

PLANNING & ZONING COMMISSION MAY 2024

May 07, 2024 at 6:00 PM 0110 Whispering Pines Circle, Blue River, CO

AGENDA

The public is welcome to attend the meeting either in person or via Zoom.

The Zoom link is available on the Town website:

https://townofblueriver.colorado.gov/planning-zoning

Please note that seating at Town Hall is limited.

I. CALL TO ORDER, ROLL CALL

II. APPROVAL OF MINUTES

A. Minutes from April 9, 2024

III. PROJECT APPROVAL

B. 0345 Coronet New Construction

IV. OTHER BUSINESS

C. Land Use Discussion-Buildable Area

V. ADJOURN

NEXT MEETING -

June 4, 2024



PLANNING & ZONING COMMISSION APRIL MEETING

April 09, 2024 at 6:00 PM 0110 Whispering Pines Circle, Blue River, CO

MINUTES

The public is welcome to attend the meeting either in person or via Zoom.

The Zoom link is available on the Town website:

https://townofblueriver.colorado.gov/planning-zoning

Please note that seating at Town Hall is limited.

I. CALL TO ORDER, ROLL CALL

Chair Johnson called the meeting to order at 6:00 p.m. PRESENT

Tim Johnson

Doug O'Brien

Ben Stuckey

Troy Watts

ABSENT

Travis Beck

Mike Costello

Gordon Manin-Excused

Also present: Town Manager Michelle Eddy; Building Official Kyle Parag and Board Liaison Noah Hopkins attended via Zoom.

II. APPROVAL OF MINUTES

A. Minutes from March 5, 2024

Motion made by Watts, Seconded by O'Brien to approve the minutes of March 5, 2024. Voting Yea: Johnson, O'Brien, Stuckey, Watts. Motion passed unanimously.

III. PUBLIC HEARING

B. Variance Request

Manager Eddy reviewed the request for a variance for a proposed home addition. It was noted all of the proper documents had been submitted and notifications made. No comments were received at Town Hall concerning the variance request.

Chair Johnson opened the public hearing at 6:01 p.m.

Dan Cleary Lot 4,5,6 Blue Rock Springs noted a date with the meeting notice. It was noted it got moved due to the election. He remarked on the parking issue but noted he didn't have an issue with the project and items within the setbacks and the road access easement that exist on the plat. He asked if the road access easement would be vacated. He asked about sewer lift station allowed in the setback and if uses have been allowed how it affects future impacts.

Watts addressed how variances are addressed and the laws to be considered.

Tom Fitzgerald 0034 Rustic Terr. owner noted he is seeking a variance for the driveway and the addition. The architect noted that it is not creating any further restriction on the site.

Chair Johnson closed the public hearing at 6:24 p.m.

Discussion on this type of variance where the existing home is non-compliant, and the addition would be non-compliant in addition to the driveway.

Discussion on if it falls under the definition of "hardship". Discussion that if it was required to fall completely in the setback, it would not meet the architectural aesthetics. Discussion that it isn't creating additional restrictions.

Motion made by Watts, Seconded by Stuckey to approve the variance for 0034 Rustic Terrace based on facts presented to planning and zoning commission today. Voting Yea: Johnson, O'Brien, Stuckey, Watts. Motion passed unanimously.

IV. PROJECT APPROVAL

C. 0039 Lodestone New Construction

Building Official Parage reviewed the proposed new construction project and recommended approval.

Discussion on project and the parking. It was noted that it is in a cul-de-sac.

Motion made by O'Brien, Seconded by Watts to approve the new construction at 0039 Lodestone. Voting Yea: Johnson, O'Brien, Stuckey, Watts. Motion passed unanimously.

D. 0097 97 Circle New Construction

Building Official Parage reviewed the proposed new construction project and recommended approval.

Motion made by Watts, Seconded by O'Brien to approve the new construction at 0097 97 Circle new construction. Voting Yea: Johnson, O'Brien, Stuckey, Watts. Motion passed unanimously.

V. ADJOURN

Motion made by O'Brien, Seconded by Stuckey adjourn the meeting at 6:54 p.m. Voting Yea: Johnson, O'Brien, Stuckey, Watts motion passed unanimously.

NEXT MEETING -

May 7, 2024

TO:	Michelle Eddy, CMC/CPM - Town Manager/Clerk
FROM:	Thomas Marshall, Plan Reviewer - CAA
DATE:	April 29, 2024
RE:	Planning/Zoning/Architectural Guidelines review –

Below please find staff's analysis that outlines the review with the Town's Zoning regulations and adopted Architectural Design Guidelines for the structure proposed

Zoning Regulation Proposal:	<u>analysis –</u> A new single-family residence with an attached garage. The proposed 3 story, 5 bedroom, 4.5 bath home, includes 3,518 s.f. of living space and an attached 558 s.f., 2 vehicle garage for a combined 4,468 square feet.
Zoning district:	R
Lot Size:	~ 38,048 sq. ft. 80,000 sq. ft. Required– Existing Non-Conforming
Lot Width:	~ 122.88' 100 ft. Required - Complies
Setbacks:	Proposed principal residence complies with required setbacks based upon submitted docs.
Height:	Building height is estimated at 35' which complies with the maximum of 35'
Garage Stds:	The proposed garage is ~558 sq. ft. and complies with the standards for structures less than 5,000 sq. ft. in habitable size.
Parking Stds:	Parking requirements will be met through the proposed garage and exterior parking.

Architectural Design Guideline analysis -

Please note the following key to the interpretation of the analysis table:

Y	Element is in substantial compliance with the design guidelines
N	Does not comply with the design guidelines
РС	Subject to Planning Commission Specific approval
	Requires additional information from applicant
N/A	Not Applicable to the application

STANDARD	NOTES/REMARKS	SUBSTANTIAL COMPLIANCE	
DEVELOPMENT STANDARD			
Article 3: Easements	No easements are indicated. Survey is provided and does not indicate any conflicting easements	Y	
Article 4: Buildable Area/setbacks	Building proposal appears to be in general conformance. Setbacks are indicated and no concerns are noted.	Y	
Article 5 Building Design Standards			
Article 5-20 Building Height	Roof height appears in general conformance per the table provided on the Site Plan.	Y	
Article 5-60 Foundation	In numerous locations the foundation is a significant design element of the house, with anticipated exposed concrete as a finish element. The concrete is indicated to be sealed.	PC	
Article 5-70 Roofs	The design uses multiple shed roofs with low slope of estimated at less than 1:12. This roof design is prohibited under (b)(1)	N	
Article 5-80 Garages	The garage is proposed at attached but accessory to the main structure and the garage is not a dominate feature of the home. The garage is proposed at 2 cars.	Y	

Article 5-90 Window and Door Design	Proposed structure includes large panes with a significant percentage of the façade. Door appears to be in general conformance.	PC
Article 5-100 Balconies and railings	Railings consist of horizontal metal finished in powdercoat black. Appears in general conformance.	Y
Article 5-110 Chimney and Roof Penetrations	Chimneys are substaintial in size and the chimney is proposed to be finished with hot rolled steel panels, consistent with the other materials used on the structure	PC
	Article 6 Building Materials and Colors	
Article 6-20 Materials	Siding materials consist of poured in place V-Groove concrete and hot rolled steel panels. These materials are inconsistent with the approved materials.	Ν
Article 6-30 Colors	Colors proposed are wood and stone colors, which are consistent with the design standards.	Y
	Article 7 Accessory Improvements	
Article 7-(20-40, 110) Berms, Garages,	Article 7 Accessory Improvements Appears in general conformance	
Article 7-(20-40, 110) Berms, Garages, sheds and Gazebos	Article 7 Accessory Improvements Appears in general conformance	Y
Article 7-(20-40, 110) Berms, Garages, sheds and Gazebos Article 7-50 Driveways	Article 7 Accessory Improvements Appears in general conformance Driveway is indicated at a 8% slope and the width is scaled at 12'. A culvert is indicated.	Y Y
Article 7-(20-40, 110) Berms, Garages, sheds and Gazebos Article 7-50 Driveways Article 7-60 Parking Areas	Article 7 Accessory Improvements Appears in general conformance Driveway is indicated at a 8% slope and the width is scaled at 12'. A culvert is indicated. Parking will be met with the attached garage and exterior parking areas.	Y Y Y
Article 7-(20-40, 110) Berms, Garages, sheds and Gazebos Article 7-50 Driveways Article 7-60 Parking Areas Article 7-100 Decks	Article 7 Accessory ImprovementsAppears in general conformanceDriveway is indicated at a 8% slope and the width is scaled at 12'. A culvert is indicated.Parking will be met with the attached garage and exterior parking areas.Decks are integrated into the design of the home and appear in general conformance	Y Y Y Y
Article 7-(20-40, 110) Berms, Garages, sheds and Gazebos Article 7-50 Driveways Article 7-60 Parking Areas Article 7-100 Decks Article 7-120 Hot Tubs	Article 7 Accessory ImprovementsAppears in general conformanceDriveway is indicated at a 8% slope and the width is scaled at 12'. A culvert is indicated.Parking will be met with the attached garage and exterior parking areas.Decks are integrated into the design of the home and appear in general conformanceA hot tub is indicated on the rear of the home, appears in general conformance	Y Y Y Y Y

Article 7-150 Retaining walls	Several retaining walls are proposed with heights indicated at 4' maximum. The remote walls are proposed as drystack boulder. Concrete retaining walls closer to the structure are proposed as part of the foundation and to remain exposed concrete	PC	
	Article 8 Signs		
Article 8 Signs	No signs are indicated	N/A	
Article 9 Lighting			
Article 9	No information can be located on the exterior lighting		
Lighting	to show compliance with Article 9		
	Article 13 Environmental Regulations		
Article 13-20 Wetlands	None indicated	N/A	

MICHAELSHULT architect

975 N Ten Mile Drive E9 PO Box 2745 Frisco, Colorado 80443 970.390.4298 michael@shultarchitect.com

Date: March 28, 2024

Michelle Eddy Town Manager Town of Blue River michelle@townofblueriver.org

Project

Weitz Residence 345 Coronet Drive Blue River, Colorado

Dear Michelle

Please find attached the additional information and narrative requested for the Weitz Residence.

Building Height

The 3d views of the home show graphic compliance with the 35'-0" height limit from existing grade. The shaded plane is the existing topography generated from the 3d model elevated 35'-0" above grade. The only projecting element is the chimney cap. The building sections previously submitted show all rooflines below the 35'-0" height limit. I have also added a Roof Height Table to the Site Plan with referenced elevation points.

Project Narrative

We are proposing a modern interpretation of mountain design (Mountain Modern), which is a popular aesthetic used throughout Summit County and Blue River. including our next door neighbor. Simplified building forms are expressed in a pattern unique and complimentary to the site. Building massing steps with the natural topography and lends a human scale to the overall project. Natural building materials and finishes enhance the architecture and reference other homes in the area, primarily wire brushed Douglas Fir with accents of blackened steel and an architectural concrete base. A live (green) roof above the Garage integrates architecture with landscape and standing seam metal roofs gently pitch upwards towards the western ridge line view.

In summary we believe the home represents a high level of architectural design that is carefully integrated with the site and most importantly a positive addition to the Blue River Community. Should any questions arise, please do not hesitate to contact me.

Michael Shult





Building Permit Application

Email to: info@townofblueriver.org Questions? Call (970) 547-0545 ext. 1



Lot Number: 453 Subdivision: Coronet Sub
Blue River Physical Address: 0345 Coronet Dr. (CR584)
Homeowner Information:
Name: <u>Stephen weitz</u> (<u>Stephenridge</u> (<u>C. 220</u>)
Mailing Address: 3115 W. 28th Are, Denrer, LO. 0021
Phone: $571 - 294 - 8773$
Email:
Contractor Information
Company Name: Breck Construction LLC
Contact Name: Andrze: Las
Mailing Address: P.U. BUX 2552 Breckonridgo, Co. 80424
Phone: 970 - 485 - 4244
Email: breck construction @ Jahoo, com
Contractor Registration #: 40414
Diana and The Town of Blog Bing Burnings I investigation of the all husinesses to conduct husinesses in the Town of

**Please note a Town of Blue River Business License is required for all businesses to conduct business in the Town of Blue River including contractors, sub-contractors and architects. **

Description of Project: Residence (new

Distance to Property Line	Type of Heat: Radian-	Construction Type: Type 5
North:	Roof: Mota	Building Height: 35
South:	Exterior Walls: Wood Frame	No. Stories: 2
East	Interior Walls: Wood Frame	Total # Bedrooms: 4
West:	Basement Fin. Sq.Ft.: 1,59 %	Total # Bathrooms:
New Addition/Res. Sq.Ft.:	Main Level Sq.Ft.: 1,403	Septic or Sever: Septic
Garage Sq.Ft.: 558	2nd Level Sq.Ft.: 517	
Total Square footage: 4,468	3rd Level Sq.Ft.:	

SEPARATE PERMITS ARE REQUIRED FOR ELECTRICAL, PLUMBING, HEATING, VENTILIATION WORK, & FIREPLACES. THIS PERMIT BECOMES NULL AND VOID IF CONSTRUCTION AUTHORIZED IS NOT COMMENCED WITHIN _____ OR IF CONSTRUCTION IS SUSPENDED OR ABANDONED FOR A PERIOR OF ____ AT ANY TIME AFTER WORK IS COMMENCED.

I HEREBY CERTIFY THAT I HAVE READ AND EXAMINDED THIS APPLICATION AND KNOW THE SAME TO BE TRUE AND CORRECT. I AGREE TO COMPLY WITH ALL TOWN ORDINANCES AND STATE LAWS REGARDING BUILDING CONSTRUCTION AND TO BUILD ACCORDING TO THE APPROVED PLANS. THE GRANT OF A PERMIT DOES NOT PRESUMED TO GIVE AUTHORITY TO VIOLATE OR CANCEL THE PROVISIONS OF ANY OTHER STATE OR LOCAL LAW REGULATING CONSTRUCTION OR THE PERFORMANCE OF CONSTRUCTION.

Signature of Owner or Contractor:

12.12.23 Date: ____

Submittal Requirements

ALL Submittals Must be Electronic Emailed to: info@townofblueriver.org

Planning & Zoning Review Submittal Requirements

**Please indicate via check box item included as well as page number in submitted packet.

Completed √	Item	Description	Page #
	Site Plan	Scale: 1" = 10'; May appear on a single sight plan. IF on a separate page, please indicate the page.	ALD
		Property Boundaries	A.0
		Building Envelope with setbacks	AD
		Proposed Buildings	ALD
		Structures (existing & proposed)	AID
		Driveway & Grades	ALO
		A wetlands delineation & Stream crossing structures where applicable.	NA
		Topographic survey, prepared and stamped by a licensed surveyor, indicating site contours at 2' intervals, easements, and significant natural features such as rock outcroppings, drainages and mature tree stands.	SURVER
		Transformer & vault location (if installed by owner or existing)	MA
		Well location; septic if applicable	TBD
		Snow storage areas and calculations	A1.0
		Major site improvements	AL.D
		Existing & proposed grading & drainage	AL.O
	Landscaping Plan	*May be included in the site plan**	A1.0
		Landscaping must indicate tree removal for defensible space requirement; any trees 6" or more primarily noting the removal of any ponderosa pines or large trees. Clear cutting of a site is not allowed.	A-1.0
		Indicate the percentage of trees removed and revegetation to be conducted.	-
		Upon completion of the construction project, all land must be raked and	41.0

	reseeded with native seed prior to issuance of CO. in cases of completion during snow coverage and/or winter, CO may be issued with conditions for completions within 60 days of the last snow and a deposit.	
	Any major structures (retaining walls; fences; landscaping rocks) must be indicated in detail on plans in conformance with the design regulations.	A1.0
	Indicating building walls, floors and roof relative to the site, including existing and proposed grades, retaining wall and proposed site improvements.	A1.0
Floor Plans	Scale 1/8" = 1'	
	Indicate the general layout of all rooms, approximate size, and total square footage of enclosed space for each floor level.	A2.1 A2.2 A2.3
Exterior Elevations	Scale same as floor plans	
	Detail to indicate the architectural character of the residence, fenestration and existing and proposed grades. Elevations must include a description of exterior materials and colors.	A3,1 A3,2 A3,3
Roof Plan	Scale same as floor plans	
	Indicate the proposed roof pitch, overhang lengths, flue locations, roofing materials and elevations of major ridge lines and all eave lines.	A214
Materials Sheet	Display materials to be used. Color renderings are suggested as well. In cases of additions, if matching the existing structure, photos of current home.	

LANDSCAPE NOTES

- 1. Strip existing topsoil from site in construction areas and stockpile topsoil for landscape use
- 2. General contractor shall remove all debris, stumps, slash, concrete asphalt, etc, form site prior to landscape work.
- 3. Disturbed areas on site shall receive a minimum of 3" 4" of topsoil in preparation for landscape treatment.
- Seed disturbed area where needed with short dry grass mix. Apply starter fertilizer (18-46-0) or equivalent @ 4 lbs/1000 sf sow grass mix @ 2 lbs/1000 sf. Rake materials into soil.
- 5. Cobble rock or rock from site may be used as a ground cover treatment in designated areas with weed barrier fabric. Approximately 3"-6" diameter
- Boulders recovered during construction (2' and larger in diameter) to be stockpiled on site. When placed, bury 1/3 to ½ of each boulder.
- 7. Locate all plant material to avoid snow shed, snow removal locations, sight lines. Utility lines, and easements.
- 8. All new plants shall be placed under an automatic drip irrigation system.
- All plant material shall be back filled with 1/3 topsoil, 1/3 manure, 1/3 compost and mixed 50/50 with native soils.
- 10. All shrub beds and tree wells shall receive a minimum of 3 inches shredded bark mulch
- 11. All newly planted trees shall be root fed at the time of installation. Root feeding shall consist of a liquid root growth stimulator, or soluble fertilizer at recommended rate of 1 tbs per 1 gallon of water.

REVEGETATION

Revegetate all disturbed areas on site. Sow short dry grass mix @ 2 lbs/1000 sf

Short dry mix 05% Canby Bluegrass 10% Canada Bluegrass

25% Sheep Fescue 30% Creeping Red Fescue

30% Hard Fescue Slopes over 3:1 shall be hayed tackified or netted.

IRC / IECC ENERGY EFFICIENCY

10, 4ft

Thermal Envelope 2018 IRC N1102.1.2 2108 IECC R402.1.2

Climate Zone Fenestration U Factor Ceiling R Value Wood Frame Wall R-Value 20+5 Floor R Value Basement Wall R-Value Slab R-Value and Depth

Mechanical Ventilation Whole-house Mechanical Ventilation system IRC Table M1505.4.3 Living Area 0.30 Number of Bedrooms Airflow in CFM 49 IRC Table N1103.6.1 38

3518 sf 90 (continuous) 15/19 HRV or ERV Fan Efficacy 1.2 CFM/Watt

Air Barrier and Insulation Installation Table N1102.4.1.1 (R402.4.1.1)

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.
Ceiling/attic	The air barrier in any dropped ceiling or soffit shall be aligned with the insulation and any gaps in the air barrier sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of not less than R-3 per inch. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and in continuous alignment with the air barrier.
Windows, skylights	The space between framing and skylights, and the jambs of	_
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.
Floors including cantilevered floors and floors above garages.	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking. Alternatively, floor framing cavity insulation shall be in contact with the top side of sheathing or continuous insulation installed on the underside of floor framing; and extending from the bottom to the top of all perimeter floor framing members.
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Crawl space insulation, where provided instead of floor insulation, shall be permanently attached to the walls.
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.	_
Narrow cavities		Batts to be installed in narrow cavities shall be cut to fit or narrow cavities shall be filled with insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.	_
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the finished surface.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.
Plumbing and wiring	_	In exterior walls, batt insulation shall be cut neatly to fit around wiring and plumbing or insulation that on installation, readily conforms to available space, shall extend behind piping and wiring.
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate the wall from the shower or tub.	Exterior walls adjacent to showers and tubs shall be insulated.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical and communication boxes. Alternatively, air-sealed boxes shall be installed.	_
HVAC register boots	HVAC supply and return register boots that penetrate building thermal envelope shall be sealed to the subfloor, wall covering or ceiling penetrated by the boot.	_

WHITE RIVER NATIONAL FOREST

10310

10300

10298

10296

10292

10290

ROOF HEIGHT TABLE

Point	Natural Grade	Finished Grade	N
A	10283.20	10282.50	F
В	10282.80	NA	١
С	10283.20	NA	1
D	10286.40	10280.50	F



ned Grade	10309.62	10309.62	-10282.50	27.12	
al Grade	10317.66	10317.66	-10282.80	34.86	Roof is not above grade, structure below
al Grade	10317.66	10317.66	-10283.20	34.46	Roof is not above grade, structure below
ned Grade	10308.86	10308.86	-10280.50	28.36	





PO Box 2745 975 N Ten Mile Dr E9 Frisco, CO 80443 970.390.4298 michael@shultarchitect.com

July 31, 2023 Height Table March 28, 2024



A1.0

LANDSCAPE NOTES

- 1. Strip existing topsoil from site in construction areas and stockpile topsoil for landscape use
- 2. General contractor shall remove all debris, stumps, slash, concrete asphalt, etc, form site prior to landscape work.
- 3. Disturbed areas on site shall receive a minimum of 3" 4" of topsoil in preparation for landscape treatment.
- Seed disturbed area where needed with short dry grass mix. Apply starter fertilizer (18-46-0) or equivalent @ 4 lbs/1000 sf sow grass mix @ 2 lbs/1000 sf. Rake materials into soil.
- 5. Cobble rock or rock from site may be used as a ground cover treatment in designated areas with weed barrier fabric. Approximately 3"-6" diameter
- Boulders recovered during construction (2' and larger in diameter) to be stockpiled on site. When placed, bury 1/3 to ½ of each boulder.
- 7. Locate all plant material to avoid snow shed, snow removal locations, sight lines. Utility lines, and easements.
- 8. All new plants shall be placed under an automatic drip irrigation system. All plant material shall be back filled with 1/3 topsoil, 1/3 manure, 1/3 compost and mixed 50/50 with native soils.
- 10. All shrub beds and tree wells shall receive a minimum of 3 inches
- shredded bark mulch
- 11. All newly planted trees shall be root fed at the time of installation. Root feeding shall consist of a liquid root growth stimulator, or soluble fertilizer at recommended rate of 1 tbs per 1 gallon of water.

REVEGETATION

- Revegetate all disturbed areas on site. Sow short dry grass mix @ 2 lbs/1000 sf Short dry mix

 - 05% Canby Bluegrass 10% Canada Bluegrass
- 25% Sheep Fescue 30% Creeping Red Fescue 30% Hard Fescue
- Slopes over 3:1 shall be hayed tackified or netted.

IRC / IECC ENERGY EFFICIENCY

Thermal Envelope 2018 IRC N1102.1.2

2108 IECC R402.1.2 Climate Zone Fenestration U Factor Ceiling R Value Wood Frame Wall R-Value 20+5 Floor R Value

Slab R-Value and Depth



Mechanical Ventilation Whole-house Mechanical Ventilation system

IRC Table M1505.4.3 0.30 Number of Bedrooms

3518 sf

90 (continuous)

4

38 IRC Table N1103.6.1 Basement Wall R-Value 15/19 HRV or ERV Fan Efficacy 1.2 CFM/Watt 10, 4ft

Air Barrier and Insulation Installation Table N1102.4.1.1 (R402.4.1.1)

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.
Ceiling/attic	The air barrier in any dropped ceiling or soffit shall be aligned with the insulation and any gaps in the air barrier sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of not less thar R-3 per inch. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and in continuous alignment with the air barrier.
Windows, skylights and doors	The space between framing and skylights, and the jambs of windows and doors, shall be sealed.	-
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.
Floors including cantilevered floors and floors above garages.	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking. Alternatively, floor framing cavity insulation shall be in contact with the top side of sheathing or continuous insulation installed on the underside of floor framing; and extending from the bottom to the top of all perimeter floor framing members.
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Crawl space insulation, where provided instead of floor insulation, shall be permanently attached to the walls.
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.	_
Narrow cavities	_	Batts to be installed in narrow cavities shall be cut to fit or narrow cavities shall be filled with insulation that or installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.	_
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the finished surface.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.
Plumbing and wiring	_	In exterior walls, batt insulation shall be cut neatly to fit around wiring and plumbing or insulation that on installation, readily conforms to available space, shall extend behind piping and wiring.
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate the wall from the shower or tub.	Exterior walls adjacent to showers and tubs shall be insulated.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical and communication boxes. Alternatively, air-sealed boxes shall be installed.	_
HVAC register boots	HVAC supply and return register boots that penetrate building thermal envelope shall be sealed to the subfloor, wall covering or ceiling penetrated by the boot.	_

WHITE RIVER NATIONAL FOREST

103-

10300

10298

10296

10292

10290

1028









PO Box 2745 975 N Ten Mile Dr E9 Frisco, CO 80443 970.390.4298 michael@shultarchitect.com

July 31, 2023



A1.0



A TOPOGRAPHIC MAP OF LOT 453, THE CORONET

SUBDIVISION, BLUE RIVER ESTATES INC.

ACCORDING TO THE PLAT RECORDED 07/27/1965 AT REC. NO. 102530 TOWN OF BLUE RIVER SUMMIT COUNTY, COLORADO



DATE OF FIELD SURVEY: 06/14/2016 CONTOUR INTERVAL=2 FEET

LEGEND

0	FOUND No.	4	REBAR	đ	RED	PLASTIC	CAP	(PLS	9939

- FOUND NO. 4 REBAR & ALUMINUM CAP (PLS 15242/BARNES)
- FOUND NO. 4 REBAR
- UTILITY POLE
- RANDOM SURVEY CONTROL POINT OPA
- MEASURED COURSE
- PLATTED COURSE
- CALCULATED COURSE
- U.G. GAS MARKER

PINE TREE WITH DRUNK DIAMETER













July 31, 2023



A2.1





MAIN FLOOR PLAN SCALE: 1/4" = 1'-0"



PO Box 2745 975 N Ten Mile Dr E9 Frisco, CO 80443 970.390.4298 michael@shultarchitect.com





































UPPER FLOOR 100'-0"(10305.83)

Steel Beam Painted Black Metal Guardrail
Powdercoat Black





EAST ELEVATION

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

NORTH ELEVATION

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



PO Box 2745 975 N Ten Mile Dr E9 Frisco, CO 80443 970.390.4298 michael@shultarchitect.com







EAST ELEVATION (GARAGE) SCALE: 1/4" = 1'-0"





WEST ELEVATION (GARAGE) SCALE: 1/4" = 1'-0"



NORTH ELEVATION (GARAGE) SCALE: 1/4" = 1'-0"



PO Box 2745 975 N Ten Mile Dr E9 Frisco, CO 80443 970.390.4298 michael@shultarchitect.com

July 31, 2023









R-38 Batt Insul 2x6 @ 16" w/ R-21 Batt Insul



PO Box 2745 975 N Ten Mile Dr E9 Frisco, CO 80443 970.390.4298 michael@shultarchitect.com

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

PO Box 2745 975 N Ten Mile Dr E9 Frisco, CO 80443 970.390.4298 michael@shultarchitect.com

7

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

> SECTION G SCALE: 1/4" = 1'-0"

PO Box 2745 975 N Ten Mile Dr E9 Frisco, CO 80443 970.390.4298 michael@shultarchitect.com

July 31, 2023

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

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

SECTION K SCALE: 1/4" = 1'-0" SECTION I SCALE: 1/4" = 1'-0"

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

PO Box 2745 975 N Ten Mile Dr E9 Frisco, CO 80443 970.390.4298 michael@shultarchitect.com

July 31, 2023

MUD ROOM 86'-3" (10281.00)

ELEV 02 GUEST SUITE 008

RESTROOM 108

WINDOW SCHEDULE

		SIZE				
	U	WIDTH	HEIGHT	TTPE		NOT
	001.01	2'	2'		Paint BLK, gloss	
	001.02	2'	6'		Paint BLK, gloss	
	002.01	3'	2'		Paint BLK, gloss	
	002.02	3'	5'		Paint BLK, gloss	
	002.03	3'	5'		Paint BLK, gloss	
	002.04	3'	2'		Paint BLK, gloss	
	002.05	4'	2'		Paint BLK, gloss	
	002.06	4'	5'		Paint BLK, gloss	
	002.07	4'	5'		Paint BLK, gloss	
	002.08	4'	2'		Paint BLK, gloss	
	005.01	5'	2'		Paint BLK, gloss	
	005.02	5'	6'		Paint BLK, gloss	
	006.01	5'	2'		Paint BLK, gloss	
	006.02	5'	6'		Paint BLK, gloss	
	008.01	4'	1'-6"		Paint BLK, gloss	
	008.02	4'	1'-6"		Paint BLK, gloss	
	010.01	3'	2'		Paint BLK, gloss	
ſ	010.02	3'	6'		Paint BLK, gloss	
ſ	010.03	5'	2'		Paint BLK, gloss	
ľ	010.04	5'	6'		Paint BLK, gloss	
ſ	013.01	3'	6'		Paint BLK, gloss	
ſ	013.02	3'	2'		Paint BLK, gloss	
ſ	017.01	3'	2'-8"		Paint BLK, gloss	
	101.01	2'	3'		Paint BLK, gloss	
	101.02	2'	5'		Paint BLK, gloss	
	101.03	4'	3'		Paint BLK, gloss	
	101.04	4'	5'		Paint BLK, gloss	
	103.01	5'	2'-6"		Paint BLK, gloss	
	103.02	5'	2'-6"		Paint BLK, gloss	
	103.03	5'	3'		Paint BLK, gloss	
	103.04	5'	6'		Paint BLK, gloss	
	103.05	5'	2'-6"		Paint BLK, gloss	
	103.06	5'	3'		Paint BLK, gloss	
	103.07	5'	6'		Paint BLK, gloss	
	103.08	5'	2'-6"		Paint BLK, gloss	
	103.09	4'	3'		Paint BLK, gloss	
	103.10	4'	6'		Paint BLK, gloss	
	103.11	4'	2'-6"		Paint BLK, gloss	
ſ	103.12	3'	3'		Paint BLK, gloss	
ſ	103.13	3'	6'		Paint BLK, gloss	
ſ	103.14	3'	2'-6"		Paint BLK, gloss	
ſ	103.15	3'-2"	1'-6"		Paint BLK, gloss	
ſ	103.16	5'	3'		Paint BLK, gloss	
ľ	103.17	5'	6'		Paint BLK, gloss	
1		•	•	•	•	•

ELEV 01 GUEST SUITE 008

ELEV 02 LAUNDRY 014

FES	ID	WIDTH	HEIGHT	TYPE	MATERIAL	NOTES
	103.18	5'	1'-6"		Paint BLK, gloss	
	103.19	5'	1'-6"		Paint BLK, gloss	
	103.20	5'	1'-6"		Paint BLK, gloss	
	103.21	5'	1'-6"		Paint BLK, gloss	
	106.01	3'	5'		Paint BLK, gloss	
	106.02	3'	2'		Paint BLK, gloss	
	106.03	4'	5'		Paint BLK, gloss	
	106.04	4'	2'		Paint BLK, gloss	
	106.05	3'	5'		Paint BLK, gloss	
	106.06	3'	2'		Paint BLK, gloss	
	108.01	2'	2'		Paint BLK, gloss	
	109.01	5'	3'		Paint BLK, gloss	
	109.02	5'	6'		Paint BLK, gloss	
	109.03	5'	2'		Paint BLK, gloss	
	109.04	5'	2'		Paint BLK, gloss	
	109.05	5'	2'		Paint BLK, gloss	
	109.06	5'	3'		Paint BLK, gloss	
	109.07	5'	6'		Paint BLK, gloss	
	109.08	5'	2'		Paint BLK, gloss	
	109.09	5'	3'		Paint BLK, gloss	
	109.10	5'	6'		Paint BLK, gloss	
	109.11	5'	2'		Paint BLK, gloss	
	109.12	5'	2'		Paint BLK, gloss	
	109.13	5'	2'		Paint BLK, gloss	
	201.01	3'-2"	2'		Paint BLK, gloss	
	201.02	2'	7'		Paint BLK, gloss	
	201.03	2'	2'		Paint BLK, gloss	
	201.04	3'	5'		Paint BLK, gloss	
	201.05	3'	2'		Paint BLK, gloss	
	201.06	4'	5'		Paint BLK, gloss	
	201.07	4'	2'		Paint BLK, gloss	
	203.01	3'-2"	2'		Paint BLK, gloss	
	203.02	5'	2'		Paint BLK, gloss	
	203.03	5'	5'		Paint BLK, gloss	
	203.04	5'	2'		Paint BLK, gloss	
	203.05	5'	2'		Paint BLK, gloss	
	203.06	5'	5'		Paint BLK, gloss	
	203.07	5'	2'		Paint BLK, gloss	
	204.01	4'	3'-6"		Paint BLK, gloss	
	204.02	4'	1'-6"		Paint BLK, gloss	
	204 03	4'	3'-6"		Paint BLK. closs	
	204 04	4'	1'-6"		Paint BLK. closs	
	204.05	21 6"			Point PLK, gloss	

DOOR SCHEDULE

10			DOOF	२		
ID	TYPE	W	HT	THK	MATL	GLZ
001		4'	7'-10"	0.15'		
003.1		4'	8'	1 3/4"		
003.2		3'	8'	1 3/4"		
004		2'-6"	8'	1 3/4"		
005.1		3'	8'	1 3/4"		
005.2		6'	8'	1 3/4"		
005.3		2'-8"	8'	1 3/4"		
006.1		3'	8'	1 3/4"		
006.2		6'	8'	1 3/4"		
006.3		2'-8"	8'	1 3/4"		
007		2'-6"	8'	1 3/4"		
008.1		3'	8'	1 3/4"		
008.2		8'	8'	1 3/4"		
009		2'-6"	8'	1 3/4"		
010		3'	8'	1 3/4"		
011		2'-6"	8'	1 3/4"		
012		2'-6"	8'	1 3/4"		
013		3'	8'	1 3/4"		
014		3'	8'	1 3/4"		
015		3'	8'	1 3/4"		
016		2'-10"	8'	1 3/4"		
017.1		3'	7'	1 3/4"		
017.2		9'	10'	1 3/4"		
017.3		9'	10'	1 3/4"		
018.1		3'	7'	1 3/4"		
018.2		8'	10'	1 3/4"		
102.1		10'	9'	1 3/4"		
102.2		9'	6'	1 3/4"		
103.1		10'	9'	1 3/4"		
103.2		15'	9'	1 3/4"		
103.3		3'	9'	1 3/4"		
105		2'-6"	8'	1 3/4"		
107		2'-10"	8'	1 3/4"		
108		2'-6"	8'	1 3/4"		
109.1		3'-6"	8'	1 3/4"		
109.2		10'	9'	1 3/4"		
201		3'	7'	1 3/4"		
202		2'-8"	7'	1 3/4"		
203.1		3'	7'	1 3/4"		
203.2		3'	7'	1 3/4"		
204		3'	8'	1 3/4"		
205		2'-6"	7'	1 3/4"		
206		2'-6"	8'	1 3/4"		

BATH 204

PO Box 2745 975 N Ten Mile Dr E9 Frisco, CO 80443 970.390.4298 michael@shultarchitect.com

STRUCTURAL GENERAL NOTES

<u>GOVERNING CODE:</u> 2018 INTERNATIONAL RESIDENTIAL CODE (IRC) AND ALL LOCAL AMENDMENTS, EXCEPT AS NOTED
DESIGN LOADS:

RISK CATEGORY: II, STANDARD		
SNOW LOAD:	100 PSF	
FLOOR LIVE LOAD:		
RESIDENTIAL:	40 PSF	
EXTERIOR DECKS:	100 PSF	
ROOF AND FLOOR DEAD LOADS:		
ROOF:	20 PSF	
FLOOR:	60 PSF	
DECK:	60 PSF	
WIND LOADS:		
BASIC WIND SPEED (3-SECOND GUST):	90 MPH	
BUILDING ENCLOSURE CLASSIFICATION:	ENCLOSED	
WIND EXPOSURE:	В	

FOUNDATION DESIGN:

FOUNDATION DESIGN IS IN ACCORDANCE WITH RECOMMENDATIONS CONTAINED IN SOILS INVESTIGATION REPORT NUMBER SU02413.000-120 PREPARED BY CTL THOMPSON DATED OCTOBER 10, 2023

SOIL CONDITIONS SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF FORMWORK OR CONCRETE. IF DIFFERENT SOIL CONDITIONS EXIST THE STRUCTURAL ENGINEER SHALL BE NOTIFIED TO RE-EVALUATE THE FOUNDATION DESIGN AT ADDITIONAL EXPENSE TO THE OWNER.

SLOPE FINAL GRADES DOWN AND AWAY FROM FOUNDATION WALLS A MINIMUM OF 12 INCHES IN FIRST 10 FEET. FOOTINGS:

FOOTINGS, SELECTED BY THE OWNER, SHALL BEAR ON THE NATURAL UNDISTURBED SOILS OR APPROVED COMPACTED STRUCTURAL FILL. EXTERIOR FOOTINGS SHALL BEAR BELOW FROST DEPTH; MINIMUM FROST DEPTH SHALL BE 40" BELOW ADJACENT

EXTERIOR FINISHED GRADE. DESIGN OF FOOTINGS IS BASED ON

MAXIMUM ALLOWABLE BEARING PRESSURE: 3,000 PSF EARTH RETAINING STRUCTURES: EARTH EQUIVALENT FLUID LATERAL PRESSURE: WALLS RESTRAINED AT TOP (AT REST): 50 PCF CANTILEVERED WALLS (ACTIVE): 40 PCF PASSIVE RESISTING: 340 PCF

COEFFICIENT OF SLIDING FRICTION: 0.35

REINFORCED CONCRETE: CONCRETE DESIGN IS BASED ON THE AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE" (ACI 301). STRUCTURAL CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES (NORMAL WEIGHT CONCRETE UNLESS NOTED

OTHERWISE): MINIMUM 28 DAY COMPRESSIVE STRENGTH (F'c) AS FOLLOWS:

CEMENT TYPE:	
MAXIMUM AGGREGATE SIZE:	3/4"
FOOTINGS:	3,500 PSI (MAX W/C RATIO 0.52); ENTRAINED AIR 1.5% (± 1.5%); SLUMP 5 INCHES (± 1")
WALLS:	4,000 PSI (MAX W/C RATIO 0.50); ENTRAINED AIR 5.0% (± 1.5%); SLUMP 4 INCHES (± 1")
INTERIOR SLABS-ON-GRADE:	3,500 PSI (MAX W/C RATIO 0.50); ENTRAINED AIR 3.0% (± 1.5%); SLUMP 4 INCHES (± 1")
EINFORCING STEEL SHALL BE FABR	ICATED AND PLACED IN ACCORDANCE WITH ACI 315 "DETAILS AND DETAILING OF
CONCRETE REINFORCEMENT."	
HEN COLD WEATHER CONDITIONS I	EXIST, PLACE AND CURE CONCRETE IN ACCORDANCE WITH ACI 306.
ELDED WIRE FABRIC SHALL CONFO	RM TO ASTM A185.
EFORMED REINFORCEMENT SHALL	BE DOMESTIC NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60 INCLUDING
STIRRUPS AND TIES, EXCEPT THA	T REINFORCING WHICH IS REQUIRED TO BE WELDED SHALL CONFORM TO ASTM A706.

UNLESS OTHERWISE NOTED ON THE STRUCTURAL DRAWINGS, LAP BARS 50 DIAMETERS (50*BAR DIAMETER MINIMUM). REINFORCING AT ALL ABUTTING CONCRETE (INCLUDING FOOTINGS) SHALL BE CONTINUOUS THROUGH OR AROUND ALL CORNERS AND INTERSECTIONS OR USE MATCHING CORNER BARS OF EQUAL SIZE AND SPACING TO REINFORCING IN THE ABUTTING MEMBERS.

INSTALL 2-#5 BARS (MINIMUM) AROUND ALL SIDES OF ALL OPENINGS IN CONCRETE AND EXTEND 2'-0" PAST EDGES OF OPENINGS, UNLESS OTHERWISE NOTED. IN CONTINUOUS MEMBERS, SPLICE TOP BARS AT MID-SPAN BETWEEN SUPPORTS AND SPLICE BOTTOM BARS OVER SUPPORTS. UNLESS OTHERWISE NOTED ON THE DRAWINGS, MINIMUM CONCRETE COVER OVER REINFORCING SHALL BE AS FOLLOWS:

UNFORMED SURFACE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3" FORMED SURFACE EXPOSED TO EARTH OR WEATHER: FORMED SURFACE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: 3/4" INSTALL CHAIRS, BOLSTERS, ADDITIONAL REINFORCEMENT, AND ACCESSORIES NECESSARY TO SUPPORT REINFORCEMENT AT POSITION SHOWN ON DRAWINGS. SUPPORT OF REINFORCEMENT ON WOOD, BRICK, OR OTHER UNACCEPTABLE

MATERIALS SHALL NOT BE PERMITTED. KEEP REINFORCEMENT CLEAN AND FREE OF DIRT AND OIL. OIL FORMS PRIOR TO PLACING REINFORCEMENT. FIBER ADMIXTURE SHALL BE 100% VIRGIN POLYPROPYLENE, FIBRILLATED FIBERS, TYPE 111 4.1.3, PERFORMANCE LEVEL ONE, PER ASTM C1116.

PROPERLY PLACE, ACCURATELY POSITION AND MAINTAIN SECURELY IN PLACE ALL EMBEDDED ITEMS PRIOR TO AND DURING CONCRETE PLACEMENT. ANCHOR BOLTS AND RODS FOR BEAM AND COLUMN-BEARING PLATES SHALL BE PLACED WITH SETTING TEMPLATES.

UNLESS OTHERWISE SHOWN IN THE ARCHITECTURAL DRAWINGS. PROVIDE 3/4" CHAMFERS AT ALL COLUMN. WALL, SLAB OR BEAM EDGES THAT ARE EXPOSED TO VIEW IN THE FINISHED STRUCTURE.

Typical Rebar Bends and Laps

SE Foundation View FOR ILLUSTRATIVE PURPOSES ONLY

STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AISC 360) AND THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (AISC 303) BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC). ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM STANDARDS AND GRADES INDICATED BELOW, UNLESS NOTED OTHERWISE ON THE DRAWINGS OR DETAILS.

STRUCTURAL STEEL:

SUPPLEMENT S1.

ANCHORS:

SFISMIC

MEMBERS.

MINIMUM.

INSPECTIONS:

INSPECTION.

STRUCTURAL STEEL WIDE FLANGE BEAMS AND WTS: ASTM A992, 50 KSI YIELD OTHER ROLLED SHAPES, INCLUDING PLATES, CHANNELS, AND ANGLES: ASTM A36, 36 KSI YIELD. HOLLOW STRUCTURAL SECTION (HSS) RECTANGULAR SHAPES: ASTM A500, GRADE B, 46 KSI YIELD

- UNLESS OTHERWISE NOTED, FRAMED BEAM CONNECTIONS SHALL BE BEARING-TYPE WITH 3/4" DIAMETER, SNUG TIGHT, ASTM A325 BOLTS, DETAILED IN CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND THE "STEEL CONSTRUCTION MANUAL" BY THE AISC, 14TH EDITION. INSTALL BOLTS IN ACCORDANCE WITH AISC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS,".
- ALL BEAMS SHALL HAVE FULL DEPTH WEB STIFFENERS EACH SIDE OF WEBS ABOVE AND BELOW COLUMNS (1/4" PLATE MIN). ANCHOR RODS SHALL CONFORM TO ASTM F1554. GRADE 55 AS NOTED ON THE STRUCTURAL DRAWINGS WITH WELDABILITY
- HEADED ANCHOR STUDS (HAS) SHALL CONFORM TO ASTM A108 AND SHALL BE CONNECTED TO STRUCTURAL STEEL WITH EQUIPMENT APPROVED BY THE STUD MANUFACTURER ACCORDING TO THE STUD MANUFACTURER'S RECOMMENDATIONS. WELDING SHALL BE DONE BY A CERTIFIED WELDER IN ACCORDANCE WITH THE AISC DOCUMENTS LISTED ABOVE, THE AMERICAN WELDING SOCIETY (AWS) D1.1: 2006 STRUCTURAL WELDING CODE, AND THE RECOMMENDATIONS FOR USE OF E70XX ELECTRODES.
- WHERE NOT SPECIFICALLY NOTED, MINIMUM WELD SHALL BE 3/16" FILLET BY LENGTH OF CONTACT EDGE. GROUT BENEATH COLUMN BASE AND BEAM BEARING PLATES SHALL HAVE A MINIMUM 28-DAY, COMPRESSIVE STRENGTH OF 5,000 PSI AND SHALL BE NON-SHRINK, NON-METALLIC, AND TESTED IN ACCORDANCE WITH ASTM C1107.
- ALL POST-INSTALLED ANCHORS SHALL HAVE CURRENT INTERNATIONAL CODE COUNCIL EVALUATION SERVICE (ICC-ES) REPORTS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. EXPANSION ANCHORS SHALL BE APPROVED "WEDGE" TYPE UNLESS SPECIFICALLY NOTED TO BE "SLEEVE" TYPE AS NOTED ON THE STRUCTURAL DRAWINGS. CHEMICAL ANCHORS SHALL BE APPROVED EPOXY OR SIMILAR ADHESIVE TYPE AS APPROPRIATE FOR INSTALLATION IN SOLID AND NON-SOLID BASE MATERIALS.
- STRUCTURAL WOOD & TIMBER: DESIGN IS BASED ON ANSI/AF&PA NDS "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH SUPPLEMENT: DESIGN VALUES FOR WOOD CONSTRUCTION" AND ANSI/AF&PA SDPWS "SPECIAL DESIGN PROVISIONS FOR WIND AND
- 2X FRAMING LUMBER SHALL BE S4S HEM-FIR NO. 2 AND BETTER UNLESS NOTED OTHERWISE. ALL LUMBER SHALL BE 19% OR LESS MAXIMUM MOISTURE CONTENT, UNLESS NOTED OTHERWISE. SOLID TIMBER BEAMS AND POSTS SHALL BE DOUGLAS FIR-LARCH NO. 1.
- 2X STUD BEARING WALLS SHALL BE 2X6 @ 16" (UNO) HEM-FIR STUD GRADE OR BETTER. 2X TOP AND BOTTOM PLATES SHALL BE HEM-FIR NO. 2 OR BETTER.
- FASTENERS FOR USE WITH TREATED WOOD SHALL COMPLY WITH IRC SECTION R317.3. WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE-TREATED DOUGLAS FIR-LARCH OR SOUTHERN YELLOW PINE. PRESERVATIVE TREATED WOOD SHALL BE TREATED IN ACCORDANCE WITH AWPA U1 AND AWPA M4. CONVENTIONAL LIGHT FRAMING SHALL COMPLY WITH IRC SECTIONS R502, R602, AND R802.
- MINIMUM NAILING SHALL BE PROVIDED AS SPECIFIED IN IRC TABLE R602.3(1) "FASTENER SCHEDULE FOR STRUCTURAL METAL FRAMING ANCHORS SHOWN OR REQUIRED, SHALL BE SIMPSON STRONG-TIE OR EQUAL CODE APPROVED CONNECTORS AND INSTALLED WITH THE NUMBER AND TYPE OF NAILS RECOMMENDED BY THE MANUFACTURER TO DEVELOP THE MAXIMUM RATED CAPACITY. NOTE THAT HEAVY-DUTY HANGERS AND SKEWED HANGERS MAY NOT BE STOCKED LOCALLY AND REQUIRE SPECIAL ORDER FROM THE FACTORY. GLUE WOOD NAILER PLATES TO STEEL BEAMS AND ATTACH WITH EITHER 1/2"Ø BOLTS @ 32" O.C., STAGGERED OR 0.145"Ø
- POWDER ACTUATED DRIVE PINS @ 16" O.C. STAGGERED. WIDTH OF NAILER PLATE SHALL MATCH BEAM WIDTH + 1/8" MIN (1/4" MAX) OVERHANG EACH SIDE. LEAD HOLES FOR LAG SCREWS SHALL BE 40%-70% OF THE SHANK DIAMETER AT THE THREADED SECTION AND EQUAL TO THE SHANK DIAMETER AT THE UNTHREADED SECTION PER NDS SECTION 11.1.3. CONNECTOR BOLTS AND LAG SCREWS SHALL CONFORM TO ANSI/ASME B18.2.1 AND ASTM SAE J429 GRADE 1. NAILS AND SPIKES SHALL CONFORM TO ASTM F1667. WOOD SCREWS SHALL CONFORM TO ANSI/ASME B18.6.1.
- WOOD FRAMING NOTES: INSTALL SOLID BLOCKING BETWEEN JOISTS UNDER JAMB STUDS OF OPENINGS. COLUMNS MUST HAVE A CONTINUOUS LOAD PATH TO FOUNDATION.

STEP TOP OF

WALL, SEE PLAN-

- UNLESS NOTED OTHERWISE, INSTALL TWO LENGTHS OF SOLID BLOCKING X JOIST DEPTH X 12 INCHES LONG IN FLOOR FRAMING UNDER COLUMN LOADS. BUILT-UP STUD COLUMNS SHALL CONSIST OF 2X4, 2X6, OR 2X8 STUDS WITH NUMBER OF LAMINATIONS NOTED ON PLAN AND
- EACH LAMINATION SHALL BE NAILED TOGETHER WITH (2) ROWS OF 12D GUN NAILS (0.131"Ø X 3 1/4") @ 6" FULL HEIGHT OF COLUMN. DO NOT SPLICE LAMINATIONS. ALL BEAMS SHALL BE BRACED AGAINST ROTATION AT POINTS OF BEARING. PROVIDE CONTINUOUS WALL STUDS EACH SIDE OF OPENINGS EQUAL TO ONE-HALF OR GREATER THE NUMBER OF STUDS
- INTERRUPTED BY OPENING UNLESS NOTED OTHERWISE. ALL WALL STUDS SHALL BE CONTINUOUS FROM FLOOR TO FLOOR OR FROM FLOOR TO ROOF. PROVIDE SOLID BLOCKING OR RIM JOISTS AT ALL JOIST SUPPORTS AND JOIST ENDS.
- SOLE PLATE AT ALL PERIMETER WALLS AND AT DESIGNATED SHEAR WALLS SHALL BE NAILED WITH (3) 0.131"ØX3" NAILS AT 16" ALL ROOF RAFTERS, JOISTS, TRUSSES, BEAMS SHALL BE ANCHORED TO SUPPORTS WITH METAL FRAMING ANCHORS.

INSPECTIONS AND TESTING SHALL BE PERFORMED BY A QUALIFIED INSPECTOR IN ACCORDANCE WITH IRC SECTION R109. THE INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING

EXCEPT AS NOTED. THE INSPECTIONS OUTLINED IN THE IRC ARE IN ADDITION TO, AND BEYOND THE SCOPE OF, PERIODIC STRUCTURAL OBSERVATIONS. STRUCTURAL OBSERVATIONS ARE INCLUDED IN THE STRUCTURAL ENGINEERING DESIGN AND CONSTRUCTION ADMINISTRATION SERVICES PROVIDED BY THE STRUCTURAL ENGINEER.

-(2) #5 VERT W/

10" TOP HOOK

-10" HOOK WHERE 'H'

- WOOD SHEATHING: PLYWOOD AND ORIENTED STRAND BOARD (OSB) FLOOR, ROOF, AND WALL SHEATHING SHALL BE APA RATED WITH STAMP INCLUDING APA TRADEMARK AND PANEL SPAN RATING. MINIMUM FLOOR SHEATHING: 23/32" APA STURD-I-FLOOR RATED 24 INCH O.C. TONGUE & GROOVE, GLUED AND NAILED. MINIMUM ROOF SHEATHING: 19/32" OSB OR CDX PLYWOOD, APA 40/20, NAILED. MINIMUM WALL SHEATHING: 7/16" OSB OR CDX PLYWOOD, APA 24/16, BLOCKED AND NAILED.
- NAIL WALL SHEATHING WITH MINIMUM 8D GUN OR SINKER NAIL @ 4" AT PANEL EDGES, AND @ 8" AT INTERMEDIATE FRAMING EXCEPT AS NOTED. BLOCK AND NAIL ALL EDGES BETWEEN STUDS. MINIMUM (3) 8D NAILS PER STUD. NAIL ALL PLATES USING PANEL EDGE NAIL SPACING INDICATED. SHEATHE ALL EXTERIOR WALLS. SHEATHE INTERIOR WALLS AS SHOWN ON THE DRAWINGS.
- SHEATHING SHALL BE CONTINUOUS FROM BOTTOM PLATE TO TOP PLATE. CUT IN "L" AND "T" SHAPES AROUND OPENINGS. LAP SHEATHING OVER RIM JOISTS A MINIMUM 4" AT ALL FLOORS TO TIE UPPER AND LOWER STUD WALLS TOGETHER. MINIMUM HEIGHT OF SHEATHING PANELS SHALL BE 16" TO ENSURE THAT PLATES ARE TIED TO STUDS. MACHINE APPLIED NAILING (I.E. GUN NAILING): THE USE OF MACHINE APPLIED NAILING IS SUBJECT TO SATISFACTORY JOBSITE DEMONSTRATION AND THE APPROVAL BY THE PROJECT STRUCTURAL ENGINEER. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. IF NAIL HEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY.
- PLANT FABRICATED / PRE-ENGINEERED WOOD FRAMING:
- I-SERIES ROOF AND FLOOR JOISTS SHALL BE MANUFACTURED BY ILEVEL TRUS JOIST WITH STRUCTURAL WOOD FLANGES AND WEBS DESIGNED FOR STRUCTURAL CAPACITIES AND DESIGN PROVISIONS ACCORDING TO ASTM D 5055. SUBSTITUTION OF EQUIVALENT SERIES BY OTHER MANUFACTURER IS ACCEPTABLE WITH ENGINEER APPROVAL. I-SERIES ROOF AND FLOOR JOISTS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. DO NOT CUT OR NOTCH CHORDS IN ANY MANNER. HOLES IN WEBS SHALL NOT EXCEED MANUFACTURER'S PUBLISHED LIMIT CRITERIA. MEMBERS NOTED AS LVL (LAMINATED VENEER LUMBER) ON PLAN SHALL BE 1 3/4" WIDE X DEPTH INDICATED, PLANT-FABRICATED, AND HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN VALUES: $F_B = 2600 \text{ PSI}$ $F_V = 285 \text{ PSI}$ $F_{C\parallel} = 2510 \text{ PSI}$ $F_{C\perp} = 750 \text{ PSI}$ E = 2000 KSI
- MEMBERS NOTED AS LSL (LAMINATED STRAND LUMBER) ON PLAN SHALL BE PLANT-FABRICATED AND HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN VALUES: $F_B = 1700 \text{ PSI}$ $F_V = 400 \text{ PSI}$ $F_{CII} = 1400 \text{ PSI}$ $F_{CII} = 680 \text{ PSI}$ E = 1300 KSIBRIDGING AND BLOCKING SHALL BE INSTALLED ACCORDING TO THE FABRICATOR'S REQUIREMENTS.
- STRUCTURAL ERECTION AND BRACING REQUIREMENTS:
- THE STRUCTURAL DRAWINGS ILLUSTRATE AND DESCRIBE THE COMPLETED STRUCTURE WITH ELEMENTS IN THEIR FINAL POSITIONS, PROPERLY SUPPORTED, CONNECTED, AND/OR BRACED. THE STRUCTURAL DRAWINGS ILLUSTRATE TYPICAL AND REPRESENTATIVE DETAILS TO ASSIST THE GENERAL CONTRACTOR. DETAILS SHOWN APPLY AT ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED. ALTHOUGH DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT EVERY DETAIL IS ILLUSTRATED AND NOT EVERY EXCEPTIONAL CONDITION IS ADDRESSED.
- ALL PROPRIETARY CONNECTIONS AND ELEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS. ALL WORK SHALL BE ACCOMPLISHED IN A WORKMANLIKE MANNER AND IN ACCORDANCE WITH THE APPLICABLE CODES AND
- LOCAL ORDINANCES. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL WORK, INCLUDING LAYOUT AND DIMENSION VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF SUBCONTRACTORS. ANY DISCREPANCIES OR OMISSIONS DISCOVERED IN THE COURSE OF THE WORK SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR RESOLUTION. CONTINUATION OF WORK WITHOUT NOTIFICATION OF DISCREPANCIES RELIEVES THE ARCHITECT AND STRUCTURAL ENGINEER FROM ALL CONSEQUENCES. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE STRUCTURAL DRAWINGS DO NOT DESCRIBE METHODS OF
- CONSTRUCTION. THE GENERAL CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO TEMPORARY BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
- TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND ANY OTHER SUPPORTING ELEMENTS ARE IN PLACE. THE ARCHITECT AND STRUCTURAL ENGINEER BEAR NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTIONS OF THESE ITEMS. THESE PLANS HAVE BEEN ENGINEERED FOR CONSTRUCTION AT ONE SPECIFIC BUILDING SITE. BUILDER ASSUMES ALL RESPONSIBILITY FOR USE OF THESE PLANS AT ANY OTHER BUILDING SITE. PLANS SHALL NOT BE USED FOR
- CONSTRUCTION AT ANY OTHER BUILDING SITE WITHOUT SPECIFIC REVIEW BY THE ENGINEER. PRECAUTIONARY NOTES ON STRUCTURAL BEHAVIOR: INTERIOR ARCHITECTURAL FINISH DETAILING MUST ACCOMMODATE THE RELATIVE DIFFERENTIAL MOVEMENTS OF SUPPORTING STRUCTURAL ELEMENTS. WHERE THE ROOF FRAMING ELEMENT SPANS ARE LONG, APPLIED LOADING WILL NATURALLY CAUSE SUBSTANTIAL DEFLECTION. INTERIOR ELEMENTS HUNG FROM THE ROOF STRUCTURE WILL DEFLECT WITH THE ROOF.
- THE FLOOR IS A FLOATING CONCRETE SLAB-ON-GRADE AND MAY EXPERIENCE MOVEMENTS INDEPENDENT OF THE STRUCTURAL FOUNDATIONS. INTERIOR ELEMENTS SUPPORTED ON THE SLAB-ON-GRADE FLOOR WILL MOVE WITH THE FLOOR. INTERIOR ELEMENTS SUPPORTED ON FOUNDATIONS AND COLUMNS WILL NOT EXPERIENCE SIMILAR OR MEASURABLE MOVEMENTS. USE OF THESE PLANS IS INDICATION THAT THE OWNER/BUILDER ACCEPTS THE RISKS ASSOCIATED WITH BUILDING ON THIS SITE, ESPECIALLY THOSE RELATED TO SLAB ON GRADE CONSTRUCTION IN FINISHED AREAS. 410 STRUCTURAL LLC WILL NOT BE HELD LIABLE FOR DAMAGES CAUSED BY SLAB MOVEMENT.
- LETTERS OF CONSTRUCTION COMPLIANCE: THE GENERAL CONTRACTOR SHALL DETERMINE FROM THE LOCAL BUILDING AUTHORITY, AT THE TIME THE BUILDING PERMIT IS OBTAINED, WHETHER ANY LETTERS OF CONSTRUCTION COMPLIANCE WILL BE REQUESTED FROM THE STRUCTURAL ENGINEER. TWO DAY ADVANCE NOTICE SHALL BE GIVEN WHEN REQUESTING SITE VISITS NECESSARY AS THE BASIS FOR THE COMPLIANCE LETTER.

NOT TO SCALE

IS LESS THAN 2'-0 TYP: 36" STEP FOOTING, -FOOTING, SEE PLAN —

SEE PLAN

Typical Concrete Wall Steps and Openings NOT TO SCALE

	LEG	END	
□XK, YT	"X" King studs, "Y" Trimmer studs, studs to match wall thickness		CMU
DC	Indicates column continuous through level shown		Concrete
	Indicates column above level shown, see next level framing plan for size; install squash blocking in floor cavity of equal size and equal column size below to foundation - unless noted otherwise		Earth fill
XXXX, Post	Indicates column type <u>below</u> level shown Post indicates shorter column that extends vertically between beams		Porous fill (i.e. gravel)
- • XX'-XX"	Indicates top of concrete slab or wood subfloor elevation		Interior wood bearing wall
⁷⁷⁷ 777,	Indicates step in floor elevation		Wood shear wall
SLOPE	Indicates direction of slope	SWX	Indicates shear wall. See schedule for sh type and nailing
O FD	Indicates floor drain	HDX	Indicates holdown. See schedule for desc
(XX'-XX")	Indicates top of footing elevation		Beam, Joist, or Truss connected to support hanger
FXX	Continuous spread footing. See schedule for size and reinforcing		Beam, Joist, or Truss connected to support concealed hanger
FX.X	Isolated pad footing. See schedule for size and reinforcing	[XX'-XX"]	Indicates top of steel beam elevation
TC=XX'-XX" BC=XX'-XX"	Indicates top of concrete elevation Indicates bottom of concrete elevation	MFX	Indicates rigid frame
TL=XX'-XX"	Indicates top of concrete ledge elevation		Moment connection
PKT XxYxZ XX'-XX"	Indicates beam pocket in concrete wall (X=width, Y=height, Z= ledge depth in inches) with bottom of pocket elevation	ВРХ	Indicates Baseplate
	Indicates step in top of concrete wall or ledge elevation. Arrow points toward lower elevation	/EPX [XX'-XX"]	Indicates Embed Plate Top of Embed Elevation

EQ EQ

O

Length

Hole size to be 1/16" larger than anchor bolt diameter

See details for additional installation requirements

Type C

Length Width Thickness A B

_

C1 5" 9" 1/2" 0" 0" Post-Installed (2) 5/8" Wedge Anchors

D1 8" 8" 3/4" 0" 0" Cast-in-Place (4) #5 A706 Rebar

2.E70XX electrodes 3.Angle and Shear plate Fy = 36 ksi 4. Minimum web thickness, tw, for wide flange beams is 3/16"

	<u> </u>						
Beam Size	# of 3/4"Ø Bolts	Length of Angle/Plate	Allowable Capacity				
W8, W10	2	4"	-				
W12, W14	3	8"	-				
W16	4	12"	-				

All embedd	led plates sha	all be placed v	with exposed	face flush to expos	ed face of mag	sonry or concre	ete w
					Number o	Number of Anchors	
Mark	Width	Height	Thickness	Anchor Type	Rows	Columns	
1	6"	1'-4"	1/2"	5/8"x4" HAS	3	2	
2	6"	8"	1/2"	5/8"x4" HAS	2	1	
3	4"	6"	1/2"	5/8"x4" HAS	2	1	
4	6"	1'-4"	1/2"	#5 x 18" A706	3	2	
5	8"	8"	1/2"	#5 x 18" A706	2	2	
6	3"	6"	1/2"	5/8"x4" HAS	2	1	

S0.1

		Concrete Footing Schedule					
All reinforcement to be installed 3" clear from bottom of footing unless							
	Mark	Width	Length	Thickness	Reinforce		
	F2.0	2'-0"	2'-0"	9"	(2) #5 each way		
	F3.0	3'-0"	3'-0"	9"	(3) #5 each way		
	F3.0R	3'-0"	3'-0"	9"	(3) #5 each way, top		
	F4.0	4'-0"	4'-0"	1'-0"	(4) #5 each way		
	F5.0	5'-0"	5'-0"	1'-0"	(4) #5 each way		
	F5.0R	5'-0"	5'-0"	1'-0"	(4) #5 each way, top		
	F6.0	6'-0"	6'-0"	1'-2"	(5) #5 each way		
	F16	1'-4"	<varies></varies>	9"	(2) #5 continuous		
	F18	1'-6"	<varies></varies>	9"	(2) #5 continuous		
	F24	2'-0"	<varies></varies>	9"	(2) #5 continuous		
	F36	3'-0"	<varies></varies>	9"	(3) #5 continuous, #5 @ 1		

S1.1

S1.3

Roof Framing Plan

Hanger Schedule									
Metal framing anchors shown or required, shall be Simpson Strong-Tie or equal code approved connectors and installed with the number and type of nails recommended by the manufacturer to develop the maximum rated capacity. Note that heavy-duty hangers and skewed hangers may not be stocked locally and require special order from the factory.									
Mark	Model	Туре	Header Fasteners	Joist Fasteners					
1	ITS2.06/11.88	Top Flange	(6) 0.148" x 1 1/2" Nails	Strong-Grip seat					
2	ITS2.06/9.5	Top Flange	(8) 0.148" x 1 1/2" Nails	(4) 0.148" x 1 1/2" Nails					
3	HU7	Face Mount	(12) 0.148" x 3" Nails	(4) 0.148" x 1 1/2" Nails					
4	HU412 - Concrete	Face Mount	(16) 1/4"ØX1 3/4" Titen Screws	(6) 0.148" x 3" Nails					
5	HUC410	Concealed Hanger	(14) 0.148" x 3" Nails	(6) 0.148" x 3" Nails					
6	HGUS5.50/12	Face Mount	(56) 0.148" x 3" Nails	(20) 0.148" x 3" Nails					
7	HHUS412	Face Mount	(30) 0.162" x 3" Nails	(10) 0.162" x 3" Nails					
8	LUS28Z	Face Mount	(6) 0.148" x 3" Nails	(3) 0.148" x 3" Nails					
9	LUS210	Face Mount	(8) 0.148" x 3" Nails	(4) 0.148" x 3" Nails					
10	LSSJ210LZ	Face Mount	(6) 0.148" x 3" Nails	(6) 0.148" x 3" Nails					
11	MIT11.88	Top Flange	(4) 0.148" x 3" Nails	(2) 0.148" x 3" Nails					
12	MIT411.88	Top Flange	(4) 0.148" x 3" Nails	(4) 0.148" x 3" Nails					
13	L70	Concealed Hanger	(4) 0.148" x 1 1/2" Nails	(4) 0.148" x 1 1/2" Nails					
14	L90	Concealed Hanger	(5) 0.148" x 1 1/2" Nails	(5) 0.148" x 1 1/2" Nails					
15	Toenails	Nailed Connection	(8) 0.148" x 3" Toenails						
16	Bearing	Notch and bear on bottom flange							

PLAN NOTES:

- See S0.1 for general structural notes, complete schedules, and legends
 See Architectural drawings for size and location of all floor, wall, and roof openings
 <u>Exterior Framed Walls (UNO)</u>: 2x6 studs @ 16" sheathed with 7/16" CDX plywood or OSB, APA 24/16 on exterior face. Nail wall sheathing with 8d gun nails (0.113"ø x 2 3/8") @ 4" at panel edges and boundaries and @ 12" in field of panel. <u>Block and nail all edges between studs</u>.
 <u>Wall Opening Construction (UNO)</u>: (2) 2x8 header with minimum (1) 2x6 trimmer and (1) 2x6 king stud each end.
- All headers are dropped unless noted otherwise on plan
 <u>Interior Bearing Wall Construction (UNO)</u>: 2x6 @ 16" sheathed with 1/2" gypsum wallboard on each face. Attach with #6x1 1/4" drywall screws @ 8" along panel edges and @ 12" in field of
- panel.
 <u>Roof Construction (UNO)</u>: 2x12 @ 24" rafters with 5/8" nominal APA 40/20 rated sheathing, see plan. Fasten sheathing to rafters, rims, flush beams, and ledgers with 0.113"ø x 2 3/8" nails @ 4" along panel edges and @ 8" along intermediate framing members. Lay panels perpendicular to remember and edgers are plainter and the provide the providet the providet
- along particle orgonality of along intermediate naming members. Lay panels perpendict to framing members and stagger panel joints.
 <u>Rafter Tie Down (UNO)</u>: H2.5a clip at bearing at each rafter. Install (2) clips within 6'-0" of corners.

3 Detail 3/4" = 1'-0"

4 Detail 3/4" = 1'-0"

MICHAELSHULT

S5.1

Section III, ItemB.

Metal Roofing Fascia Bridger Steel

Vintage Matte Black Alternate

Metal Siding

Blackened Hot Rolled Steel Natural Weathering

Wood Siding Garage Doors Montana Timber Products 50% Artisan Homestead + 50% Artisan Dusk Wire Brushed Fir

Windows Guardrails Structural Steel Steel Railings Black Painted/Powdercoat

Architectural Concrete Poured in Place Clear

Sealer

Stone Retaining Wall Siloam Stone

WEITZ RESIDENCE

Exterior Color Schedule Michael Shult Architect APRIL 12, 2023

TOWN OF BLUE RIVER, COLORADO MEMORANDUM

NOT CONFIDENTIAL - AVAILABLE FOR PUBLIC DISTRIBUTION ON REQUEST

TO: Michelle Eddy

THROUGH: Bob Widner, Town Attorney

FROM: Keith Martin, Deputy Town Attorney

DATE: May 1, 2024

SUBJECT: Zoning Methods to Control Housing Size and Bulk

This memorandum provides a brief overview of some of the various land-use controls commonly employed to limit the size and bulk of residential homes. Size and bulk controls are often used to limit the new development and redevelopment of lots and prevent what has been colloquially referred to as "McMansions" or larger homes which can be inconsistent with the character of the existing developed neighborhood.

<u>Authority</u>

Colorado's Zoning Enabling Act provides that a community may enact "bulk" regulations for buildings.¹ "Bulk" regulations are a combination of controls (lot size, floor area ratio, lot coverage, open space, yards, height, and setback) that determine the maximum size and placement of a building on a zoning lot.

Types of Bulk Controls

Minimum Lot Size

Nearly all land use and zoning codes include minimum lot size requirements for zone districts. For example, the Town of Blue River's Land Use Code (LUC) sets a minimum lot size of 80,000 square feet in the R-1 Zone District. This standard prevents lots larger than 80,000 square feet from being subdivided into smaller lots and prevents existing lots that are smaller than 80,000 square feet from being feet from being further subdivided into smaller lots.

¹ "... [F]or the purpose of promoting health, safety, morals, or the general welfare of the community, including energy conservation and the promotion of solar energy utilization, the governing body of each municipality is empowered to regulate and restrict the height, number of stories, and size of buildings and other structures, the percentage of lot that may be occupied, the size of yards, courts, and other open spaces, the density of population, the height and location of trees and other vegetation, and the location and use of buildings, structures, and land for trade, industry, residence, or other purposes." C.R.S. § 31-23-301.

Minimum lot size requirements help control the density of housing in a neighborhood and preserve view and open space. Reasonable minimum lot size requirements are valid.²

Setbacks

An ordinance may mandate building location by requiring minimum front, side and rear yards in residential districts.³ Setbacks are universally common in land use codes in order to prevent certain areas of a lot from development and, in turn, limiting the area of a lot that can be developed.

IMPORTANT NOTE: Blue River's LUC uses both *minimum lot size* and *setbacks* to define the "Buildable Area" of a lot. However, where a lot is larger in size and the setbacks are relatively short, the Buildable Area can potentially accommodate a significantly large residential structure. For example, a 40,000 square foot lot that is accompanied by front and rear yard setbacks of 25 feet and size yard setbacks of 15 feet, creates a potential Buildable Area as great as **25,500** square feet (assuming the lot is relatively flat and not encumbered by undevelopable slopes or easements). Even where the owner limits the footprint of the structure to 10,000 square feet, a one, two-, or three-story residence will dwarf most homes in the neighborhood. Granted, not all owners will construct a residence of such size, but the potential will remain.

Maximum Lot Coverage

A zoning ordinance can specify a <u>percent</u> of lot coverage in a residential zone to prevent building to the maximum bulk permitted by lot area, setback and height dimensions alone. For example:

² *Di Salle v Giggal*, 128 Colo 208, 261 P2d 499 (1953)

³ In *Gorieb v. Fox*, 274 U.S. 603, 47 S. Ct. 675, 71 L. Ed. 1228, 53 A.L.R. 1210 (1927), the United States Supreme Court upheld the general validity of setbacks to further the general goals of open space, light and air, and safety from fire; *see also Flinn v Treadwell*, 120 Colo 117, 207 P2d 967 (1949).

Maximum Building Size

The Town could set minimum and maximum size for residential buildings, generally based on aesthetic and community character concerns. Limits on the size of residential structures have been upheld by many courts. As an example, the Town can limit all homes in the R-1 Zone District to a maximum of 4,500 square feet (regardless of the size of the lot).

Maximum Building Footprint (First Story)

The Town could set a maximum building footprint (or the maximum size of the first story of the residential structure on a lot). Such a limitation, together with the zone district's maximum building *height*, will effectively limit the total size or bulk of the lot's residential structure. For example, a maximum first story building footprint of 2,000 square feet (regardless of the size of the lot) will limit the lot to a one-story residential home to 2,000 square feet and, depending on the maximum building height allowed, a two-story home of 4,000 square feet or three-story home of 6,000 square feet could theoretically be constructed (assuming no overhang of higher floors.

Floor Area Ratio (FAR)

Floor area ratio or "FAR" is a metric used to measure how large a building on a lot is relative to the lot's size and is another device that permits variable dimensions within an over-all volume limit. Most of the ordinances that employ it also retain some if not all of the ordinary size limiting controls (e.g., minimum lot size, setbacks, and height). However, it does not in any way control the placement of that volume on the land. Therefore, if placement is a factor to be regulated, other bulk controls are required.

In nearly every ordinance in which it is used, a floor area ratio is obtained by the following simple formula:

FAR = floor area / lot area

In practice, this ratio is constant for a zone. For example, on a 10,000 square foot lot, a FAR of 0.5, allows a maximum 5,000 square foot building. A floor area ratio of 1.0 means that floor area may equal the lot area (10,000 square feet).

Although setting a floor area ratio affects volume, shape, and spacing of buildings on the lot, it does not determine a particular shape or spacing. Rather, it permits a choice. The following diagram (Figure 1) shows three of many possibilities under FAR 1.0, 4.0, and 9.0 and demonstrates that shape, height, and arrangement on a lot may vary widely.

Illustrations of Floor Area Ratios. Source: *A New Zoning Plan for the District of Columbia*. Harold M. Lewis, 1956.

Bulk Plane Requirements

Bulk plane standards lower the permitted height of development near front, side and/or rear property lines by establishing an inclined plane over which buildings may not protrude. By pushing taller building elements towards the center of a lot, a bulk plane may be used to reduce looming impacts on neighboring properties and promote access to light and air.

Bulk plane standards are best suited to larger municipalities with planning staff due to the complexity of the tool and its application. If more information is desired about this method of controlling building size, bulk, and mass, please contact me.

As always, please let us know of any questions or concerns.