

**TOWN OF MOUNTAIN VILLAGE
REGULAR DESIGN REVIEW BOARD MEETING
THURSDAY MAY 2, 2019 10:00 AM
2nd FLOOR CONFERENCE ROOM, MOUNTAIN VILLAGE TOWN HALL
455 MOUNTAIN VILLAGE BLVD, MOUNTAIN VILLAGE, COLORADO
AGENDA**

| | Time | Min. | Presenter | Type | |
|-----|-------|------|-----------|----------------------------------|---|
| 1. | 10:00 | | Chair | | Call to Order |
| 2. | 10:00 | 5 | Clerk | Action | Oath of Office Appointed DRB Members |
| 3. | 10:05 | 5 | Starr | Action | Reading and Approval of Summary of Motions of the of the March 28, 2019 Design Review Board Meeting. |
| 4. | 10:10 | 20 | Miller | Action/ Recommendation | Interview New Applicants for Design Review Board vacated open seat with recommendation to Town Council |
| 5. | 10:30 | 30 | Starr | Public Hearing Quasi-Judicial | Consideration of a Minor Revision's application for synthetic roofing, on Lot 601-34, 307 Fairway Drive, raised to class 3 design review. |
| 6. | 11:00 | 60 | Starr | Public Hearing Quasi-Judicial | Consideration of a Design Review: Final Architectural and Site Review application for a new single-family residence on Lot 165-13, 230 Cortina Drive. |
| 7. | 12:00 | 30 | | | LUNCH |
| 8. | 12:30 | 60 | Miller | Action Legislative | Review and Recommendation of an Ordinance Amending the Community Development Code Sections 17.15.12 – Lighting Regulations, 17.5.15 – Commercial, Ground Level and Plaza Area Design Regulations, and 17.8 – Definitions. |
| 9. | 1:30 | 20 | Haynes | Action Legislative | Review and Recommendation to Town Council regarding an amendment to the Community Development Code to allow for staff level review of synthetic roof materials at Section 17.5.6.C.3. Roof Material. |
| 10. | 1:50 | | | | Adjourn |

Please note that this Agenda is subject to change. (Times are approximate and subject to change)
455 Mountain Village Blvd., Suite A, Mountain Village, Colorado 81435
Phone: (970) 369-8242 Fax: (970) 728-4342

Individuals with disabilities needing auxiliary aid(s) may request assistance by contacting Town Hall at the above numbers or email: cd@mtnvillage.org. We would appreciate it if you would contact us at least 48 hours in advance of the scheduled event so arrangements can be made to locate requested auxiliary aid(s).

**SUMMARY OF MOTIONS
TOWN OF MOUNTAIN VILLAGE
DESIGN REVIEW BOARD MEETING
THURSDAY MARCH 28, 2019**

Call to Order

Vice-Chairman Luke Trujillo called the meeting of the Design Review Board of the Town of Mountain Village to order at 10:05 a.m. on Thursday, March 28th, 2019 in the Town Hall Conference Room at 415 Mountain Village Boulevard Mountain Village, CO 81435.

Attendance

The following Board members were present and acting:

Phil Evans
Greer Garner
Dave Eckman
Liz Caton (Alternate)
Luke Trujillo
Keith Brown

The following Board members were absent:

Jean Vatter (Alternate)
David Craige
Banks Brown

Town Staff in attendance:

Michelle Haynes, Planning & Development Services Director
Sam Starr, Planner

Public in attendance:

| | |
|-------------------|--|
| Robert Stenhammer | rstenhammer@telski.com |
| Lea Sisson | lea@leasissonarchitects.com |
| Paul Hoskinson | phoskinson@cedur.com |
| Cath Jett | cathjett@gmail.com |
| Tim Losa | tlosa@zehren.com |
| Steve Margetts | gettsbuilt@outlook.com |
| Chris Hawkins | chris@alpineplanningllc.com |

Reading and Approval of Summary of Motions for the March 7th, 2019 Design Review Board Meeting Minutes.

On a **Motion** made by Phil Evans and seconded by Greer Garner, the DRB voted 6-0 to approve the March 7th, 2019 Summary of Motions.

Consideration of a Design Review application for CeDUR synthetic roofing, which requires a specific approval from the DRB on lot 601, Unit 34, Knoll Estates, 307 Fairway Drive.

Planner Sam Starr presented the consideration of specific approval for CeDUR synthetic roofing on Lot 601, Unit 34, 307 Fairway Drive. Paul Hoskinson of CeDUR presented on behalf of the applicant.

There was no public comment.

On a **Motion** made by Phil Evans and seconded by David Eckman, the DRB voted 6-0 to approve a specific approval for CeDUR synthetic roofing on Lot 601 Unit 34, Knoll Estates, 307 Fairway Drive, with the following condition:

1. *Applicant must use copper flashing.*

Consideration of a Design Review: Initial Architectural Site Review Application for a new single-family residence on Lot 165, Unit13, Cortina Land Condominiums, 230 Cortina Drive.

Planner Sam Starr presented the consideration of an Initial Architectural Site Review application for a new single-family residence on lot 165, Unit 13, Cortina Land Condominiums, 230 Cortina Drive. Architect Lea Sisson presented on behalf of the applicant.

There was no public comment.

On a **Motion** made by Keith Brown and seconded by the DRB voted 6-0 to approve a Final Review Application for a new single-family residence on Lot 165, Unit13, Cortina Land Condominiums, 230 Corina Drive, with the following conditions:

1. *A monumented land survey shall be prepared by a Colorado public land surveyor to establish the maximum building height and the maximum average building height. This condition shall be carried over to any Final Review Approval as it is a construction condition.*
2. *A monumented land survey of the footers will be provided prior to pouring concrete to determine there are no encroachments into the GE. This condition shall be carried over to any Final Review Approval as it is a construction condition.*
3. *Owners Applicant will need to adjust the address monument to make the address monument numbers downlit instead of backlit. Numbers will need to be coated with a reflective paint.*
4. *Reconsider lighting plan as proposed to minimize amounts of deck lighting, subject to review of the Design Review Board.*
5. *Drainage needs to be specified in a quantitative sense with input of Colorado Licensed Professional Engineer.*
6. *Provide a cross section of construction schematics for the DRB to have confidence that the engineering will not change the appearance of the building as presented to the DRB.*

Consideration of a Design Review: Initial Architectural Site Review Application for a Multi-Family Development within the expansion area of Lot 600A consisting of Six (6) Condominium Units; Read and Recommendation of a Resolution to Town Council for a Density Transfer and Rezone from Four (4) Condo Units to Six (6) Condo Units.

Planner Sam Starr presented the consideration of an Initial Architectural Site Review application for a multi-family development within the expansion area of Lot 600A, Elkstone, consisting of Six (6) Condominium Units; and the reading and recommendation of a Resolution to Town Council for a density transfer and rezone from four (4) condo units to six (6) condo units. Chris Hawkins of Alpine Planning LLC, and Tim Losa of Zehren Architects presented on behalf of the applicant. Board Member Dave Eckman recused himself due to a conflict of interest regarding financial interest.

There was no public comment.

On a **Motion** made by Phil Evans and seconded by Keith Brown, the DRB voted 5-0 to approve 1) Initial Architectural Site Review Application for a Multi-Family development within the expansion area of Lot 600A, Elkstone, and 2) recommend approval to Town Council for a density transfer and rezone from four (4) condominium units to six (6) condominium units, with the following conditions:

1. *Prior to submitting for the Final Review, the Owner shall either (A) obtain Town Council approval for the Rezoning Process and Density Transfer Process development applications; or (B) revise the proposed plans to include only four condominium units.*
2. *Prior to Final Architectural Review, the applicant shall provide staff a cumulative calculation of lot coverage for Lot 600A in its entirety, including existing structures not within the expansion area.*
3. *Prior to Final Architectural Review, the applicant shall provide a total calculation of exterior areas to have snow melt systems, and revise page L1.01 to indicate those areas in the plan set.*
4. *Prior to the Final Architectural Review, the applicant must submit a complete grading and erosion control plan documenting all cuts, fills, stormwater mitigation and drainage plans. The civil plans for the development of the site must be prepared by a Colorado PE.*
5. *Prior to Final Architectural Review, the applicant must provide additional information related to the address monument for the project, including location, illumination methods, heights, and any other requirements that may be applicable for addressing.*
6. *Prior to Final Architectural Review, the applicant shall submit a full wildfire mitigation plan demonstrating all mitigation areas as Zone 1, 2, or 3. In addition, they must provide documentation to planning staff demonstrating a certified forester, arborists, or landscape architect has determined the extent of any thinning work required for forest health.*
7. *Prior to Final Architectural Review, the applicant will be required to update the landscaping plan in order to demonstrate irrigation system design, methods to preserve existing trees which are to remain, along with specific planting schedules for all proposed shrubs and plantings on the site.*
8. *Prior to Final Architectural Review, the applicant must address the HOA parking requirements of no less than one (1) and no more than five (5) spaces reserved for HOA uses.*
9. *Prior to Final Architectural Review, staff is recommending that the applicant provide a full lighting plan including an iso-metric foot-candle study along with full cut sheets for all the proposed lighting fixtures for the site. The iso-metric foot candle study should specifically address light spill into the wetlands / riparian areas of Elk Pond.*
10. *Prior to Final Architectural approval, staff is requesting a full Construction Mitigation Plan that addresses but is not limited to the following items: construction fencing, material stockpiling, construction parking, crane staging, tree protection, storm water mitigation, and project phasing.*

11. *Prior to issuance of a CO the property owner will enter in to a General Easement Encroachment Agreement with the Town of Mountain Village for the subterranean soil nail encroachments to the south of the development.*
12. *Prior to issuance of a CO, the property owner will submit a condominium map or condominium map amendment recognizing the final development.*
13. *A monumented land survey shall be prepared by a Colorado public land surveyor to establish the maximum building height and the maximum average building height.*
14. *A monumented land survey of the footers will be provided prior to pouring concrete to determine there are no additional encroachments into the GE.*

Condition of a recommendation regarding a density transfer and rezone:

1. *The property owner must demonstrate ownership of the requisite density prior to issuance of a building permit.*

Discussion Regarding Accessory Structures as found in Chapter 17.3.3 Use Table, 17.3.4 Specific Zone District Requirements, and Chapter 17.8 Definitions, of the Community Development Code.

Planner Sam Starr presented the work session discussion regarding Accessory Structures as found in Chapter 17.3.3 Use Table, 17.3.4 Specific Zone District Requirements, and Chapter 17.8 Definitions, of the Community Development Code.

No public comment was provided.

Adjourn

On a unanimous **Motion** the Design Review Board voted 4-0 to adjourn the March 28th, 2019 meeting of the Mountain Village Design Review Board at 2:21 p.m.

Prepared and Submitted by,

Sam Starr, AICP
Planner
Town of Mountain Village

Hello Jane,

This letter is my expression of interest in a position on the Mountain Village Design Review Board. I have been a full time resident of the Telluride area for 11 years and a resident of Mountain Village for the last 5. Before this I was a contractor in Breckenridge and lived in Jackson Hole Wyoming and Hood River Oregon. I am familiar with mountain and historic aesthetic as well as the inevitability of change and the necessity of responsible design. I am a licensed General Contractor in Mountain Village and have been working in the area as a General Contractor, Project Manager and Carpenter for a decade. Most recently I worked closely with Telluride Ski and Golf on the Mountain View apartment complex, from design through construction.

My wife and I, along with our two children, are building a house in the Boulders neighborhood this year. We are long term residents and I am looking forward to any opportunity to engage in and serve our community.

Thank you,

Adam Miller

Jane Marinoff

From: David Heaney <dheaney@heaneyrosenthal.com>
Sent: Thursday, February 14, 2019 10:55 AM
To: Jane Marinoff
Subject: DRB Vacancy
Attachments: ATT00001.txt; JDH Resume 2019.docx

Dear Ms. Marinoff,

Please accept this email as my application to fill one of the open seats on the Design Review Board. I have been a Mountain Village homeowner for nearly 20 years. My address is 140 San Sophia.

My resume is attached. I have considerable experience with community development generally and Mountain Village specifically. I am aware of the critical phase we are in as our community matures and would like to participate.

Thank you very much. Would you kindly reply to this email to confirm receipt?

David Heaney

J. DAVID HEANEY

9 Greenway Plaza, Suite 2400
Houston, Texas 77046
(713) 341-5752 (o)
(713) 724-4859 (cell)

Home Address:
3260 Chevy Chase
Houston, Texas 77019

EMPLOYMENT

- (1994-) **HEANEY ROSENTHAL INC.**
Co-Founder and Chairman. Heaney Rosenthal is a private investment company.
- (1986-94) **STERLING CHEMICALS, INC. – FOUNDING INVESTOR**
Vice President-Finance and Chief Financial Officer (1992-94).
Administrative Vice President (1986-92). Sterling Chemicals, Inc. was a NYSE commodity chemicals producer.
- (1974-86) **BRACEWELL & PATTERSON (NOW BRACEWELL).**
Partner. Bracewell & Patterson is a Houston, Texas-based law firm. Transaction work in Oil & Gas, Real Estate, Banking and General Corporate Areas

EDUCATION

- (1971-74) **UNIVERSITY OF TEXAS LAW SCHOOL**, Austin, Texas.
J.D. Degree. Executive Editor, *Texas Law Review*.
- (1966-70) **UNIVERSITY OF TEXAS**, Austin, Texas.
B.B.A. with Honors in Accounting.

MILITARY

- (1971-78) **UNITED STATES AIRFORCE RESERVE** - Attended Officer Training School and was assigned to the 433rd Tactical Airlift Wing, Kelly Air Force Base, Texas. Honorably discharged as First Lieutenant, USAF Reserve, 1978.

ACTIVITIES AND INTERESTS

Director, Zions Bancorporation. Director of Amegy Bank of Texas. Founding director of Southwest Bank of Texas, now Amegy Bank. Director, Lone Star Flight Museum. Former director and founding investor of Southwest Concrete Products, L.L.P., now a part of Headwaters, Inc. Chairman, Shook Mobile Technology. Past member and President of Board of Directors of River Oaks Property Owners Association. Director and officer of River Oaks Country Club. Director of Buffalo Bayou Partnership. Past member of Board of Directors Memorial Hermann Healthcare System.

Jane Marinoff

From: Jean Vatter <jean@telluridevillagerealestate.com>
Sent: Friday, January 18, 2019 2:26 PM
To: Jane Marinoff
Subject: letter of intent DRB

Dear DRB Board,

I have lost count but I think I have volunteered for the DRB as an alternate for the last four years. It has been a great pleasure to work amongst so many thoughtful and intelligent MV staff and DRB members. There is so very much to learn: from the CDC, history of DRB deliberations, looking at plans, the ongoing architecture shift in tastes and how we wade through the regulations while fairly supporting the local designers and owners with their vision. I think it takes at least a few years to understand the culture of the meetings and including but not limited to all the aforementioned elements. Although challenging at times remaining a DRB board member is something that I would like to keep volunteering for. I feel I have a solid base of understanding and would like to continue to build that and will be a benefit to both the DRB Board and the community.

I really appreciate your time in considering me for another term and I am very happy being an alternate so that I can keep up with my 16 year old son and his baseball tournaments etc.

--

Best,

JEAN M. VATTER
Broker, VILLAGE REAL ESTATE, LLC



Fairmont

Authorized agents for:

Fairmont Heritage Place Franz Klammer Lodge
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PLANNING & DEVELOPMENT SERVICES
PLANNING DIVISION
455 Mountain Village Blvd.
Mountain Village, CO 81435
(970) 728-1392

DATE: April 20, 2019
TO: Design Review Board
FROM: Sam Starr, Planner
FOR: DRB Public Hearing on May 2nd, 2019
RE: Consideration of a Minor Revisions application for synthetic roofing, on Lot 601, Unit 34, Knoll Estates 307 Fairway Drive, raised to class 3 design review.

PROJECT GEOGRAPHY

Legal Description: Lot 601, Unit 34, Knoll Estates
Address: 307 Fairway Drive
Applicant/Agent: Paul Hoskinson
Owner: Barbra and Walter Hinterkopf
Zoning: Multi-Family
Existing Use: Multi-Family

ATTACHMENTS

- Exhibit A: Narrative
- Exhibit B: Existing Flashing Images

BACKGROUND

The existing roofing on Lot 601 Unit 34, Knoll Estates is cedar shake which is no longer allowed in Mountain Village. At the March 28, 2019 Design Review Board Meeting the applicant proposed to replace the existing cedar shake with a CeDUR "Live Oak" synthetic roofing that required DRB review and approval. The DRB passed the specific approval application unanimously, with the following condition:

1. *Applicant must use copper flashing.*

Since the March DRB meeting, applicant has decided to pursue a "Walden" color instead of the approved "Live Oak" color. Moreover, applicant seeks a specific approval to use CMG dark bronze powder coated steel flashing in lieu of the DRB requirement provided on March 28, 2019 to use copper flashing (gutters, and downspouts are also understood to be copper). To address these minor revisions to the existing approval, staff has elevated this application to a class 3 application for the Design Review Board to consider specific approval per CDC Sections 17.5.6.C.3.d(i) and 17.5.6.C.3.i, which state:

- d. The following roofing materials outside of the Village Center shall be approved by the DRB as a specific approval that is processed as a class 3 development

application if the DRB finds the roofing material is consistent with the town design theme and the applicable Design Regulations:

- i. Synthetic roofing material that accurately emulates wood shake, concrete and slate tile or any other roofing material permitted or existing in Mountain Village.
 - (a) Synthetic roofing material shall be:
 - (i.) Durable
 - (ii.) High strength, both material and shape;
 - (iii.) Low absorption or permeability;
 - (iv.) High freeze/thaw damage resistance;
 - (v.) Color throughout the tile (not surface applied); and
 - (vi.) High-quality design that fits within the architectural context of the building and the architectural context of the surrounding area.

(...)

- i. Roof flashing, Gutters Downspouts and Similar Hardware:
 - i. In the Village Center, all exposed metal flashing, gutters, downspouts and other roof hardware shall be copper except when structural requirements dictate the use of stronger materials such as for snow fences.
 - ii. In all other areas, other metal guttering besides copper may be approved by the review authority to allow it to match roofing material, such as the use of rusty steel guttering on a rusty metal roof.
 - iii. When steel or iron are used, they shall be either rusted to match the roof or finished with a baked-on enamel paint or, subject to the prior approval of the review authority, a silicon modified alloy or special epoxy paint system of a color approved by the review authority.

17.5.4 TOWN DESIGN THEME

A. The town design theme is directed at establishing a strong image and sense of place for the community within its mountain setting.

B. Mountain Village is located in a fragile, high-alpine environment that contains forests, streams, wetlands and mountainous topography. The natural physical features and setting of the town shall inform the design of our buildings to promote harmony between people and nature that respects and blends with its surroundings and is integrated into the landscape.

C. Architecture and landscaping within the town shall be respectful and responsive to the tradition of alpine design and shall reflect sturdy building forms common to alpine regions.

D. Architectural expression shall be a blend of influences that visually tie the town to mountain buildings typically found in high alpine environments.

E. Architecture within the town will continue to evolve and create a unique mountain vernacular architecture that is influenced by international and regional historical alpine precedents. The Town encourages new compatible design interpretations that embrace nature, recall the past, interpret our current time, and move us into the future while respecting the design context of the neighborhood surrounding a site.

F. The key characteristics of the town design theme are:

1. Building siting that is sensitive to the building location, access, views, solar gain, tree preservation, and visual impacts to the existing design context of surrounding neighborhood development.
2. Massing that is simple in form and steps with the natural topography.
3. Grounded bases that are designed to withstand alpine snow conditions.
4. Structure that is expressive of its function to shelter from high snow loads.
5. Materials that are natural and sustainable in stone, wood, and metal.
6. Colors that blend with nature.

The Design Regulations set forth herein are intended to achieve these defining characteristics.

ANALYSIS

The CeDUR "Walden" synthetic shake proposed by the applicant is a material that meets the design theme of the town, as the Walden color blends with nature and emulates a natural material. The proposed material is not a radical departure from the existing roof; therefore, the new material will not change the architectural character of the home. Although there are examples of homes that do not have copper flashing gutters and downspouts within Knoll Estates, the Design Review Board will need to weigh in on the contextual appropriateness of the steel proposed by the applicant.

SPECIFIC APPROVALS FOR THE MINOR REVISIONS APPLICATION

- Use of a CMG dark color, powder coated steel flashing, gutters, and downspouts
- CeDUR "Walden" color synthetic roofing material

STAFF RECOMMENDATION

The DRB can approve, continue, deny or modify the owner's request regarding the specific approvals contained in the minor revisions application to the roof material color and flashing, gutter and downspout material. If the DRB approves the application, below is a draft recommended motion for your consideration:

"I move to approve the application by Barbara and Walter Hinterkopf for the use of CeDUR "Walden" synthetic roofing and CMG dark color powder coated steel flashing, gutter and downspouts at Lot 601, Unit 34, Knoll Estates with the findings contained in the staff memo presented at the May 2nd, 2019 DRB meeting.

Barbra and Walter Hinterkopf

307 Fairway Drive, Mountain Village, CO

Development Review Process Application

Responses to Items Not Marked N/A

1. **Application Form and Fee Acknowledgement Form:** Attached
2. **Proof of Ownership:** Assessor's office tax report attached
3. **Agency Letter:** Attached
7. **Development Narrative:** The current cedar shake roof is in deteriorating condition. There are cracked, cupped and missing shingles over the entire roof, particularly on ridges and adjacent to valleys (see picture attached). The existing shingles are dried out and break when walked on. The current roof is a fire hazard and will be prone to leaks in the near future. It would be in the best interests of the Owner, the Town of Mountain Village and the Owners insurance company to replace the roof at this time rather than to spend money, on a recurring basis, to repair the existing roof. Because of this the Homeowner requests approval to re-roof the current residence with CeDUR synthetic shake shingles.

The residence will be re-roofed using the following procedures:

- Remove current cedar shake shingles, underlayment and metal and haul away.
- Inspect decking to determine if any needs to be replaced. If so, replace.
- Install Carlisle WIP 300 HT (high temperature) ice and water shield over entire roof surface with 2 layers in all valleys.
- Install powder coated steel headwall sidewall and drip edge flashing at all intersections of roof and exterior walls. Color- CMG dark bronze
- Install powder coated steel valley metal in all valleys- open valley installation. Color- CMG dark bronze.
- Replace skylights with Velux skylights and solar shades
- Install ridge vents on all major ridges.
- Install CeDUR shake starter, hip and ridge and field shingles using galvanized RS 1 3/4" nails using straight across pattern. Color- ~~Live Oak~~ WAUDEM BK 4/17/19
- Install snow retention above all traffic areas. The Owner has reviewed the areas where people and property could be damaged from falling snow and has designed a snow retention plan to protect those areas. Color Statuary Bronze **Plan attached.**
- Replace existing pipe jack boots. Paint all boots and furnace vents to blend with the color of the new roof shingles.
- Fully clean up the jobsite after completion of work.

-The Project will be fully permitted by the Mountain Village building department. All work will be performed in accordance with the all applicable building codes.

Re-roofing of the residence with CeDUR shingles will comply with the desires of the Town of Mountain Village to eliminate the fire hazard associated with the cedar shake shingles currently in place on the subject roof. The CeDUR shingles re-roofing will result in a Class A fire rating for the roofing system as well as a Class IV hail rating (the best possible). The use of CeDUR shingles in the Live Oak color will be lighter in color than two other homes in the Knolls Estates subdivision, located at 115 Eagle Drive and 116 Eagle Drive (pictures attached) that have been re-roofed with CeDUR shingles in the last 2 years,. The other homes used the Walden color. The CMG dark bronze for flashing metal will emulate the color of copper after patina. The statuary bronze color for the snow clips will also emulate the color of copper after patina and is the same color as used at 115 Eagle Drive and 116 Eagle Drive.

8H. Existing Improvements: See photographs attached showing building, driveway, roadway and site improvements. There are no drainage systems, trails, sidewalks, lite poles.

9G. Construction Mitigation Plan:

- i. Construction disturbances will include noise associated with the re-roofing process, including the sound of compressors and nail guns.
- ii. No crane will be used.
- iii. No trees will be removed.
- iv. No trees will be disturbed
- v. No construction fencing will be used. Landscaping will not be disturbed to any significant degree. Minor debris will be removed from landscaping on a daily basis. Debris will be loaded into a truck to be located in the driveway.
- vi. Materials will be roof loaded. Only minor amounts of materials will be located in the driveway during construction.
- vii. Haul off truck will be parked in the driveway. One construction pick-up truck will be parked in the driveway or on the roadside adjacent to the home.
- viii. No port-a-toilet will be on site
- ix. There will be no construction trailer
- x. There will be no need for erosion control as no disturbance of the ground will occur.
- xi. Haul off truck will be parked in the driveway and removed from the site once tear-off of the existing roof is complete.
- xii. There will be no food waste left onsite overnight.

9H. Materials Board: Will be available at the time of the DRB review.

12. **Design Variation** The existing cedar shake roof will be re-roofed using CeDUR synthetic shake shingles. The color will be ~~Live Oak~~ WALDEN

RBW 4/19





115+116 Eagle Drive





**PLANNING & DEVELOPMENT SERVICES DEPARTMENT
PLANNING DIVISION**

455 Mountain Village Blvd.
Mountain Village, CO 81435
(970) 728-1392

TO: Design Review Board
FROM: Sam Starr, Planner
FOR: Meeting of May 2nd, 2019
DATE: April 24, 2019
RE: Consideration of a Design Review: Final Review application for a new single-family dwelling on Lot 165-13, 230 Cortina Drive.

PROJECT GEOGRAPHY

Legal Description: Unit 13, Lot 165, The Cortina Land Condominiums, according to the second amendment to the map of Cortina Land Condominiums recorded August 22, 2014 in Plat book 1 at Page 4461, County of San Miguel, State of Colorado.

Address: 230 Cortina Drive
Applicant/Agent: Lea Sisson Architects
Owner: Bruce and Rosamaria Taten
Zoning: Multi Family Zone District
Existing Use: Vacant Lot
Proposed Use: Single-Family Residence
Lot Size: 0.21 Acres

Adjacent Land Uses:

- **North:** Multi-Family
- **South:** Multi-Family
- **East:** Multi-Family
- **West:** Open Space

ATTACHMENTS

- Exhibit A: Applicant Narrative
- Exhibit B: Plan Set

BACKGROUND

In accordance with 17.4.3 of the Community Development Code (CDC), the applicant has applied for a Class 3 Final Review for the development of a single-family residence. The proposed dwelling unit is located on 230 Cortina Drive and consists of 3,858 livable square feet with 616 square feet of mechanical and garage space. The total site area .21 acres (9,147 square feet) and is characterized by a substantial slope on the western portion that has driven the design and placement of this residence.

PROJECT SUMMARY

| CDC Provision | Requirement | Proposed |
|-----------------------------|--|------------------------|
| Maximum Building Height | 35 + 5' (if gable form) maximum | 34' 6" |
| Maximum Avg Building Height | 30' + 5' (if gable form) maximum | 29' 1" |
| Maximum Lot Coverage | Subject to building envelope, zone district is otherwise 65% | 54% |
| Setbacks | | |
| North | 16' setback line and building envelope | 16' 8" |
| South | 16' setback line and building envelope | 16' |
| East | 10' setback line and building envelope | 10' |
| West | 10' setback line and building envelope | 13' |
| Roof Pitch | | |
| Primary | | 4:12 |
| Secondary | | 2:12 |
| Exterior Material | | |
| Stone | 35% | 35.4% |
| Wood | No requirement | 26.9% |
| Windows/Doors | 40% maximum for windows | 27.4% |
| Metal Accents | No requirement | 10.2% |
| Parking | 2 spaces per unit | 2 enclosed, 2 exterior |
| Snowmelt | 1000 square feet | 0 |

17.3.12.C BUILDING HEIGHT LIMITS

Since appearing before the Design Review Board for the Initial Architectural Site Review, the average height for the proposed design has increased by one foot to 29' 1". The maximum height is 34' – 6" at the western elevation, just below the maximum allowed height for a single-family residence without a gabled roof. To verify that the finished product matches the proposed plans, staff also recommends that a monumented land survey shall be prepared by a Colorado public land surveyor to establish the maximum building height and the maximum average building height. This condition shall be carried over to any Final Review approval as it is a construction condition.

17.5.5 BUILDING SITING DESIGN

The site for this proposed home contains considerable slopes on the western portion of the site. The existing Cortina setbacks and the lot size have dictated a smaller home. Staff recommends that a monumented land survey of the footers be provided prior to pouring concrete to verify no building elements encroach outside of the building envelope.

17.5.6 BUILDING DESIGN**Building Form and Exterior Wall Form**

The proposed building form and exterior wall form portray a mass that is thick and strong, with a heavy, thick grounded foundation. Moreover, the materials and form align with the character of the neighborhood.

Roof Forms, Design and Materials

The CDC states that the roof shall be a composition of multiple forms that emphasize sloped planes, varied ridgelines, and vertical offsets. The primary roof is a twin V roof with a 4:12 and 2:12 pitches. The proposed roof material is a rusted standing seam steel. The applicant has not indicated a fireplace will be present.

At the March 28, 2019 meeting, the DRB asked that as a courtesy the Building Official review the roof assembly. The Building Official has reviewed the roof assembly and has the following concerns based upon design architectural plans, (not construction plans):

- *The ability of a 2:12 roof to support snow loads in a high alpine climate*
- *The ability of the cantilevered supports to carry the roof load and deck*

Exterior Wall Materials

Applicant has slightly modified the exterior wall materials for Final Review. The proposed single-family residence now consists of 35.4% 6" stone veneer of an unspecified mix. 26.9% of the exterior materials will be 8" stained horizontal cedar siding and 4" vertical siding. A variation will be required for all wood under 8" in diameter. The remainder of the proposed materials will be 27.4% fenestration, and 10.2% metal accents.

Pursuant to CDC Section 17.5.6.E.1.c.iii, "Any review authority approval for stone shall include a condition that a four foot (4') by four foot (4') mock up board be prepared by the development mason for the review authority to approve the final stone material and setting pattern consistent with the review authority approval. Such mock up shall be provided prior to the installation of any stone and prior to the town conducting the framing inspection (if any), or other trigger point developed by the review authority." This is a condition of approval.

17.5.7 GRADING AND DRAINAGE PLAN

Per the conditions of Initial Architectural Site Review approval, the applicant has provided a grading and drainage plan for the proposed development. Positive drainage away from the structures has been provided with all disturbed areas and to have final grades of 3:1 or flatter. Fill areas will be graded with the foundation excavation. Per the CDC Requirements, licensed professional engineer David Ballode of Uncompahgre Engineering has provided the drainage study calculations to accommodate a 25 year frequency storm run off for this site.

Applicant proposes placing a series of boulders for retainage in the eastern portion near the driveway and extending into the setback area to ease the naturally occurring slope. The boulders will be approximately 2'x2'x5 in terms of dimensions. The plan has also been revised to include a 7' 6" section of concrete retaining wall at the south side of the property to keep all retaining walls within the setbacks. The Design Review Board will need to weigh in on the appropriateness of the massing for the retaining walls.

17.5.8 PARKING REGULATIONS

The applicant shows 2 enclosed and 2 exterior parking spaces, which is above the number of spaces required for a single-family common interest community home. The applicant has indicated that the driveway will not be snowmelted.

17.5.9 LANDSCAPING REGULATIONS

The proposed landscape plan shows the addition of 4 aspen, 4 bristlecone pine, 3 specialty spruce trees, and an assortment of perennials with native wildland grass. Additionally, there are landscaping elements in the setbacks outside of the building envelope area. All plantings shown on Final Review will need to be in compliance with Table 5-4 of the CDC:

Table 5-4, Minimum Plant Size Requirements

| Landscaping Type | Minimum Size |
|-------------------------------------|---|
| Deciduous Trees –Single Stem | 3 inches caliper diameter at breast height (“dbh”) |
| Deciduous Trees – Multi-stem | 2.5 inches dbh |
| Evergreen Trees –Single-family lots | 8 to 10 feet in height, with 30% 10 feet or larger. |
| Evergreen Trees – Multi-family lots | 8 to 12 feet in height, with 30% 12 feet or larger. |
| Shrubs | 5 gallon or larger massing of smaller shrubs |

17.5.11 UTILITIES

All shallow utilities are proposed to be run from the eastern portion of the lot. Public Works requests that all utilities be field located by the contractor prior to construction.

17.5.12 LIGHTING REGULATIONS.

Applicant has revised the existing lighting plan and photometric lighting study to reflect that the cans previously in the roof overhang have been replaced with downlit sconces. The maximum footcandles found on site is now 11.9, which is down considerably from the Initial Architectural Site Review. However, the Design Review Board will still need to weigh in on the contextual appropriateness of the lighting.

17.5.13.E.4 ADDRESS IDENTIFICATION SIGNS

The applicant will be using 10” plate steel box numbers attached to field stone. The address monument complies with the maximum height of 6 feet. The applicant has revised the monument since the Initial Architectural Site Review to include a LED ribbon downlighting system.

17.7.19 CONSTRUCTION MITIGATION

All construction staging is within the lot boundaries. However, the construction staging plan does show construction parking and disturbance in the area outside of the building envelope and in the Cortina Drive Right of Way. The HOA has approved the construction mitigation plan and would approve any construction mitigation plan as amended.

SETBACK AREA OUTSIDE OF THE BUILDING ENVELOPE

Between the initial design review and final review, there is a retaining wall in the setback area. Staff recommends an additional condition of approval that HOA consent be provided for non-building elements outside of the building envelope on the property.

Specific Approvals and Stated Variations

- Vertical wood siding less than 8” in diameter
- Retaining walls over the 5 foot maximum as outlined in CDC Section 17.6.6(a)

RECOMMENDATION

Staff recommends the DRB approve the Final Architecture Review application with the stated variations and specific approvals for Unit 13, Lot 165, 230 Cortina Drive with the following

conditions which shall be addressed before issuance of a building permit unless otherwise noted:

1. A monumented land survey shall be prepared by a Colorado public land surveyor to establish the maximum building height and the maximum average building height. This condition shall be carried over to any Final Review Approval as it is a construction condition.
2. A monumented land survey of the footers will be provided prior to pouring concrete to determine there are no encroachments into the GE. This condition shall be carried over to any Final Review Approval as it is a construction condition.
3. A four foot (4') by four foot (4') mock up board be prepared by the development mason for the review authority to approve the final stone material and setting pattern consistent with the review authority approval. Such mock up shall be provided prior to the installation of any stone and prior to the town conducting the framing inspection (if any), or other trigger point developed by the review authority.
4. Demonstrate approval by the HOA for boulder retaining walls, address monument and any other non-building features in the setback areas, concurrent with building permit review. Any building elements would require an agreement between the HOA and the lot owner prior to issuance of a Certificate of Occupancy, as applicable.

Narrative
for Unit 13 Cortina,
Mountain Village
4.18.2019

Town of Mountain Village Planning Board and Staff;

Below are the responses for the comments/requirements from the sketch plan review. You will see that all have been addressed. There is a schematic building section based on engineering schematic drawings on A3.2. The lighting has been reduced and changed on the deck side. All cans previously in the large roof overhang have been removed and replaced with 4 downlit sconces. The new location of these are above the sliding doors and thus are now lower and further in closer to the building, to light just the area in front of the sliding doors rather than the whole deck. It will reduce the beam spread as it is lower, and further conceals the light from those below by being further back and screened by the deck. I hope these additional revisions satisfy your previous concerns.

Other items modified are the following. Some of the materials have moved around to focus the wood and stone on the front of the building, this was driven by client's preference. The revised material calculations are on A3.1 the minimum and maximum percentages have all been met. The roof over the master and garage has been simplified and the drain at the main roof has been further detailed. The changes to the heights are found on A1.1 all height limits have been met again. There is now a 5' section of concrete retaining wall (less than 8' high) at the south side of the property that will have the same stone as the building. This wall in addition to boulders to keep all retaining walls within the setbacks.

A dropbox file link has been sent to you with this letter the drawing set and the 3D sketchup model.

Thank you everyone for your time.

Regards,



Lea Sisson, Registered Architect

RE: Notice of Action for Lot 165-13 Design Review for new single-family home

Dear Mrs. Sisson,

At the March 28, 2019 Design Review Board meeting the board voted 6 to 0, to approve the Initial Architectural Site Review application for a new single-family home on Lot 165-13. The development application was approved with the following conditions:

1. *A monumented land survey shall be prepared by a Colorado public land surveyor to establish the maximum building height and the maximum average building height. This condition shall be carried over to any Final Review Approval as it is a construction condition.*
2. *A monumented land survey of the footers will be provided prior to pouring concrete to determine there are no encroachments into the GE. This condition shall be carried over to any Final Review Approval as it is a construction condition. CDNTRACTOR HAS BEEN NOTIFIED*
3. *Owners Applicant will need to adjust the address monument to make the address monument numbers downlit instead of backlit. Numbers will need to be coated with a reflective paint. SEE A1.1EL*
4. *Reconsider lighting plan as proposed to minimize amounts of deck lighting, subject to review of the Design Review Board. SEE A1.1EL*
5. *Drainage needs to be specified in a quantitative sense with input of Colorado Licensed Professional Engineer. SEE CIVIL DRAWINGS*
6. *Provide a cross section of construction schematics for the DRB to have confidence that the engineering will not change the appearance of the building as presented to the DRB. SEE A3.2*

Please address all of the relevant conditions and findings of the March 28th Design Review Board meeting prior to April 18th, 2019 if you would like to be placed on the May 2nd, 2019 Design Review Board agenda for Final Review of this project.



Taten Residence

Cortina Drive, UNIT # 13, Mountain Village, Colorado

OWNER:
 Bruce Taten
 Casamigos LLC
 3716 Jardin st.
 Houston, TX. 77005
 T: 713-582-4516
 bruce.taten@gmail.com

ARCHITECT:
 LEA SISSON ARCHITECT, LLC.
 Lea Sisson, Principal
 Centrum Building Ste. 200B
 Mountain Village, CO.
 MAILING:
 P.O.Box 4471 Aspen, CO. 81612
 (970) 925-1224
 EMAIL: lea@easissonarchitects.com

SURVEYOR:
 San Juan Surveying
 p.o.box 3730
 Telluride, CO 81435
 T: (970) 728-1128
 office@sanjuansurveying.net

GEOTECHNICAL ENGINEER:
 Trautner Geotech
 649 Tech Center Drive
 Durango, CO 81435.
 (970) 259-5095
 dtrautner@trautnergeotech.com

CIVIL ENGINEER:
 Uncompahgre Engineering
 David Ballode, PE
 P.O.BOX 3945
 Telluride, CO. 81435
 Ph: 970-729-0683
 dballode@msn.com

LANDSCAPE ARCHITECT
 Escape Garden Design
 Jennifer Dolecki-Smith
 312-E AABC
 Aspen, CO. 81611
 Ph: 970-920-3700
 Fx: 970-920-9589
 jennifer@escapegardendesign.com

CONTRACTOR:
 OSBOURNE BUILDERS
 G.C. : Michael Osbourne
 220 East Colorado Ave, Suite #201
 P.O. Box 3163, Telluride CO 81435
 (970)728-4679 Office
 (970)729-0186 Cell
 (970)446-7212 Fax
 www.osbornebuilders.com
 michael@osbornebuilders.com

FLOOR AREA CALCULATIONS

| | |
|-----------------------------------|-------------|
| SINGLE FAMILY RESIDENTIAL: | |
| LIVABLE AREA | |
| LOWER LEVEL: | 1349 SQ FT. |
| MAIN LEVEL: | 1446 SQ FT. |
| UPPER LEVEL: | 1063 SQ FT. |
| TOTAL-LIVING: | 3858 SQ FT. |
| GARAGE-STORAGE-MECH | 616 SQ FT. |
| TOTAL-GROSS SF: | 4474 SQ FT. |
| OTHER SF: | |
| DECK/PATIOS | 475 SQ FT. |

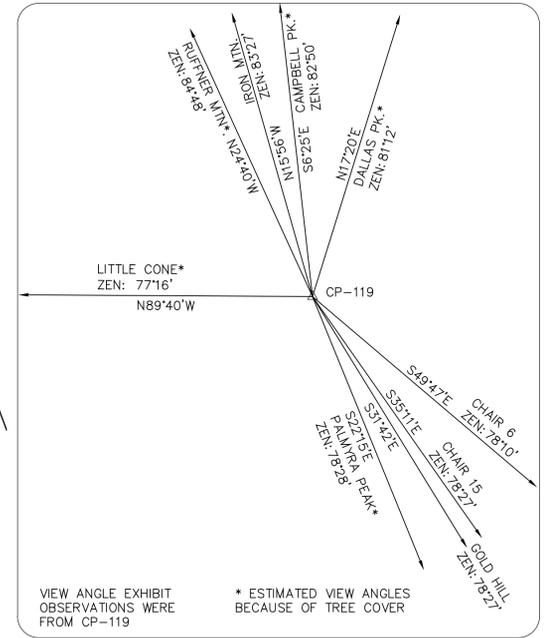
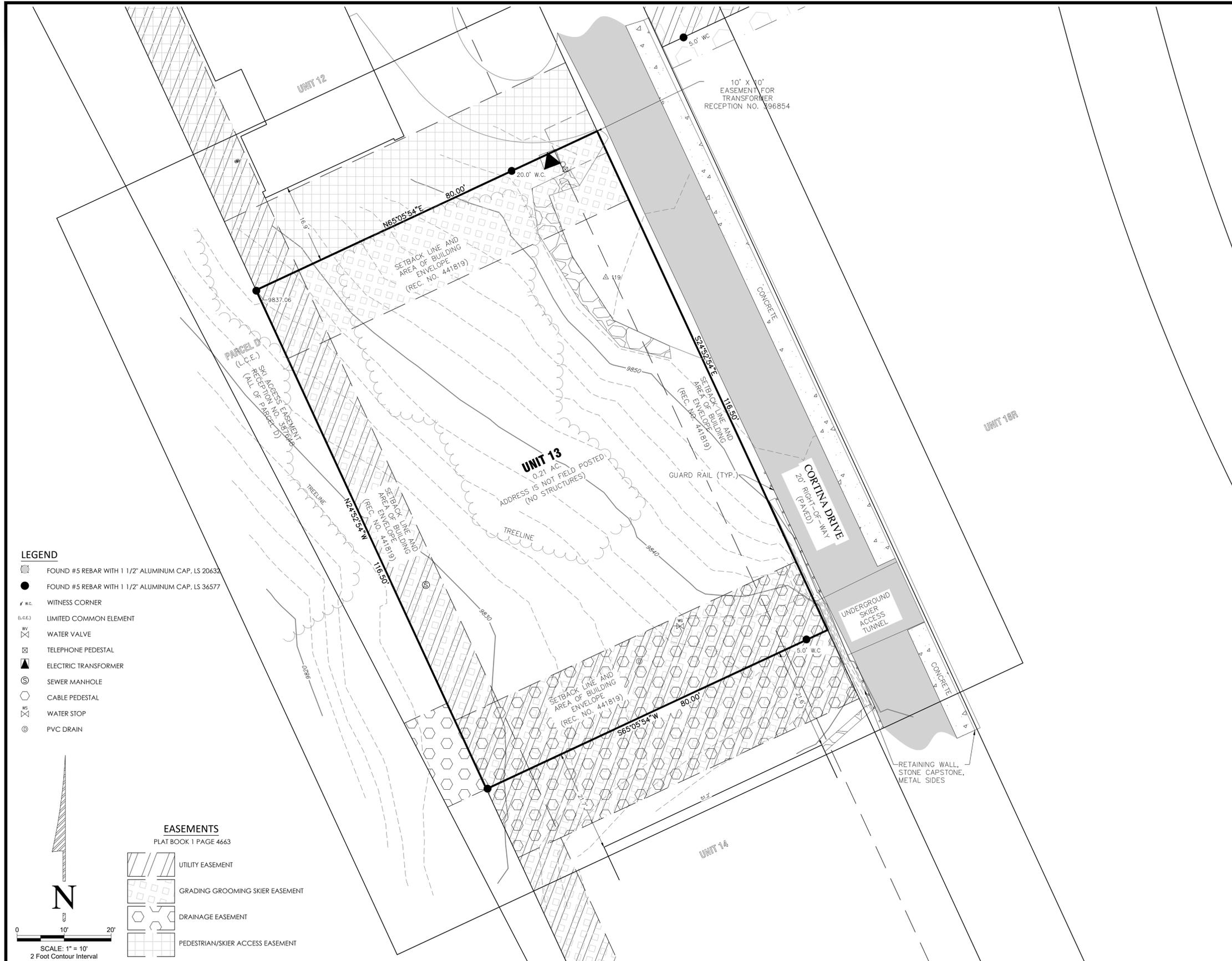
L.U.C. NOTES
 R-3 TYPE V CONSTRUCTION.

DRAWING INDEX

| | |
|----------------------|------------------------------|
| ARCHITECTURAL | |
| A-0 | COVER |
| | TOPOGRAPHICAL SURVEY |
| A-1.1 | SITE PLAN |
| A-1.1C | CONSTRUCTION PLAN |
| C1-3 | GRADING / UTILITY PLAN |
| L1 | LANDSCAPE PLAN |
| L2 | IRRIGATION PLAN |
| A1.1EL | EXTERIOR LIGHTING PLAN |
| L701 | EXTERIOR PHOTOMETRIC PLAN |
| A-2.1 | MAIN & LOWER FLOOR PLANS |
| A-2.2 | UPPER FLOOR & ROOF PLANS |
| A-3.1 | ELEVATIONS |
| A-3.2 | ELEVATIONS/SCHEMATIC SECTION |
| A-3.3 | 3D IMAGERY RENDERINGS |

L E A S I S S O N A R C H I T E C T
 200 B/C CENTRUM BLDG. MOUNTAIN VILLAGE : P.O. BOX 4471 ASPEN, CO 81612 TEL: (970) 925-1224 EMAIL: LEA@LEASISSONARCHITECTS.COM
 SUBMISSIONS | 1.25.2019 503 | 1.29.2019 PREDR | 2.14.2019 MVDRE |
 TATEN RESIDENCE
 LOT 13 CORTINA TELLURIDE MOUNTAIN VILLAGE . CO .

A-0



NOTICE:
According to Colorado Law, you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown herein.

- NOTES:**
1. According to Flood Insurance Rate Map 08113C0287 D Map Revised September 30, 1992, this parcel lies within Flood Zone "X" (Areas determined to be outside the 500-year flood plain).
 2. Easement research from Land Title Guarantee Company, Commitment No. TLR86008285, Effective Date 07/26/2018 at 05:00 PM.
 3. Lineal Units U.S. Survey Feet
 4. Vertical datum is based on the found Northwest corner of Unit 13, an Aluminum Cap Rebar, LS 36577, having an elevation of 9837.06 feet, as depicted.
 5. Fieldwork was performed October 01, 2018.

PROPERTY DESCRIPTION:
Unit 13, The Cortina Land Condominiums, according to the Condominium Declaration recorded November 30, 2004 under Reception No. 370697 and The First Amendment thereto recorded November 14, 2006 under Reception No. 388352 and The Second Amendment thereto recorded January 19, 2007 under Reception No. 389686 and The Third Amendment thereto recorded August 22, 2014 under Reception No. 434256, and Notice recorded November 20, 2014 under Reception No. 435386, and rerecorded December 1, 2014 under Reception No. 435492 and The Fourth Amendment thereto recorded January 5, 2016 under Reception No. 440875 and The Fifth Amendment thereto recorded March 14, 2016 under Reception No. 441684 and The Sixth Amendment thereto recorded August 24, 2016 under Reception No. 443675 and according to the Condominium Map recorded November 30, 2004 in Plat Book 1 at page 3400 and The First Amendment to the Map of Cortina Land Condominiums recorded January 19, 2007 in Plat Book 1 at page 3803 and The Second Amendment to the Map of the Cortina Land Condominiums recorded August 22, 2014 in Plat Book 1 at page 4661.

County of San Miguel,
State of Colorado

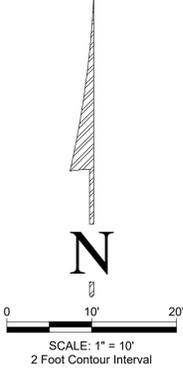
BASIS OF BEARINGS:
The Basis of Bearings for this Improvement Survey Plat was derived from the northeast line of Lot 165, according to the Plat recorded in Book 1 at page 1312, said bearing being **S 05°22'30" E**.

SURVEYOR'S CERTIFICATE:
I, Christopher R. Kennedy, being a Colorado Licensed Land Surveyor, do hereby certify that this Topographic Survey of Unit 13, The Cortina Land Condominiums, was made by me and under my direct supervision, responsibility, and checking. This Topographic Survey does not constitute a Land Survey Plat or Improvement Survey Plat as defined by Title 38, Article 51 C.R.S.

Christopher R. Kennedy
Christopher R. Kennedy, P.L.S. 36577
10/03/2018

- LEGEND**
- FOUND #5 REBAR WITH 1 1/2" ALUMINUM CAP, LS 20632
 - FOUND #5 REBAR WITH 1 1/2" ALUMINUM CAP, LS 36577
 - WITNESS CORNER
 - LIMITED COMMON ELEMENT
 - WATER VALVE
 - TELEPHONE PEDESTAL
 - ELECTRIC TRANSFORMER
 - SEWER MANHOLE
 - CABLE PEDESTAL
 - WATER STOP
 - PVC DRAIN

- EASEMENTS**
PLAT BOOK 1 PAGE 4663
- UTILITY EASEMENT
 - GRADING GROOMING SKIER EASEMENT
 - DRAINAGE EASEMENT
 - PEDESTRIAN/SKIER ACCESS EASEMENT

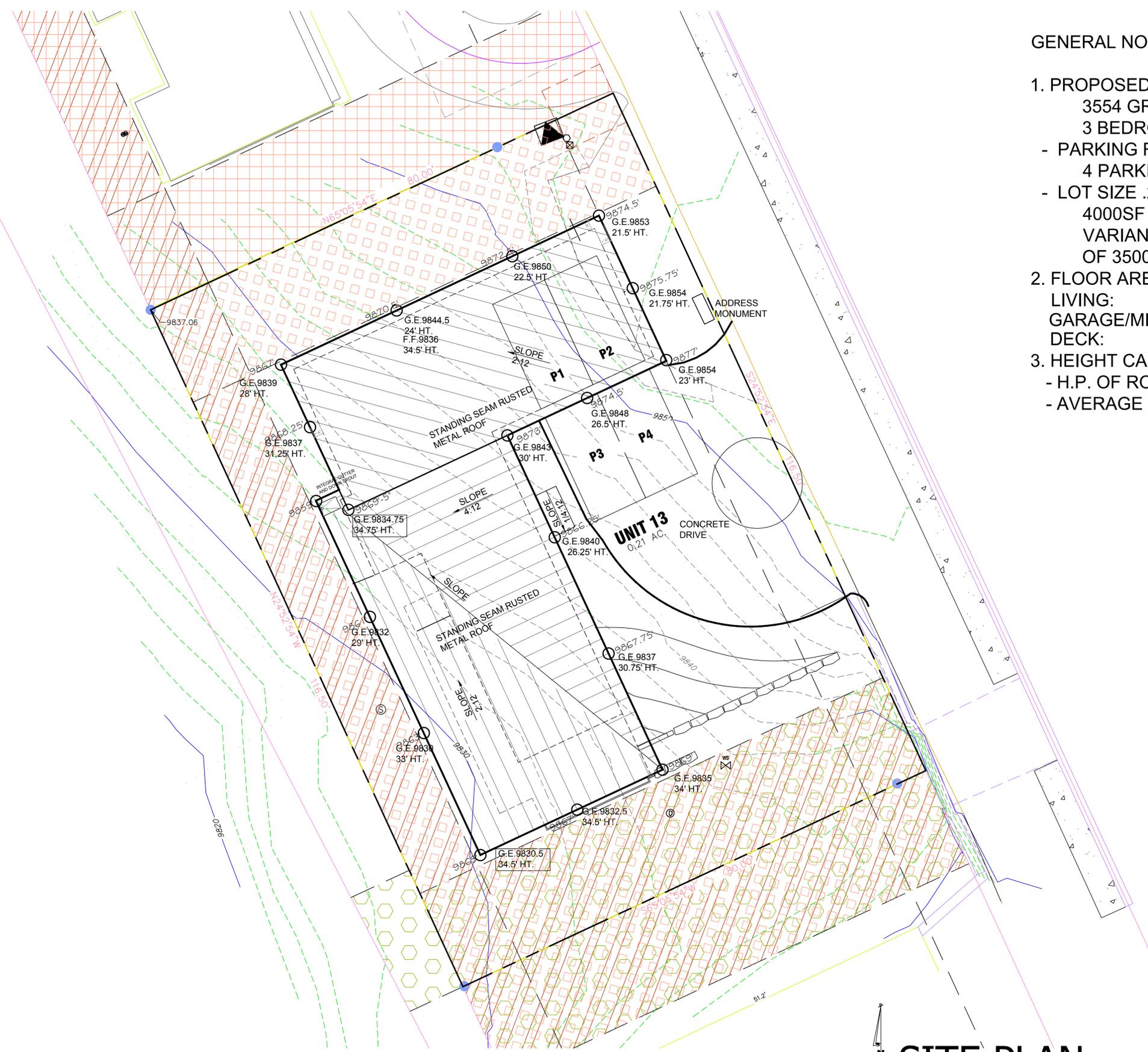


TOPOGRAPHIC SURVEY

UNIT 13, THE CORTINA LAND CONDOMINIUMS

SAN JUAN SURVEYING
SURVEYING * PLANNING
102 SOCIETY DRIVE TELLURIDE, CO. 81435
(970) 728-1128 (970) 728-9201 fax
office@sanjuansurveying.net

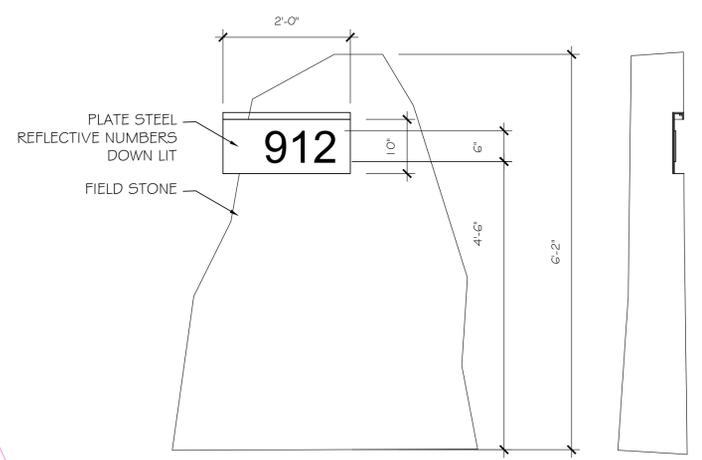
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|-----------------|------------|
| DATE: | 10/03/2018 |
| JOB: | 04028 |
| DRAWN BY: | CRK |
| CHECKED BY: | ESS |
| REVISION DATES: | |
| SHEET: | 1 OF 1 |



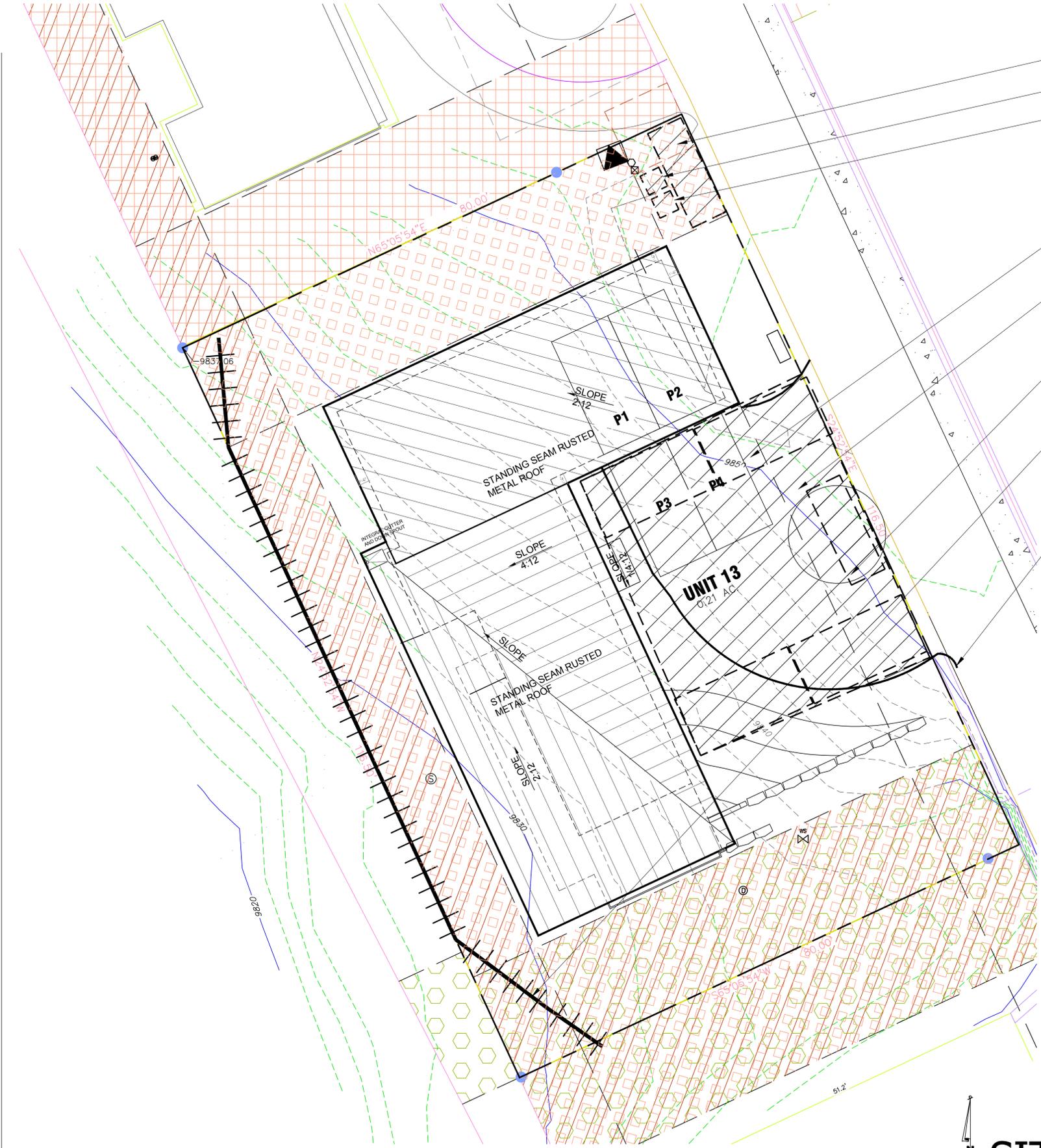
GENERAL NOTES:

1. PROPOSED SINGLE FAMILY RESIDENTIAL
 3554 GROSS SQUARE FEET
 3 BEDROOMS PLUS OFFICE
 - PARKING REQUIREMENT -
 4 PARKING SPACES INCL. OFFICE
 - LOT SIZE .21 ACRE (9427.5SF):
 4000SF MINIMUM REQUIRED HEATED SPACE
 VARIANCE GRANTED FOR REDUCTION
 OF 3500SF MINIMUM
2. FLOOR AREA TOTALS
 LIVING: 3858SF
 GARAGE/MECH: 616SF
 DECK: 475SF
3. HEIGHT CALCULATIONS SHOWN ON THIS PLAN
 - H.P. OF ROOF 34.5' < 35'-0"
 - AVERAGE HEIGHT 29.1'

SITE PLAN
 SCALE : 1/8" = 1' - 0"



ADDRESS MONUMENT
 SCALE: 3/4" = 1'-0"



- GENERAL CONSTRUCTION WASTE DUMPSTER
- PORTA TOILET
- BEAR-PROOF FOOD WASTE DUMPSTER
- PARKING AREAS
- MATERIAL STORAGE
- JOB TRAILER
- SILT FENCING/ STRAW BALES.
- LIMITS OF CONSTRUCTION ACTIVITY-JOB SITE FENCE

STAGING NOTES

1. CONTOUR INTERVAL IS 2'-0"
2. EXCAVATED MATERIAL TO BE REMOVED FROM SITE VIA DRIVE CLEARING.
3. CUT AND SLASH TO BE REMOVED FROM SITE
4. PEDESTRIAN PROTECTION TO BE IMPLEMENTED WITH PROPER SIGNAGE AND HARD HAT REQUIREMENTS.
5. BEAR-PROOF CONTAINER FOR FOOD
6. RECYCLING CONTAINERS FOR ALL RECYCLABLE MATERIALS.
7. HEAVY CONSTRUCTION NOISE IS LIMITED TO MON-SAT 7AM-6PM

SITE PLAN
SCALE : 1/8" = 1' - 0"

CONSTRUCTION MITIGATION PLAN

A1.1c

GENERAL CIVIL ENGINEERING NOTES:

1. THE EXISTING UTILITY LINES SHOWN ON THE PLANS ARE APPROXIMATE. AT LEAST TWO (2) FULL WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO @ 1-800-922-1987 OR 811 TO GET ALL UTILITIES LOCATED. IF ANY OF THESE UNDERGROUND UTILITIES ARE IN CONFLICT WITH THE CONSTRUCTION PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND WORK WITH THE ENGINEER TO FIND A SOLUTION BEFORE THE START OF CONSTRUCTION.

INSTALLATION AND SEPARATION REQUIREMENTS SHALL BE COORDINATED WITH THE INDIVIDUAL UTILITY PROVIDERS.

THE UTILITY PROVIDERS ARE:
SEWER, WATER, AND CABLE TV: TOWN OF MOUNTAIN VILLAGE
NATURAL GAS: BLACK HILLS ENERGY
POWER: SAN MIGUEL POWER
TELEPHONE: CENTURY LINK

2. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES ALL PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES ALL NECESSARY PERMITS SHALL BE OBTAINED BY THE OWNER OR CONTRACTOR.

3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT EXCAVATED SLOPES ARE SAFE AND COMPLY WITH OSHA REQUIREMENTS. REFER TO THE SITE-SPECIFIC REPORT FOR THIS PROJECT FOR ADDITIONAL INFORMATION..

4. ALL TRENCHES SHALL BE ADEQUATELY SUPPORTED OR LAID BACK PER OSHA REGULATIONS.

5. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ALL MATERIALS AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE TOWN OF MOUNTAIN VILLAGE DESIGN STANDARDS LATEST EDITION. ALL CONSTRUCTION WITHIN EXISTING STREET OR ALLEY RIGHT-OF-WAY SHALL BE SUBJECT TO TOWN OF MOUNTAIN VILLAGE INSPECTION.

6. THE CONTRACTOR SHALL HAVE ONE COPY OF THE STAMPED PLANS ON THE JOB SITE AT ALL TIMES.

7. THE CONTRACTOR SHALL NOTIFY THE TOWN 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

8. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES AT ALL TIMES DURING CONSTRUCTION. THE ADJOINING ROADWAYS SHALL BE FREE OF DEBRIS AT THE END OF CONSTRUCTION ACTIVITIES EACH DAY.

9. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN PROPER TRAFFIC CONTROL DEVICES UNTIL THE SITE IS OPEN TO TRAFFIC. ANY TRAFFIC CLOSURES MUST BE COORDINATED WITH THE TOWN OF MOUNTAIN VILLAGE.

10. ALL DAMAGE TO PUBLIC STREETS AND ROADS, INCLUDING HAUL ROUTES, TRAILS, OR STREET IMPROVEMENTS, OR TO PRIVATE PROPERTY, SHALL BE REPAIRED AT THE SOLE EXPENSE OF THE CONTRACTOR TO THE ORIGINAL CONDITIONS.

11. WHEN AN EXISTING ASPHALT STREET IS CUT, THE STREET MUST BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION. THE FINISHED PATCH SHALL BLEND SMOOTHLY INTO THE EXISTING SURFACE. ALL LARGE PATCHES SHALL BE PAVED WITH AN ASPHALT LAY-DOWN MACHINE.

12. IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL COORDINATE THE DISCHARGE REQUIREMENTS WITH THE TOWN OF MOUNTAIN VILLAGE.

13. CONTRACTOR SHALL NOTIFY ALL RESIDENTS IN WRITING 24 HOURS PRIOR TO ANY SHUT-OFF IN SERVICE. THE NOTICES MUST HAVE CONTRACTOR'S PHONE NUMBER AND NAME OF CONTACT PERSON, AND EMERGENCY PHONE NUMBER FOR AFTER HOURS CALLS. ALL SHUT-OFF'S MUST BE APPROVED BY THE TOWN AND TOWN VALVES AND APPURTENANCES SHALL BE OPERATED BY TOWN PERSONNEL.

14. CONTRACTOR SHALL KEEP SITE CLEAN AND LITTER FREE (INCLUDING CIGARETTE BUTTS) BY PROVIDING A CONSTRUCTION DEBRIS TRASH CONTAINER AND A BEAR-PROFF POLY-CART TRASH CONTAINER, WHICH IS TO BE LOCKED AT ALL TIMES.

15. CONTRACTOR MUST BE AWARE OF ALL TREES TO REMAIN PER THE DESIGN AND APPROVAL PROCESS AND PROTECT THEM ACCORDINGLY.

16. THE CONTRACTOR SHALL PROVIDE UNDERGROUND UTILITY AS-BUILTS TO THE TOWN.

17. ALL STRUCTURAL FILL UNDER HARDSCAPE OR ROADS MUST BE COMPACTED TO 95% MODIFIED PROCTOR (MIN.) AT PLUS OR MINUS 2% OF THE OPTIMUM MOISTURE CONTENT. NON-STRUCTURAL FILL SHALL BE PLACED AT 90% (MIN.) MODIFIED PROCTOR.

18. UNSUITABLE MATERIAL SHALL BE REMOVED AS REQUIRED BY THE SOILS ENGINEER. ALL MATERIALS SUCH AS LUMBER, LOGS, BRUSH, TOPSOIL OR ORGANIC MATERIALS OR RUBBISH SHALL BE REMOVED FROM ALL AREAS TO RECEIVE COMPACTED FILL.

19. NO MATERIAL SHALL BE COMPACTED WHEN FROZEN.

20. NATIVE TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICABLE ON THE SITE FOR USE ON AREAS TO BE REVEGETATED.

21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST ABATEMENT AND EROSION CONTROL MEASURES DEEMED NECESSARY BY THE TOWN, IF CONDITIONS WARRANT THEM.

22. ALL DISTURBED GROUND SHALL BE RE-SEEDED WITH A TOWN-APPROVED SEED MIX. REFER TO THE LANDSCAPE PLAN.

23. THE CONTRACTOR IS REQUIRED TO PROTECT ALL EXISTING SURVEY MONUMENTATION AND PROPERTY CORNERS DURING GRADING AND CONSTRUCTION.

24. PROPOSED WATER AND SANITARY SEWER ARE TO MAINTAIN A MINIMUM TEN FEET (10') HORIZONTAL SEPARATION (OUTSIDE OF PIPE TO OUTSIDE OF PIPE) AND A MINIMUM VERTICAL SEPARATION OF EIGHTEEN INCHES (18").

25. ALL UNDERGROUND PIPE SHALL BE PROTECTED WITH BEDDING TO PROTECT THE PIPE FROM BEING DAMAGED.

26. HOT TUB DRAINS CANNOT BE CONNECTED TO THE SANITARY SEWER SYSTEM.

27. JOINTS IN SEWER MAINS THAT ARE WITHIN 18 INCHES VERTICALLY AND 10 FEET HORIZONTALLY SHALL BE ENCASED IN CONCRETE.

28. THE UTILITY PLAN DEPICTS FINAL UTILITY LOCATIONS BUT HAS BEEN COMPLETED AT A PRELIMINARY STAGE. CONTRACTOR SHALL VERIFY ALIGNMENTS WITH THE ARCHITECT PRIOR TO CONSTRUCTION.



Uncompahgre
Engineering, LLC

P.O. Box 3945
Telluride, CO 81435
970-729-0683

SUBMISSIONS:

DRB SUBMITTAL 2019-02-12

Taten Residence
Lot 13 Cortina
Mtn. Village, CO



CONTRACTOR TO REVIEW AND COMPLY WITH ALL
C.A.T.E.R.S. D.I.T.E.R.S. C.I.L.L.A.R. D.R.A.T.I.E.S
A.D.R.E.O.R.T.A. DISCRE.A.C.I.E.S TO T.H.E
A.R.C.H.I.T.E.C.T. PRIOR TO A.F.F.I.E.L.D. O.R. I.E.I.
D.O.E. ACCORDANCE WITH A.A.A.D.O.C. MEET A201

Civil
Engineering
Notes

C1



Uncompahgre Engineering, LLC

P.O. Box 3945
Telluride, CO 81435
970-729-0683

SUBMISSIONS:

DRB SUBMITTAL 2019-02-12
ADDED DISSIPATORS 2019-04-06
REVISED RETAINING WALLS AND ROOF PLAN 2019-04-22

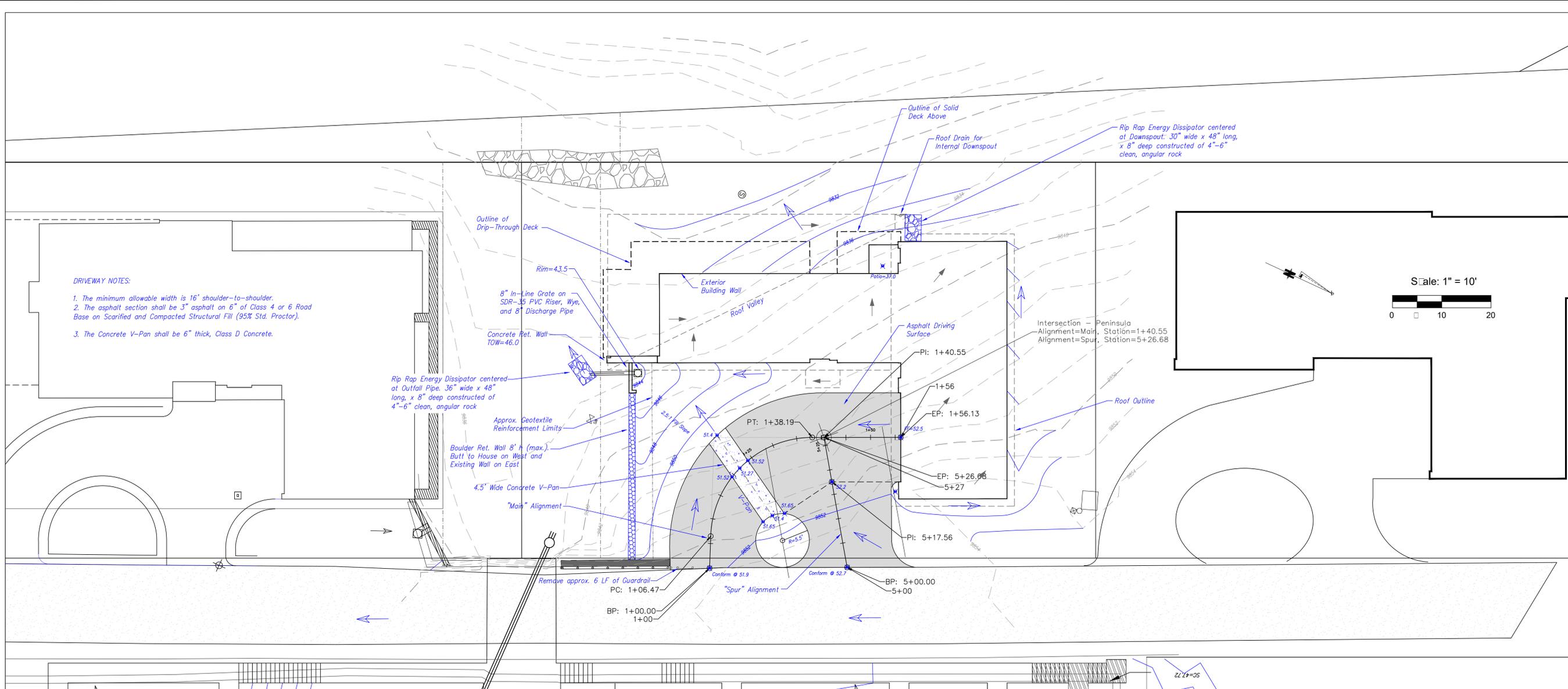
Taten Residence
Lot 13 Cortina
Mtn. Village, CO



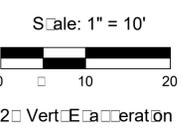
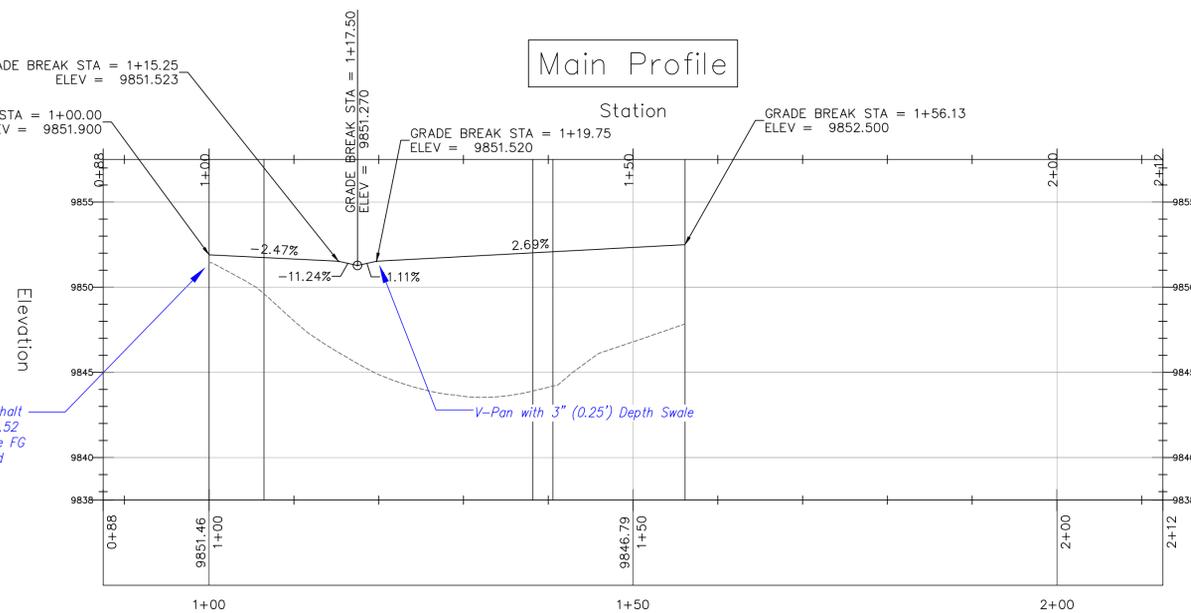
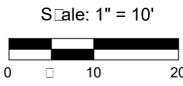
CONTRACTOR TO REVIEW: ALL DOCUMENTS ARE ALL C.A.T.E.R.S. AND INTERDISCIPLINARY: DRAWINGS AND REPORTS ARE DISCREPANCIES TO THE ARCHITECT PRIOR TO ALL FIELD OR FIELD DO-E-I ACCORDANCE WITH: AIA DOCUMENT A201

Driveway
Plan
and
Profile

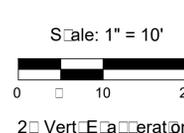
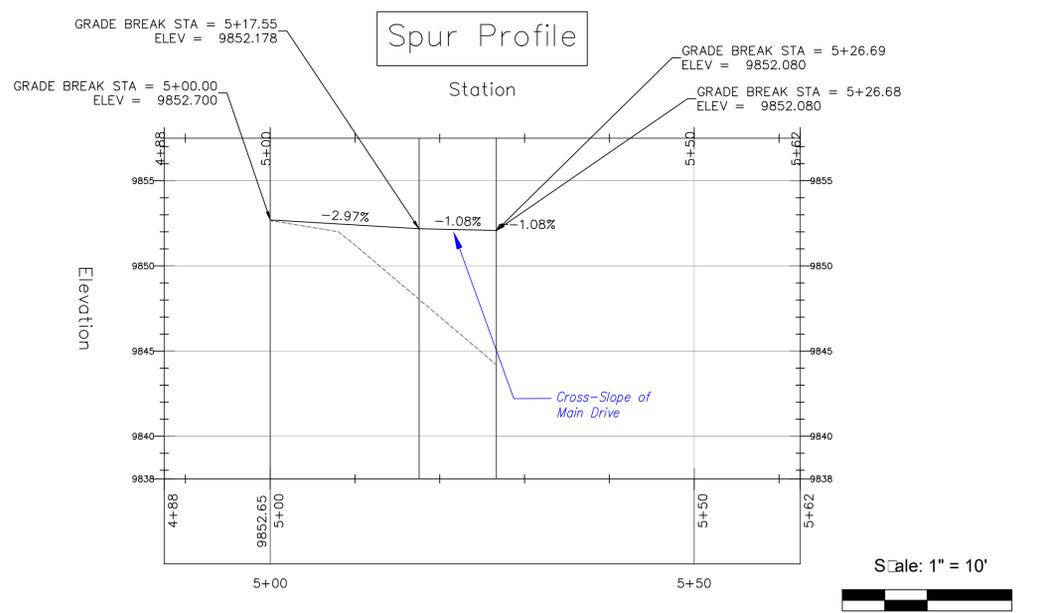
C2



DRIVEWAY NOTES:
1. The minimum allowable width is 16' shoulder-to-shoulder.
2. The asphalt section shall be 3" asphalt on 6" of Class 4 or 6 Road Base on Scarified and Compacted Structural Fill (95% Std. Proctor).
3. The Concrete V-Pan shall be 6" thick, Class D Concrete.



2 Vertical Curvature



2 Vertical Curvature



Uncompahgre
Engineering, LLC

P.O. Box 3945
Telluride, CO 81435
970-729-0683

SUBMISSIONS:

DRB SUBMITTAL 2019-02-12
ADDED DISSIPATORS 2019-04-06
REVISED RETAINING WALLS AND ROOF PLAN 2019-04-22

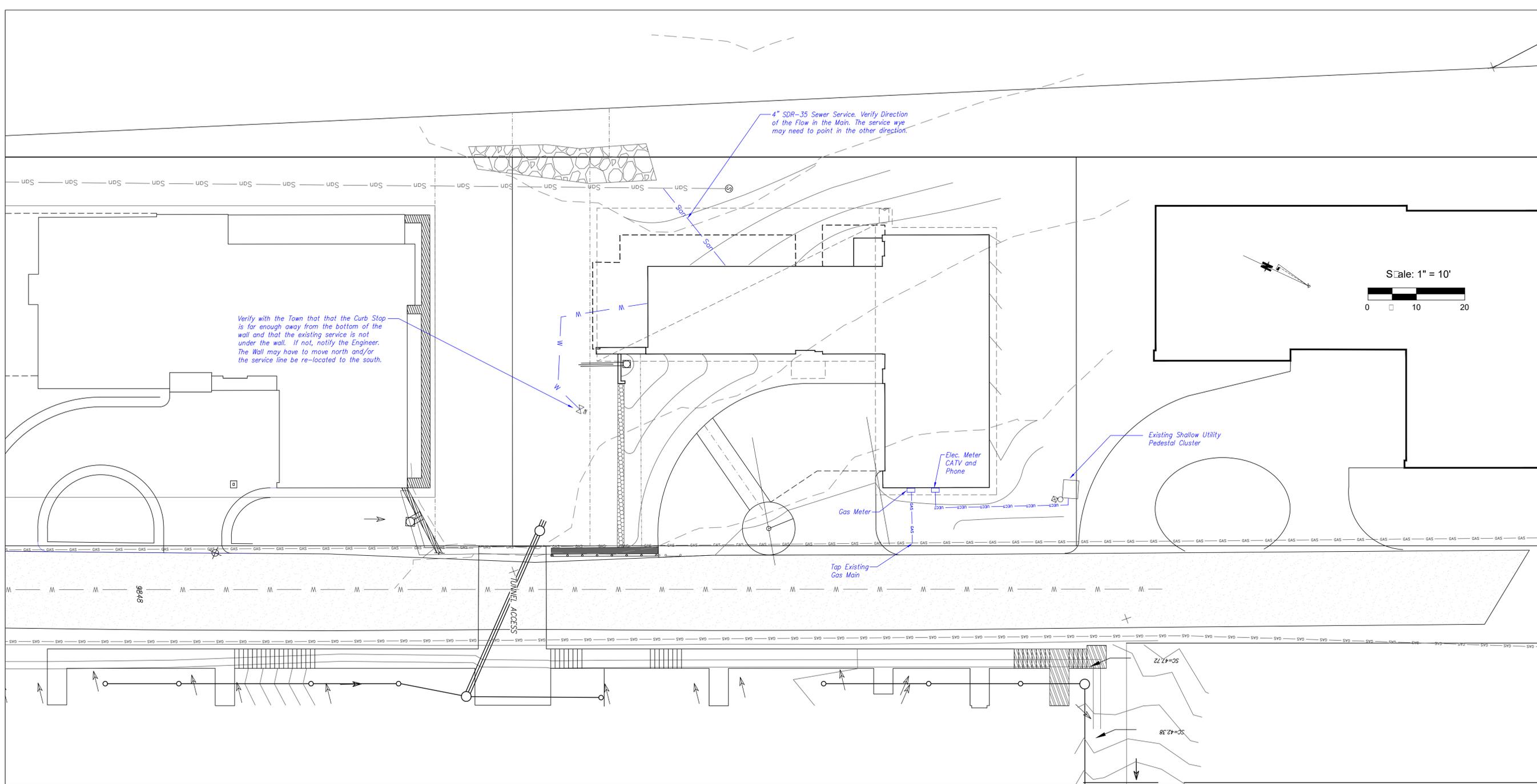
Taten Residence
Lot 13 Cortina
Mtn. Village, CO



CONTRACTOR TO REVIEW AND COMMENT ARE ALL
CONTRACTORS AND PROFESSIONAL ENGINEERS
AND REPORT AND DISCREPANCIES TO THE
ARCHITECT PRIOR TO A FIELD OR FIELD
DOCUMENT ACCORDANCE WITH AIA DOCUMENT A201

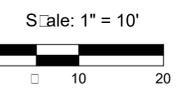
Utilities

C3



Verify with the Town that the Curb Stop is far enough away from the bottom of the wall and that the existing service is not under the wall. If not, notify the Engineer. The Wall may have to move north and/or the service line be re-located to the south.

4" SDR-35 Sewer Service. Verify Direction of the Flow in the Main. The service wye may need to point in the other direction.



Existing Shallow Utility Pedestal Cluster

Elec. Meter CATV and Phone

Gas Meter

Tap Existing Gas Main

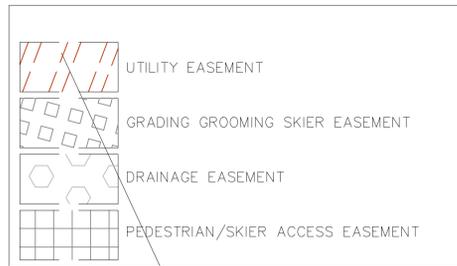
TUNNEL ACCESS

SC-42.72

SC-42.38

9846

Easements



Landscape General Notes

1. All trees and shrubs shall be field located by project Architect
2. All trees and shrubs shall be back filled with a topsoil / organic compost mixture at a 2:1 ratio.
3. Necessary trees shall be staked with 4 foot metal posts. Trees shall be guyed with 12 gauge galvanized wire and polypropylene tree race straps.
4. Perennial planting beds shall be tilled to a depth of 1' and amended with topsoil and organic compost at a 2:1 ratio, or filled to a minimum depth of 12" with new topsoil.
5. Mulch all perennial beds with a cotton burr compost or soil conditioner.
6. All plant material to meet the American standard for nursery stock.
7. All planted materials shall be a non-noxious species as specified within the Mountain Village noxious weed list Section 9-109 and The San Miguel County noxious weed list.

Landscape Maintenance Notes

1. Turf shall be aerated 2 to 3 times per year to increase the water absorption rates. Necessary organics fertilization and amendment shall be incorporated at the same time. (N/A)
2. Weekly weed maintenance, or as required to control weeds during seed establishment. Once seed is established, weeding as needed.
3. Annual composting or soil conditioning of perennial beds.
4. Weekly irrigation testing/inspection to assure proper functioning.

Revegetation Notes

1. Subsoil surface shall be tilled to a 4" depth on non filled areas.
2. Topsoil shall be spread at a minimum depth of 4" over all areas to be revegetated (except on slopes greater than 3:1) and amendments rototilled at a rate of three cubic yards per thousand square feet.
3. Broadcasting of seed shall be done immediately after topsoil is applied (within ten days) to minimize erosion and weeds.
4. Areas which have been compacted, or are relatively undisturbed, needing seeding, shall be scarified before broadcasting of seed.
5. Broadcast with specified seed mix and follow with dry mulching. Straw or hay shall be uniformly applied over seeded area at a rate of 1.5 tons per acre for hay and 2 tons per acre for straw, crimp in.
6. On slopes greater than 3:1 erosion control blanket shall be applied in place of straw mulch and pinned.
7. All utility cuts shall be revegetated within two weeks after installation of utilities to prevent weed infestation.
8. Seed all areas labeled native grass seed with the following mixture at a rate of 12 pounds per acre.

Native Grasses Seed Mix - to be checked for altitude - may be supplemented with species from the approved Mtn. Village Mix

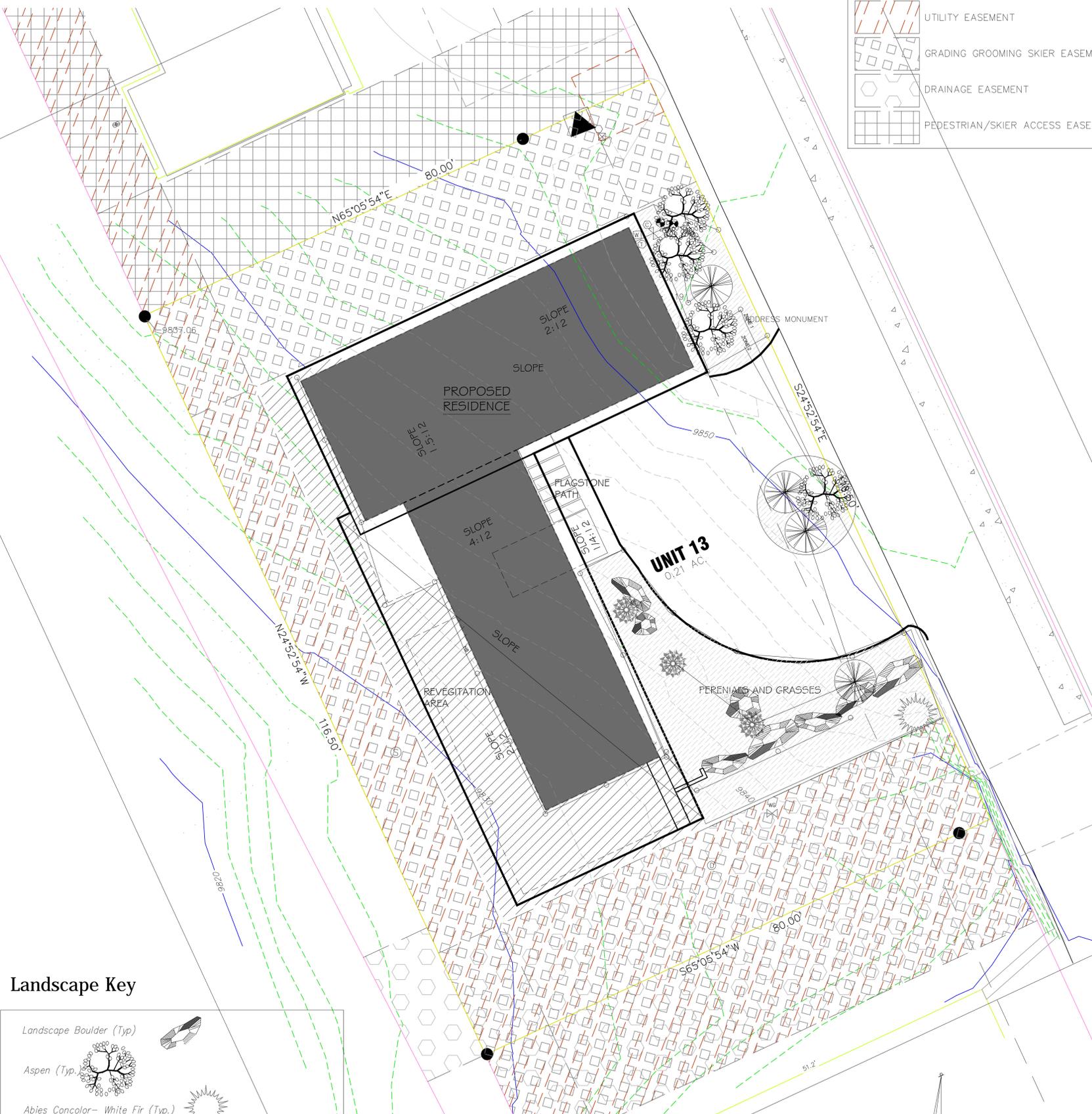
| Scientific Name | Common Name | % |
|------------------------|-------------------|-----|
| Elymus trachycaulus | Prairie Dropseed | 20 |
| Festuca Idahoensis | Idaho Fescue | 30 |
| Bouteloua gracilis | Blue Gramma Grass | 15 |
| Muhlenbergia montana | Mountain Muhly | 15 |
| Achnatherum hymenoides | Indian Ricegrass | 10 |
| Koeleria macrantha | Prairie Junegrass | 10 |
| | | 100 |

Perennial (Seeded in Native revegetation Areas and planted in garden spaces. Some or all of the following shall be used)

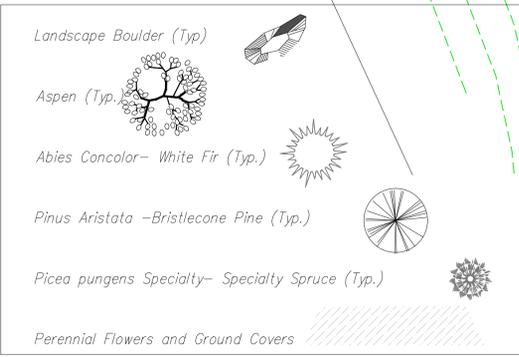
| Scientific Name | Common Name |
|---------------------------|------------------------|
| Achillea Millefolium | White Yarrow |
| Anemone Multifida | Wind Flower |
| Antennaria Dioca | Pussytoes |
| Antennaria Parvifolia | Dwarf Pussytoes |
| Blue Columbine | Aquilegia caerulea |
| Ergonim Umbellatum | Buckwheat |
| Harebell | Campanula rotundifolia |
| Penstemon glaber alpinus. | Smooth Penstemon |
| Silver Lupine | Lupinus argenteus |
| White Yarrow | Achillea lanulosa |

Trees and Shrubs

| Scientific Name | Common Name | Qty. | Size |
|-------------------------|----------------------------|------|---------------|
| Abies Concolor | White Fir | 1 | 8-12' |
| Picea Englemanni | Englemann Spruce | | 8-12' |
| Picea Pungens | Blue Spruce | | 8-12' |
| Picea Pungens Specialty | Specialty Blue Spruce | | 3/2-6' |
| Pinus aristata | Bristlecone Pine | | 4-8' |
| Populus Tremuloides | Quaking Aspen (Multi Stem) | | 4/2.5-3" cal. |
| Ribes Aureum | Golden Currant | #5 | |
| Rosa Woodsii | Woods Rose | #5 | |
| Arctostaphylos uva-ursi | Kinnikinnick | #1 | |



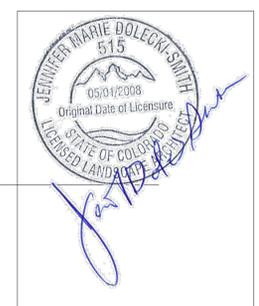
Landscape Key



Landscape PLAN

SCALE : 1/8" = 1' - 0"

LANDSCAPE

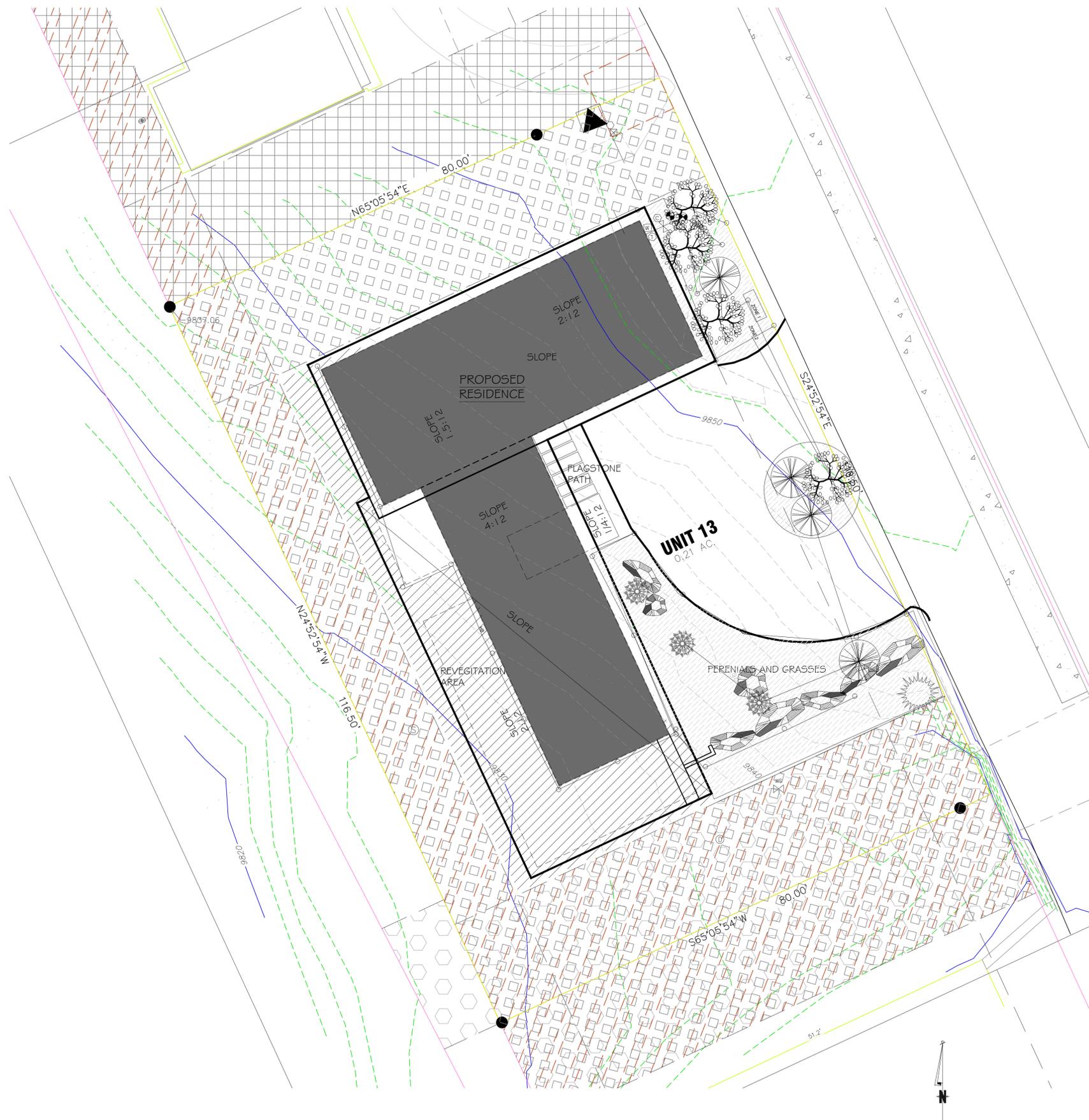


Landscape Plan

Taten Residence
Lot 13 Cortina
Mountain Village, Colorado

Date: 2-8-19
Revisions:
4-22-19

Drawing
L1



WATER USAGE CHART

| TYPE | MONTHLY USE | TOTAL # | TOTAL MONTHLY USE |
|----------------------------------|---------------------------|------------------|---|
| ASPEN | 10 GAL / SF | 8 3"-4" | 200 GAL FOR THE FIRST 2 SEASONS 100 GAL THEREAFTER |
| BRISTLECONE PERENNIALS & GRASSES | 25 GAL / SF 5 GAL / SF | 2 6'-8' 500SF | 250 GAL 2500 GAL |

| ZONE | LOCATION | HEAD | TOTAL | QUANTITY |
|----------|-----------------------------------|-----------------|-------|----------|
| ZONE 1 | BRISTLECONE ASPEN, FIR and SPRUCE | DRIP EMITTERS | 12 | - |
| ZONE 2 | PERENNIALS & GRASSES | Pop up Emitters | 15 | - |
| (ZONE 3) | (REVEG)TEMP ASPEN | ROTOR | 10 | 20 GPM |

Number of Zones to be adjusted based on Pressure

IRRIGATION LEGEND

- TAP WITH RAINBIRD PVB-075 BACKFLOW PREVENTER
- RAINBIRD RCM-12 ELECTROMECHANICAL CONTROLLER
- 1 1/2" WILKINS MODEL 500 PRESSURE REGULATOR
- RAINBIRD 150 ELECTRIC REMOTE CONTROL VALVE
- 1" CLASS 200 PVC MAINLINE
- 1" NSF POLYLATERAL LINE
- WATER SENSOR-RAIN SHUT OFF SENSOR
- RE-VEG AREAS
- Irrigation Head- Quantity and Distance to be adjusted based on Pressure



SCALE : 1/8" = 1' - 0"

IRRIGATION

Date: 2-8-19
 Revisions:
 4-22-19



3" LED EXTRA ADJUSTABLE DOWNLIGHT & WALL WASH

The ELEMENT Extra 3" adjustable LED downlight offers a cost-effective alternative to meet residential and commercial specifications on budget-sensitive projects. Custom engineered for high performance and reliability, ELEMENT Extra is easy to configure with a complete feature set that offers flexibility without an overwhelming list of options. Extra LED modules are available in a color temperature and include 20°, 40° and 60° interchangeable optics with 30° to 200° rotation. Flange and trim options (including round, square, round or square, flat or beveled die-cast trim in Silver and a stainless White finish. Remote installation also available with a remote control and trim options.

Features of Flangeless Ceiling Appearance

- Flangeless 3" LED module
- 20°, 40° and 60° interchangeable optics (all included)
- Adjustable typical controls
- 3-step color tuning

SPECIFICATIONS

| DESCRIPTION | TYPE | UNIT | TYPE | UNIT |
|--------------------------|--|--|---|---|
| DESCRIPTION | TYPE | UNIT | TYPE | UNIT |
| WARRANTY | 3 YR | 10 YR | 3 YR | 10 YR |
| EFFICIENCY | 100 LM/W | 110 LM/W | 100 LM/W | 110 LM/W |
| LM | 100 | 110 | 100 | 110 |
| OPERATING TEMPERATURE | 32° - 104° F | 32° - 104° F | 32° - 104° F | 32° - 104° F |
| LED TYPE | 2835, 3030, 3535, 4014 | 2835, 3030, 3535, 4014 | 2835, 3030, 3535, 4014 | 2835, 3030, 3535, 4014 |
| OPERATING VOLTAGE | 120V AC | 120V AC | 120V AC | 120V AC |
| OPERATING CURRENT | 0.83A | 0.83A | 0.83A | 0.83A |
| OPERATING POWER | 100W | 110W | 100W | 110W |
| OPERATING FREQUENCY | 60 Hz | 60 Hz | 60 Hz | 60 Hz |
| OPERATING DIMENSIONS | 3" Dia | 3" Dia | 3" Dia | 3" Dia |
| OPERATING WEIGHT | 0.5 lbs | 0.5 lbs | 0.5 lbs | 0.5 lbs |
| OPERATING MATERIALS | Aluminum | Aluminum | Aluminum | Aluminum |
| OPERATING FINISHES | White, Silver | White, Silver | White, Silver | White, Silver |
| OPERATING OPTIONS | Flangeless, Flangeless with trim, Flangeless with trim and flange | Flangeless, Flangeless with trim, Flangeless with trim and flange | Flangeless, Flangeless with trim, Flangeless with trim and flange | Flangeless, Flangeless with trim, Flangeless with trim and flange |
| OPERATING ACCESSORIES | Flangeless trim, Flangeless trim and flange | Flangeless trim, Flangeless trim and flange | Flangeless trim, Flangeless trim and flange | Flangeless trim, Flangeless trim and flange |
| OPERATING CERTIFICATIONS | UL, ETL, CE, FCC, RoHS, REACH, WEEE, EN60598-1, EN60598-2-1, EN60598-2-2, EN60598-2-3, EN60598-2-4, EN60598-2-5, EN60598-2-6, EN60598-2-7, EN60598-2-8, EN60598-2-9, EN60598-2-10, EN60598-2-11, EN60598-2-12, EN60598-2-13, EN60598-2-14, EN60598-2-15, EN60598-2-16, EN60598-2-17, EN60598-2-18, EN60598-2-19, EN60598-2-20, EN60598-2-21, EN60598-2-22, EN60598-2-23, EN60598-2-24, EN60598-2-25, EN60598-2-26, EN60598-2-27, EN60598-2-28, EN60598-2-29, EN60598-2-30, EN60598-2-31, EN60598-2-32, EN60598-2-33, EN60598-2-34, EN60598-2-35, EN60598-2-36, EN60598-2-37, EN60598-2-38, EN60598-2-39, EN60598-2-40, EN60598-2-41, EN60598-2-42, EN60598-2-43, EN60598-2-44, EN60598-2-45, EN60598-2-46, EN60598-2-47, EN60598-2-48, EN60598-2-49, EN60598-2-50, EN60598-2-51, EN60598-2-52, EN60598-2-53, EN60598-2-54, EN60598-2-55, EN60598-2-56, EN60598-2-57, EN60598-2-58, EN60598-2-59, EN60598-2-60, EN60598-2-61, EN60598-2-62, EN60598-2-63, EN60598-2-64, EN60598-2-65, EN60598-2-66, EN60598-2-67, EN60598-2-68, EN60598-2-69, EN60598-2-70, EN60598-2-71, EN60598-2-72, EN60598-2-73, EN60598-2-74, EN60598-2-75, EN60598-2-76, EN60598-2-77, EN60598-2-78, EN60598-2-79, EN60598-2-80, EN60598-2-81, EN60598-2-82, EN60598-2-83, EN60598-2-84, EN60598-2-85, EN60598-2-86, EN60598-2-87, EN60598-2-88, EN60598-2-89, EN60598-2-90, EN60598-2-91, EN60598-2-92, EN60598-2-93, EN60598-2-94, EN60598-2-95, EN60598-2-96, EN60598-2-97, EN60598-2-98, EN60598-2-99, EN60598-2-100 | UL, ETL, CE, FCC, RoHS, REACH, WEEE, EN60598-1, EN60598-2-1, EN60598-2-2, EN60598-2-3, EN60598-2-4, EN60598-2-5, EN60598-2-6, EN60598-2-7, EN60598-2-8, EN60598-2-9, EN60598-2-10, EN60598-2-11, EN60598-2-12, EN60598-2-13, EN60598-2-14, EN60598-2-15, EN60598-2-16, EN60598-2-17, EN60598-2-18, EN60598-2-19, EN60598-2-20, EN60598-2-21, EN60598-2-22, EN60598-2-23, EN60598-2-24, EN60598-2-25, EN60598-2-26, EN60598-2-27, EN60598-2-28, EN60598-2-29, EN60598-2-30, EN60598-2-31, EN60598-2-32, EN60598-2-33, EN60598-2-34, EN60598-2-35, EN60598-2-36, EN60598-2-37, EN60598-2-38, EN60598-2-39, EN60598-2-40, EN60598-2-41, EN60598-2-42, EN60598-2-43, EN60598-2-44, EN60598-2-45, EN60598-2-46, EN60598-2-47, EN60598-2-48, EN60598-2-49, EN60598-2-50, EN60598-2-51, EN60598-2-52, EN60598-2-53, EN60598-2-54, EN60598-2-55, EN60598-2-56, EN60598-2-57, EN60598-2-58, EN60598-2-59, EN60598-2-60, EN60598-2-61, EN60598-2-62, EN60598-2-63, EN60598-2-64, EN60598-2-65, EN60598-2-66, EN60598-2-67, EN60598-2-68, EN60598-2-69, EN60598-2-70, EN60598-2-71, EN60598-2-72, EN60598-2-73, EN60598-2-74, EN60598-2-75, EN60598-2-76, EN60598-2-77, EN60598-2-78, EN60598-2-79, EN60598-2-80, EN60598-2-81, EN60598-2-82, EN60598-2-83, EN60598-2-84, EN60598-2-85, EN60598-2-86, EN60598-2-87, EN60598-2-88, EN60598-2-89, EN60598-2-90, EN60598-2-91, EN60598-2-92, EN60598-2-93, EN60598-2-94, EN60598-2-95, EN60598-2-96, EN60598-2-97, EN60598-2-98, EN60598-2-99, EN60598-2-100 | | |

TRIMS

ROUND, SQUARE, WALL WASH, FLANGELESS, FLANGELESS WITH TRIM, FLANGELESS WITH TRIM AND FLANGE

ADJUSTABLE DOWN LIGHT 3" HOUSING

ROUND, SQUARE

EXTERIOR RECESSED

ROUND, SQUARE

GRIDS

ROUND, SQUARE

PROJECT INFO

PROJECT NAME, ADDRESS, CITY, STATE, ZIP, PHONE, FAX, EMAIL, WEBSITE

ELEMENT

GENERATION 2.0

BOWMAN 6 WALL SCIENCE

The classic silhouette of this sleek LED wall science makes it suitable for both indoor and outdoor applications. The Bowman's die-cast aluminum body houses a powerful, long-lasting LED light source tightly controlled for down light only, yet supplying significant illumination for even the darkest nights.

High quality LMB-based LEDs

For consistent long life performance and color

Outstanding protection against the elements:

- Marine-grade powder coat finishes
- Stainless Steel mounting hardware
- Impact-resistant, UV stabilized frosted acrylic lensing

SPECIFICATIONS

| DESCRIPTION | TYPE | UNIT | TYPE | UNIT |
|---|--|--|---|---|
| DESCRIPTION <td>TYPE</td> <td>UNIT</td> <td>TYPE</td> <td>UNIT</td> | TYPE | UNIT | TYPE | UNIT |
| WARRANTY | 3 YR | 10 YR | 3 YR | 10 YR |
| EFFICIENCY | 100 LM/W | 110 LM/W | 100 LM/W | 110 LM/W |
| LM | 100 | 110 | 100 | 110 |
| OPERATING TEMPERATURE | 32° - 104° F | 32° - 104° F | 32° - 104° F | 32° - 104° F |
| LED TYPE | 2835, 3030, 3535, 4014 | 2835, 3030, 3535, 4014 | 2835, 3030, 3535, 4014 | 2835, 3030, 3535, 4014 |
| OPERATING VOLTAGE | 120V AC | 120V AC | 120V AC | 120V AC |
| OPERATING CURRENT | 0.83A | 0.83A | 0.83A | 0.83A |
| OPERATING POWER | 100W | 110W | 100W | 110W |
| OPERATING FREQUENCY | 60 Hz | 60 Hz | 60 Hz | 60 Hz |
| OPERATING DIMENSIONS | 6" Dia | 6" Dia | 6" Dia | 6" Dia |
| OPERATING WEIGHT | 0.5 lbs | 0.5 lbs | 0.5 lbs | 0.5 lbs |
| OPERATING MATERIALS | Aluminum | Aluminum | Aluminum | Aluminum |
| OPERATING FINISHES | White, Silver | White, Silver | White, Silver | White, Silver |
| OPERATING OPTIONS | Flangeless, Flangeless with trim, Flangeless with trim and flange | Flangeless, Flangeless with trim, Flangeless with trim and flange | Flangeless, Flangeless with trim, Flangeless with trim and flange | Flangeless, Flangeless with trim, Flangeless with trim and flange |
| OPERATING ACCESSORIES | Flangeless trim, Flangeless trim and flange | Flangeless trim, Flangeless trim and flange | Flangeless trim, Flangeless trim and flange | Flangeless trim, Flangeless trim and flange |
| OPERATING CERTIFICATIONS | UL, ETL, CE, FCC, RoHS, REACH, WEEE, EN60598-1, EN60598-2-1, EN60598-2-2, EN60598-2-3, EN60598-2-4, EN60598-2-5, EN60598-2-6, EN60598-2-7, EN60598-2-8, EN60598-2-9, EN60598-2-10, EN60598-2-11, EN60598-2-12, EN60598-2-13, EN60598-2-14, EN60598-2-15, EN60598-2-16, EN60598-2-17, EN60598-2-18, EN60598-2-19, EN60598-2-20, EN60598-2-21, EN60598-2-22, EN60598-2-23, EN60598-2-24, EN60598-2-25, EN60598-2-26, EN60598-2-27, EN60598-2-28, EN60598-2-29, EN60598-2-30, EN60598-2-31, EN60598-2-32, EN60598-2-33, EN60598-2-34, EN60598-2-35, EN60598-2-36, EN60598-2-37, EN60598-2-38, EN60598-2-39, EN60598-2-40, EN60598-2-41, EN60598-2-42, EN60598-2-43, EN60598-2-44, EN60598-2-45, EN60598-2-46, EN60598-2-47, EN60598-2-48, EN60598-2-49, EN60598-2-50, EN60598-2-51, EN60598-2-52, EN60598-2-53, EN60598-2-54, EN60598-2-55, EN60598-2-56, EN60598-2-57, EN60598-2-58, EN60598-2-59, EN60598-2-60, EN60598-2-61, EN60598-2-62, EN60598-2-63, EN60598-2-64, EN60598-2-65, EN60598-2-66, EN60598-2-67, EN60598-2-68, EN60598-2-69, EN60598-2-70, EN60598-2-71, EN60598-2-72, EN60598-2-73, EN60598-2-74, EN60598-2-75, EN60598-2-76, EN60598-2-77, EN60598-2-78, EN60598-2-79, EN60598-2-80, EN60598-2-81, EN60598-2-82, EN60598-2-83, EN60598-2-84, EN60598-2-85, EN60598-2-86, EN60598-2-87, EN60598-2-88, EN60598-2-89, EN60598-2-90, EN60598-2-91, EN60598-2-92, EN60598-2-93, EN60598-2-94, EN60598-2-95, EN60598-2-96, EN60598-2-97, EN60598-2-98, EN60598-2-99, EN60598-2-100 | UL, ETL, CE, FCC, RoHS, REACH, WEEE, EN60598-1, EN60598-2-1, EN60598-2-2, EN60598-2-3, EN60598-2-4, EN60598-2-5, EN60598-2-6, EN60598-2-7, EN60598-2-8, EN60598-2-9, EN60598-2-10, EN60598-2-11, EN60598-2-12, EN60598-2-13, EN60598-2-14, EN60598-2-15, EN60598-2-16, EN60598-2-17, EN60598-2-18, EN60598-2-19, EN60598-2-20, EN60598-2-21, EN60598-2-22, EN60598-2-23, EN60598-2-24, EN60598-2-25, EN60598-2-26, EN60598-2-27, EN60598-2-28, EN60598-2-29, EN60598-2-30, EN60598-2-31, EN60598-2-32, EN60598-2-33, EN60598-2-34, EN60598-2-35, EN60598-2-36, EN60598-2-37, EN60598-2-38, EN60598-2-39, EN60598-2-40, EN60598-2-41, EN60598-2-42, EN60598-2-43, EN60598-2-44, EN60598-2-45, EN60598-2-46, EN60598-2-47, EN60598-2-48, EN60598-2-49, EN60598-2-50, EN60598-2-51, EN60598-2-52, EN60598-2-53, EN60598-2-54, EN60598-2-55, EN60598-2-56, EN60598-2-57, EN60598-2-58, EN60598-2-59, EN60598-2-60, EN60598-2-61, EN60598-2-62, EN60598-2-63, EN60598-2-64, EN60598-2-65, EN60598-2-66, EN60598-2-67, EN60598-2-68, EN60598-2-69, EN60598-2-70, EN60598-2-71, EN60598-2-72, EN60598-2-73, EN60598-2-74, EN60598-2-75, EN60598-2-76, EN60598-2-77, EN60598-2-78, EN60598-2-79, EN60598-2-80, EN60598-2-81, EN60598-2-82, EN60598-2-83, EN60598-2-84, EN60598-2-85, EN60598-2-86, EN60598-2-87, EN60598-2-88, EN60598-2-89, EN60598-2-90, EN60598-2-91, EN60598-2-92, EN60598-2-93, EN60598-2-94, EN60598-2-95, EN60598-2-96, EN60598-2-97, EN60598-2-98, EN60598-2-99, EN60598-2-100 | | |

ORDERING INFORMATION

ITEM NO., QUANTITY, PRICE, TOTAL

BOWMAN 4 WALL SCIENCE

The classic silhouette of this sleek LED wall science makes it suitable for both indoor and outdoor applications. The Bowman's die-cast aluminum body houses a powerful, long-lasting LED light source tightly controlled for down light only, yet supplying significant illumination for even the darkest nights.

High quality LMB-based LEDs

For consistent long life performance and color

Outstanding protection against the elements:

- Marine-grade powder coat finishes
- Stainless Steel mounting hardware
- Impact-resistant, UV stabilized frosted acrylic lensing

SPECIFICATIONS

| DESCRIPTION | TYPE | UNIT | TYPE | UNIT |
|---|--|--|---|---|
| DESCRIPTION <td>TYPE</td> <td>UNIT</td> <td>TYPE</td> <td>UNIT</td> | TYPE | UNIT | TYPE | UNIT |
| WARRANTY | 3 YR | 10 YR | 3 YR | 10 YR |
| EFFICIENCY | 100 LM/W | 110 LM/W | 100 LM/W | 110 LM/W |
| LM | 100 | 110 | 100 | 110 |
| OPERATING TEMPERATURE | 32° - 104° F | 32° - 104° F | 32° - 104° F | 32° - 104° F |
| LED TYPE | 2835, 3030, 3535, 4014 | 2835, 3030, 3535, 4014 | 2835, 3030, 3535, 4014 | 2835, 3030, 3535, 4014 |
| OPERATING VOLTAGE | 120V AC | 120V AC | 120V AC | 120V AC |
| OPERATING CURRENT | 0.83A | 0.83A | 0.83A | 0.83A |
| OPERATING POWER | 100W | 110W | 100W | 110W |
| OPERATING FREQUENCY | 60 Hz | 60 Hz | 60 Hz | 60 Hz |
| OPERATING DIMENSIONS | 4" Dia | 4" Dia | 4" Dia | 4" Dia |
| OPERATING WEIGHT | 0.5 lbs | 0.5 lbs | 0.5 lbs | 0.5 lbs |
| OPERATING MATERIALS | Aluminum | Aluminum | Aluminum | Aluminum |
| OPERATING FINISHES | White, Silver | White, Silver | White, Silver | White, Silver |
| OPERATING OPTIONS | Flangeless, Flangeless with trim, Flangeless with trim and flange | Flangeless, Flangeless with trim, Flangeless with trim and flange | Flangeless, Flangeless with trim, Flangeless with trim and flange | Flangeless, Flangeless with trim, Flangeless with trim and flange |
| OPERATING ACCESSORIES | Flangeless trim, Flangeless trim and flange | Flangeless trim, Flangeless trim and flange | Flangeless trim, Flangeless trim and flange | Flangeless trim, Flangeless trim and flange |
| OPERATING CERTIFICATIONS | UL, ETL, CE, FCC, RoHS, REACH, WEEE, EN60598-1, EN60598-2-1, EN60598-2-2, EN60598-2-3, EN60598-2-4, EN60598-2-5, EN60598-2-6, EN60598-2-7, EN60598-2-8, EN60598-2-9, EN60598-2-10, EN60598-2-11, EN60598-2-12, EN60598-2-13, EN60598-2-14, EN60598-2-15, EN60598-2-16, EN60598-2-17, EN60598-2-18, EN60598-2-19, EN60598-2-20, EN60598-2-21, EN60598-2-22, EN60598-2-23, EN60598-2-24, EN60598-2-25, EN60598-2-26, EN60598-2-27, EN60598-2-28, EN60598-2-29, EN60598-2-30, EN60598-2-31, EN60598-2-32, EN60598-2-33, EN60598-2-34, EN60598-2-35, EN60598-2-36, EN60598-2-37, EN60598-2-38, EN60598-2-39, EN60598-2-40, EN60598-2-41, EN60598-2-42, EN60598-2-43, EN60598-2-44, EN60598-2-45, EN60598-2-46, EN60598-2-47, EN60598-2-48, EN60598-2-49, EN60598-2-50, EN60598-2-51, EN60598-2-52, EN60598-2-53, EN60598-2-54, EN60598-2-55, EN60598-2-56, EN60598-2-57, EN60598-2-58, EN60598-2-59, EN60598-2-60, EN60598-2-61, EN60598-2-62, EN60598-2-63, EN60598-2-64, EN60598-2-65, EN60598-2-66, EN60598-2-67, EN60598-2-68, EN60598-2-69, EN60598-2-70, EN60598-2-71, EN60598-2-72, EN60598-2-73, EN60598-2-74, EN60598-2-75, EN60598-2-76, EN60598-2-77, EN60598-2-78, EN60598-2-79, EN60598-2-80, EN60598-2-81, EN60598-2-82, EN60598-2-83, EN60598-2-84, EN60598-2-85, EN60598-2-86, EN60598-2-87, EN60598-2-88, EN60598-2-89, EN60598-2-90, EN60598-2-91, EN60598-2-92, EN60598-2-93, EN60598-2-94, EN60598-2-95, EN60598-2-96, EN60598-2-97, EN60598-2-98, EN60598-2-99, EN60598-2-100 | UL, ETL, CE, FCC, RoHS, REACH, WEEE, EN60598-1, EN60598-2-1, EN60598-2-2, EN60598-2-3, EN60598-2-4, EN60598-2-5, EN60598-2-6, EN60598-2-7, EN60598-2-8, EN60598-2-9, EN60598-2-10, EN60598-2-11, EN60598-2-12, EN60598-2-13, EN60598-2-14, EN60598-2-15, EN60598-2-16, EN60598-2-17, EN60598-2-18, EN60598-2-19, EN60598-2-20, EN60598-2-21, EN60598-2-22, EN60598-2-23, EN60598-2-24, EN60598-2-25, EN60598-2-26, EN60598-2-27, EN60598-2-28, EN60598-2-29, EN60598-2-30, EN60598-2-31, EN60598-2-32, EN60598-2-33, EN60598-2-34, EN60598-2-35, EN60598-2-36, EN60598-2-37, EN60598-2-38, EN60598-2-39, EN60598-2-40, EN60598-2-41, EN60598-2-42, EN60598-2-43, EN60598-2-44, EN60598-2-45, EN60598-2-46, EN60598-2-47, EN60598-2-48, EN60598-2-49, EN60598-2-50, EN60598-2-51, EN60598-2-52, EN60598-2-53, EN60598-2-54, EN60598-2-55, EN60598-2-56, EN60598-2-57, EN60598-2-58, EN60598-2-59, EN60598-2-60, EN60598-2-61, EN60598-2-62, EN60598-2-63, EN60598-2-64, EN60598-2-65, EN60598-2-66, EN60598-2-67, EN60598-2-68, EN60598-2-69, EN60598-2-70, EN60598-2-71, EN60598-2-72, EN60598-2-73, EN60598-2-74, EN60598-2-75, EN60598-2-76, EN60598-2-77, EN60598-2-78, EN60598-2-79, EN60598-2-80, EN60598-2-81, EN60598-2-82, EN60598-2-83, EN60598-2-84, EN60598-2-85, EN60598-2-86, EN60598-2-87, EN60598-2-88, EN60598-2-89, EN60598-2-90, EN60598-2-91, EN60598-2-92, EN60598-2-93, EN60598-2-94, EN60598-2-95, EN60598-2-96, EN60598-2-97, EN60598-2-98, EN60598-2-99, EN60598-2-100 | | |

ORDERING INFORMATION

ITEM NO., QUANTITY, PRICE, TOTAL

GMLighting LTR WET LOCATION SERIES STANDARD OUTPUT LED RIBBON

LEDIAN™ TWC STANDARD OUTPUT WET LOCATION FLEXIBLE LED LINEAR RIBBON

PRODUCT DESCRIPTION

The LEDIAN™ TWC Standard Output Wet Location Flexible LED Linear Ribbon is a fully waterproof LED ribbon light that provides the most powerful and longest-lasting LED ribbon light available. It is designed for use in wet locations and is suitable for use in residential and commercial applications. The ribbon is made of high-quality materials and is designed to be long-lasting and reliable. It is available in a variety of lengths and is easy to install. The ribbon is made of high-quality materials and is designed to be long-lasting and reliable. It is available in a variety of lengths and is easy to install.

PRODUCT SPECIFICATIONS

| DESCRIPTION | TYPE | UNIT | TYPE | UNIT |
|---|---------------|--------------|--------------|--------------|
| DESCRIPTION <td>TYPE</td> <td>UNIT</td> <td>TYPE</td> <td>UNIT</td> | TYPE | UNIT | TYPE | UNIT |
| WARRANTY | 3 YR | 10 YR | 3 YR | 10 YR |
| EFFICIENCY | 100 LM/W | 110 LM/W | 100 LM/W | 110 LM/W |
| LM | 100 | 110 | 100 | 110 |
| OPERATING TEMPERATURE | 32° - 104° F | 32° - 104° F | 32° - 104° F | 32° - 104° F |
| LED TYPE | 2835, 3030, 3 | | | |



amped lighting design
 katie sapp
 po box 4156
 telluride, co 81435
 970-708-1545

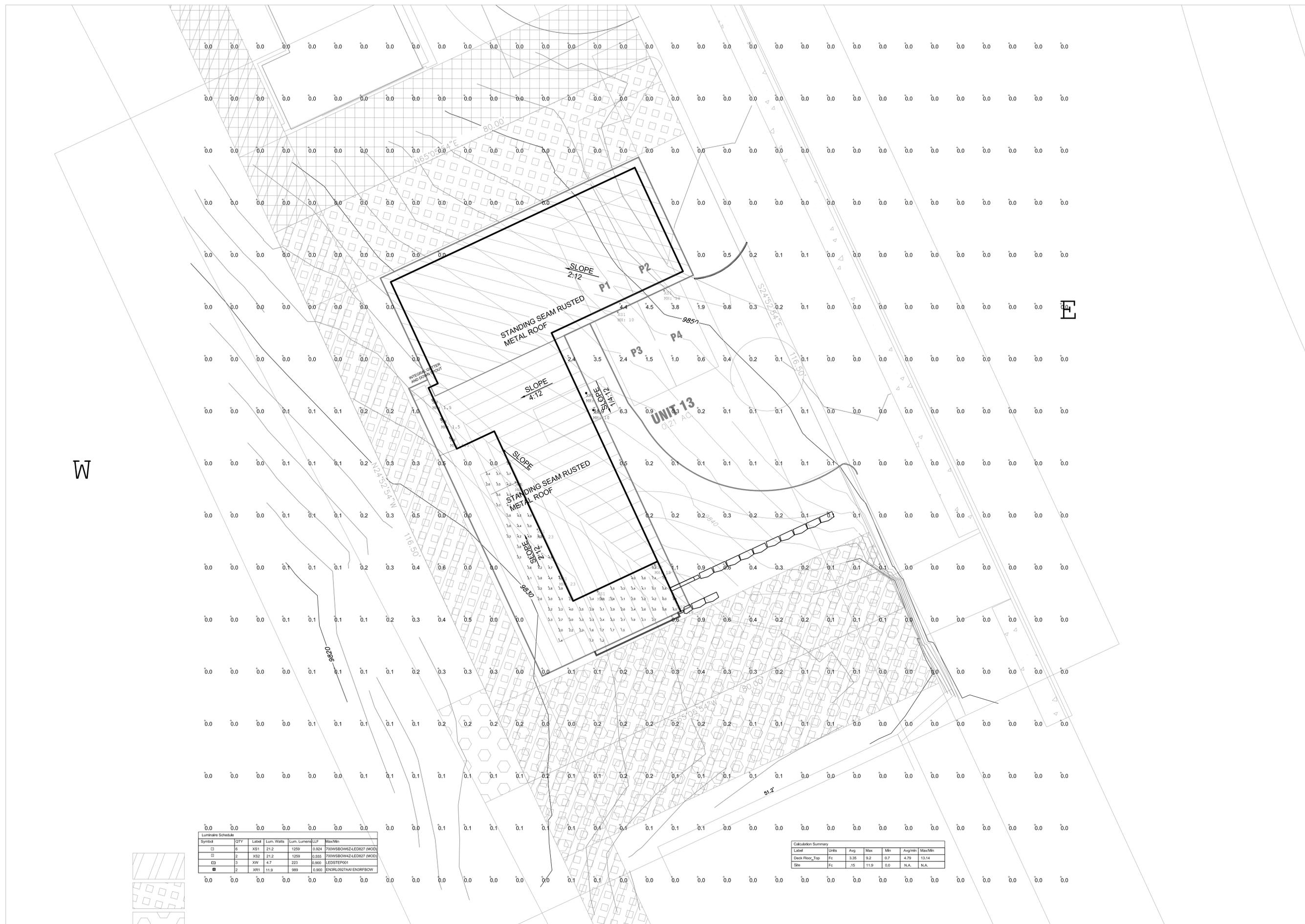
| PHASE | DATE |
|-------|------------|
| DRB | 02/05/2019 |
| DRB | 04/18/2019 |

Photometric drawings are not to scale.
 Drawings are for estimating purposes.
 Foot-Candle values are predicted at
 horizontal calculations unless specified
 otherwise. This is a simulated
 calculation and actual foot-candles may
 vary.

TATEN RESIDENCE
 LOT 13 Cortina
 TELLURIDE MOUNTAIN VILLAGE, CO

PROJECT
 DRAWING
**EXTERIOR
 PHOTOMETRIC
 LIGHTING PLAN**

LD7.01

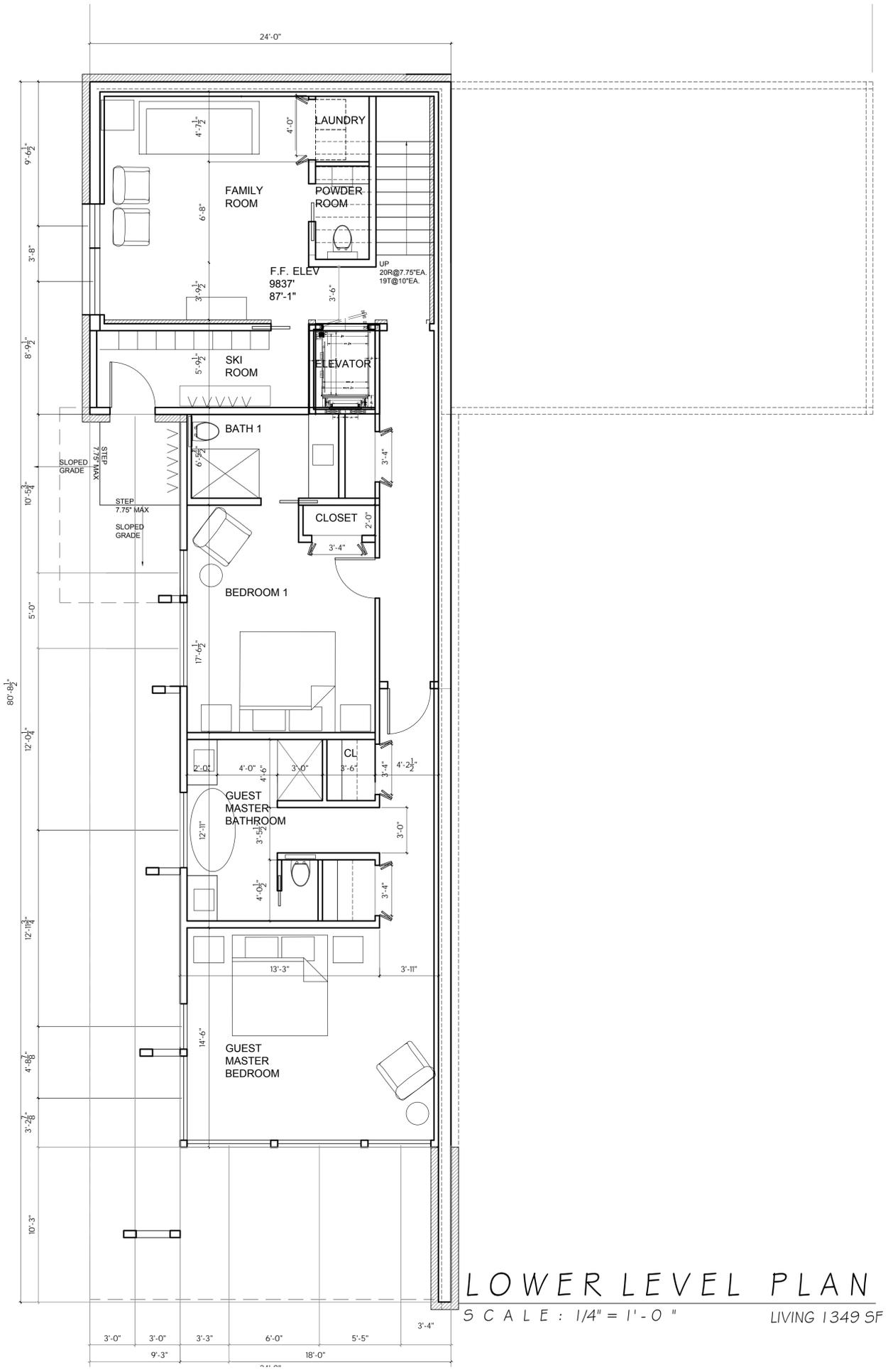
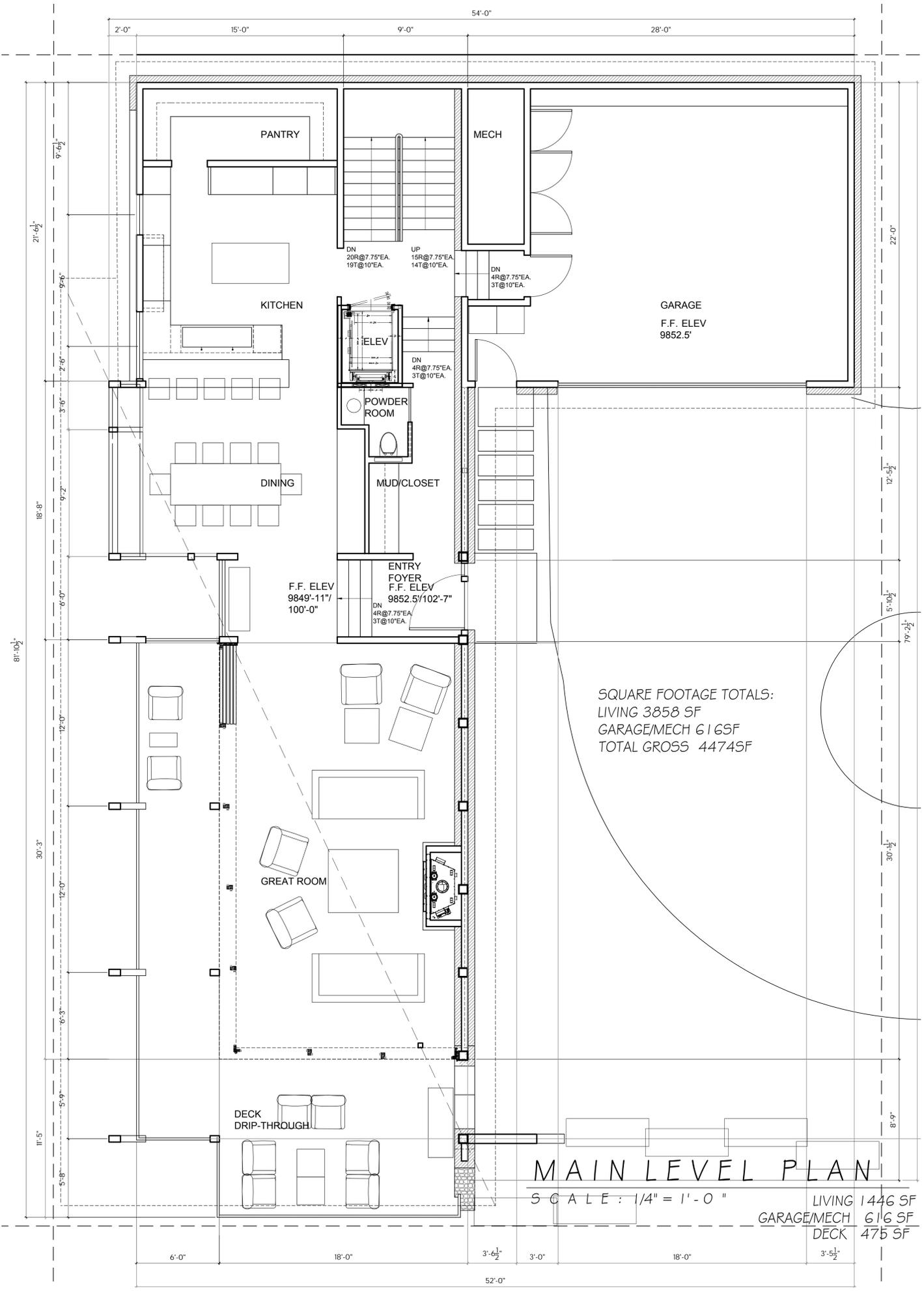


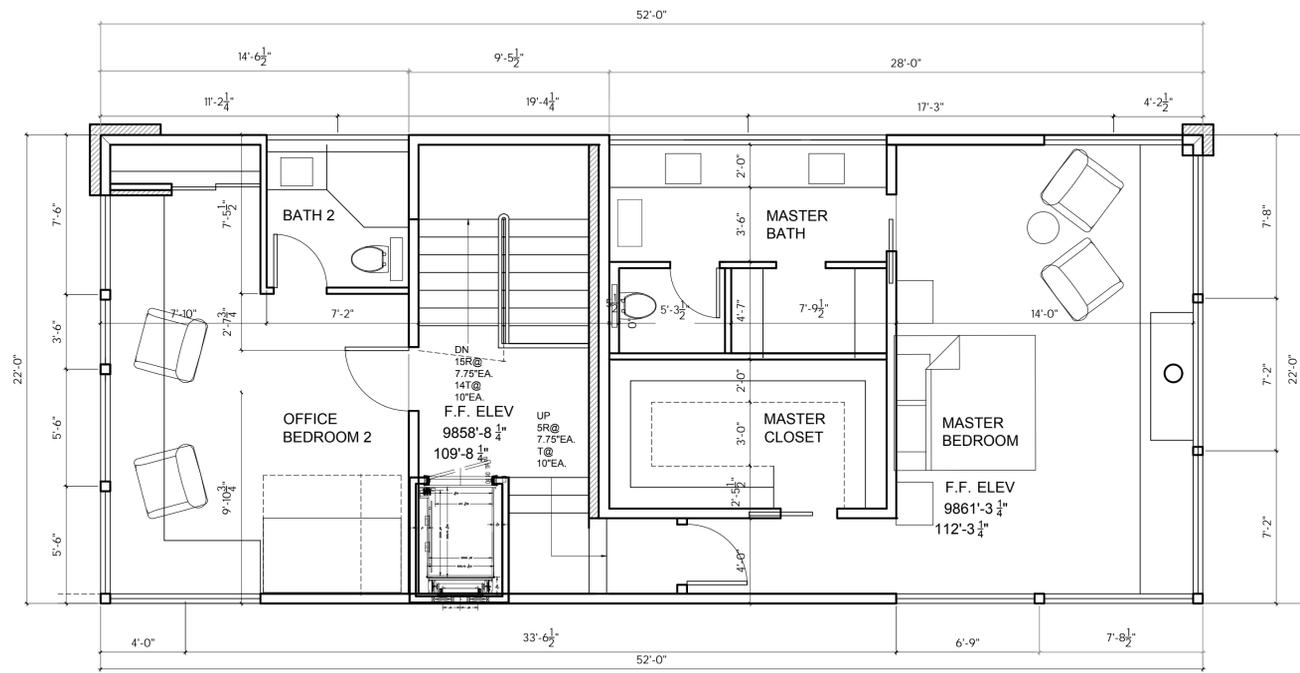
Luminaire Schedule

| Symbol | QTY | Label | Lum. Watts | Lum. Lumens | LF | Max/Min |
|--------|-----|-------|------------|-------------|-------|-------------------------|
| □ | 6 | XS1 | 212 | 1299 | 0.924 | 700WSBOW42-LED027 (MOD) |
| □ | 2 | XS2 | 212 | 1299 | 0.555 | 700WSBOW42-LED027 (MOD) |
| □ | 3 | XW | 4.7 | 223 | 0.900 | LEDSTEP001 |
| □ | 2 | XR1 | 11.9 | 989 | 0.900 | ENR3L0927AA1 ENR3FBOW |

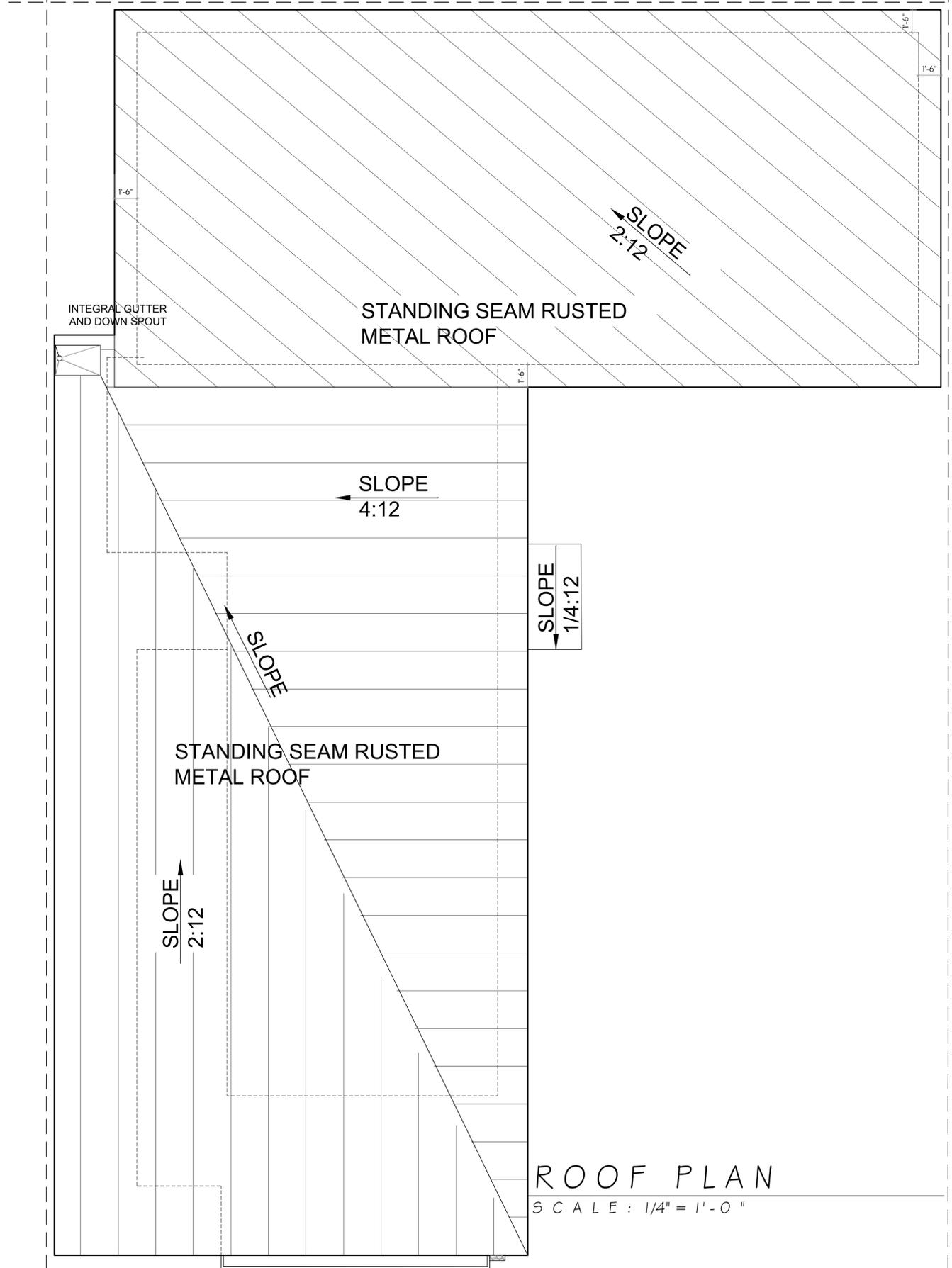
Calculation Summary

| Label | Units | Avg | Max | Min | Avg/Min | Max/Min |
|----------------|-------|------|------|-----|---------|---------|
| Deck Floor_Top | Fc | 3.36 | 9.2 | 0.7 | 4.79 | 13.14 |
| Site | Fc | .15 | 11.9 | 0.0 | N.A. | N.A. |

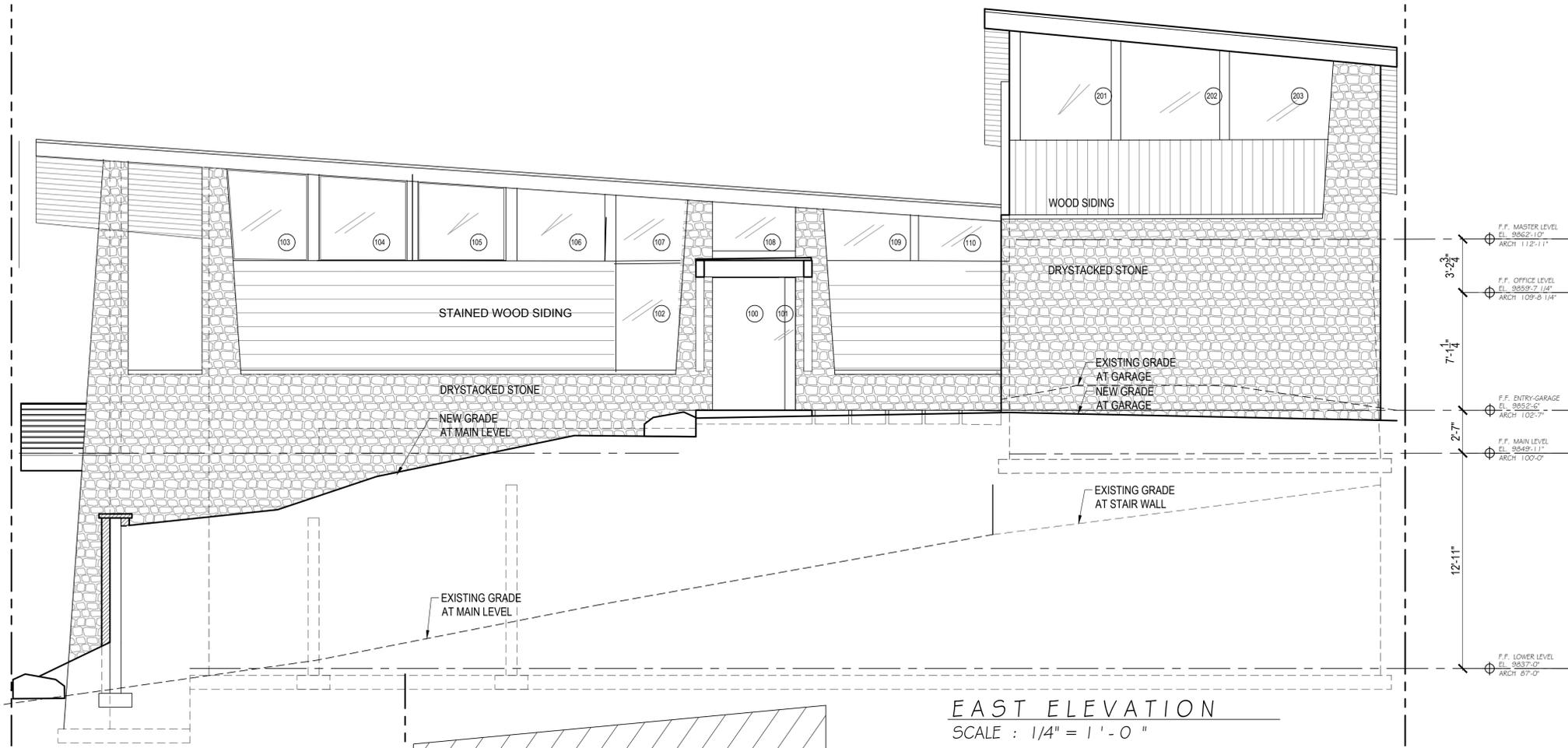




UPPER LEVEL PLAN
 SCALE: 1/4" = 1'-0" LIVING 1063 SF

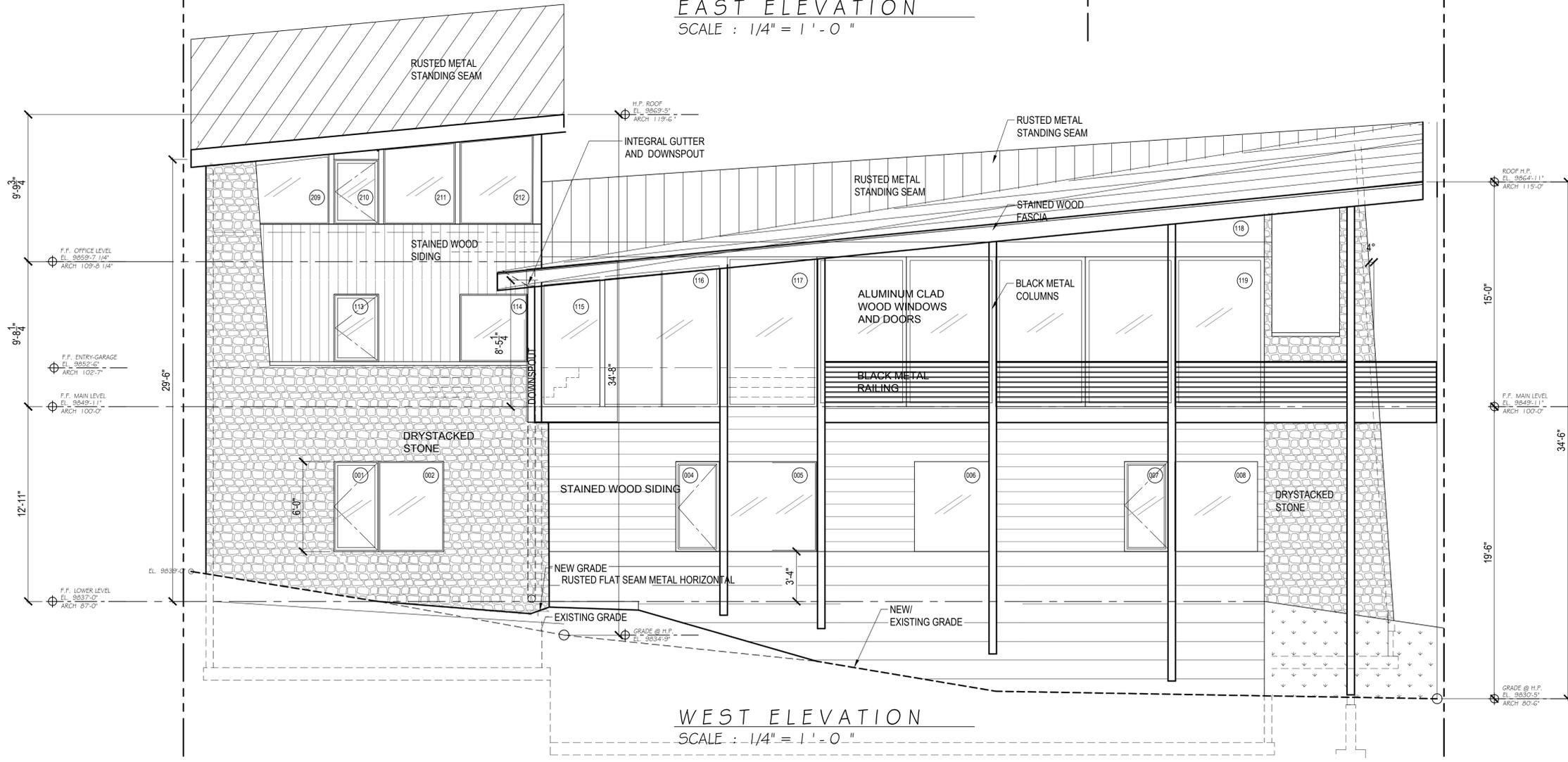


ROOF PLAN
 SCALE: 1/4" = 1'-0"



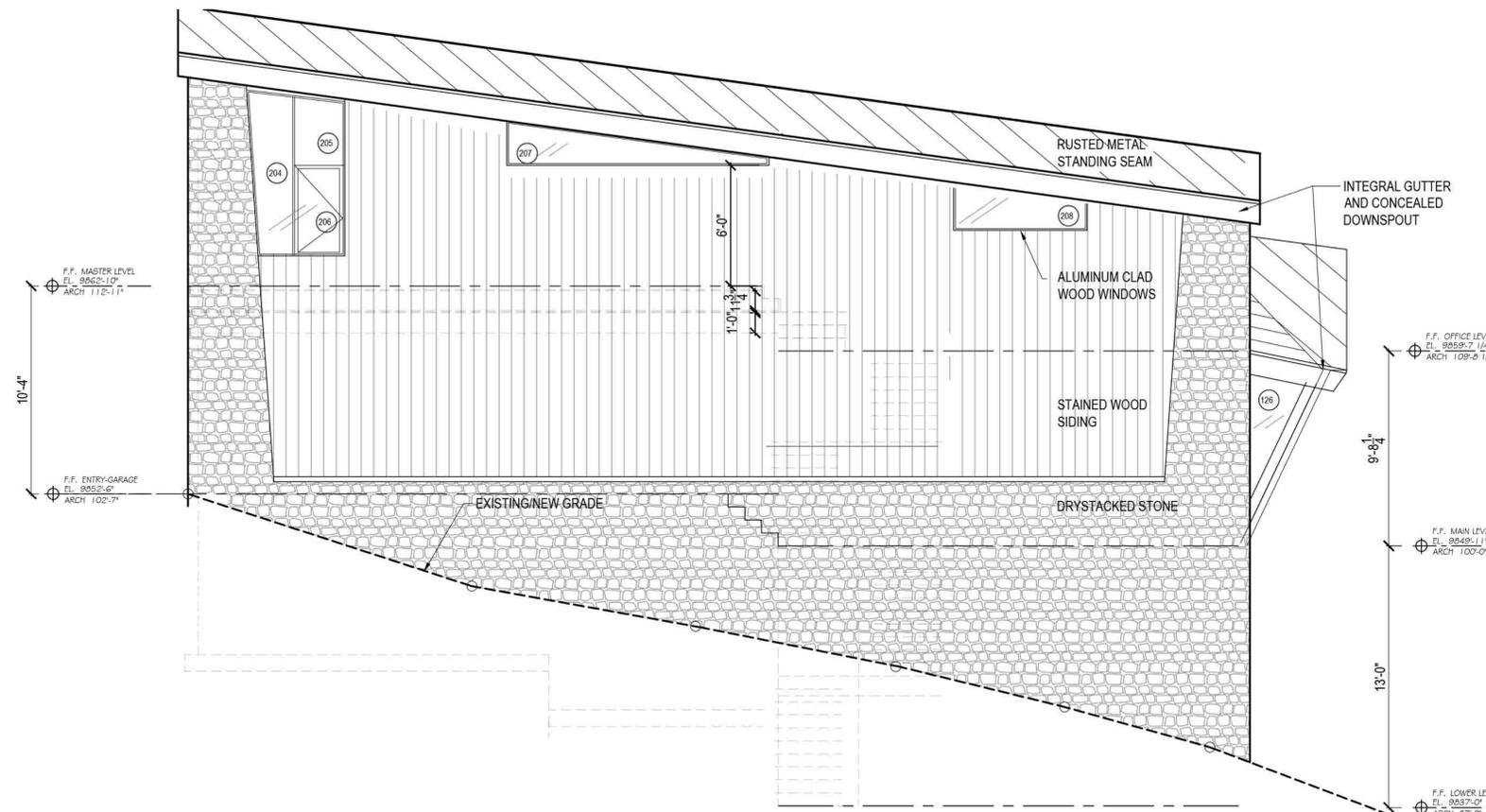
EAST ELEVATION
SCALE : 1/4" = 1' - 0"

| TATEN RESIDENCE | | | | | |
|--------------------|--------|---------|-----------|-------|-------|
| MATERIAL SCHEDULE | LOT 13 | CORTINA | 4.17.2019 | | |
| | WOOD | METAL | GLAZING | STONE | TOTAL |
| NORTH | 680 | 0 | 67 | 538 | 1285 |
| SOUTH | 315 | 314 | 541 | 450 | 1620 |
| WEST | 391 | 340 | 855 | 600 | 2186 |
| EAST | 346 | 0 | 300 | 690 | 1336 |
| TOTALS | 1732 | 654 | 1763 | 2278 | 6427 |
| PERCENTAGES | | | | | |
| TOTAL | 26.9% | 10.2% | 27.4% | 35.4% | |
| NORTH | 52.9% | 0 | 5.2% | 41.9% | |
| SOUTH | 19.4% | 19.4% | 33.4% | 27.8% | |
| WEST | 17.9% | 15.6% | 39.1% | 27.4% | |
| EAST | 25.9% | 0.0% | 22.5% | 51.6% | |

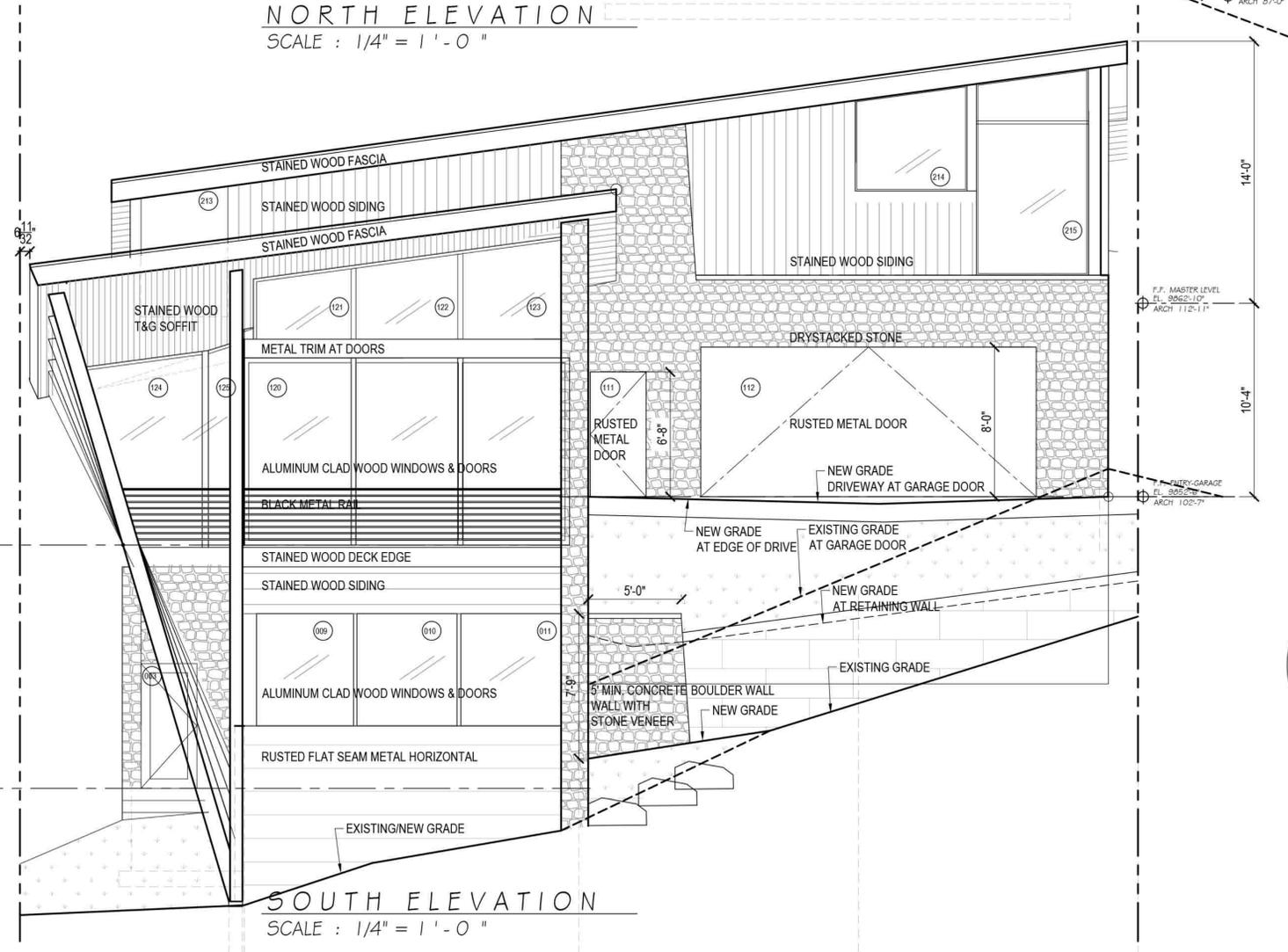


WEST ELEVATION
SCALE : 1/4" = 1' - 0"

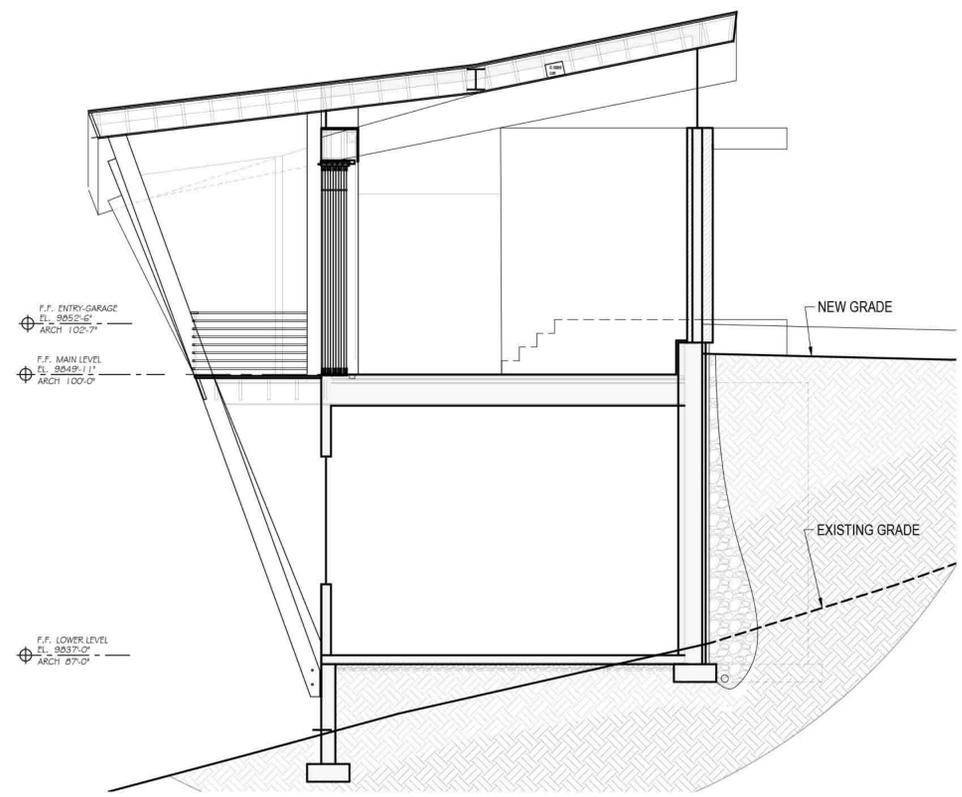
| LOCATION | NO. | SIZE (H X W) | H.H. | MANUFACTURER | MATERIAL | TYPE | HARDWARE | CASE | NO. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|-----|-----------------------------|-------------|---------------|-----------------|------------------------|----------|---|--------------------|--|--|--|--|--|--|--|--|--|------------------|-----|---------------|-------|---------------|----------------|------------|--|----------|----------|---------------|-----|---------------|-------|---------------|----------------|-------|--|-----|----------|----------------|-----|---------------|-------|---------------|----------------|-------------------|--|---------|----------|----------------|-----|---------------|-------|---------------|----------------|------------|--|----------|----------|----------------|-----|---------------|-------|---------------|----------------|-------|--|-----|----------|-----------------|-----|---------------|-------|---------------|----------------|-------|--|-----|----------|----------------|-----|---------------|-------|---------------|----------------|------------|--|----------|----------|----------------|-----|---------------|-------|---------------|----------------|-------|--|-----|----------|----------------|-----|---------------|-------|---------------|----------------|-------|--|-----|----------|----------------|-----|---------------|-------|---------------|----------------|-------|--|-----|----------|----------------|-----|---------------|-------|---------------|----------------|-------|--|-----|----------|
| MAIN LEVEL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENTRY EAST | 100 | 8'-0" X 4'-0" | 8'-0" | TBD | WOOD FLAT PANEL | LH DOOR | | DEADBOLT & ENTRY SET | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENTRY EAST | 101 | 8'-0" X 1'-0" | 8'-0" | TBD | DIRECT SET | | | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREATROOM EAST | 102 | 8'-8" X 4'-11"-1" | 11'-7 1/2" | | ALUM CLAD WOOD | FIXED-TRAPEZOID | N/A | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREATROOM EAST | 103 | 5'-8 1/2" X 5'-6 1/2" 5" | 17'-3 1/2" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | N/A | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREATROOM EAST | 104 | 5'-2 1/2" X 5'-5'-6" | 16'-9 1/2" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | N/A | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREATROOM EAST | 105 | 4'-9 1/2" X 5'-4" | 16'-4 1/2" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | N/A | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREATROOM EAST | 106 | 4'-4 1/4" X 5'-6" | 16'-11 1/2" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | N/A | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREATROOM EAST | 107 | 4'-0 1/2" X 4'-10 1/4" 7" | 16'-11 1/2" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | N/A | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREATROOM EAST | 108 | 1'-0 1/2" X 8'-5'-0" | 12'-7 1/2" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | N/A | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREATROOM EAST | 109 | 1'-1 1/2" X 8'-5'-3 1/2" | 12'-2" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | N/A | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREATROOM EAST | 110 | 2'-9 1/2" X 5'-0" | 11'-9 1/2" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | N/A | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GARAGE SOUTH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GARAGE SOUTH | 111 | 3'-0" X 6'-0" | 6'-0" | TBD | RUSTED METAL | LH DOOR | | PRIVATE | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GARAGE SOUTH | 112 | 8'-0" X 18'-0" | 8'-0" | TBD | RUSTED METAL | OVERHEAD INSULATED | | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| KITCHEN WEST | 113 | 4'-0" X 3'-0" | 7'-6" | WEATHERSHIELD | ALUM CLAD WOOD | CASEMENT-L | | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| KITCHEN WEST | 114 | 4'-6" X 4'-0" | 7'-6" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DINING WEST | 115 | 9'-4 1/2" X 4'-4" | 8'-3" VAR | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TILT | | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DINING WEST | 116 | 10'-5 1/2" X 8'-4" | 9'-5" VAR | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TILT, VERT MULL | | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREAT ROOM WEST | 117 | 10'-0" X 6'-0" | 10'-0" | WEATHERSHIELD | ALUM CLAD WOOD | CASEMENT | | STANDARD | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREAT ROOM WEST | 118 | 2'-0" X 18'-0" | 13'-0" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAP-3 VERT MULL | | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREAT ROOM WEST | 119 | 10'-0" X 30'-0" | 10'-0" | WEATHERSHIELD | ALUM CLAD WOOD | XXXXX CORNER | | PRIVATE | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREAT ROOM SOUTH | 120 | 10'-0" X 18'-0" | 10'-0" | WEATHERSHIELD | ALUM CLAD WOOD | CORNER-XXX | | PRIVATE | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREAT ROOM SOUTH | 121 | 2'-0 1/2" X 6'-0" | 13'-0" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAP-TRANSOM | | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREAT ROOM SOUTH | 122 | 2'-8 1/2" X 6'-0" | 13'-8" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAP-TRANSOM | | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GREAT ROOM SOUTH | 123 | 3'-5 1/2" X 6'-0" | 14'-5" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAP-TRANSOM | | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DINING SOUTH | 124 | 8'-3 1/2" X 6'-0 1/2" 0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DINING SOUTH | 125 | 9'-4 1/2" X 3'-5" | 10'-0" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DINING NORTH | 126 | 7'-0 1/2" X 3'-0" | 8'-8" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UPPER LEVEL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MASTER BR EAST | 201 | 4'-8 1/4" X 6'-3" | 10'-8" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MASTER BR EAST | 202 | 4'-2 1/2" X 6'-3" | 10'-2" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MASTER BR EAST | 203 | 3'-8 1/2" X 6'-3" | 9'-8" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MASTER BR NORTH | 204 | 7'-16" X 2'-2 1/2" 4" | 8'-10" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MASTER BR NORTH | 205 | 2'-0 1/2" X 2'-8" | 8'-7" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MASTER BR NORTH | 206 | 4'-2" X 2'-0" | 5'-8" | WEATHERSHIELD | ALUM CLAD WOOD | CASEMENT-R | | STANDARD | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MASTER BATH NORTH | 207 | 11'-8 1/2" X 13' | 7'-6" | DIRECT SET | | FIXED | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OFFICE NORTH | 208 | 4'-0 1/2" X 4'-11 1/4" 8" | 7'-6" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OFFICE WEST | 209 | 4'-7 1/2" X 6'-2 1/2" 10" | 7'-6" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OFFICE WEST | 210 | 4'-3 1/2" X 3'-0" W TRANSOM | 7'-6" | WEATHERSHIELD | ALUM CLAD WOOD | CASEMENT-L | | STANDARD | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OFFICE WEST | 211 | 5'-5 1/2" X 9'-1 1/2" | 7'-8" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OFFICE WEST | 212 | 8'-4 1/2" X 4'-10 1/2" 0" | 6'-0" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OFFICE SOUTH | 213 | 8'-7 1/2" X 4'-8" | 9'-0" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OFFICE SOUTH | 214 | 4'-0 1/4" X 6'-0" | 10'-0" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OFFICE SOUTH | 215 | 9'-0 1/2" X 6'-0" | 10'-6" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED-TRAPEZOID | | N/A </tr <tr> <td colspan="10">LOWER LEVEL</td> </tr> <tr> <td>FAMILY ROOM WEST</td> <td>001</td> <td>6'-0" X 3'-0"</td> <td>9'-3"</td> <td>WEATHERSHIELD</td> <td>ALUM CLAD WOOD</td> <td>CASEMENT-L</td> <td></td> <td>STANDARD</td> <td>RETURN 1</td> </tr> <tr> <td>SLO ROOM WEST</td> <td>002</td> <td>6'-0" X 4'-0"</td> <td>9'-3"</td> <td>WEATHERSHIELD</td> <td>ALUM CLAD WOOD</td> <td>FIXED</td> <td></td> <td>N/A</td> <td>RETURN 1</td> </tr> <tr> <td>SLO ROOM SOUTH</td> <td>003</td> <td>6'-0" X 2'-0"</td> <td>9'-3"</td> <td>WEATHERSHIELD</td> <td>ALUM CLAD WOOD</td> <td>LH DOOR FULL LITE</td> <td></td> <td>PRIVATE</td> <td>RETURN 1</td> </tr> <tr> <td>BEDROOM 1 WEST</td> <td>004</td> <td>6'-0" X 3'-0"</td> <td>9'-3"</td> <td>WEATHERSHIELD</td> <td>ALUM CLAD WOOD</td> <td>CASEMENT-L</td> <td></td> <td>STANDARD</td> <td>RETURN 1</td> </tr> <tr> <td>BEDROOM 1 WEST</td> <td>005</td> <td>6'-0" X 3'-0"</td> <td>9'-3"</td> <td>WEATHERSHIELD</td> <td>ALUM CLAD WOOD</td> <td>FIXED</td> <td></td> <td>N/A</td> <td>RETURN 1</td> </tr> <tr> <td>GUEST BATH WEST</td> <td>006</td> <td>6'-0" X 5'-0"</td> <td>9'-3"</td> <td>WEATHERSHIELD</td> <td>ALUM CLAD WOOD</td> <td>FIXED</td> <td></td> <td>N/A</td> <td>RETURN 1</td> </tr> <tr> <td>GUEST BED WEST</td> <td>007</td> <td>6'-0" X 3'-0"</td> <td>9'-3"</td> <td>WEATHERSHIELD</td> <td>ALUM CLAD WOOD</td> <td>CASEMENT-L</td> <td></td> <td>STANDARD</td> <td>RETURN 1</td> </tr> <tr> <td>GUEST BED WEST</td> <td>008</td> <td>6'-0" X 8'-0"</td> <td>9'-3"</td> <td>WEATHERSHIELD</td> <td>ALUM CLAD WOOD</td> <td>FIXED</td> <td></td> <td>N/A</td> <td>RETURN 1</td> </tr> <tr> <td>GUEST BED WEST</td> <td>009</td> <td>6'-0" X 5'-4"</td> <td>9'-3"</td> <td>WEATHERSHIELD</td> <td>ALUM CLAD WOOD</td> <td>FIXED</td> <td></td> <td>N/A</td> <td>RETURN 1</td> </tr> <tr> <td>GUEST BED WEST</td> <td>010</td> <td>6'-0" X 5'-4"</td> <td>9'-3"</td> <td>WEATHERSHIELD</td> <td>ALUM CLAD WOOD</td> <td>FIXED</td> <td></td> <td>N/A</td> <td>RETURN 1</td> </tr> <tr> <td>GUEST BED WEST</td> <td>011</td> <td>6'-0" X 5'-4"</td> <td>9'-3"</td> <td>WEATHERSHIELD</td> <td>ALUM CLAD WOOD</td> <td>FIXED</td> <td></td> <td>N/A</td> <td>RETURN 1</td> </tr> | LOWER LEVEL | | | | | | | | | | FAMILY ROOM WEST | 001 | 6'-0" X 3'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | CASEMENT-L | | STANDARD | RETURN 1 | SLO ROOM WEST | 002 | 6'-0" X 4'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 | SLO ROOM SOUTH | 003 | 6'-0" X 2'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | LH DOOR FULL LITE | | PRIVATE | RETURN 1 | BEDROOM 1 WEST | 004 | 6'-0" X 3'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | CASEMENT-L | | STANDARD | RETURN 1 | BEDROOM 1 WEST | 005 | 6'-0" X 3'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 | GUEST BATH WEST | 006 | 6'-0" X 5'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 | GUEST BED WEST | 007 | 6'-0" X 3'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | CASEMENT-L | | STANDARD | RETURN 1 | GUEST BED WEST | 008 | 6'-0" X 8'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 | GUEST BED WEST | 009 | 6'-0" X 5'-4" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 | GUEST BED WEST | 010 | 6'-0" X 5'-4" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 | GUEST BED WEST | 011 | 6'-0" X 5'-4" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 |
| LOWER LEVEL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAMILY ROOM WEST | 001 | 6'-0" X 3'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | CASEMENT-L | | STANDARD | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SLO ROOM WEST | 002 | 6'-0" X 4'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SLO ROOM SOUTH | 003 | 6'-0" X 2'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | LH DOOR FULL LITE | | PRIVATE | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BEDROOM 1 WEST | 004 | 6'-0" X 3'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | CASEMENT-L | | STANDARD | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BEDROOM 1 WEST | 005 | 6'-0" X 3'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GUEST BATH WEST | 006 | 6'-0" X 5'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GUEST BED WEST | 007 | 6'-0" X 3'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | CASEMENT-L | | STANDARD | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GUEST BED WEST | 008 | 6'-0" X 8'-0" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GUEST BED WEST | 009 | 6'-0" X 5'-4" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GUEST BED WEST | 010 | 6'-0" X 5'-4" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GUEST BED WEST | 011 | 6'-0" X 5'-4" | 9'-3" | WEATHERSHIELD | ALUM CLAD WOOD | FIXED | | N/A | RETURN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



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



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



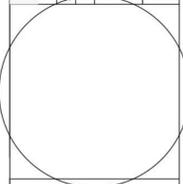
SCHEMATIC SECTION
SCALE : 1/4" = 1'-0"

L E A S S O N A R C H I T E C T S
 200 B/C CENTRUM BLDG. MOUNTAIN VILLAGE : P.O. BOX 4471 ASPEN, CO 81612 TEL: (970) 995-1224 EMAIL: LEA@LEASSONARCHITECTS.COM
 SUBMISSION# 25.2019 SD3 | 1.29.2019 PREDB | 2.14.2019 MDRB | 4.18.2019 MDRB
 LOT 13 CORTINA TELLURIDE MOUNTAIN VILLAGE . CO .
TATEN RESIDENCE
 A3.2



L E A S I S O N A R C H I T E C T
200 B/C CENTRUM BLDG. MOUNTAIN VILLAGE : P.O. BOX 4471 ASPEN, CO 81612 TEL: (970) 925 - 1224 EMAIL: LEA@LEASSONARCHITECTS.COM
SUBMISSIONS | 25.2019 SDS | 29.2019 PREPR | 14.2019 MDRB | 4.18.2019 MDRB2

LOT 13 CORTINA TELLURIDE MOUNTAIN VILLAGE . CO .
TATEN RESIDENCE



A3.3

3D IMAGERY PAGE



AGENDA ITEM 8
PLANNING & DEVELOPMENT SERVICE
PLANNING DIVISION
455 Mountain Village Blvd.
Mountain Village, CO 81435
(970) 728-1392

TO: Mountain Village Design Review Board
FROM: John Miller, Senior Planner
FOR: May 2, 2019
DATE: April 11, 2019
RE: CDC Amendment for Lighting Regulations

PART I. Introduction and Background

The purpose of this agenda item is to propose possible amendments to the Community Development Code (CDC) regarding exterior residential lighting in Mountain Village. The goal is to evaluate and potentially modify lighting standards to bring the town's regulations in line with current lighting technology and community needs. This proposal is based on the premise that lighting technology will change, in turn necessitating changes to lighting regulations.

Mountain Village currently has existing outdoor lighting regulations, but this discussion relates to the effectiveness of the existing provisions given the ever-changing nature of light fixture design as well as the overall needs of residents looking to enjoy their outdoor living spaces. This project aims to identify a more holistic approach for lighting regulations within the Town of Mountain Village – quantifying appropriate lighting levels, clearly defining terms associated with lighting, allowing some limited use of exterior lighting, and preventing off-site impacts to neighbors, wildlife and the region from light pollution and reduced night sky visibility. This report also attempts to document current research on the topic of light pollution as well as best management practices for limiting light pollution based on examples from other communities throughout the Inter-Rocky Mountain West.

Town Staff held work sessions with both the DRB and Town Council regarding the proposed amendments and have received specific feedback from both bodies which were subsequently incorporated into this document. It should be noted that at the Town Council work session held March 21, 2019 staff received direction to streamline the requirements for lighting rather than creating additional requirements which could increase the cost of development within the village – particularly for affordable housing and topographically constrained lots. Staff has attempted to follow that direction by creating a prescriptive lighting approval process based on a tiered requirement process that anticipates impacts of new construction based on the relative size of the proposal. In addition, Staff was directed to clarify commercial outdoor lighting standards – which will be proposed mid to late 2019 and will augment the existing lighting standards of the code.

PART III. Proposed Amendment Discussion

This report addresses the following topics and includes detailed discussion of each.

- Light Intensity Measurements (Lumens, Bulb Temperature)
- Outdoor Living Space Allowances
- Landscaping/Architectural Lighting
- Wildlife Buffers
- Lighting Plan Requirements
- Addition of Specific Lighting Terms within Definition Section

The following formatting styles are used for the proposed code language:

Regular Text = Existing code language to remain

Underline = Proposed new language

~~Strikethrough~~ = Language proposed for removal

(*******) = Portion of existing code removed (skipping to another code section to reduce report length)

Section 3.1: Amending Section 17.5.12 Lighting Regulations

17.5.12 LIGHTING REGULATIONS

A. Purpose and Intent

The purpose of the Lighting Regulations is to establish standards for minimizing the unintended and undesirable side effects of residential exterior lighting while encouraging the intended and desirable safety and aesthetic purposes of such lighting. It is the purpose of the Lighting Regulations to allow illumination that provides the minimum and safe amount of lighting that is needed for the lot on which the light sources are located. In addition, the purpose of this section is to protect the privacy of neighboring residents by controlling the intensity of the light source. All exterior lighting shall conform to the standards set forth below.

B. Limited Exterior Lighting

The basic guideline for exterior lighting is for it to be subdued, understated and indirect to minimize the negative impacts to surrounding lots and public rights-of-way. The location of exterior lighting that meets the requirements of this section shall only be allowed at:

1. Buildings where Building Codes require building ingress and egress doors;
2. Pedestrian walkways or stairs;
3. Plaza areas and other public areas where lighting is required;
4. Deck or patio areas;
5. Surface parking lots;
6. Signs;
7. Address identification or address monuments;
8. Flags;
9. Public art;
10. Driveways;

11. Street lights; ~~and/or~~
12. Swimming pools, spas and water features; and
13. Outdoor living spaces.

C. Prohibited Lighting. The following exterior lighting is prohibited:

1. Architectural lighting;
2. Landscape lighting;
3. Uplighting;
4. ~~3-~~ Flood lighting;
5. 4- Other lighting not outlined above as permitted or exempt lighting;
6. Lighting that causes glare from a site or lot to any designated wetlands or other environmentally sensitive areas;
7. ~~5-~~ Lighting that causes glare from a site or lot to adjoining property; and
8. ~~6-~~ Lighting that produces glare to vehicles within a public right-of-way or access tract.

D. Exemptions. The following types of exterior lighting shall be exempt from the Lighting Regulations:

1. Seasonal lighting and/or other types of festoon lighting, providing individual lamps are less than ~~ten (10) watts and seventy (70) lumens~~ per linear foot of lighting;
 - a. Seasonal lighting and/or other types of festoon lighting shall not detrimentally affect adjacent neighbors. If the Town determines that ~~seasonal~~ such lighting detrimentally affects adjacent neighbors, it may determine such lighting to be a nuisance and require the lighting to be removed.
2. Temporary lighting that is used for theatrical, television, performance area and construction sites;
3. Emergency lighting; ~~and~~
4. Special event lighting approved by the Town as a part of the required development application; ~~;~~
5. Swimming pool and/or hot tub lighting when it is established that no off-site glare shall occur;
6. Lighting of the United States Flag when there is no other down-light option to prevent upward glare;
7. Lighting within public right-of-way for the principle purpose of illuminating streets or roads. No exemption shall apply to any lighting within the public right-of-way when the purpose is to illuminate areas outside the public right-of-way; and,
8. Lighting required by the ski resort operator for the ordinary operation of the ski area snow making installation and operation.

E. Lighting Design Regulations.

1. **Full Cut-Off Fixture Design.** All exterior lighting shall be designed as eighty-five degrees (85°) full cut-off fixtures that direct the light downward without any off-site glare, except as exempted in Section 17.5.12(D).
 - a. Opaque glass may be used to achieve this requirement if the fixture does not permit light distribution above a horizontal plane located at the bottom of the fixture.
 - b. Each exterior light fixture shall be directed downward and shall not exceed 850 lumens, with the exception of residential outdoor pathway and recessed stairway lighting which shall not exceed 300 lumens per fixture. Lighting for Town owned parking garages which shall not exceed 5000 lumens per fixture.
 - b. ~~Exemptions:~~
 - i. ~~Swimming pool and water feature lighting when it is established that no off-site glare shall occur; and~~
 - ii. ~~Lighting of the United States flag when there is no other down-light option to prevent the upward glare.~~
 - c. ~~Approved surface parking lots lighting shall be screened to direct the light onto the parking lots and to ensure lower elevation development is protected from glare.~~
2. **Required Exterior Lighting Type.** LED lighting or other equivalent energy saving high efficiency lighting compliant with this section, shall be used for all exterior lighting.
3. **Maximum Temperature.** The maximum temperature for ~~differing~~ all proposed lighting types regardless of bulb type, shall ~~be not exceed~~ 3,000 degrees Kelvin, or may employ amber light sources, filtered LED light sources, or a suitable alternative - with the goal of having a warmer light source. ~~:~~
 - a. ~~3,500 degrees Kelvin for incandescent, halogen lighting, HID and other lighting not specified herein.~~
 - b. ~~4,500 degrees Kelvin for LED lighting provided the degrees Kelvin is reduced closer to 3,500 to the extent practical given current LED technologies, with the goal of having warmer, less bluish toned LED lights.~~
4. **Lighting for Parking Areas.** Lighting shall be provided for surface parking areas and underground parking garages.
 - a. Surface parking lot lighting shall be located in landscaped areas to the extent practical.
 - b. Parking area lights are encouraged to be greater in number, lower in height and lower in light level.
 - c. Approved parking area lighting shall direct the light onto the parking lot areas only and ensure lower elevation development is protected from glare.

5. **Maximum Height Limit for Lights.** The following light fixture height limits shall be met. The review authority may approve other heights based on site-specific considerations.

- a. The maximum height for a pole-mounted light fixture shall be twelve feet (12') as measured from the immediate adjacent grade, either natural or finished. Pole-mounted light fixtures are not permitted or intended to be placed on buildings or structures in order to artificially increase the height allowance or circumvent maximum height allowances.
- b. The maximum height for a wall-mounted light fixture shall be seven feet (7') above the directly adjacent walking surface or pathway, except for sign lighting that may be higher as reviewed and approved by the review authority to allow for proper illumination of the sign.
- c. The maximum height for public surface parking and underground parking garage area lighting shall be twenty feet (20') above the grade of the parking spaces that are intended to be illuminated.

6. **Lighting on Upper Floors.**

- a. Exterior lighting on second or higher stories shall be provided by fixtures, or by recessed wall, ceiling or lighting that is louvered or otherwise designed to prevent off-site glare.
- b. Decks on second and upper floors that do not have stairs shall have only recessed wall or ceiling, in-rail or in-wall, louvered or concealed lighting that is directed towards the building or the deck/patio surface and not to the exterior.
- c. All lighting on upper floors shall require either a timer or sensor to reduce usage and energy loss during times of inactivity.

7. **Levels of Illumination:** During hours of darkness, the minimum and average maintained foot-candles of light shall be consistent with the provisions listed below. A point-by-point photometric calculation listing the number, type, height, and level of illumination of all exterior lighting fixtures may be required as per Section 17.5.12(E)(9) prior to Design Review Board approval or staff approval to ensure compliance with these provisions.

- a. Parking lots, driveways, trash enclosures/areas, and group mailboxes shall be illuminated with a minimum maintained one (1 fc) foot-candle of light and an average not to exceed four (4 fc) foot-candles of light.
- b. Pedestrian walkways and staircases shall be illuminated with a minimum maintained one-half (0.5 fc) foot-candle of light and an average not to exceed two (2 fc) foot-candles of light.
- c. Exterior doors shall be illuminated with a minimum maintained one (1 fc) foot-candle of light, measured within a five (5' 0") foot radius on each side of the door at ground level.

- d. In order to minimize light trespass on abutting residential property, illumination measured at the nearest residential structure or rear yard setback line shall not exceed the moon's potential ambient illumination of one-tenth (0.1 fc) foot-candle
 - e. The use of exterior lighting shall be minimized in areas of important wildlife habitat and delineated wetlands, and lighting shall be designed so that it does not spill over or onto such critical habitat.
8. **Lighting Designer Required.** In the case of new development or remodeling subject to the Lighting Regulations, a Lighting Certified professional, a Certified Lighting Efficiency professional, an International Association of Lighting Designers member or similarly certified professional, or a licensed architect shall design all exterior lighting.
 9. **Lighting Plan Required.** A detailed exterior lighting plan, separate from other required plans, shall be submitted with development application detailing the location and specifications of all lighting to be installed. New development of single-family dwellings having a floor area of less than 3,500 square feet as well as minor revisions to existing lighting plans shall be subject to only the requirements of 17.5.12(E)(9)(a) unless it is determined by the Community Development Department that unique circumstances exist or if required for safety reasons.
 - a. The exterior lighting plan shall describe the location, height above grade, type of illumination (such as ~~incandescent~~ LED, halogen, high pressure sodium, etc.), source, and temperature for each light source being proposed.
 - b. An isofootcandle diagram prepared by a certified lighting professional or licensed architect as outlined above ~~shall be provided~~ may be required and if required shall to indicate the level and extent of the proposed lighting.
 10. **Additional Lighting Requirements for the Village Center.** Provisions for seasonal and ~~holiday~~ lighting and/or other types of festoon lighting shall be incorporated into the exterior lighting plan for all projects located within the Village Center.
 - a. Additional lighting requirements for the Village Center are found within the Commercial, Ground Level and Plaza Area Design Regulations.
 11. **Application.** All newly installed exterior lighting shall comply with the Lighting Regulations.
 - a. A redevelopment or remodel valued at fifty thousand dollars (\$50,000) or more shall retrofit all existing exterior lighting to comply with the then current Lighting Regulations.
 - b. Notwithstanding the value of the redevelopment or remodel, if twenty-five percent (25%) or more of the exterior lights are to be replaced, all existing exterior lighting shall be retrofitted to comply with the then current Lighting

Section 3.2: Amending Section 17.5.15: Commercial, Ground Level and Plaza Area Design Regulations to better align Standards for Commercial storefront lighting.

(***)

(B)(4): Lighting

- a. In general, lighting within commercial areas shall originate within the storefront windows and not be dependent on freestanding light fixtures. Direct light sources should be used only for accent of architecture, landscape, artwork or for the definition of entries and walkways consistent with the Lighting Regulations.
- b. Window displays within storefront windows shall be illuminated lighted so as to provide an indirect glow of light onto adjacent pedestrian walkways and plazas. Harsh light and glare from storefront windows or interiors shall be avoided.
- c. Interior ~~fluorescent~~ lights shall be baffled so that the light source shall not be seen from pedestrian areas.
- d. ~~White, yellow or other~~ Town-approved LED lights with a maximum temperature of less than 3,000K shall be used to light storefronts. With all lighting types, extreme care shall be taken to avoid glare and color distortion. Flashing, blinking or moving lights shall not be used in storefronts. Colored lighting and projector lighting of the interior of a storefront may be used for storefronts and displays with specific approval from the review authority.

Section 3.3: Amending definitions to include related lighting terms – to be inserted in alphabetical order of the existing definitions.

Chapter 17.8 Definitions

(***)

Exterior Lighting: Artificial outdoor illumination as well as outdoor illuminating devices or fixtures, whether permanent or temporary, including, but not limited to, illumination and illuminating devices or fixtures emanating from or attached to: the exterior of buildings, including under canopies and overhangs, within railings or stairs; structures, such as poles, fences, or decks; the interior or exterior of open-air structures or buildings such as gazebos, pergolas, and breezeways; and the ground, a tree, or other natural features.

Festoon Lighting: A string of exterior lighting that is suspended between two points.

Foot-Candle: ("FC") The basic unit of illuminance (the amount of light falling on a surface). Foot-candle measurement is taken with a hand-held light meter. One foot-candle is equivalent to the illuminance produced on one square foot of surface area by a source of one candle at a distance of one foot. Horizontal foot-candles measure the illumination striking a horizontal plane.

Glare: Light entering the eye directly from a light fixture or indirectly from reflective surfaces that cause visual discomfort or reduced visibility to a reasonable person.

Kelvin: The measure of color temperature of a light source. Temperature is measured in degrees with warmer temperatures having a lower number and cooler temperatures having a higher number.

Lamp: A source of optical radiation (i.e., "light"), often called a "bulb" or "tube." Examples include incandescent, fluorescent, high-intensity discharge (HID) lamps, and low-pressure sodium (LPS) lamps, as well as light emitting diode (LED) modules and arrays.

Light Pollution: The material adverse effect of artificial light, including but not limited to, glare, light trespass, energy waste, compromised safety and security, and impacts on the nocturnal environment.

Light Trespass: An undesirable condition in which exterior light is cast across property lines to areas that are unwarranted or unwanted.

Lumen: A unit of measure used to quantify the amount of visible light produced by a lamp or emitted by a light fixture (as distinct from "watt", a measure of power consumption).

Outdoor Living Space: an area that extends the usable living area of the home and includes indoor elements such as furniture, kitchen areas, walls or enclosures, overhead cover or canopy, fireplaces, or other entertainment elements that are typically found indoors.

Seasonal Lighting: Lighting installed and operated in connection with the holidays or other seasonal traditions.

PART IV. Findings and Recommended Motion

Findings:

These amendments are necessary to implement the stated policies of the CDC which establish the purpose of the lighting regulations as minimizing the unintended and undesirable side effects of residential exterior lighting while encouraging the intended and desirable safety and aesthetic purpose of such lighting. This proposal works to accomplish this by bringing the town's regulations in line with current lighting technology and specific community needs for outdoor spaces.

Proposed Motion:

Staff recommends the DRB provide a recommendation of approval to the Town Council with the following proposed motion:

I move to recommend approval to the Town Council, an Ordinance amending the Community Development Code Chapter 17.5 Design Regulations, Sections 17.15.12 – Lighting Regulations, 17.5.15 – Commercial, Ground Level and Plaza Area Design Regulations; and Chapter 17.8 – Definitions.

This motion is based on the evidence and testimony provided at a public hearing held on May 2, 2019, with notice of such hearing as required by the Community Development Code.

/jjm

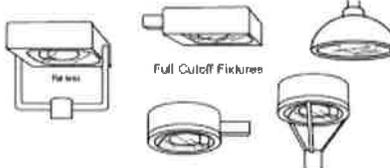
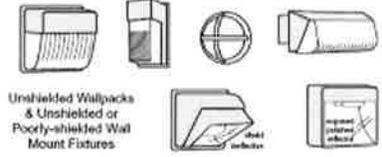
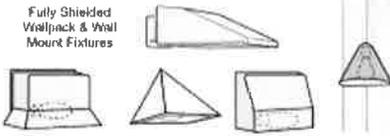
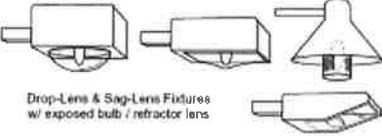
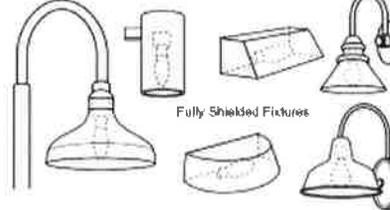
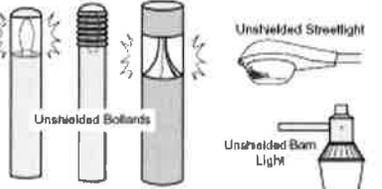
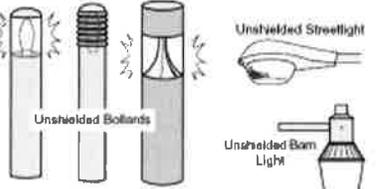
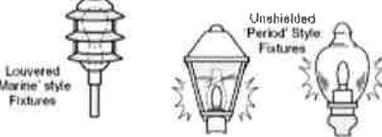
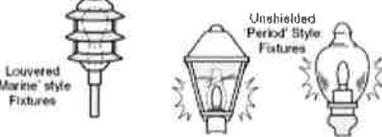
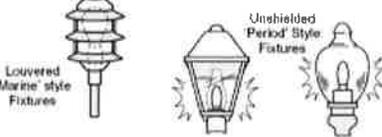
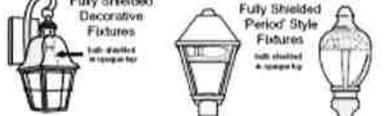
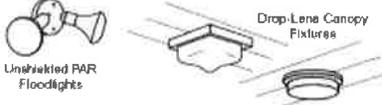
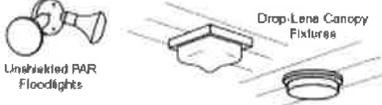
Exhibits:

- A. *Acceptable Fixture Types***
- B. *The Dark Sky Concept Narrative – TMV Staff***
- C. *Holiday LED Magazine: "How Bright are LED Lights? The Facts about Lumens"***
- D. *LED Magazine: "Model Lighting Ordinance: Is the BUG rating method effective at limiting light trespass"***

EXHIBIT A: Examples of Acceptable Exterior Dark Sky Compliant Fully Shielded Fixtures

Better Lights for Better Nights

Help eliminate light pollution. Select the best fixture for your application using this guide. Use the lowest wattage bulb appropriate for the task and turn off the light when it's not being used.

| Unacceptable / Discouraged <small>Fixtures that produce glare and light trespass</small> | Acceptable <small>Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night</small> |
|---|---|
|  <p>Unshielded Floodlights or Poorly-shielded Floodlights</p> |  <p>Full Cutoff Fixtures</p> |
|  <p>Unshielded Wallpacks & Unshielded or Poorly-shielded Wall Mount Fixtures</p> |  <p>Fully Shielded Wallpack & Wall Mount Fixtures</p> |
|  <p>Drop-Lens & Sag-Lens Fixtures w/ exposed bulb / refractor lens</p> |  <p>Fully Shielded Fixtures</p> |
|  <p>Unshielded Streetlight</p> |  <p>Full Cutoff Streetlight</p> |
|  <p>Unshielded Bollards</p> |  <p>Fully Shielded Walkway Bollards</p> |
|  <p>Unshielded Barn Light</p> |  <p>Fully Shielded Barn Light</p> |
|  <p>Louvered 'Marine' style Fixtures</p> |  <p>Fully Shielded Decorative Fixtures</p> |
|  <p>Unshielded Period Style Fixtures</p> |  <p>Fully Shielded Period Style Fixtures</p> |
|  <p>Drop-Lens Canopy Fixtures</p> |  <p>Flush Mounted or Side Shielded Under Canopy Fixtures</p> |
|  <p>Unshielded PAR Floodlights</p> |  <p>Shielded / Properly aimed PAR Floodlights</p> |

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presented by the
Dark Sky Society
www.darksksociety.org

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EXHIBIT B: THE DARK SKY CONCEPT

Preservation of the Night Sky

Light pollution was first raised as an issue in the 1970s by scientists and astronomers who noticed increasing degradation of the night sky. Since then, light pollution from growing communities and excessive exterior lighting has continued to diminish the view of the stars in and around developed areas. Because of this relatively rapid change in light intensity, many jurisdictions have adopted regulations to combat light pollution – commonly referred to as Dark Sky Lighting Regulations. While excessive exterior lighting may create a nuisance to neighbors, it also wastes electricity resulting in unnecessary emissions of greenhouse gases, decreases the quality of ambient lighting and overall community safety, and can have documented negative effects of the health of humans and wildlife.

To combat the above issues, the model ordinance from the International Dark Sky Association promotes a thoughtful approach to exterior lighting design that doesn't necessarily limit use of exterior light fixtures but rather limits the design to a manner that is more effective in lighting outdoor spaces. The primary method for prevention of light pollution and limiting energy waste is the full shielding of lighting fixtures, limiting the total light output (lumens) per property, and utilization of lighting curfews which requires properties turn off all non-security lighting between 10pm and 6am, including illuminated signs, parking lot lighting and lighting not required for building entry points.

Better Lighting means Better Neighbors

Exterior lighting, when appropriately shielded and directed, can improve visibility and safety while minimizing energy use, operating costs, and glare. In contrast, improperly shielded lights can shine into adjacent properties and create conflict with neighbors, drivers, and pedestrians. A general rule of thumb is if the bulb is visible from the property line, its contributing to glare and light pollution; with dark sky rated lighting, only the intended area is illuminated. Due to the unique outdoor amenities and quality of life experienced by Mountain Village residents, there is an increasing desire to spend more time in dedicated outdoor living spaces. This is especially true during summer months, and this dynamic has increasingly led to conflicts between existing / proposed lighting and the regulations governing lighting in the town. To better understand this conflict, it may be helpful to better understand the typical lighting requests that have been received in the past and the evolving nature of outdoor space and its utilization within the town.

Generally speaking, most conflicts initially arise during the Design Review process and largely deal with issues such as lighting locations, number of fixtures and intensity, address monument illumination, conflicts with adjacent uses, and landscape/architectural lighting requests. It appears that the current process for new homes has been effective in providing a high standards of dark sky compliance, but there are some questions about the overall effectiveness of the non-conforming fixtures within the Town. These proposed changes do not affect the existing fixtures within the Town, only new proposed fixtures and allowances.

Impacts on Human Health

Excessive light at night negatively impacts many areas of human health. Bright points of light from poorly designed lighting can produce a condition known as "disability glare", which temporarily impairs vision and can cause us to avert our eyes from the veil of light being scattered across our retinas – a potentially dangerous condition for the numerous vehicle and pedestrian interfaces throughout Mountain Village. More concerning from a biological perspective are the effects of

ambient lighting on the 24-hour day/night cycle, known as the circadian clock, which affect physiologic processes in almost all organisms. Studies show disruption of the rhythms can result in insomnia, depression and cardiovascular disease. In June 2009, the American Medical Association adopted resolutions that support reducing light pollution and glare – advocating for the use of fully shielded exterior lighting because of the negative health effects caused by light pollution.

Impacts on Wildlife

Studies suggest that artificial night lighting has negative effects on a wide range of wildlife, including amphibians, birds, mammals, insects and even plants. Light pollution disorients migratory birds, disrupts mating behavior of frogs, and interferes with predator/prey relationships. Since the eyes of nocturnal animals have evolved for foraging in low-light conditions, small changes in ambient lighting conditions can alter their relationship with prey species. Light fixation and subsequent collisions are estimated to kill between 100 million and one billion birds annually within the United States – mainly due to collisions with buildings and windows¹. Small adjustments in our current lighting regulations such as the potential to create wetland lighting buffers may help to remedy some of these issues described above. Other issues such as bird/window collisions may be more complicated due to the fact that many windows are illuminated internally and not regulated under the CDC or Design Review Process.

Safety

Brighter light does not necessarily mean a safer environment. Bright, glaring lights that illuminate night time events or locations can decrease the security of the sites. Excessively bright lights can create a sharp contrast between light and darkness – making the area outside the light nearly impossible to see. It should be noted that most property crime offenses are committed during the day, or inside illuminated buildings. Although possibly counter-intuitive, a safer environment involves shielded lighting for roadways, parking lots, homes, businesses and landscapes; increasing visibility and decreasing distractions, such as glare and contrasts between dark and illuminated areas. In addition to security, lighting needs for pedestrian safety and ingress/egress purposes can be accomplished with similar principles of “less is more”, especially if the fixtures are properly shielded and directed to the area intended for illumination. There have been discussions related to The Comprehensive Plan and overall vibrancy within the core and with that, the need for more pedestrian lighting. Any pedestrian lighting within the core would be governed under the CDC – and should be potentially reviewed for conflicts moving forward.

An Economic Case for Proper Exterior Lighting

According to the International Dark Sky Association, inadequately sized and shielded exterior lighting in the US results in wasted energy amounting to over three billion dollars a year. This equates to 21 million tons of carbon dioxide, which for comparison would be offset by planting 875 million trees annually. Unshielded fixtures typically waste about 30% of their energy. When lighting is used only where needed, money that would otherwise be spent on energy costs can instead be spent on other things; a tradeoff which is beneficial to both property owners and the local economy. There are other economic benefits related to preservation of the night sky – typically dealing with tourism related to star gazing and the outdoor industry. Notably, light pollution from a community can travel over 100 miles from the source and application of the Dark Sky Concept regionally can provide surprisingly widespread benefits and sustainable economic growth.

¹ Loss, S. R., Will, T., Loss, S. S., & Marra, P. P. (2014). Bird–building collisions in the United States: Estimates of annual mortality and species vulnerability. *The Condor*, 116(1), 8-23. doi:10.1650/condor-13-090.1

It should be noted that there are currently several non-compliant light fixtures within the Town. The Community Development Code (CDC) requires that all new fixtures comply with current regulations but does not required retroactive replacement of non-compliant fixtures unless the redevelopment or remodel is valued at \$50,000.00 or more, or if 25% or more of the exterior lighting is replaced. Staff is not proposing to modify any provisions related to non-conforming fixtures at this time. It may be worthwhile to explore possible options to establish an incentive program that would allow homeowners with existing non-conforming lights to receive a financial rebate for the cost of retro-fitting existing lights that no longer meet Town Standards. This would allow for better implementation of the lighting code, and an overall reduction in energy consumption in the Town for existing homes and business.



HOLIDAY LED LIGHTING NEWS AND ARTICLES

Looking for news or information about LED Christmas lights, decorative lighting, or decorating with Christmas lights? We have a wealth of information about these subjects and we are constantly adding new content. Use the search function on our site to find older articles.

SHOP WHOLESALE BY: COLOR SHAPE TYPE OCCASION ACCESSORIES GREENERY SALE

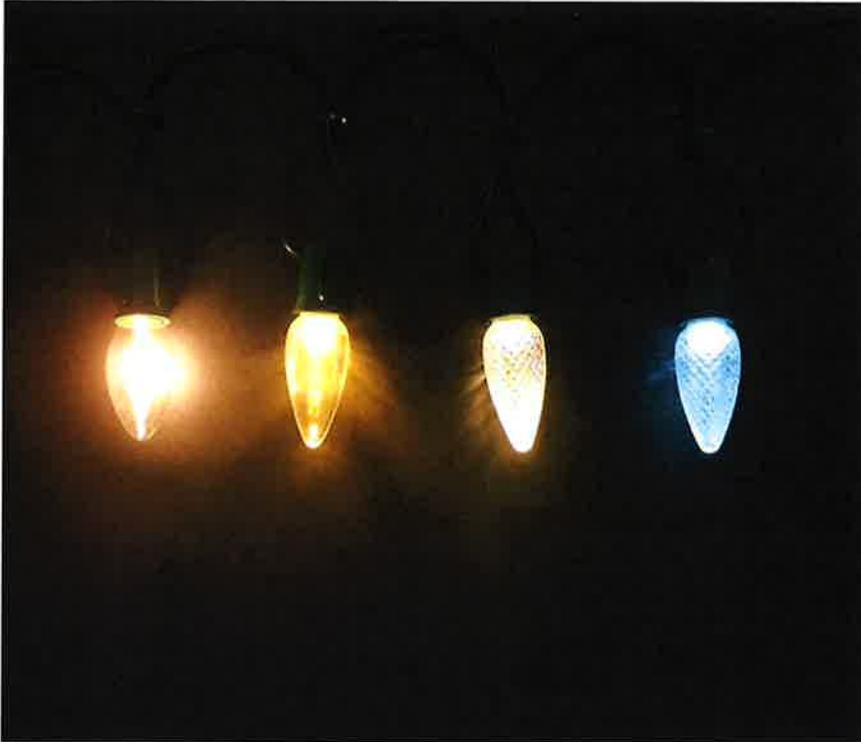
[← Back](#)

HOW BRIGHT ARE LED LIGHTS? THE FACTS ABOUT LUMENS



Are you are considering LEDs, but afraid they won't match or look as bright as your incandescent lights? Well, let's talk about lumens, and how LED lights can look just as bright while using a tenth of the energy of incandescent lights.

The actual lumen output of a C7 or C9 incandescent bulb is about 24 lumens. The illumination comes from the filament in the center of the bulb, and is evenly distributed as it shines through the clear bulb. In this photo, the incandescent bulb is all the way on the left.



LED lights on the other hand, are directional, that means their lumen output doesn't spread out the way a filament's light output does. It goes in one direction. So, a direct comparison of the light output can be tricky and misleading.

In order to create a fully glowing look in a Christmas light, an LED light needs to be housed in a faceted bulb that breaks up the light in all directions. The third and fourth lights pictured are warm and cool white LEDs, respectively. The faceting makes the light fill the whole bulb. But the brightness varies depending on what angle of facet you see the light through—which creates a wonderful twinkle.

A non-faceted bulb can break up the light a little bit, but as you can see on the second bulb from the left ("champagne smooth"), it is very bright but does not "fill" the bulb. It appears bright at a distance, but as you can see the light has a slightly different quality from an old-fashioned incandescent bulb.

The actual lumen output of an LED light depends on the color. Just as a colored bulb will dim a white incandescent light, colored LED bulb housings and colored LED lights will have a lower luminosity than white ones. White LEDs are brightest, the warm and cool C7 and C9 bulbs averaging around 4 lm. The colored lights get dimmest at either end of the spectrum, blues and reds coming in dim at around half a lumen. (But remember, the same principle applies to a colored incandescent bulb! A red painted bulb housing will lower the luminosity of even the brightest incandescent filament.) Here are all the numerical details.

| Model | # of LEDs | Color | Power Draw (Watts) | Total Output Power (mW) | Light (lm) |
|------------|-----------|--------|--------------------|-------------------------|------------|
| C7 Faceted | 3 | RED | 0.96 | 1.3 | 0.4 |
| | | ORANGE | | 1.6 | 0.7 |
| | | YELLOW | | 1.5 | 0.5 |

| | | | | | |
|---------------|---|------|---------------|------|-----|
| | | | BLUE | 3.9 | 0.4 |
| | | | GREEN | 2.7 | 1.8 |
| | | | PURPLE | 3.4 | 1.2 |
| | | | COOL WHITE | 6.3 | 3.2 |
| | | | WARM WHITE | 6.5 | 3.9 |
| | | | RED | 2.6 | 0.7 |
| | | | ORANGE | 2.8 | 1.2 |
| | | | YELLOW | 1.2 | 0.7 |
| | | | BLUE | 11.6 | 0.9 |
| C9 Faceted | 5 | 0.96 | GREEN | 5.8 | 3.7 |
| | | | PURPLE | 5.4 | 1.8 |
| | | | COOL WHITE | 8 | 3.5 |
| | | | WARM WHITE | 7.8 | 4.7 |

So how is it that at a fraction of the lumen output, an LED light can look just as bright as an incandescent bulb? The answer is in the directing and breaking up of the light. By refracting a very focused LED light in many directions, or even down the length of a smooth bulb, the eye will perceive nearly as much luminosity from an LED as from a filament lit up with ten times the energy pouring out of it. (See below picture unlit to show faceted and smooth bulbs.)



The quality of light is slightly different between LEDs and incandescents, but the purity of the colors, the low energy cost, and the ability to string four times as many LEDs onto a single strand of lights (due to the low energy draw), means going with LEDs will save you time and money down the road. In fact, a quantity of 100 incandescent 7W bulbs draws about 6 amps of power. The same quantity of LEDs? Less than 1 amp! LEDs save energy and money, and more importantly will add plenty of brightness and sparkle to your holiday decorating.

Fully stocked with incandescents but wanting to make the switch to LEDs? Update to energy-efficient lighting with our [retrofit LED bulbs!](#)



Model Lighting Ordinance: Is the BUG rating method effective at limiting light trespass? (MAGAZINE)

The MLO offers two different options for evaluating the off-site impact of different outdoor lighting design schemes, but unfortunately they do not give the same results, according to WENDY NORMAN and MICHAEL SMOLYANSKY.

Published on: May 4, 2012

By Wendy Norman and Michael Smolyansky

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This article was published in the April/May 2012 issue of LEDs Magazine.

View the [Table of Contents](#) and download the PDF file of the complete April/May 2012 issue, or view the E-zine version in your browser.

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The Model Lighting Ordinance (MLO), recently published by the International Dark-Sky Association (IDA) and the Illuminating Engineering Society (IES), is designed to help municipalities develop standards for environmentally-responsible, yet safe, outdoor lighting. The guidelines for area lighting apply to businesses, property owners, and building owners. They specify light levels and allowable light pollution based on defined zones that are appropriate for different settings ranging from residential to New York's Times Square. But, the MLO offers options in terms of how light levels and pollution are characterized and today, as we will show with a case study, you can get drastically different answers as to whether a luminaire is appropriate for a given installation.

One of the main purposes of the MLO is to "minimize adverse offsite impacts of lighting such as light trespass and obtrusive light." The MLO can be downloaded from the IDA website (<http://bit.ly/iRt0Dk>).

The MLO requires that all outdoor lighting comply with one of two methods: the prescriptive method or the performance method.

Both methods require a total site lumen limit. These limits are different depending on which method is chosen. The performance method allows anywhere from 25% to 40% more lumens per site than allowed with the prescriptive method.

The main difference is that with the prescriptive method there are no limits on foot-candle levels leaving the site; there is only a restriction to use fixtures that have allowed BUG (Backlight, Uplight and Glare) ratings.

The performance method requires that you prove spill light by following either the BUG rating method, or by providing computer calculations showing that there is no vertical illuminance on the sides of the property line and that the total lumens leaving the site do not exceed the allowed levels.

MLO options

The prescriptive method is simple; calculate the total site lumens allowed according to one of two tables (limited to hardscape areas) and choose fixtures that meet the given BUG restrictions.

| | LZ1 | LZ2 | LZ3 | LZ4 | All zones |
|----------------------|-----|-----|-----|-----|-----------|
| Comply with option A | 12 | 23 | 21 | 28 | 84 |
| Comply with option B | 3 | 3 | 3 | 7 | 16 |

Table 1.

With the performance method, you need to determine total site lumens allowed by assigning usage for each area of the site. Then, the allowed levels for the areas are combined to come up with a total site lumen allowance. The designer then must meet foot-candle allowances for each area while at the same time keeping the spill light at or below given levels. The MLO uses lighting zones (LZs), which reflect the base light levels and obtrusive light measures desired by a community.

As shown in Fig. 1, the MLO proposes two options, which are designed to aid the selection of appropriate luminaires to limit the off-site impact. The prescriptive method is referred to as option A or the BUG rating method, while the performance method is referred to as option A or option B (the calculation method).

According to the MLO, both option A and option B are capable of preventing off-site impact such as glare, sky glow and light trespass.

The BUG rating method, as described in TM-15-11 Addendum A, establishes a BUG rating for any luminaire based on a lumen limit in each secondary solid angle.



Fig. 1.

According to the MLO, in order to conform to the BUG rating method, any fixture on the site must comply with the maximum allowable BUG ratings in Tables C-1 (backlight rating), C-2 (uplight ratings) and C-3 (glare ratings) from the MLO.

The calculation method does not limit the designer's ability to select the luminaire type or location. It just requires that computer lighting calculations show compliance with the maximum vertical illuminance at any point in the plane of property line, as shown in Table F of the MLO.

Comparing options

In an effort to verify and compare options A and B, the following comparison tests were run. Fifty-one LED and HID luminaires with distribution types 1, 2, 3 and 4 were selected for 84 installations, according to option A (BUG rating method, Table C). Some luminaires were selected for three installations for different LZ and positions, some for two and others for one only. Luminaire wattage varied from 25W to 310W for LED, and from 100W to 250W for HID.

All tested luminaires were installed to be ideally oriented.

According to the MLO, this means that “the backlight portion of the light output is oriented perpendicular and towards the property line of concern.”

| Luminaire | BUG rating | Maximum vertical illuminance (fc) from MLO, Table F | Calculated maximum vertical illuminance (fc) |
|-----------|------------|---|--|
| LED-1 | B1-U0-G1 | 0.8 | 4 |
| LED-2 | B1-U0-G1 | 0.8 | 6.3 |
| LED-3 | B1-U0-G1 | 0.8 | 7.2 |
| 150WPS-1 | B2-U0-G1 | 0.8 | 10.8 |
| 100WPS-1 | B2-U0-G1 | 0.8 | 18.2 |
| LED-4 | B1-U0-G1 | 0.8 | 9.4 |

All installations were done based on compliance with the maximum allowable BUG ratings as shown in Tables C-1, C-2 and C-3. Table 2.

The maximum allowable ratings are defined according to the LZ and installation position. For example, luminaires with a BUG rating of B=3, U=0, G=1 could be installed for LZ3 in positions that are a distance of 0.5 to 1.0 mounting height (mh) from the property line.

If the same luminaire is supposed to be used for LZ2, the allowed position for this luminaire is 1-2 mh from the property line.

Maximum vertical illuminance

The measurement of maximum vertical illuminance as per option B (calculation method) was done for each of the 84 luminaire installations, which were all in compliance with option A.

Fig. 2 shows the lighting layout used for the calculation of maximum vertical illuminance. The pole height was 20 ft, and the vertical grid rose 33 ft above the pole. The tested luminaire was installed in the middle of one of the three positions (1-2 mh, 0.5-1.0 mh, or less than 0.5 mh) according to MLO Table C. The actual pole spacing from the property line was designated as either 1.5, 0.75 or 0.25 mh. The total length of the testing site was 200 ft.

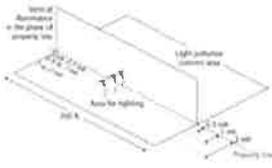


Fig. 2.

The graphical results of the maximum vertical illuminance calculations are shown in Fig. 3. The red lines show the value of maximum vertical illuminance threshold as per option B (MLO Table F). The highest obtained value of maximum vertical illuminance is 8.7 fc; this is 5.8 times higher than the option B threshold for LZ4.

Table 1 provides the calculation summary for each LZ and all test summaries. A total of 84 luminaire installations were approved based on option A, but only 16 of those were able to meet the option B requirements. Therefore, only 19% of the luminaires that complied when using option A also complied with option B.

The MLO also rates luminaires that are “not ideally oriented.” In this type of installation there is an additional glare value limitation noted in MLO Table C-3.

Six luminaires (both LED and HID) were rated and installed in not-ideally-oriented positions in LZ3, at 0.5-1.0 mh to the property line. All installations complied with option A according to Table C-1, C-2 and C-3 for backlight, upright and glare (not ideally oriented), respectively.

According to option B, the maximum vertical illuminance for LZ3 should not exceed 0.8 fc. As shown in Table 2, the lowest maximum vertical illuminance value of the six tested luminaires was 4 fc, which is five times higher than the allowed threshold. The worst result exceeded the threshold 19 times.



Discrepancies

This discrepancy between the two options is alarming. Both options should be consistent and compatible. If lighting fixtures were appropriate for the first option, all selected luminaires should have been appropriate for the second option as well, and the reverse is true.

All previous tests have been done for single luminaires installed on a 200-ft-long test site. In real practice, more than one pole would be used for lighting design, sometimes with two or more luminaires per pole. In a real situation, every luminaire would contribute to the off-site impact of lighting. The BUG rating system is not capable of accounting for the effect of a multiple-luminaire installation. The comparison between the BUG rating method and the calculation method would be even worse in the case of an actual site installation.

The MLO has a purpose of limiting spill light and offers two options to meet this goal. As is shown by the comparisons run, the calculation method (option B) is much more effective at meeting this goal. However, the BUG rating method (option A) is easier to use and not as

Fig. 3.

restrictive on spill light, therefore many sites will default to the BUG rating method for ease of use.

From these examples, it is apparent that the BUG rating method (option A) and calculation method (option B) are not equal at limiting light leaving the site. The prescriptive method is more restrictive regarding the total site lumens; however, it allows for a greater amount of spill light because it is solely based on the BUG rating method from Table C.

The MLO allows for the use of BUG ratings along with the performance method as long as there is no uplight used. This scenario would not only allow for more lumens on the site as compared to the prescriptive method, but also would allow for a greater amount of light spilling from the site than would be seen from sites that restrict the spill by using the calculation method. As proven from the studies done for this article, the BUG rating method cannot effectively control these extra lumens of spill light.

If the objective is to put the best lighting on the site and limit light leaving the site, then option B using the calculation method is by far the most effective means of limiting light trespass.



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**COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING DIVISION**

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Agenda Item 9.

TO: Design Review Board

FROM: Michelle Haynes, Planning and Development Services Director

FOR: Meeting of May 2, 109

DATE: April 22, 2019

RE: Review and Recommendation to Town Council regarding an amendment to the Community Development Code (CDC) to allow for staff level review of synthetic roof materials at Section 17.5.6.C.3. Roof Material and other clarifying amendments

BACKGROUND

In 2018, the town amended the roof material section of the CDC to provide better clarity and to allow for a broader range of roof materials in the Village Center. At the time, the town decided that synthetic roof materials required a class 3 application, which is full Design Review Board (DRB) review.

The DRB has developed enough comfort with review of synthetic roof materials that they have requested a CDC amendment to allow for staff level review of synthetic roof materials outside of the Village Center zone district.

Attached is exhibit A showing the proposed redline amendment for your review.

ATTACHMENTS

1. Exhibit A. Proposed CDC Amendment

ADDITIONAL PROPOSED AMENDMENT TO CDC SECTION 17.5.6.C.3.I. ROOF FLASHING, GUTTERS, DOWNSPOUTS AND SIMILAR HARDWARE, FOR DRB CONSIDERATION

When the Land Use Ordinance was replaced with the CDC, areas outside of the Village Center were allowed to propose material other than copper to be considered by the review authority for flashing, gutters, downspouts and similar hardware so long as it matched the roof material.

The specific language from the CDC is as follows:

- i. Roof flashing, Gutters Downspouts and Similar Hardware:
 - i. In the Village Center, all exposed metal flashing, gutters, downspouts and other roof hardware shall be copper except when structural requirements dictate the use of stronger materials such as for snow fences.
 - ii. In all other areas, other metal guttering besides copper may be approved by the review authority to allow it to match roofing material, such as the

- use of rusty steel guttering on a rusty metal roof.
- iii. When steel or iron are used, they shall be either rusted to match the roof or finished with a baked-on enamel paint or, subject to the prior approval of the review authority, a silicon modified alloy or special epoxy paint system of a color approved by the review authority

Staff recommends that (ii) be modified as follows:

- i. Roof flashing, Gutters, Downspouts and Similar Hardware:
 - i. In the Village Center, all exposed metal flashing, gutters, downspouts and other roof hardware shall be copper except when structural requirements dictate the use of stronger materials such as for snow fences, or when the metal roof and metal flashing, gutter and downspout materials are incompatible to be used together.
 - ii. Outside of the Village Center, In all other areas, the review authority may approve roof flashing, gutters, downspouts and similar hardware in steel or iron, so long as it matches the roof material in color, such as the use of rusted steel gutters and flashing on a rusted metal roof, or a synthetic shake shingle roof with baked on enamel steel gutters to match in color. ~~Other metal guttering besides copper may be approved by the review authority to allow it to match roofing material, such as the use of rusty steel guttering on a rusty metal roof.~~
 - iii. When steel or iron are used, they shall be either rusted to match the roof or finished with a baked-on enamel paint or, subject to the prior approval of the review authority, a silicon modified alloy or special epoxy paint system of a color approved by the review authority.

With the introduction of standing seam metal as an approvable roof material, copper is not compatible as a flashing and gutter material because if the metals are in contact the standing seam will corrode the copper. What is more typical is matching the metal roof material and color of steel with the flashing, gutters and downspouts. For example, a baked enamel color applied to a metal roof would propose the same baked enamel color proposed for the flashing, gutters and downspouts. The CDC allows for consideration of materials other than copper on a case by case basis and likely for the practical reason stated above. On the other hand, when a cedar shake roof is replaced with a synthetic cedar roof, there could be several options for approvable flashing and gutters including the following: copper, rusted metal, bonderized steel or painted steel, with review authority approval. The CDC otherwise requires that a rusted metal roof would have matching rusted metal gutters and flashing, although a painted steel could also be considered so long as the color matches.

Staff has simply proposed to reword the language that currently allows for flashing, gutters, downspouts and similar hardware to be approved by the review authority to be a material other than copper, so long as it matches the companion roof color to be more clear.

DISCUSSION POINTS

Items to consider:

- Aluminum or painted aluminum is not typically used in Mountain Village and is therefore not listed under iii above as an approvable flashing, gutter or downspout material.

- With the introduction of standing-seam as an approvable roof material, the board should understand that a variation to copper flashing and downspouts will be typical as part of the design review because the roof material will corrode the copper material.
- Synthetic roofs could use a broad range of flashing and gutters as listed above by way of example with review authority approval.
- The primary design concern is color, not necessarily matched material in all cases. For example, a synthetic roof material can only be matched in color with flashing, gutters and downspouts. In the case of a standing seam roof with a baked enamel color, the flashing, gutters and downspouts could match in color and material.
- The review authority may be staff or may be the DRB as it relates to approval of the flashing, gutter and downspout material with roof material applications depending upon the scope of the design review application. The DRB should determine whether they are comfortable with staff approving synthetic roof material and a possible range of proposed flashing, gutter and downspout material, not copper.

CONCLUSION

Please discuss and provide direction to staff regarding a proposed CDC roofing amendment. This includes direction regarding a proposed amendment to allow staff level review of synthetic roofs and clarifying language in the roof flashing, gutters, downspouts and similar hardware section of the CDC.

RECOMMENDED MOTION

I move to recommend approval to the Town Council regarding a CDC amendment to the Roof Material CDC section at 17.5.6.c.3. and section 17.5.6.i. Roof flashing, Gutters, Downspouts and Similar Hardware of the CDC attached as exhibit A.

/mbh

- e. Roof ridgelines shall, where practicable, step with the topography of the site following the stepped foundation.
- f. The design of roofs shall reflect concern for snow accumulation and ice/snow shedding. Entries, walkways and pedestrian areas shall be protected from ice/snow shedding.
- g. Eaves and fascia shall generally be responsive and proportional to the design of the building.

2. Roof Drainage

- a. Where roofs drip onto pedestrian or other public areas, all multi-family, mixed use or commercial buildings shall provide a system of gutters, downspouts and permitted heat-tape to direct and channel roof run-off into the project's landscape areas and to prevent ice build-up in pedestrian areas. In non-pedestrian or public areas, roofs may drip to cobble lined swales that direct water to the natural or proposed landscape.
- b. All development within the Village Center shall be required to provide an integral guttering system designed into the roof or other DRB approved system of gutters, downspouts and heat-tape to contain roof run-off.
- c. Within the Village Center, all building roof run-off shall be directed to storm sewers or drainage systems capable of handling the volume of run-off. Such system shall be kept and maintained by the owner and/or respective homeowners association in a clean, safe condition and in good repair.

3. Roof Material

- a. All roofing material shall be of a type and quality that will withstand high alpine climate conditions.
- b. The review authority may require class A roofing materials as a fire mitigation measure.
- c. Permitted roof material outside the Village Center include:

Metal roof material limited to the following: rusted, black or gray standing seam, bonderized or corrugated metal (not reflective);

- i. Zinc;
- ii. Minimum 1/2" slate; and
- iii. Copper;

(a) Copper shall only be considered when it is proposed with a brown patina finish.

(b) The brown patina finish shall be completed prior to issuing a certificate of occupancy.

iv. Synthetic roofing material that accurately emulates wood shake, concrete and slate tile or any other roofing material permitted or existing in Mountain Village.

(a) Synthetic roofing material shall be:

- ~~(i.) Durable~~
- ~~(ii.) High strength, both material and shape;~~
- ~~(iii.) Low absorption or permeability;~~
- ~~(iv.) High freeze/thaw damage resistance;~~
- ~~(v.) Color throughout the tile (not surface applied); and~~
- ~~(+)(vi.) High-quality design that fits within the architectural context of the building and the architectural context of the surrounding area.~~

d. The following roofing materials outside of the Village Center shall be approved by the DRB as a specific approval that is processed as a class 3 development application if the DRB finds the roofing material is consistent with the town design theme and the applicable Design Regulations:

~~i. Synthetic roofing material that accurately emulates wood shake, concrete and slate tile or any other roofing material permitted or existing in Mountain Village.~~

~~(a) Synthetic roofing material shall be:~~

- ~~(ii.) Durable~~
- ~~(iii.) High strength, both material and shape;~~
- ~~(iv.) Low absorption or permeability;~~
- ~~(v.) High freeze/thaw damage resistance;~~
- ~~(vi.) Color throughout the tile (not surface applied); and~~
- ~~(vii.) High-quality design that fits within the architectural context of the building and the architectural context of the surrounding area.~~

i. Solar roof tiles so long as they are contextually compatible in design, color, theme and durability (non-reflective).

e. Village Center roofing material will require a class 3 development application and building specific design review. The following roof materials shall be approved by the DRB if the DRB finds the roofing material is consistent with the town design theme and applicable Design Regulations:

- i. Burnt sienna concrete tile.
- ii. Earth tones compatible with burnt sienna concrete tile in color and texture.
- iii. Brown patina copper
- iv. Standing seam or bonderized metal (dark grey or black) (not rusted)
- v. Zinc
- vi. Solar roof tiles so long as they are contextually compatible in design, color, theme and durability (non-reflective).
- vii. Some variation of roof material color is permissible by specific DRB approval as long as it is contextually compatible in design, color, theme and durability.

f. Modification to roof materials on dormers and secondary roof forms may

be reviewed as a class 1 development application.

- i. Permitted roof materials are listed in e.i-vii above.
- ii. bevel edged corrugated (not rusted) metal may be approved so long as it is contextually compatible in design, color, theme and durability.

g. The following requirements are applicable to all roofing:

- i. Metal roofing surface shall not reflect an excessive amount of light when viewed against direct sunlight.
Unless the DRB grants a specific approval for a non-rusted metal roof, corrugated and standing seam roofing materials shall be pre-treated to produce rusting prior to placement on the roof, and prior to the issuance of a certificate of occupancy.

h. The installation or re-installation of wood shakes, glazed tile and asphalt shingles is prohibited, except for the repair or replacement of roof areas that are 25% or less of the total roof surface area.

i. Roof flashing, Gutters, Downspouts and Similar Hardware:

- i. In the Village Center, all exposed metal flashing, gutters, downspouts and other roof hardware shall be copper except when structural requirements dictate the use of stronger materials such as for snow fences, ~~or when the metal roof and metal flashing, gutter and downspout materials are incompatible to be used together.;~~
- ii. ~~Outside of the Village Center, in all other areas, the review authority may approve roof flashing, gutters, downspouts and similar hardware in steel or iron so long as it matches the roof material in color, such as the use of rusted steel gutters and flashing on a rusted metal roof, or a synthetic shake shingle roof with baked on enamel steel gutters to match in color. other metal guttering besides copper may be approved by the review authority to allow it to match roofing material, such as the use of rusty steel guttering on a rusty metal roof.~~
- iii. When steel or iron are used, they shall be either rusted to match the roof or finished with a baked-on enamel paint or, subject to the prior approval of the review authority, a silicon modified alloy or special epoxy paint system of a color approved by the review authority.

4. Pedestrian Protection. Due to the potential for heavy snow accumulation, snow shedding shall be expected from sloping roofs onto the adjoining finished grades. It is therefore important that people, structures and improvements be protected from these potential impact loads.

- a. All building entries and shop fronts shall be located at gable ends of buildings or shall be protected by secondary roofs, arcades, balconies or similar structures when they are subject to snow or ice shedding.
- b. Structures, improvements and other pedestrian/public areas shall be protected by structural snow retention devices and other measures, such as snow fences and heat traced gutters.
- c. Snow retention devices shall be designed by a registered, Colorado professional