TOWN OF MOUNTAIN VILLAGE
TOWN COUNCIL REGULAR MEETING
THURSDAY, JULY 15, 2021, 2:00 PM
2nd FLOOR CONFERENCE ROOM, MOUNTAIN VILLAGE TOWN HALL
455 MOUNTAIN VILLAGE BLVD, MOUNTAIN VILLAGE, COLORADO
AGENDA REVISED 2

https://us06web.zoom.us/webinar/register/WN_hhPyF6CMT9-DIJCvIAED1g

	Time	Min	Presenter	Type	
1.	2:00				Call to Order
2.	2:00	10	Johnston		Administration of Oath of Office to Newly Elected Council Members
3.	2:10	10	Wisor	Action	Election of Mayor and Mayor Pro-Tem
4.	2:20	5			Public Comment on Non-Agenda Items
5.	2:25	5	Johnston	Action	Consent Agenda: All matters in the Consent Agenda are considered to be routine by the Town Council and will be enacted with a single vote. There will be no separate discussion of these items. If discussion is deemed necessary, that item should be removed from the Consent Agenda and considered separately: a. Consideration of Approval of the June 17, 2021 Regular Town Council Meeting Minutes b. Consideration of a Resolution to Eliminate the Green Team Bylaws c. Consideration of a Resolution to Eliminate the Business Development Advisory Committee (BDAC) Bylaws d. Consideration of a Resolution to Eliminate the Plaza Vending Committee Bylaws e. Consideration of Adoption of Rules of Conduct for Meetings and General Business
6.	2:30	5	Wisor	Action	Second Reading, Public Hearing and Council Vote on an Ordinance Amending Section 2.04.010(B) of the Town of Mountain Village Municipal Code to Clarify Oversight of and Reporting By Certain Department Heads
7.	2:35	15	Council Members & Staff	Informational	Council Boards and Commissions Updates: 1. Telluride Tourism Board - Berry 2. Colorado Flights Alliance - Gilbride 3. Transportation & Parking – Benitez/Duprey 4. Budget & Finance Committee –Gilbride/Duprey 5. Gondola Committee – Caton/Berry 6. Colorado Communities for Climate Action – Berry 7. San Miguel Authority for Regional Transportation (SMART)- Caton/Prohaska 8. Telluride Historical Museum- Prohaska 9. Alliance for Inclusion – Binder 10. Green Team Committee- Berry/Prohaska 11. Business Development Advisory Committee – Caton/Benitez 12. San Miguel Watershed Coalition- Prohaska 13. Telluride Mountain Village Owners Association Governance Auxiliary Committee - Duprey 14. Mayor's Update – Benitez
8.	2:50	30	Council Members & Staff	Work Session Action	Council Boards and Commissions Appointments: 1. Telluride Tourism Board (One Council Member) 2. Colorado Flights Alliance (One Council Member) 3. San Miguel Watershed Coalition-(One Council Member) 4. Transportation & Parking – (Two Council Members) 5. Budget & Finance Board –(Two Council Members) 6. Gondola Subcommittee (Two Council Members) 7. Colorado Communities for Climate Action –(One Council Member) 8. San Miguel Authority for Regional Transportation (SMART)- (Three Council Members – Two Regular and One Alternate Seat) 9. Telluride Historical Museum- (One Council Member) 10. Telluride Conference Center Work Group– (Two Council Members) 11. Alliance for Inclusion – (One Council Member) 12. Green Team Committee- (Two Council Members) 13. Business Development Advisory Committee (Two Council Members) 14. Ethics Commission- (Two Council Members) 15. Mountain Village Condominium Association (One Council Member) 16. Telluride Mountain Village Owners Association Governance Auxiliary

					Committee – (One Council Member) 17. Grant Committee (Two Council Members) 18. Colorado Flights Alliance (One Council Member) 19. Plaza Vending Committee (One Council Member) 20. Employee Development Board (Two Council Members)
9.	3:20	10	Johnston	Action	Consideration of Ethics Committee Appointments: a. One Regular Seat for a Two-Year Term b. One Alternate Seat for a Two-Year Term
10.	3:30	5	Vergari	Informational	Finance: a. Presentation of the June 30, 2021 Business & Government Activity Report (BAGAR)
11.	3:35	30	Wisor Loebe	Informational	Discussion Regarding Federal Public Transportation Mask Requirements
12.	4:05	30	Miller Wisor	Action	Consideration of a Resolution Regarding a Minor Subdivision Request to Vacate a General Easement and to Relocate the Meadows Trail Out of the Town Easement onto the Town Unimproved Right of Way and Other Associated Relocation Elements Affecting Adjacent Properties, Lot 615-1CR, TBD Lawson Overlook
13.	4:35	45	Loebe Foster	Work Session	Revised Trails Master Plan Discussion
14.	5:20	5	Miller	Action	Consideration of a Resolution Regarding a Variance Request for Building Height, Pursuant to CDC Section 17.4.16. C on Lot 615-1CR, TBD Lawson Overlook *Staff has requested that this item be continued to the August 19, 2021, Regular Town Council Meeting*
15.	5:25	45	Miller Applicant	Action *Quasi-Judicial*	First Reading, Setting of a Public Hearing and Council Vote on an Ordinance Regarding a Density Transfer and Rezone on Lot 30, 98 Aspen Ridge, to Increase the Condominium Density from Nine (9) Condominium Zoning Designation Units and Two (2), Employee Condominium Zoning Designation Units to Sixteen (16) Condominium Zoning Designation Units and Three (3) Employee Condominium Zoning Designation Units
16.	6:10	30	Miller	Work Session	Discussion Regarding a Potential Site-Specific Planned Unit Development (SPUD) on Lots 162A & B, TBD San Joaquin Road
17.	6:40	15	Wisor Applicant	Action	Mountain Village Housing Authority 1. Consideration of a Request for an Exemption to the R-1 School District Boundary Employment Requirement, 201 Boulders Way, Lot 5 Boulders Way
18.	6:55	10	Skinner	Informational	Colorado Flights Alliance Bi-Annual Report
19.	7:05	10	Horning	Informational	TSG Quarterly Update
20.	7:15	15	Dohnal Soukup Montgomery	Informational	Staff Reports a. Marketing & Business Development b. Technology & Broadband Services c. Town Manager
21.	7:30	5			Other Business
22.	7:35				Adjourn

Please note that times are approximate and subject to change.
SJ
07/02/21

Individuals with disabilities needing auxiliary aid(s) may request assistance by contacting Town Hall at 970-369-6429 or email: mvclerk@mtnvillage.org. A minimum notice of 48 hours is required so arrangements can be made to locate requested auxiliary aid(s)

https://us06web.zoom.us/webinar/register/WN_hhPyF6CMT9-DIJCvIAED1g

Public Comment Policy:

- All public commenters must sign in on the public comment sign in sheet and indicate which item(s) they intend to give public comment on Speakers shall wait to be recognized by the Mayor and shall give public comment at the public comment microphone when recognized by the Mayor
- Speakers shall state their full name and affiliation with the Town of Mountain Village if any
- Speakers shall be limited to five minutes with no aggregating of time through the representation of additional people
- Speakers shall refrain from personal attacks and shall keep comments to that of a civil tone
- No presentation of materials through the AV system shall be allowed for non-agendized speakers
- Written materials must be submitted 48 hours prior to the meeting date to be included in the meeting packet and of record. Written comment submitted within 48 hours will be accepted, but shall not be included in the packet or be deemed of record

TOWN OF MOUNTAIN VILLAGE
MINUTES OF THE JUNE 17, 2021
REGULAR TOWN COUNCIL MEETING
DRAFT

Agenda Item 5a

The meeting of the Town Council was called to order by Mayor Laila Benitez at 2:00 p.m. on Thursday, June 17, 2021. Due to the Town's Disaster Declaration of March 19, 2020 related to the COVID-19 virus, the meeting was held in person and with virtual access provided through Zoom.

Attendance:

The following Town Council members were present and acting:
Laila Benitez, Mayor
Dan Caton, Mayor Pro Tem
Patrick Berry
Pete Duprey Via Zoom
Natalie Binder Via Zoom
Jack Gilbride
Marti Prohaska

The following Town Council members were absent:

Also in attendance were:

Kim Montgomery, Town Manager
Susan Johnston, Town Clerk
Christina Lambert, Senior Deputy Town Clerk
Paul Wisor, Town Attorney
Julie Vergari, Chief Accountant
Chris Broady, Chief of Police
Jaime Holmes, Human Resources Director
Zoe Dohnal, Business Development and Sustainability Director
Kathrine Warren, Public Information Specialist
Michelle Haynes, Director of Planning & Development Services
John Miller, Senior Planner
Jim Soukup, Chief Technology Officer
Kate Burns, Controller
Jim Loebe, Director of Transportation & Recreation
Pam Pettee
Carson Bryant
Douglas Tooley
Elly Brophy
Heather Knox
Andrew Knudtsen
Tyler Gibbs
Stephanie Fanos
Yvette Rauff
H. Moffett
Anton Benitez
Katie Singer
Erika Builder
Jonathan Greenspan

Town Attorney Paul Wisor proposed amending the agenda. On a **MOTION** by Jack Gilbride and seconded by Natalie Binder, Council voted unanimously to amend the agenda to include an agenda item regarding a Norwood Deed Restriction and to exclude agenda item 4b on the consent agenda.

Executive Session for the Purpose of Receiving Legal Advice and Determining Positions Relative to Matters that may be Subject to Negotiations, Developing Strategy for Negotiations, and Instructing Negotiators with Respect to:

a. **Sherry v. Moir, et al. Pursuant to § 24-6-402(4)(b) and (e)**
b. **Discussing Personnel Matters in Connection with COVID-19 Response Pursuant to Section 24-6-402(4)(b) and (f)(II) C.R.S.**

On a **MOTION** by Marti Prohaska and seconded by Pete Duprey, Council voted unanimously to move into Executive Session for the purpose of receiving legal advice pursuant to (a.) Sherry v. Moir, et al. pursuant to § 24-6-402(4)(b) and (e) and (b.)discussing personnel matters in connection with COVID-19 response pursuant to Section 24-6-402(4)(b) and (f)(II) C.R.S.at 2:03 p.m.

Council returned to open session at 2:30 p.m.

Public Comment on Non-Agenda Items (3)
Public comment was received from Pam Pettee and Douglas Tooley.

Consent Agenda:
All matters in the Consent Agenda are considered to be routine by the Town Council and will be enacted with a single vote. There will be no separate discussion of these Items. If discussion is deemed necessary, that item should be removed from the Consent Agenda and considered separately: (4)

a. **Consideration of Approval of the May 20, 2021 Regular Town Council Meeting Minutes**
b. **First Reading, Setting of a Public Hearing and Council Vote on an Ordinance Amending Ordinance 2014-03**
c. **Consideration of Approval to Dissolve the Town Hall Subarea Planning Committee and the Conference Center Committee.**

Town Clerk Susan Johnston presented. On a **MOTION** by Dan Caton and seconded by Jack Gilbride, Council voted unanimously to approve the Consent Agenda noting that item 4b was removed.

MIG Presentation on Mountain Village Economic Conditions and Implications for the Comprehensive Plan Amendment (5)
Andrew Knudtsen EPS, Carson Byant EPS and Elly Brophy MIG presented. Council discussion ensued. Public comment was received from Douglas Tooley.

Finance: (6)
Chief Accountant Julie Vergari presented.

a. **Presentation of the April 30, 2021 Business & Government Activity Report (BAGAR)**
b. **Consideration of Approval of the April 30, 2021 Financials**

Council discussion ensued. On a **MOTION** by Dan Caton and seconded by Jack Gilbride, Council voted unanimously to approve the April 30, 2021 Financials as presented.

c. **2022 Budget Policies and Goals Worksession**

Julie Vergari presented. Council discussion ensued. Council directed staff to use 4% as a placeholder for employee compensation until the Finance Committee has a final recommendation.

First Reading, Setting of a Public Hearing and Council Vote on an Ordinance Amending Section 2.04.010(B) of the Town of Mountain Village Municipal Code to Clarify Oversight of and Reporting By Certain Department Heads (7)
Town Attorney Paul Wisor presented. Council discussion ensued. On a **MOTION** by Jack Gilbride and seconded by Natalie Binder, Council voted 7–0 to approve on first reading an Ordinance amending Section 2.04.010(B) of the Town of Mountain Village Municipal Code to clarify oversight of and reporting by certain department heads and to set the second reading, public hearing and final Council vote for July 15, 2021.

Second Reading, Public Hearing and Council Vote on an Ordinance Authorizing Future Members of Town Council to be Eligible for Certain Benefits (8)
Paul Wisor presented. Council discussion ensued. On a **MOTION** by Jack Gilbride and seconded by Dan Caton, Council voted 7–0 to adopt an Ordinance authorizing future members of Town Council to be eligible for certain benefits.

Discussion Regarding Draft Community Development Code (CDC) Language Consistent with the Community Housing Initiatives to Re-Introduce Non-Subdividable and Subdividable Duplex Development in an Overlay District Within the Single-Family Zone District, Modify the Definition of an Accessory Dwelling Unit (ADU)and Remove the Definition of a Mother-In-Law Suite (9)
Planning and Development Services Director Michelle Haynes presented. Council discussion ensued. Council direction was to amend the definition of the ADU and remove the mother-in-law suite from the CDC. Public comment was received by Douglas Tooley.

Consideration of a Resolution Approving the Your Equity Support (YES) Program and Supporting Documentation (10)
Paul Wisor presented. Council discussion ensued. Council consensus was to allow a current owner to put their unit into the program with the understanding that the Housing Director and Town Manager evaluate each situation for compliance. Council consensus was to utilize YES funds to purchase raw land inside Town limits. On a **MOTION** by Marti Prohaska and seconded by Patrick Berry, Council voted unanimously to adopt a Resolution approving the Your Equity Support (YES) Program and supporting documentation.

Council took a break from 5:15pm to 5:37 p.m.

Second Reading, Public Hearing and Council Vote on an Ordinance to Extend a Vested Property Right and Plan at Lot 1003R-1, 433 Mountain Village Boulevard, Gondola Parking Garage Expansion from October 20, 2021, to October 20, 2031 (11)
Senior Planner John Miller presented. Council discussion ensued. The Mayor opened the public hearing. No public comment was received. The Mayor closed the public hearing. On a **MOTION** by Dan Caton and seconded by Jack Gilbride, Council voted 7-0 to approve an Ordinance to extend a vested property right and plan at Lot 1003R-1, 433 Mountain Village Boulevard, Gondola Parking Garage expansion from October 20, 2021, to October 20, 2031 pursuant to CDC section 17.4.17.

The Mayor re-opened public comment. Public comment was received by Douglas Tooley.

Second Reading, Public Hearing and Council Vote on an Ordinance to Consider a Vested Property Right and Plan Extension for Lot 1001R, 415 Mountain Village Boulevard, Village Court Apartments (VCA) Phase IV from July 18, 2021, to July 18, 2031 (12)
John Miller presented. Council discussion ensued. The Mayor opened a public hearing. There was no public comment. The Mayor closed the public hearing On a **MOTION** by Marti Prohaska and seconded by Natalie Binder, Council voted 7–0 to approve an Ordinance considering a vested property right and site-specific development plan application at Lot 1001R, 415 Mountain Village Boulevard, Village Court Apartments (VCA) Phase IV from July 18, 2021 to July 18, 2031 pursuant to CDC Section 17.4.17.

Consideration of Support for the Revised Wording of the Plaque on the Permanent Tribute to the Allred's and Jim Wells on Oak Street Plaza (13)
Telluride Foundation representative Katie Singer presented. On a **MOTION** by Marti Prohaska and seconded by Jack Gilbride, Council voted unanimously to approve the revised wording of the plaque on the permanent tribute to the Allred's and Jim Wells on Oak Street Plaza with a small clarification to the second to last paragraph.

Staff Reports: (14)
a. **Town Manager**
Kim Montgomery presented her report. Council discussion ensued.

Town Council Informational Council Boards and Commissions Updates (15)
1. **Telluride Tourism Board – Berry**
2. **Colorado Flights Alliance – Gilbride**
3. **Transportation & Parking – Benitez/Duprey**
4. **Budget & Finance Committee – Gilbride/Duprey**

5. **Gondola Committee – Caton/Berry**
6. **Colorado Communities for Climate Action – Berry**
7. **San Miguel Authority for Regional Transportation (SMART) – Caton/Prohaska**
8. **Telluride Historical Museum – Prohaska**
9. **Alliance for Inclusion – Binder**
10. **Green Team Committee – Berry/Prohaska**
11. **Business Development Advisory Committee (BDAC) – Caton/Benitez**
12. **Mayor's Update – Benitez**

The Mayor presented outgoing Council member Natalie Binder with a plaque, thanking her for her service to the community and wishing her well.

Other Business (16)

a. **Ethics Commission July Appointments; One regular and One Alternate Seat**

Susan Johnston presented stating that the Ethics Commission appointments would be made at the July 15, 2021 Town Council meeting.

b. **TMVOA Update on Summer Programming**

Pete Duprey opened the discussion. TMVOA Executive Director Anton Benitez presented the summer programming which did not include Sunset Concerts Series and instead focused on optimizing consistent activity and vibrancy throughout the week. Council discussion ensued. Mr. Benitez stated that he would meet with the Board to see if they would consider an alternate location for the concerts.

Consideration of a Norwood Deed Restriction Purchase

Paul Wisor presented regarding a Habitat for Humanity home in Norwood. The sale of the home was held up because FHA and HUD will not accept the deed restriction. On a **MOTION** by Natalie Binder and seconded by Jack Gilbride Council voted unanimously to allow Attorney Paul Wisor to amend the deed restriction to allow the home to close.

There being no further business, on a **MOTION** by Natalie Binder and seconded by Dan Caton, Council voted unanimously to adjourn the meeting at 6:21 p.m.

Respectfully prepared and submitted by,

Susan Johnston
Town Clerk

AGENDA ITEM 5 B, C, D
455 Mountain Village Blvd.
Mountain Village, CO 81435
(970) 728-1392

TO: Mountain Village Town Council

FROM: Paul Wisor, Town Attorney

FOR: Town Council Meeting, July 15, 2021

DATE: July 8, 2021

RE: **Dissolving the BDAC, Plaza Vending and Green Team Committee Bylaws**

OVERVIEW

The BDAC, Plaza Vending Committee and Green Team Committee are intended to be advisory boards, and are not meant to be bodies that adopt policies, positions, resolutions, rules, regulations, or take formal action. As such, these entities are not subject to requirements under the Open Meetings Law such as the taking of minutes or posting notice of meetings. That said, each entity has extensive bylaws, each requiring significant staff time, including mandatory attendance at meetings, keeping of minutes and other administrative tasks. Trusting staff, and other members of these entities are able to conduct themselves in professional manner, the bylaws are not necessary and should be abolished in order to promote more effective use of staff time.

PROPOSED MOTION

I move to dissolve the bylaws for BDAC, Plaza Vending Committee and Green Team Committee as set forth in the resolutions presented by staff.

RESOLUTION OF THE TOWN OF MOUNTAIN VILLAGE, COLORADO DISSOLVING THE GREEN TEAM COMMITTEE BYLAWS

RESOLUTION NO. 2021-__

RECITALS

WHEREAS, the Town Council of the Town of Mountain Village (the "Town"), pursuant to the Town of Mountain Village Home Rule Charter Section 3.6(d), has the authority to create and dissolve advisory or fact-finding boards, commissions or committees which are considered necessary or desirable by the Town Council in the course of carrying out its legislative responsibilities of enacting, amending or repealing ordinance; and

WHEREAS, the Town Council approved and adopted the Bylaws for the Green Team Committee on December 12, 2019; and

WHEREAS, Article VII of the Bylaws provides the Bylaws may only be amended by the Town Council; and

WHEREAS, Town Council hereby finds the bylaws create an undue burden on staff time and do not create efficiencies in the operation of the Green Team Committee.

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Mountain Village, Colorado, that:

Section 1. Recitals Incorporated. The above and foregoing recitals are incorporated herein by reference and adopted as findings and determinations of the Town Council.

Section 2. Dissolution of the Green Team Committee Bylaws . The Town Council hereby formally dissolves the Green Team Committee Bylaws.

Section 3. Effective Date. This Resolution shall be in full force and effect upon its passage and adoption.

ADOPTED AND APPROVED by the Town Council at a regular public meeting held on the 15th day of July 2021.

TOWN OF MOUNTAIN VILLAGE,
TOWN COUNCIL

By: _____
Laila Benitez, Mayor

ATTEST:

_____
Susan Johnston, Town Clerk

APPROVED AS TO FORM:

_____
Paul Wisor, Town Attorney

RESOLUTION OF THE TOWN OF MOUNTAIN VILLAGE, COLORADO DISSOLVING THE BUSINESS DEVELOPMENT ADVISORY COMMITTEE

RESOLUTION NO. 2021-__

RECITALS

WHEREAS, the Town Council of the Town of Mountain Village (the "Town"), pursuant to the Town of Mountain Village Home Rule Charter Section 3.6(d), has the authority to create and dissolve advisory or fact-finding boards, commissions or committees which are considered necessary or desirable by the Town Council in the course of carrying out its legislative responsibilities of enacting, amending or repealing ordinance; and

WHEREAS, the Town Council approved and adopted the Bylaws for the Business Development Advisory Committee on April 25, 2019; and

WHEREAS, Article VI of the Bylaws provides the Bylaws may only be amended by the Town Council; and

WHEREAS, Town Council hereby finds the bylaws create an undue burden on staff time and do not create efficiencies in the operation of the Business Development Advisory Committee.

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Mountain Village, Colorado, that:

Section 1. Recitals Incorporated. The above and foregoing recitals are incorporated herein by reference and adopted as findings and determinations of the Town Council.

Section 2. Dissolution of the Business Development Advisory Committee. The Town Council hereby formally dissolves the Business Development Advisory Committee Bylaws.

Section 3. Effective Date. This Resolution shall be in full force and effect upon its passage and adoption.

ADOPTED AND APPROVED by the Town Council at a regular public meeting held on the 15th day of July 2021.

TOWN OF MOUNTAIN VILLAGE,
TOWN COUNCIL

By: _____
Laila Benitez, Mayor

ATTEST:

_____
Susan Johnston, Town Clerk

APPROVED AS TO FORM:

_____
Paul Wisor, Town Attorney

RESOLUTION OF THE TOWN OF MOUNTAIN VILLAGE, COLORADO
DISSOLVING THE PLAZA VENDING COMMITTEE

RESOLUTION NO. 2021-__

RECITALS

WHEREAS, the Town Council of the Town of Mountain Village (the "Town"), pursuant to the Town of Mountain Village Home Rule Charter Section 3.6(d), has the authority to create and dissolve advisory or fact-finding boards, commissions or committees which are considered necessary or desirable by the Town Council in the course of carrying out its legislative responsibilities of enacting, amending or repealing ordinance; and

WHEREAS, the Town Council approved and adopted the Bylaws for the Plaza Vending Committee on April 25, 2019, which Bylaws provide; and

WHEREAS, Article VII of the Bylaws provides the Bylaws may only be amended by the Town Council; and

WHEREAS, Town Council hereby finds the bylaws create an undue burden on staff time and do not create efficiencies in the operation of the Plaza Vending Committee.

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Mountain Village, Colorado, that:

Section 1. Recitals Incorporated. The above and foregoing recitals are incorporated herein by reference and adopted as findings and determinations of the Town Council.

Section 2. Dissolution of the Plaza Vending Committee. The Town Council hereby formally dissolves the Plaza Vending Committee Bylaws.

Section 3. Effective Date. This Resolution shall be in full force and effect upon its passage and adoption.

ADOPTED AND APPROVED by the Town Council at a regular public meeting held on the 15th day of July 2021.

TOWN OF MOUNTAIN VILLAGE,
TOWN COUNCIL

By: _____
Laila Benitez, Mayor

ATTEST:

_____
Susan Johnston, Town Clerk

APPROVED AS TO FORM:

_____
Paul Wisor, Town Attorney

MOUNTAIN VILLAGE TOWN COUNCIL
Rules for the Conduct of Meetings and General Business

Revised July 2021

I. Conduct

- Council is expected to uphold a high standard of civility toward each other and to abide by the Town's Code of Ethics.
- Civility is expected between Council and the public, and among members of the public while in meetings; rude behavior will not be tolerated.
- All participants in Council meetings are to refrain from profanity.
- Robert's Rules of Order shall govern the conduct of meetings.
- Council is to strive for brevity and to avoid redundancy and will encourage the same of the public.
- The Mayor is charged with the primary role of enforcing Council's rules of conduct. Council is also encouraged to courteously ask each other to refrain from inappropriate behavior if it occurs (that is, Council can "call" each other on inappropriate behavior to reinforce the ethic of the group as a whole or to support the Mayor's efforts to achieve the same effect).
- Council members are encouraged to speak with staff, or each other, if they have questions or objections to recommendations coming before the body.
- Cell phones should be turned off during meetings and only if absolutely necessary left on in silenced mode. In a quasi-judicial hearing, cell phones must remain off.
- Council is expected to refrain from sidebar conversations to the extent possible so as not to detract from another speaker

II. Setting the Town Council Agenda

- The Mayor sets the agenda.
- Council members wishing to add an item to the agenda should contact the Mayor by the agenda deadline which is noon two weeks prior to the meeting date. Council members desiring to amend the agenda during the meeting for the purpose of adding an item shall first consult with the Town's legal counsel to determine the appropriateness of the proposed amendment. If deemed appropriate by legal counsel, the Council member desiring to amend may do so after being recognized by the Mayor and then offering the motion to amend the agenda. The Council member so moving shall briefly explain the appropriateness of the amendment but may not substantively address the item until such time as the Council has considered the motion and approved it. Motions to amend the agenda require a 2/3 vote of the quorum present. If the motion to amend the agenda is approved, the item shall then be considered, and action taken, if appropriate. If the motion to amend fails, the issue dies without further discussion.

III. Public Hearings on Action Items

- Mayor opens public hearing
- Mayor introduces item (reading the item from the agenda and making any prefatory remarks)
- Staff provides report, including brief relevant history of and context for the item
- Council poses questions to staff
- Public Comment is opened
  - The Mayor reads the Public Comment Policy
  - Each member of the public is asked to speak only once.
  - The public is asked to refrain from duplicating the comments of others if possible.
  - The public is asked to avoid engaging in dialogue with each other but instead to address the Council and the audience in general.
  - If a large audience is present, the Mayor may set a time limit (i.e. 2-3 minutes) for each speaker
- Public comment is closed, and the matter brought to Council
- Council motion is placed on floor and acted on consistent with Robert's Rules of Order for making and entertaining motions.

IV. Work sessions

- Work sessions are designed to permit less formal discussion among Council members and the public on issues of importance to the community. No formal action by Council shall be taken in a work session.
- The Mayor, in his/her discretion may entertain commentary from the public either in the form of a public hearing or in a more interactive format depending on the topic, number of speakers present and time constraints.
- While no formal action may be taken at work sessions, Council may provide direction to staff for further work or other related matters.

V. Public Discussion

- Public Discussion shall not last more than forty-five (45) minutes per council meeting unless otherwise directed by the Mayor.
- Any member of the public wishing to address the Council during public discussion shall first approach the podium and state his/her name and address as well as their relation to the topic of discussion for the record and then proceed to make his/her comments. If any member of the public claims to represent one or more persons, / he/she shall, after making his/her introduction and prior to making his/her comments, disclose who /he/she represents and state the name and address of the person or persons so represented.
- Public comment by members of the public is not designed for interactive dialogue between the Council and the public but is designed for members of the public to make a public statement of position. Consequently, members of the public shall make their statement of position known to the Council without an expectation of a response from Council.
- Members of the public will be asked to speak only once on the topic unless additional comments are approved by the Mayor and/or Council. If a member of the public would like to ask a question of Council, he/she must first request permission of the Mayor to do so. If the Mayor consents, members of the public shall be allowed a five (5) minute maximum for questions and Council's response unless otherwise directed by the Mayor. If more than five (5) minutes is necessary, an appointment with a Council member or staff should be scheduled.
- No personal attacks or arguments.
- No grandstanding for the audience.
- People speaking on the same issue will be asked to refrain from redundancy.

VI. Flow of Information

Information requests from Town Council to staff:

- For minor or readily available information from Town Hall (i.e. a copy of an ordinance or minutes to a meeting), Council should ask the Town Manager for assistance and will be provided the item without further ado.
- Council should refrain from making individual requests for information from staff other than through the Town Manager.
- Council, except through the Mayor or Town Manager, should refrain from instructing or requesting an individual staff member to perform any task.
- For items that require substantial research, analysis or compilation of information not readily available, requests should be made to the Town Manager. Staff, at the Town Manager's direction, will undertake the task and provide the information requested if it is reasonable in terms of time. Information so provided will be copied to all Council members. If the Town Manager believes the request for research or analysis is too onerous to be coming from one member of Council or has concerns regarding its appropriateness, she will bring the matter before the full Council to determine if there is agreement that the task should be undertaken.

Information going to Council:

- Mail addressed to individual Council members is held by the Town Clerk and given to Council members on meeting days.
- Mail that is time sensitive or emails received by staff will be forwarded via email to Council.

VII. Appointments to Boards and Commissions

- See Attached Policy

VIII. Intergovernmental Meetings

The purpose of these gatherings is to provide a forum for informal dialogue between local governments. If items are not controversial and can be administratively implemented the relevant parties may simply take action as a result of discussion. If an issue has more of a policy or legislative nature the elected officials use this forum to gather input for subsequent consideration through their respective public hearing decision-making processes.

- Participating San Miguel local governments staff take turns preparing a draft agenda for comment.
- Town staff will circulate the draft agenda to Council members.
- Council members wishing to add items to these agendas should contact the Town Clerk, who will in turn advise the appropriate entity.
- Council members are encouraged to use this forum more proactively to discuss issues and ideas with the other entities.

IX. REMOTE ATTENDANCE OF MEETINGS POLICY IMPLEMENTED APRIL 2011 AND REVISED OCTOBER 2011

- Council members attending a meeting remotely will be allowed to participate and vote on non-quasi-judicial matters
- Participation and voting of remote Council members on quasi-judicial matters is prohibited

- Council members may attend an Executive Session remotely only through a secure phone line and only after reading the Council affirmation below into the record.

  Council Members who miss a meeting have a responsibility to "catch up" by either listening to the audio recording or viewing the video recording of the meeting.
- Questions may be sent in advance to staff or to the Town Attorney by email during a meeting

COUNCILMEMBER'S AFFIRMATION REGARDING REMOTE ATTENDANCE AT AN EXECUTIVE SESSION

I,_____, a member of the Mountain Village Town Council hereby states and acknowledge that I am attending this executive session of the Mountain Village Town Council this____day of _____20 at a remote location away from the Town of Mountain Village and therefore I am not physically present at this executive session.

I understand and acknowledge that I am bound by all the rules of confidentially of an executive session as if I were physically present at this meeting.

I hereby affirm that I am alone at this remote location and that the proceedings of this executive session may not be overheard by any third party outside of the room in which I am located.

POLICY FOR BOARD/COMMITTEE/COMMISSIONS AND OTHER TOWN COUNCIL APPOINTED POSITIONS

For all positions appointed and filled by Town Council the following policy shall be followed:

1. Clerk's Office - Review the board and commission spreadsheet for any term expirations.
2. Designated staff as set forth below will notify current members via phone call and written correspondence of the end of their term immediately following the Council meeting where the term expiration was discussed.
    a. Ethics Commission – Town Clerk
    b. Design Review Board – Planning and Development Services
    c. Town Council – Town Clerk
    d. TRAA – Town Clerk
    e. CFA – Town Clerk
    f. Board of Appeals – Planning and Development Services
    g. Grant Committee – Town Clerk
    h. Green Team Committee – Business Development and Sustainability Director/Town Clerk
3. Once notification of the incumbents is complete, advertise the open positions by posting on the website until the deadline for letters of interest and send out an e-mail blast. E- mail changes and vacancies to the Marketing and Communication Coordinator for the website posting and email blast.
4. Require candidates to provide a letter of interest and a bio, both of which must be submitted no later than the day prior to the Council packet deadline at 5:00 p.m. for the meeting at which appointments will be made.
5. When a letter of interest is received for any seat the Clerk or designee will check their qualifications to ensure they are eligible for that seat.
6. Appointments are placed on the Council agenda after the advertised deadline has expired. If fewer than two applicants are received a re-advertisement of the vacancy may be recommended, but not required.
7. Notify candidates that Council appointments will take place at the Council meeting following the above deadline.

All departments must notify the Town Clerk of designated terms for members as well as titles (such as Chairman, Secretary, etc.) to include in the overall schedule maintained by the Clerk.

The exception to this policy is for Town Council members and staff serving on advisory committees (i.e. finance committee, transportation committee, etc.) which appointments are made in the course of Town Council meetings by Council action.

AFTER THE TOWN COUNCIL MEETING AND SEAT APPOINTMENTS ARE MADE

1) Notify applicants of appointments by e-mail. Verify the new term dates.
2) If the applicant has not served on a commission before, send them a copy of the current ethics code.
3) Update board and commission spreadsheet. Email the staff person of the board with contact information of the new board member. Redistribute the spreadsheet to staff as necessary.

ADDITIONAL COUNCIL OPTIONS

1) The Mayor may elect to re-advertise a position if he/ she believes the applicant pool is too limiting for Council.
2) Council members may "move to direct staff to re-advertise the vacancy" in lieu of making an appointment if they believe the field is too limited or the public interest would be better served through re-advertisement.
3) Late applications will be brought to Council's attention by staff to afford Council the opportunity to postpone the appointment and extend the deadline if it is believed that postponement would be in the public interest. Walk-in candidates may be given similar consideration at Council's discretion. Late or walk-in applicants may not be appointed at that Council meeting; they may only be considered at a subsequent meeting. Council is under no obligation to consider late or walk-in applicants.

TO: **Honorable Mayor Laila Benitez and Councilmembers**
FROM: **Paul Wisor, Town Attorney**
RE: **Ordinance to Amend Section 2.04.010(B) Regarding Oversight of Certain Town Employees**
DATE: **July 15, 2021** **Agenda Item # 6**

SUMMARY: The proposed amendment to the Town Code clarifies that while the Mayor, with the consent of Council, hires the Town Clerk and Director of Community Development, the Town Manager, who oversees their day to day activities, is responsible for suspending or terminating such employees. Any suspension or termination may only be carried out with the advice and consent of the Mayor.

BACKGROUND: Section 6.1(a)(2)(H) of the Charter provides the Mayor, with the consent of Council shall be responsible for hiring individuals for the following positions:

1) The Town Attorney
2) The Town Manager
3) The Town Treasurer
4) The Town Clerk
5) The Police Chief
6) The Municipal Judge
7) The Director of Community Development
8) The Director of Operations and Development

Section 6.1(a)(2)(I) of the Charter provides "all other personnel shall be hired, suspended or dismissed by the Town Manager, with the advice and consent of the Mayor." The Charter does not identify the individual responsible for suspending or dismissing an individual who fills the positions enumerated in Section 6.1(a)(2)(H).

The Town's Code provides the Town Manager, the Town Clerk, the Town Treasurer, the Town Attorney, the Chief of Police, and the Director of Community Development shall serve at the pleasure of the Mayor. However, as a matter of operation of the Town, the Town Clerk and the Director of Community Development report to the Town Manager

PROPOSED ORDINANCE: The proposed ordinance makes clear the Town Manager is the individual responsible for the suspension or termination of the Town Clerk or Director of Community Development. Such suspension or termination may only proceed with the advice and consent of the Mayor.

PROPOSED MOTION: I move to approve the proposed Ordinance amending Section 2.04.010(B).

ORDINANCE 2021-_____

ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF MOUNTAIN VILLAGE, COLORADO AMENDING SECTION 2.04.010(B) OF THE TOWN MUNICIAL CODE

WHEREAS, the Section 6.1(a)(2)(H) of the Town of Mountain Village Home Rule Charter (the "Charter") provides the Mayor, with the consent of Council shall be responsible for hiring individuals for the following positions:

1) The Town Attorney
2) The Town Manager
3) The Town Treasurer
4) The Town Clerk
5) The Police Chief
6) The Municipal Judge
7) The Director of Community Development
8) The Director of Operations and Development; and

WHEREAS, Section 6.1(a)(2)(I) of the Charter provides "all other personnel shall be hired, suspended or dismissed by the Town Manager, with the advice and consent of the Mayor"; and

WHEREAS, the Charter does not identify the individual responsible for suspending or dismissing an individual who fills the positions enumerated in Section 6.1(a)(2)(H); and

WHEREAS, Section 2.04.010(B) of the Town's Municipal Code (the "Code") provides the Town Manager, the Town Clerk, the Town Treasurer, the Town Attorney, the Chief of Police, and the Director of Community Development shall serve at the pleasure of the Mayor; and

WHEREAS, as a matter of operation of the Town, the Town Clerk and the Director of Community Development report to the Town Manager; and

WHEREAS, Town Council hereby determines it is appropriate amend Section 2.04.01(B) of the Code to reflect for the Town Manager, were the need to arise, to be the party responsible for suspending or terminating the Town Clerk or the Director of Community Development and it is necessary to amend.

NOW THEREFORE, BE IT RESOLVED, BY THE TOWN COUNCIL OF THE TOWN OF MOUNTAIN VILLAGE, COLORADO:

Section 1. Amendment to Section 2.04.010(B). Town Council hereby delegates to the Town Manager, Section 2.04.010(B) is hereby amended to read as follows with ~~**strike-out**~~ indicating language to be deleted and **underline** indicating language to be adopted:

The Office of the Town Manager/Clerk/Treasurer/Attorney/Police Chief/Director of Community Development are hereby created and established. The department

head of each office shall be nominated by the Mayor and confirmed by the Town Council wholly on the basis of his/her administrative and executive abilities and qualifications, and his/her knowledge of the accepted practice in respect to the duties of his/her office. ~~**Each department head**~~ **The Town Manager, Treasurer Police Chief and Town Attorney**, after confirmation, shall serve at the pleasure of the Mayor. **The Town Clerk and Director of Community Development shall be suspended or dismissed by the Town Manager, with the advice and consent of the Mayor.** (Town Charter Article VI, Section 6.1H)

Section 2. Ordinance Effect. All ordinances, of the Town, or parts thereof, inconsistent or in conflict with this Ordinance, are hereby repealed, replaced, and superseded to the extent only of such inconsistency or conflict.

Section 3. Severability. The provisions of this Ordinance are severable and the invalidity of any section, phrase, clause, or portion of this Ordinance as determined by a court of competent jurisdiction shall not affect the validity or effectiveness of the remainder of this Ordinance.

Section 4. Effective Date. This Ordinance shall become effective on July 15, 2021, following public hearing and approval by Council on second reading.

Section 5. Public Hearing. A public hearing on this Ordinance was held on the 17th of une 2021 at Town Council Chambers, Town Hall located at 455 Mountain Village Boulevard, Suite A, Mountain Village, Colorado 81435.

[***SIGNATURE PAGE FOLLOWS***]

INTRODUCED, READ AND REFERRED to public hearing before the Town Council of the Town of Mountain Village, Colorado on the 17th day of June 2021.

TOWN OF MOUNTAIN VILLAGE

TOWN OF MOUNTAIN VILLAGE, COLORADO, A HOME-RULE MUNICIPALITY

By: _____
Laila Benitez, Mayor

ATTEST: _____
Susan Johnston, Town Clerk

HEARD AND FINALLY ADOPTED by the Town Council of the Town of Mountain Village, Colorado this 17th day of June 2021

TOWN OF MOUNTAIN VILLAGE

TOWN OF MOUNTAIN VILLAGE, COLORADO, A HOME-RULE MUNICIPALITY

By: _____
Laila Benitez, Mayor

ATTEST:

_____
Susan Johnston, Town Clerk

Approved as To Form:

_____
Paul Wisor, Town Attorney

I, Susan Johnston, the duly qualified and acting Town Clerk of the Town of Mountain Village, Colorado ("Town") do hereby certify that:

1. The attached copy of the Corrected Ordinance No.2021-_____ ("Ordinance") is a true, correct and complete copy thereof.

2. The Ordinance was introduced, read by title, approved on first reading and referred to public hearing by the Town Council the Town ("Council") at a regular meeting held at Town Hall, 455 Mountain Village Blvd., Mountain Village, Colorado, on June 17, 2021, by the affirmative vote of a quorum of the Town Council as follows:

Council Member Name	**"Yes"**	**"No"**	**Absent**	**Abstain**
Laila Benitez, Mayor				
Dan Caton, Mayor Pro-Tem				
Martinique Davis Prohaska				
Peter Duprey				
Patrick Berry				
Natalie Binder				
Jack Gilbride				

3. After the Council's approval of the first reading of the Ordinance, notice of the public hearing, containing the date, time and location of the public hearing and a description of the subject matter of the proposed Ordinance was posted and published in the Telluride Daily Planet, a newspaper of general circulation in the Town, on _____, 2021 in accordance with Section 5.2b of the Town of Mountain Village Home Rule Charter.

4. A public hearing on the Ordinance was held by the Town Council at a regular meeting of the Town Council held at Town Hall, 455 Mountain Village Blvd., Mountain Village, Colorado, on July 15, 2021. At the public hearing, the Ordinance was considered, read by title, and approved without amendment by the Town Council, by the affirmative vote of a quorum of the Town Council as follows:

Council Member Name	**"Yes"**	**"No"**	**Absent**	**Abstain**
Laila Benitez, Mayor				
Dan Caton, Mayor Pro-Tem				
Martinique Davis Prohaska				
Peter Duprey				
Patrick Berry				
Natalie Binder				
Jack Gilbride				

5. The Ordinance has been signed by the Mayor, sealed with the Town seal, attested by me as Town Clerk, and duly numbered and recorded in the official records of the Town.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Town this 15th day of July 2021.

_____
Susan Johnston, Town Clerk

TOWN OF MOUNTAIN VILLAGE ~ BOARDS & COMMISSIONS

ETHICS COMMISSION: Term: Two years. Vacancies: Appointment by Town Council for full term staggered so that approximately 1/2 of the terms expire each year. Member requirements: Qualified elector.

TOWN OF MOUNTAIN VILLAGE ~ BOARDS & COMMISSIONS	Position	Appointed	Term Exp.	E-mail
Richard Child	Regular	Aug-19	Jul-21	richard@childmail.net
Angela Pashayan	Regular	Jul-20	Jul-22	yogaofdevotion@gmail.com
Dan Caton	Regular Council	Jul-19	Jul-21	dcaton@mtnvillage.org
Peter Duprey	Regular Council	Jul-19	Jul-21	pduprey@mtnvillage.org
Michael Rosenfeld	Alternate	Aug-19	Jul-21	mrosenfeld@telluridekiresort.com

BUDGET & FINANCE BOARD: Meet with auditors annually to review and revise the financial statements and make recommendations to Town Council for approval of audited financial statements. Available for periodic discussions of financial matters and oversight of EPS model. Two Council members, Finance Director and Town Manager. No term applies. Reappoint as necessary. DISSOLVED BY RESOLUTION # ON 12.3.2020!!

2020-1203-22 Resolution Dissolving the Town of Mountain Village Finance Committee

Members	Position	Appointed	Term Exp.	E-mail
Peter Duprey	Town Council	Jul-19	Jul-21	pduprey@mtnvillage.org
Jack Gilbride	Town Council	Jul-19	Jul-21	jgilbride@mtnvillage.org
	Finance Director			
Staff - Kim Montgomery	Town Manager			kmontgomery@mtnvillage.org

DESIGN REVIEW BOARD (DRB): Provide a clear, consistent, predictable and efficient land Development Review Process; promote public health, safety and welfare; preserve Open Space and protect the environment; enhance the natural beauty of the town's surroundings; foster a sense of community; promote the economic vitality of the town; promote the resort nature and tourism trade of the town; ensure that uses and structures enhance their sites and area compatible with the natural beauty of the town's setting and its critical natural resources; protect property values within the town; promote good civic design and develop, create and preserve an attractive and functional community. Two year alternating terms appointed by Town Council. Prefer Mountain Village residents and maintain a balance of qualified architects/builders amongst other board members.

Members	Position	Appointed	Term Exp.	E-Mail
David Craige	Regular	Apr-20	Apr-22	dcraige@mtnvillage.org
Liz Caton	Regular	Mar-21	Apr-23	lcaton@mtnvillage.org
Ellen Kramer	Regular	Mar-21	Apr-23	deckman@mtnvillage.org
Banks Brown	Regular	Apr-20	Apr-22	bbrown@mtnvillage.org
Greer Garner	Regular	Mar-21	Apr-23	ggarner@mtnvillage.org
Shane Jordan	Alternate	Mar-21	Apr-23	ekramer@mtnvillage.org
Cath Jett	Regular	Apr-20	Apr-22	cjett@mtnvillage.org
Adam Miller	Regular	Apr-20	Apr-22	amiller@mtnvillage.org
Scott Bennett	Alternate	Mar-21	Apr-23	sbennett@telluridecolorado.net
Staff - Michelle Haynes	Director Planning & Development Services			mhaynes@mtnvillage.org
Staff - John Miller	Senior Planner			johnmiller@mtnvillage.org

MOUNTAIN VILLAGE CONDOMINIUM ASSOCIATION

Members	Position	Appointed	Term Exp.	E-mail
Peter Duprey	Member	N/A		pduprey@mtnvillage.org
	Staff			

BUILDING BOARD OF APPEALS established July 17, 2014 to hear and decide appeals of administrative orders, decisions or determinations made by the Building Official relative to the application and interpretation of the Building Regulations. No terms - members serve until they resign or are replaced by Council

Members	Position	Appointed	Term Exp.	E-mail
Adam Miller	Regular	Jul-14		amiller@mtnvillage.org
Eric Robinson	Regular	Sep-15		erobinson@mtnvillage.org
David Eckman	Regular	Jul-14		deckman@mtnvillage.org
Richard Buckendorf	Regular	Jul-14		rbuckendorf@mtnvillage.org
Don Jones	Regular	Jul-14		djones@mtnvillage.org
Ryan Deppen	Alternate	Jan-18		rdeppen@mtnvillage.org
Dennis Overly	Alternate	Jul-14		doverly@mtnvillage.org

TOWN COUNCIL/REGIONAL AUTHORITIES

MOUNTAIN VILLAGE TOWN COUNCIL: Town Council also operates as the Mountain Village Housing Authority, Liquor License Authority and Budget Committee. Four year alternating terms elected by the public.

Members	Position	Elected/ Appointed	Term Exp.	E-mail
Patrick Berry	Regular	Jun-17	Jun-21	pberry@mtnvillage.org
Peter Duprey	Regular	Jun-19	Jun-23	pduprey@mtnvillage.org
Natalie Binder	Regular	Sep-17	Jun-21	nbinder@mtnvillage.org
Laila Benitez	Regular	Jun-19	Jun-23	lailabenitez@mtnvillage.org
Jack Gilbride	Regular	Jun-17	Jun-21	jgilbride@mtnvillage.org
Martinique Davis Prohaska	Regular	Jun-19	Jun-23	mprohaska@mtnvillage.org
Dan Caton	Regular	Jun-19	Jun-23	dcaton@mtnvillage.org

TELLURIDE REGIONAL AIRPORT AUTHORITY (TRAA): Board of Commissioners - three regular members and one alternate appointed Town of Telluride, San Miguel County and Mountain Village and three regular members and one alternate member appointed by TRAA from the public at large. Four year terms and must be tax-paying electors and at the time of appointment in the municipality or county from which appointed. Appointment is by Resolution and requires proper advertising.

Members	Position	Appointed	Term Exp.	E-mail
Gary Bash	Regular	Aug-20	Aug-24	gary.bash@fairmont.com
Tom Richards	Regular (appointed to fill Lawrence Crosby's term)	Feb-20	Jul-23	trichards@telski.com
Richard Child (Vice Chair)	Regular(appointed to fill Jon Dwight's term)	Jul-19	Aug-22	richard@childmail.net
Banks Brown	Alternate	Jul-19	Jul-23	banks@rmi.com

COLORADO FLIGHTS ALLIANCE (CFA) FORMERLY TMRAO CHANGED May-13

Members	Position	Appointed	Term Exp.	E-mail
Jack Gilbride	Regular	Jul-19	Jul-21	jgilbride@mtnvillage.org

SAN MIGUEL REGIONAL HOUSING AUTHORITY REPRESENTATIVE (STAKEHOLDERS COMMITTEE)

Members	Position	Appointed	Term Exp.	E-mail
Kim Montgomery	Vice Chair	N/A		kmontgomery@mtnvillage.org

TELLURIDE HISTORICAL MUSEUM BOARD

Members	Position	Appointed	Term Exp.	E-mail
Marti Prohaska	Town Council	Jul-19	Jul-21	mprohaska@mtnvillage.org

SAN MIGUEL WATERSHED COALITION: Attend twice-annual meetings with representatives of other towns in the watershed, County, USFS, BLM, The Nature Conservancy, CDOW, USGS and others to discuss ongoing environmental matters in the Watershed.

Members	Position	Appointed	Term Exp.	E-mail
Marti Prohaska	Town Council	May-21	Jul-21	mprohaska@mtnvillage.org

TRANSPORTATION, PARKING & VEHICLE COMMITTEE: To assist the Transportation Department and Town Manager in setting strategic and operational policies related to the Gondola, DAR and Parking and advise and make recommendations to Town Council. Two Town Council members and two staff members. Review and approve proposed vehicle purchases for the town fleet annually considering efficiency and being green.

Members	Position	Appointed	Term Exp.	E-mail
Peter Duprey	Council member	Jul-19	Jul-21	Pduprey@mtnvillage.org
Laila Benitez	Council member	Jul-19	Jul-21	lailabenitez@mtnvillage.org
Staff - Kim Montgomery	Town Manager	Aug-09	N/A	kmontgomery@mtnvillage.org
Staff - Chris Broady	Police Chief	Aug-09	N/A	cbroady@mtnvillage.org
Staff - Finn Kjome	Public Works Director	Aug-09	N/A	fkjome@mtnvillage.org
Staff- Jim Loebe	Transportation/Parking Director	Aug-09	N/A	jloebe@mtnvillage.org

REGION 10

Zoe Dohnal	Mountain Village Rep	Mar-17		zdohnal@mtnvillage.org
Jim Loebe	Staff - Primary Gunnison Valley Transportation Planning Region	Jan-12		jloebe@mtnvillage.org

Telluride Mountain Village Owners Association Gondola Committee:

Members	Position	Appointed	Term Exp.	Email Address
Patrick Berry	Town Council/Staff	Jul-19	Jul-21	pberry@mtnvillage.org
Dan Caton	Town Council/Staff	Jul-19	Jul-21	dcaton@mtnvillage.org

Colorado Communities for Climate Action:

Members	Position			
Patrick Berry		Jul-19	Jul-21	pberry@mtnvillage.org

Mountain Village Community Grant Committee:	**The Committee shall be active as long as the Grant Program shall exist. The term of each Committee member shall initially be one year for one member of each category and 2 years for the other member of each category. Thereafter, each Committee member appointed by Town Council shall be for 2 year terms.**	2020-1203-20 Resolution Amending the Bylaws for all Committees (Grant, Green Team and Plaza Vending) Excluding Business Development Advisory Committee and Finance Committee		**Chair must be a Council member.**
Members	**Position**	**Appointed**		**Email Address**
Laila Benitez- Vice Chair	Town Council	Jul-19	Jul-21	lailabenitez@mtnvillage.org
Natalie Binder- Chair	Town Council	Jul-19	Jul-21	nbinder@mtnvillage.org
Kathrine Warren	Town Staff	Aug-20		kwarren@mtnvillage.org
Susan Johnston	Town Staff	Jul-21		sjohnston@mtnvillage.org
Liz Caton	Mountain Village Resident	Aug-19	Jul-21	lizcaton@yahoo.com
Whitney Pearce Rosenfeld	Mountain Village Resident	Aug-20	Jul-22	WhitneyPearce@gmail.com
Telluride Conference Center Work Group:				
Members	**Position**	**Appointed**		**Email Address**
Jack Gilbride	Town Council	Jul-19	Jul-21	jgilbride@mtnvillage.org
Natalie Binder	Town Council	Jul-19	Jul-21	nbinder@mtnvillage.org
Zoe Dohnal	Staff			
Kim Montgomery	Staff	Dec-16		kmontgomery@mtnvillage.org
SMART San Miguel Authority for Regional Transportation Board of Directors:				
Members	**Position**	**Appointed**		**Email Address**
Marti Prohaska	Town Council	Jul-19	Jul-21	mprohaska@mtnvillage.org
Dan Caton	Town Council	Jul-19	Jul-21	dcaton@mtnvillage.org
Laila Benitez	Alternate	Jul-19	Jul-21	lailabenitez@mtnvillage.org

Alliance for Inclusion - formerly Multicultural Advisory Committee				
Members	**Position**	**Appointed**		**Email Address**
Natalie Binder	Mountain Village Representative	Jul-19	Jul-21	nbinder@mtnvillage.org
The Green Team	Term. Committee members shall serve for two years and three years as follows: One Council member, one at large member, one resident, and one at large alternate seat shall serve two-year terms. One Council member, one resident, the TSG representative and the TMVOA representatives shall serve three-year terms	12.3.2020 Town Council Meeting: 2020-1203-20 Resolution Amending the Bylaws for all Committees (Grant, Green Team and Plaza Vending) Excluding Business Development Advisory Committee and Finance Committee		
Members	**Position**	**Appointed**		**Email Address**
Marti Prohaska - Vice Chair	Town Council	Jul-19	Jul-22	mprohaska@mtnvillage.org
Patrick Berry - Chair	Town Council	Jul-19	Jul-21	pberry@mtnvillage.org
Jonathan Greenspan	Resident	Sep-20	Sep-23	jg@sunrisetelluride.com
Cath Jett	Resident	Sep-19	Sep-21	cjett@mtnvillage.org
Erin Kress	TSG	Sep-20	Sep-23	ekress@telski.com
Marla Meridith	TMVOA	Sep-20	Sep-23	marla@marlameridith.com
Jonette Bronson	At Large	Sep-19	Sep-21	bronson.jonette@gmail.com
Christina Lambert	Staff - support			clambert@mtnvillage.org
Zoe Dohnal	Staff - support			zdonhal@mtnvillage.org
Inga Johansson	At Large Alternate	Jan-20	Jan-22	ingamar20@gmail.com
Plaza Vending Committee	The intent and purpose of the Committee shall be to approve and assign the location, design, and use of plaza vending, and to evaluate that such activities contribute to the vibrancy of our Village Center plazas. The Committee shall also adopt plaza vending rules and regulations for Town Council consideration and approval.	1.One Council member shall serve three-year terms. 2.All Town staff shall serve three-year terms. 3.TMVOA representative shall serve three-year terms.	12.3.2020 TC Meeting: 2020-1203-20 Resolution Amending the Bylaws for all Committees (Grant, Green Team and Plaza Vending) Excluding Business Development Advisory Committee and Finance Committee	
Members	**Position**	**Appointed**		**Email Address**
Natalie Binder	Town Council - Chair	Apr-19	Apr-22	nbinder@mtnvillage.org

Zoe Dohnal	Staff	Apr-19	Apr-22	zdonhal@mtnvillage.org
JD Wise	Plaza Services Staff	Apr-19	Apr-22	jwise@mtnvillage.org
Michelle Haynes	Building & Planning Staff	Apr-19	Apr-22	mhaynes@mtnvillage.org
Ann Barker	TMVOA Representative	Apr-19	Apr-22	ann@tmvoa.org
Mountain Village Business Development Advisory Committee	BDAC shall advise and make recommendations to Town Council on matters related to economic development which include but are not limited to economic development incentives through state and town resources, current business climate, business attraction and retention, marketing opportunities, and other initiatives that may promote economic development.	• One Council member and one merchant shall serveone-year terms.• One Council member, TSG representative and the TMVOA representatives shall serve two-year terms. All Town staff shall serve two-year terms.	12.3.2020 TC Meeting: 2020-1203-21 Resolution Amending the Bylaws for the Town of Mountain Village Business Development Advisory Committee (BDAC)	
Members	**Position**	**TMVOA representatives shall serve three-yea**		**Email Address**
Dan Caton	Town Council	Apr-20	Apr-22	dcaton@mtnvillage.org
Laila Benitez	Town Council	Apr-19	Apr-21	lailabenitez@mtnvillage.org
Zoe Dohnal	Staff	Oct-19	Apr-21	zdohnal@mtnvillage.org
John Miller	Staff	Apr-19	Apr-21	johnmiller@mtnvillage.org
Stanya Gorraiz	Mountain Village Merchant	Nov-20	Nov-21	gorraiz@g6culinary.com
Kevin Jones	Mountain Village Merchant	Dec-20	Dec-21	kjones@latitude38vacationrentals.com
Sherri Reeder	TSG Representative	Aug-19	Aug-21	sreeder@telluridekiresort.com
Garrett Brafford	TMVOA	Aug-19	Aug-21	garrett@tmvoa.org

Employee Development Board	Section 1 Tasks. With the purpose of ensuring the recruitment, motivation, and retention of a qualified and competent work force and advising the Town Council with regard to the same, the Advisory Committee shall be tasked with the following: A. Task 1: Review and determine a comparable market, considering both public and private employers, to provide reliable and comparative comparisons to the Town's compensation and benefits policies. B. Task 2: Perform an internal review of the Town's goals and objectives concerning the recruitment, motivation, and retention of a qualified and competent work force. C. Task 3: Provide for consideration of the Town Council an annual report concerning the Town's compensation and benefits policies in light of the Town's goals and objectives regarding employment and recruitment. -96- D. Task 4: At the request of the Mayor and Town Council, perform further review and further advise within the scope of the above outlined tasks and in accordance with the limitations imposed by the local and state law, including	The Town Council shall appoint the Members of the Advisory Committee. There shall be a total of not more than four (4) Members of the Advisory Committee, which shall include two (2) currently serving Town Council Members, the Town Manager, and the Human Resources Director.	Replacement. Upon the vacation, removal or expiration of an Advisory Committee member seat, a replacement Advisory Committee member(s) shall be appointed by the Town Council following the same process as the original appointment.	

Members	Position	Appointed		Email
Jamie Holmes	Director of Human Resources	Feb-20		jholmes@mtnvillage.org
Kim Montgomery	Town Manager	Feb-20		kmontgomery@mtnvillage.org
Pete Duprey	Town Council	Feb-20	Jul-21	pduprey@mtnvillage.org
Patrick Berry	Town Council	Feb-20	Jul-21	pberry@mtnvillage.org

VCA Resident Committee	VCA strives to provide a safe, clean and comfortable living environment for the residents of our community. In furtherance to this goal, VCA is creating a VCA Resident Advisory Committee ("Committee"), which functions as a resident working group. The Committee will meet to provide input and feedback to VCA administration.	The Telluride Mountain Village Housing Authority ("TMVHA") will appoint five VCA residents. Initially, two members will be appointed for one-year terms, and three members will be appointed for two-year terms, to establish a stagger of term appointments. After the first year, all members will be appointed for two year terms.	Residency at VCA is a requirement to serve on the Committee, therefore, if a Committee member is no longer a resident, they will be replaced via a similar process utilized in the appointment of members. Town Support The Town will provide one VCA administrator at each meeting and when advised of the meeting dates and times, a Town Council member, at Town Council's discretion.	**Meeting Procedures** The TMVHA recommends meetings to be held every two months. The committee may elect a chairperson who would schedule the Committee meetings and manage the meeting. **Meeting Notifications** The town will not require agendas to be drafted or public noticed; however, the Committee can request that meeting dates be shared with VCA residents. Meetings are open to the public.	Unit
Members	Position	Appointed		Email	
Matthew Lewis		Feb-21	Feb-23	mattlewisdesign@gmail.com	1032
Trevor Browning		Feb-21	Feb-23	rcheroske@mtnvillage.org	
Ursula Cristol		Feb-20	Feb-22	ucrostol@telluride.k12.co.us	1304
Amelia Martin	Chair	Feb-20	Feb-22	amartin277@gmail.com	1046
Citlali Casillas		Feb-20	Feb-22	talicg1985@yahoo.com.mx	1302
	VCA Administrator				
Telluride Mountain Village Owners Association (TMVOA) Governance Auxiliary Committee					
Members	**Position**	**Appointed**		**Email Address**	
Pete Duprey	Town Council	Feb-21		pduprey@mtnvillage.org	
Telluride Tourism Board					
Members	**Position**	**Appointed**		**Email Address**	
Patrick Berry	Town Council		Jul-21	pberry@mtnvillage.org	

Memorandum

Agenda Item #9

To: Mayor & Town Council

From: Town Clerk Susan Johnston

Date: 7/8/2021

Re: Consideration of Ethics Commission Appointments

Ethics Commission Appointment of a Regular Seat and Alternate Seat

Scheduled for appointment at the July 15th Town Council meeting are one regular seat and one alternate seat, both for two-year terms. Letters of interest were received from Keith Brown and Heather Knox. The deadline for submitting was Wednesday, July 7th by 5:00 p.m.

Suggested Motion:

Motion to appoint _____ to the regular seat and _____ to the alternate seat on the Ethics Commission for two-year terms.

Keith Brown
117 Lost Creek Lane, Unit 41A-(r)
Mountain Village, CO 81435
(970) 417-9513 keithtelluride@gmail.com

July 06, 2021

Application for a Seat on the Mountain Village Ethics Commission Board

Dear Mountain Village Town Council,

I would like to serve on the Ethics Commission Board. My interest in doing so is to contribute to the town interests by helping provide an unbiased, informed review of alleged violations of the town's Code of Ethics and to determine the validity of the alleged violations.

I have read the Code of Ethics and I am familiar and comfortable with the definitions and guidelines.

My qualifications comes from serving on town, HOA and non-profit boards. I have training and experience in board governance. I served 7 years on the Mountain Village Design Review Board. I was was a board member for a HOA, and President and Chairperson for several local non-profit organizations.

I received 2020 training as a Covid-19 contact tracer, which emphasised the importance and techniques of listening and engaging in ways that help dialogue and the collection of information. I also received a valuable education in group dynamics and governance in my MBA studies and applied the knowledge to several collaborative businesses and personal interests.

Prior to Telluride, I had corporate responsibilities for international manufacturing, with 35+ employees. My employment had applicable ethical considerations from interactions between employees and contractors and from larger considerations of employment practices by my offices and manufacturing facilities.

In a recreational capacity as a mountaineer I made ethical decisions related to the employment of support help. As an expedition leader on a successful climb of Mt. Everest I chose not to allow employed help above basecamp, given the conflict of sending employees into a hazardous environment. Recognizing the hazards and the employee motivation for income a decision was to pay a higher wage and restrict employees to basecamp. A Mt. Everest experience is far from anticipated Mountain Village ethics concerns, but it was a valuable and heightened consideration of the rights of an individual employee in a group effort.

Thank you for the opportunity to serve on the Mountain Village Ethics Commission Board.

Keith Brown Keith Brown

Mountain Village Town Clerk
455 Mountain Village Blvd.
Suite A
Mountain Village, CO 81435

July 6, 2021

Greetings,

Please consider my letter of interest to serve on the Mountain Village Ethics Commission.

I have lived full-time in Mountain Village for 9 years. I moved to Mountain Village in 1995. I watched the government evolve from the Mountain Village Metro District to the Town of Mountain Village, and Metro Services grow into Telluride Mountain Village Owners Association.

I saw the gondola open in 1996 and how that infrastructure brought new business and the visitors to support those businesses.

I worked for Mountain Village in the Telluride Conference Center, and later as the Director of Economic Development. I oversaw/worked with a team of 50+ employees and handled a $2.4M annual budget for Mountain Village in this position.

I have worked with non-profit organizations, including the Michael D. Palm Theatre, and EcoAction Partners.

I serve on the Colorado Department of Health and Environment Pollution Prevention Advisory Board Assistance Committee. This PPAB Assistance Committee is responsible for reviewing grants from organizations across Colorado and determining grant awards with a $1.8M annual budget. Additionally, I regularly partake in Mountain Village Green Team meetings.

Thank you for considering me for the Mountain Village Ethics Commission. I would bring a valuable and fair perspective to the Ethics Commission.

Thank you,

Heather Knox

Heather Knox
327 Adams Ranch Road #402
Mountain Village, CO 81435

Business and Government Activity Report
For the month ending: June 30th

Activity		2021 MONTH	2021 Monthly Change	2021 YTD	2020 MONTH	2020 Monthly Change	2020 YTD	YTD or MTD Variance	Variance %
Cable/Internet		*Reporting criteria is changing, prior period data not comparable. *New*							
TV Residential Sunscribers		469	4		NA	NA		NA	NA
Fiber Video *		141	15		NA	NA		NA	NA
TV Bulk Subscribers		612	0		NA	NA		NA	NA
Fiber Commercial *		14	2		NA	NA		NA	NA
TV Inactive Digital Subscribers		69	(33)		NA	NA		NA	NA
Cable Modem Residential Cable Modem Subscribers		788	13		NA	NA		NA	NA
Cable Modem Business Net Service Subscribers		32	(1)		NA	NA		NA	NA
Cable Modem Hospitality Subscribers		272	0		NA	NA		NA	NA
Dark Fiber Transport		8	0		NA	NA		NA	NA
Fiber Hospitality Subscribers		8	0		NA	NA		NA	NA
Fiber Residential Subscribers		365	24		NA	NA		NA	NA
Phone Subscribers		66	0		82	(4)		(16)	-19.51%
Village Court Apartments									
Occupancy Rate	%	99.55%	0.00%	99.70%	99.09%	1.36%	99.24%	0.46%	0.5%
# Vacated Units		2	0	12	4	0	13	(1)	-7.7%
# Work Orders Completed		20	8	88	27	14	136	(48)	-35.3%
# on Waiting List		237	(3)		176	(4)		61	34.7%
Public Works		**The increase in service calls is due to an increase in number of UNCC line locates we have due to the fiber project**							
Service Calls		808	(217)	5,020	530	(526)	4,215	805	19.1%
Truck Rolls		544	120	1,706	555	101	1,009	697	69.1%
Snow Fall	Inches	0	0	188	0	0	142	46	32.4%
Snow Removal - Streets & Prkg Lots	Hours	0	0	2,396	2	2	2,528	(132)	-5.2%
Roadway Maintenance	Hours	449	89	1,248	537	401	424	824	194.3%
Water Billed Consumption	Gal.	19,717,000	14,798,000	78,942,000	17,780,000	11,454,000	68,006,000	10,936,000	16.1%
Sewage Treatment	Gal.	7,359,000	375,000	40,732,000	19,310,000	13,376,000	62,293,000	(21,561,000)	-34.6%
Child Development Fund		**The child care facility reopened with limited capacity June 2020**							
# Infants Actual Occupancy		6.11	0.23		2.36	2.36		3.75	159.0%
# Toddlers Actual Occupancy		14.22	1.22		2.70	2.70		11.52	426.1%
# Preschoolers Actual Occupancy		14.72	(0.47)		9.14	9.14		5.58	61.1%
Transportation and Parking		**Inbound traffic counter is not available at this time.**							
GPG (noon snapshot)		5,798	3,844	39,841	3,214	2,442	31,180	8,661	27.8%
GPG Parking Utilization (% of total # of spaces occupied)		42.0%	28.30%	47.9%	23.30%	17.90%	37.2%	10.7%	28.8%
HPG (noon snapshot)		1,021	556	9,812	629	383	6,221	3,591	57.7%
HPG Parking Utilization (% of total # of spaces occupied)		32.1%	17.90%	51.1%	19.80%	12.30%	32.2%	18.9%	58.7%
Total Parking (noon snapshot)		10,484	5,685	72,348	6,396	3,749	54,045	18,303	33.9%
Parking Utilization (% of total # of spaces occupied)		43.2%	24.10%	49.4%	26.40%	15.80%	36.7%	12.7%	34.6%
Paid Parking Revenues		$48,114	$39,488	$223,698	$14,296	$13,688	$134,432	$89,266	66.4%
Bus Routes	# of Passengers	4,966	1,567	10,616	1,461	67	4,625	5,991	129.5%
Employee Shuttle	# of Passengers	0	0	0	0	0	3,598	(3,598)	-100.0%
Employee Shuttle Utilization Rate	%	0.00%	0.00%	0.0%	0.00%	0.00%	47.0%	-47.00%	-100.0%
Inbound (Vehicle) Traffic (Entrance)	# of Cars	0	0	0	66,471	27,633	327,224	(327,224)	-100.0%
Human Resources		Part Time EE's: Council (7), Judge (1), Child Care (6), GIS (1) MARRS: 6 employees Seasonal EE's: Gondola Ops, Plaza/ Sanitation Services, Groundskeepers New Hires: 3 Gondola Seasonal, 1 PT Childcare Assistant Terms: 3 Gondola seasonal Reason for Terms: end of season/other job WC Costs: new total for YTD costs as continued treatment costs are paid by Pinnacol							
FT Year Round Head Count		76	(4)		78	17		(2)	-2.6%
Seasonal Head Count (FT & PT)		4	0		0	0		4	NA
PT Year Round Head Count		15	1		16	8		(1)	-6.3%
Gondola FT YR, Seasonal, PT YR Head Count		49	3		52	14		(3)	-5.8%
Total Employees		144	0		146	39		(2)	-1.4%
Gondola Overtime Paid	Hours	616	313	1,637	207	196	1,167	470	40.3%
Other Employee Overtime Paid		60	0	382	112	53	325	57	17.5%
# New Hires Total New Hires		4	(8)	29	17	17	17	12	70.6%
# Terminations		3	0	34	7	6	8	26	325.0%
# Workmen Comp Claims		0	0	4	1	1	1	3	300.0%
Workmen Comp Claims Costs		$0	$0	$12,377	$484	$432	$2,934	$9,443	321.9%
Number of Reported Injuries		0	0	5	1	0	2	3	150.0%
Marketing & Business Development		**Town hosted meetings include Zoom meetings due to COVID-19**							
Town Hosted Meetings		4	0	31	11	(10)	69	(38)	-55.1%
Email Correspondence Sent		27	14	97	23	11	87	10	11.5%
E-mail List	#	8,314	(59)		7,918	(70)		396	5.0%
Ready-Op Subscribers		2,022	35		1,983	(14)		39	2.0%
News Articles		28	5	153	21	(5)	119	34	28.6%
Press Releases Sent		7	3	20	6	3	17	3	17.6%
Gondola and RETA									
Gondola	# of Passengers	346,746	303,608	1,200,641	132,048	132,048	1,055,573	145,068	13.7%
Chondola	# of Passengers	0	0	77,388	0	0	80,532	(3,144)	-3.9%
RETA fees collected by TMVOA		$ 606,660	$ (1,246,536)	$ 8,356,392	$ 162,285	$ 3,695	$ 2,109,963	$6,246,429	296.0%

Business and Government Activity Report
For the month ending: June 30th

Activity	2021 MONTH	2021 Monthly Change	2021 YTD	2020 MONTH	2020 Monthly Change	2020 YTD	YTD or MTD Variance	Variance %
Recreation			Summer = May 1 - Oct 31					
Disc Golf Registrations	987	778	1196	na	NA	na	NA	NA
Adventure Rock Registrations	367	367	367	na	NA	na	NA	NA
Platform Tennis Registrations	58	19	252	na	NA	64	188	293.8%
Police								
Calls for Service #	496	81	2,878	269	114	1,761	1,117	63.4%
Investigations #	7	0	89	11	7	67	22	32.8%
Alarms #	14	4	113	27	8	126	(13)	-10.3%
Arrests #	1	1	9	0	0	9	0	0.0%
Summons #	0	(1)	7	1	0	13	(6)	-46.2%
Traffic Contacts #	7	0	77	5	0	75	2	2.7%
Traffic Tickets Written #	2	2	3	0	(1)	12	(9)	-75.0%
Parking Tickets Written #	401	198	2,157	61	61	924	1,233	133.4%
Administrative Dismissals #	3	2	25	1	1	14	11	78.6%
Building/Planning								
Community Development Revenues	$86,617	($47,172)	$1,054,764	$132,240	$106,813	$217,141	$837,623	385.8%
# Permits Issued	30	-33	231	50	20	175	56	32.0%
Valuation of Mtn Village Remodel/New/Additions Permits	$1,737,065	($3,504,859)	$29,782,655	$3,574,838	$3,116,688	$4,590,988	$25,191,667	548.7%
Valuation Mtn Village Electric/Plumbing/Other Permits	$357,567	($661,872)	$2,331,697	$370,078	$245,977	$1,822,908	$508,789	27.9%
Valuation Telluride Electric/Plumbing Permits	$139,200	($333,343)	$1,683,722	$412,148	$197,948	$1,202,855	$480,867	40.0%
# Inspections Completed	399	(170)	2,306	364	184	1,392	914	65.7%
# Design Review/Zoning Agenda Items	22	8	98	14	5	68	30	44.1%
# Staff Review Approvals	68	13	219	44	6	158	61	38.6%
Plaza Services								
Snow Removal Plaza Hours	0	0	795	5	5	976	(181)	-18.5%
Plaza Maintenance Hours	463	21	3,382	155	19	1,641	1,741	106.1%
Lawn Care Hours	208	159	301	116	19	282	20	6.9%
Plant Care Hours	835	243	1,713	323	228	541	1,172	216.5%
Irrigation Hours	128	(48)	417	130	(96)	364	52	14.3%
TMV Trash Collection Hours	93	10	596	84	19	481	115	23.9%
Christmas Decorations Hours	0	(9)	464	0	(3)	506	(42)	-8.3%
Residential Trash Pound	82,614	6,262	478,121	67,687	8,239	411,316	66,805	16.2%
Residential Recycle Pound	31,841	1,747	185,730	15,970	8,797	149,160	36,570	24.5%
Diversion Rate %	27.82%	-0.45%	27.98%	19.09%	8.32%	26.61%	1.36%	5.1%
Vehicle Maintenance								
# Preventive Maintenance Performed	24	8	113	34	9	130	(17)	-13.1%
# Repairs Completed	29	10	138	20	(7)	124	14	11.3%
Special Projects	3	3	7	0	(5)	8	(1)	-12.5%
# Roadside Assists	0	(1)	1	1	1	1	0	0.0%
Finance								
# Other Business Licenses Issued	24	(17)	1,083	20	(4)	941	142	15.1%
# Privately Licensed Rentals	4	2	88	2	2	70	18	25.7%
# Property Management Licensed Rentals	2	(6)	442	1	(3)	422	20	4.7%
# Unique VRBO Property Advertisements Listings for MV	512	8		451	2		61	13.5%
# Paperless Billing Accts (total paperless customers)	1,175	16		1,142	16		33	2.9%
# of TMV AR Bills Processed	2,230	40	13,093	2,201	10	12,856	237	1.8%

Accounts Receivable

	TMV Operating Receivables (includes Gondola funding)		Utilities - Broadband and Water/Sewer		VCA - Village Court Apartments	
Current	$293,866	36.9%	$508,592	90.8%	$1,762	19.2%
30+ Days	489,683	61.4%	31,053	5.5%	1,219	13.3%
60+ Days	6,992	0.9%	6,418	1.1%	614	6.7%
90+ Days	854	0.1%	11,035	2.0%	5,577	60.8%
over 120 days	5,852	0.7%	2,887	0.5%	-	0.0%
Total	$ 797,247	100.0%	$ 559,985	100.0%	$ 9,172	100.0%

	Other Billings - CDF, Construction Parking		Total All AR		Change Since Last Month - Increase (Decrease) in AR	
Current	$20,012	59.9%	$ 824,232	58.9%	($110,510)	-29.8%
30+ Days	5,769	17.3%	527,724	37.7%	479,689	129.4%
60+ Days	2,275	6.8%	16,299	1.2%	1,293	0.3%
90+ Days	1,075	3.2%	18,541	1.3%	2,946	0.8%
over 120 days	4,257	12.8%	12,996	0.9%	(2,776)	-0.7%
Total	$33,388	100.0%	$ 1,399,792	100.0%	$ 370,642	100.0%

General Fund Investment Activity

Change in Value (Month)	($16,736)
Ending Balance	$9,456,735
Investment Income (Month)	$3,175
Portfolio Yield	na
Yield Change (Month)	na

Other Statistics

Population (estimated)	1,434
(Active) Registered Voters	873
Property Valuation	310,031,920

AGENDA ITEM 12
PLANNING & DEVELOPMENT SERVICE
PLANNING DIVISON
455 Mountain Village Blvd.
Mountain Village, CO 81435
(970) 728-1392

TO: Mountain Village Town Council

FROM: John Miller, Senior Planner

FOR: Regular Town Council Meeting; July 15, 2021

DATE: July 6, 2021

RE: Minor Subdivision Request to Vacate a General Easement and to Relocate the Meadows Trail Out of the Town Easement onto the Town Unimproved Right of Way and Other Associated Relocation Elements Affecting Adjacent Properties, Lot 615-1CR, TBD Lawson Overlook

Application Overview:

PROJECT GEOGRAPHY

Legal Description: LOT 615 1CR TOWN OF MOUNTAIN VILLAGE ACC TO A REPLAT OF LOTS BC110 BC513A 615 1C 615 2CR 615 3AR TRACT 21 AR TRACT OSP 21 TRACTS OS 615A B AND C AND OLD HIGHWAY RD LOCATED WITHIN N1 2S1 2 OF SEC 33 T43N R9W NMPM SAN MIGUEL COUNTY CO ZONING 3 CONDOMINIUMS

Address: TBD Lawson Overlook
Applicant: Chris Hawkins, Alpine Planning
Owner: Brown Dog Properties LLC
Zoning: Multi-Family
Existing Use: Vacant
Proposed Use: Three Detached Condominiums
Lot Size: 0.778 Acres

Figure 1: Vicinity Map

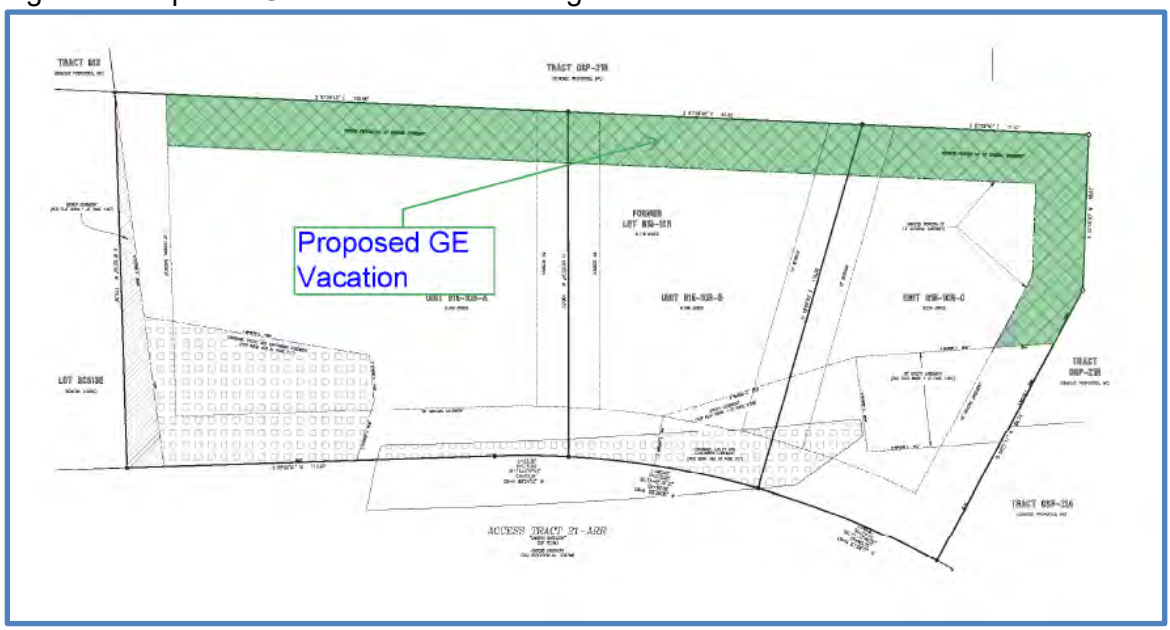
Adjacent Land Uses:
- **North:** Multi-Family
- **South:** Multi-Family
- **East:** Multi-Family
- **West:** Multi-Family

Attachments:
1. Referral Comments
2. Plan and Narrative
3. June 3, 2020 Letter from Town Attorney RE: Easements
4. Comp Plan Pages 75 and 76
5. IMBA Trail Difficulty Handout
6. Aerial Image of Lot 615-1CR

1.1 Case Summary:

Chris Hawkins of Alpine Planning (Applicant), working on behalf of the Brown Dog Properties LLC (Owner), is requesting Town Council approval of a Class 5 Minor Subdivision which proposes to vacate portions of the General Easement (GE) along with the request to relocate portions of the Meadows Trail out of a Town Easement and onto Town unimproved Right of Way (See Ffigure 3 for the existing trail location and Figures 4.1 and 4.2 for the proposed Meadows Trail relocation),. Pursuant to Section 17.4.3(J)(5), a Minor Subdivision does not require a public hearing or public noticing. The Applicant has provided an exhibit demonstrating the area of General Easement subject to the requested vacation.

Figure 2. Proposed GE Vacation- shown in green



In order to effectuate the overall development plan for the site, the following steps will be necessary:

1. Class 5 Minor Subdivision - In addition to the area shown above in green, the Applicant has also requested the relocation of the existing Meadows Trail from Town Easements along the south frontage of the Lot. The trail relocation is described below in more detail within Section 1.3 of this Memo.
2. Class 1 Staff Subdivision – The CDC allows for the creation of detached condominium land units as a staff-level approval. In order to approve this request, the Applicant must meet the subdivision requirements outlined in CDC Section 17.4.13. This step will occur after Step 1 and is a Staff level review.
3. Class 3 Design Review – Subsequent to the Minor Subdivision and Staff Subdivision, the Applicant must receive Design Review approval for the proposed 3 detached condominiums. This will require a 2-step process with the DRB. At the July 1, 2021, DRB meeting, staff requested this item be continued to better understand the Town's comfort with the proposed Minor Subdivision and trail relocation, as the layout of these items impacts the overall design review process. DRB will meet on this issue at its August 5, 2021 meeting, and will take into account Council's decision on the Class 5 Minor Subdivision.
4. Class 4 Variance for Maximum Building Height – Based on the application, the west home will require a height variance. A Class 4 Variance requires DRB to hold a hearing

and make a recommendation to Town Council. If the Town Council determines the request to be appropriate and grants the approval of the variance request, then the Applicant may then proceed with Final Review with the DRB for the design of the three detached condominiums. At the July 1, 2021, DRB meeting, this item was continued for the same reasons listed above. This item will also be considered at the DRB's August 5, 2021 meeting.

1.2 History and Existing Conditions:

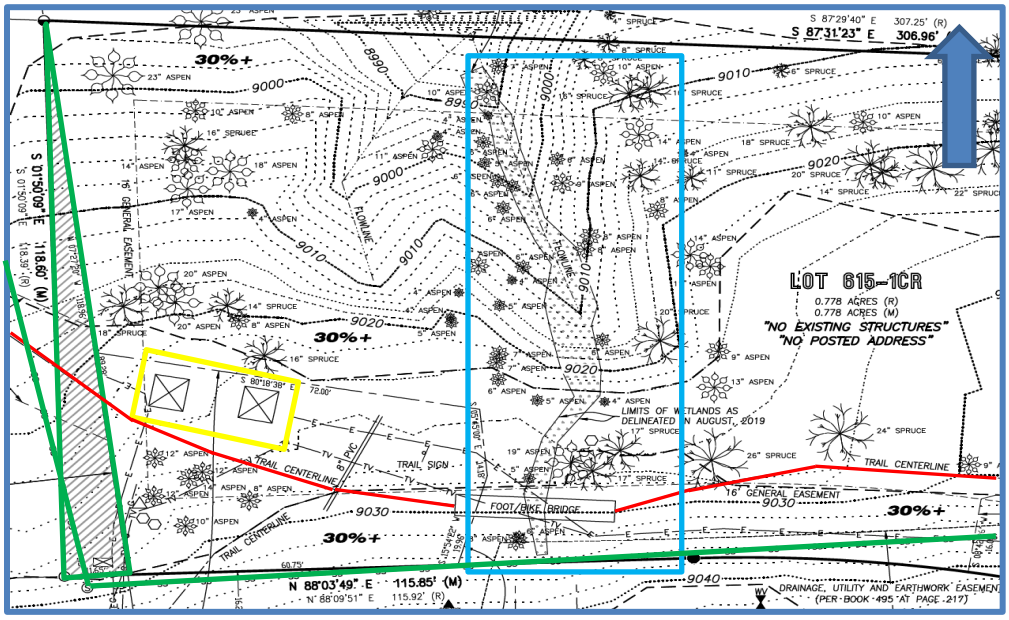
Lot 615-1CR is zoned Multi-Family and is located near the intersection of Adams Ranch Road and Lawson Overlook. Platted into its current configuration in 1999, Lot 615-1CR is .778 acres in size and is assigned 3 units of condominium density.

The Lot is encumbered with the following easements:

1. 30-Foot Utility Easement (Plat Book 1, Page 1381)
2. Utility Easement (Plat Book 1, Page 2729)
3. Drainage, Utility, and Earthwork Easement (Plat Book 495, Page 217)
4. 20-Foot Trail/Utility Easement (Plat Boot 1, Page 1457)
5. Sewer Easement (Plat Book 1, Page 1457)
6. General Easement – 16' Perimeter Easement, TMV and TSG Beneficiaries

The easements described above serve several purposes – which include the primary electrical service for the entire Mountain Village (held by SMPA – yellow polygon), as well as the Town's main sewer line (green polygon/polyline), and the existing Meadows Trail which traverses this property (red polyline). In addition to the easements, the site is constrained by delineated wetlands (blue polygon), and approximately 50% of the Lot is located in areas over 30% slope.

Figure 3. Site Constraints



1.3 Community Infrastructure Relocation:

As proposed, the development would necessitate the relocation of community infrastructure. It should be noted that the CDC defines community infrastructure inclusive of utility transmission lines, water and sewer lines, storm drainage, recreational trails. The

developer is obligated to relocate this infrastructure in a way satisfactory to the town and other utility providers. All of the items described below and shown in Figures 4.1 and 4.2, would be impacted by the proposed development and should be discussed:

- SMPA electrical service and access (yellow polygons) – In order to accommodate the proposed driveway location for Lot 615-1CR, the electrical service to the Town will require modifications. The retaining wall heights for the proposed driveway will result in the electrical line being buried, and this will need to be augmented with a series of junction boxes on the southeast side of the driveway. SMPA has also requested that access to the existing transformers be maintained which due to the new driveway will require grading and the creation of a retaining wall on neighboring Lot BC513E. As of the time of drafting this memo, written authorization from BC513E for these improvements has not been provided by the Applicant.
- The Meadows Trail (red polyline) would also require relocation based on the submitted plans. Because the existing trail is located within Town Easements, Town Council will need to approve the relocation of the Meadows Trail from its existing configuration shown in Figure 3 to the new proposed location shown in Figures 4.1 and 4.2 below. Alternatively, the Council could determine that it is not in the best interests of the town to relocate the existing Meadows Trail and otherwise maintain the trail's existing alignment. Town Staff has been in discussions with the Applicant in order to verify that any proposed relocations would not negatively impact the Town and have requested additional information on the proposed trail relocation such as proposed trail drainage, construction fencing, and trail access during excavation, along with more detailed cross-sections of the proposed trail. Staff believes that this information could be required as part of the project's design review. In order to lessen grades, the relocation now requires modifications to both Lot B513E and OS-21A. As of the time of drafting this memo, written authorization for these improvements have not been provided by the Applicant.
- Drainage Facilities (blue polygon) – The survey information indicates that there is a delineated wetland area within the area of disturbance. Because of these impacts, the Applicant will be required to contract with a wetland specialist to investigate this more, specifically as it relates to US Army Corps of Engineers (USACE) permitting. It would be helpful to understand better how the Applicant is proposing to impact this wetland and if there will be negative impacts. On the revised civil drawings page C2.2, a large amount of riprap is shown on either side of the drive and within wetland areas. It also appears that the driveway will cover delineated wetland areas. Typically, any bridging over wetlands is required to span so as to not impact the wetlands. (Discussed more below under Section 1.4 of this Memo)

The remainder of this page has been left blank intentionally.

Figure 4.1. Proposed Infrastructure Relocation (west)

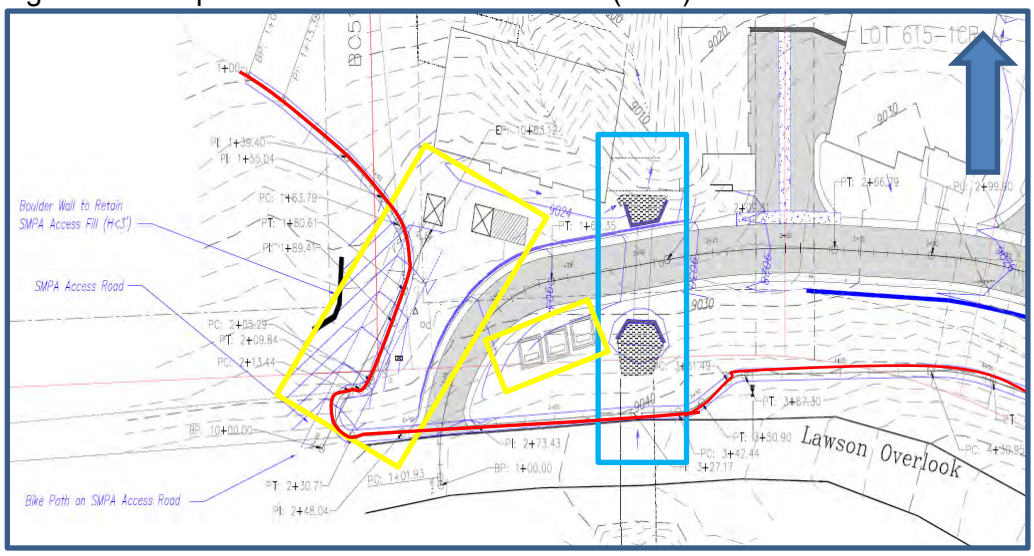
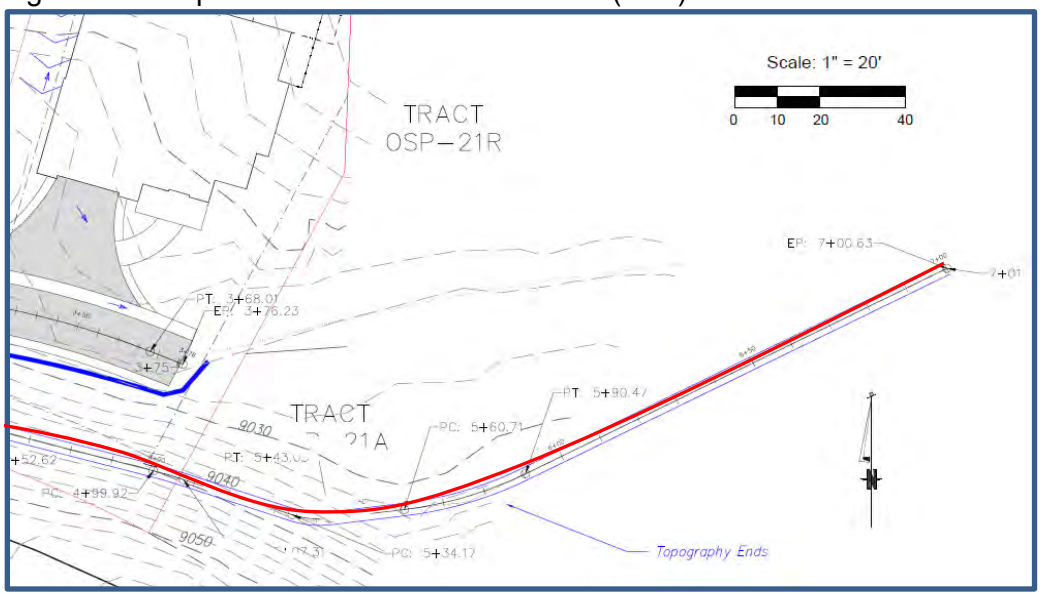


Figure 4.2. Proposed Infrastructure Relocation (east)



1.4 Applicable Regulation and Standard Analysis: *Please note that Staff Findings will be indicated by Italicized Text.* (***) indicates code sections that have been removed to reduce the length of this report. The applicable law cited may not be exhaustive or all-inclusive. The Applicant is required to follow all applicable laws even if an applicable section of the CDC is not cited.

CDC 17.4.13: **Subdivision Regulations**(***)

CDC 17.4.13(D): Review Process(***)

17.4.13(D)(2): Minor Subdivisions. Minor subdivisions shall be processed as class 5 applications.

Staff: Class 5 applications generally require no public notice or public hearing.

CDC 17.4.13(E): Criteria for Decision(***)

17.4.13(E)(2): Minor Subdivisions. The following criteria shall be met for the review authority to approve a lot line vacation, lot line adjustment, easement vacation, or similar subdivision:

a. The lots resulting from the adjustment or vacation are in compliance with Town Zoning and Land Use Regulations and Subdivision Regulations;

Staff Finding: The request to vacate the easement will result in minimal changes to Lot 615-1CR with the exception of the vacation of certain General Easements to the rear and east of the Lot. It should be noted that the proposed detached condominium units would not be created until the future approval of a Staff Subdivision.

b. The proposed subdivision is in general conformance with the goals, policies and provisions of the Comprehensive Plan;

Staff Note: Lot 615-1CR is not discussed within the Comprehensive Plan (comp plan), but open space, recreation, and trails are discussed in detail. Page 34 and 35 of the comp plan presents the eight key land-use values expressed by community members - Value 2: Recreational Backbone states that "Outdoor recreation is clearly a founding principle of the town, and its role in land use planning will endure as it continues to evolve into a year-round community. Value 6 discusses Connectivity and states "Mountain Village is famous for its unique gondola system, and true sustainability cannot be achieved without continuing to provide alternative modes of transportation and improving the area's connectivity. Within the Comprehensive Plan, additional trails, roadways, walkways, bus systems, and gondolas are included in order to further enhance the connective tissue that binds Mountain Village".

Page 75 and 76 of the comp plan relate to open space and recreation and have been included as an exhibit to this memo. Specifically, the comp plan states that Mountain Village [should] expand its community-wide trail network through collaboration with public agencies, regional partners, and private developers. This includes improving the trail network and way-finding system throughout Mountain Village in order to encourage non-vehicular transportation, greater access to recreation, and overall community connectivity. The plan also discusses regional trail connections and how to improve and integrate such trails into the town's recreational offerings (i.e. Valley Floor trails).

Staff Finding: The Meadows Trail is a primary regional trail for pedestrian and bike trail users who use the corridor for recreation and transportation to and from the Mountain Village, Lawson Hill, and Telluride. This trail corridor has been identified within our Trails Master Plan and has also been the subject of numerous regional trail discussions including a future Highway 145 pedestrian tunnel, linking this trail with a safer route to the Lawson Hill trail network. According to the International Mountain Biking Association (IMBA), a trail with an Average Trail Grade of 20% or more and a Maximum Trail Grade of 15% or more is considered Extremely Difficult (Double Black Diamond). "This system was adapted from the International Trail Marking System used at ski areas throughout the world. Many trail networks use this type of system, most notably resort-based mountain biking trail networks. The system applies to mountain bikers best, but also is applicable to other visitors such as hikers and equestrians. Given the current investment the Town is making in the

pedestrian tunnel along with the increased usage of this trail for recreation and commuting, Town Council should discuss whether the trail relocation is meeting the Comprehensive Plan Goals, Policies and Provisions.

Further, staff does not find the application to be in compliance with the plan as the relocation will elevate difficulty on the Meadows Trail more so than the current existing configuration. Given the regional impact that modifications to this trail may present, staff believes that other options for relocations should be explored so that the overall experience of the trail is not diminished.

(https://www.imba.com/sites/default/files/content/resources/2018-10/IMBATrailDifficultRatingSystem.jpg

c. Subdivision access is in compliance with Town standards and codes unless specific variances have been granted in accordance with the variance provisions of this CDC;

Staff Finding: Access, as proposed, is in general compliance with the Town Standards. It should be noted that due to the driveway grade, the fire department has indicated that any future homes must be sprinkled, standpipes provided on the Lot, and the drive must be signed with no emergency access. The proposed retaining wall heights will necessitate a future design variation request for road and driveway standards from the Design Review Board that will occur as part of a future design review.

d. Easements are not affected, or have been relocated to the satisfaction of the utility companies and/or the benefited party under the easement or, in the case of vacated easements, the easement is no longer necessary due to changed conditions, and the easement vacation has been consented to by the benefited party under the easement; and

Staff Note: The majority of the Lots in the Mountain Village are burdened by a 16-foot general easement that creates a building setback around the perimeter of the lot. The GE exists for the benefit of the Town and in some unique cases, TSG Ski and Golf LLC (TSG). The GE allows for any improvements deemed necessary for the safe and efficient operation of the Town including, but not limited to, utilities, drainage, electrical, communications, biker access, pedestrian access, skier access, sanitary sewer, and storm sewer. TSG assigned their rights to certain general easements within the Town at Reception No. 305359 and 339588, but it should be noted that TSG retained a 50% interest in the subject GE on Lot 615-1CR.

Staff Finding: It should be clearly noted that the existing General Easement, along with the other encumbrances described above in Section 1.2 of this memo, allow for the Meadows Trail to be maintained in its current configuration. The Applicant has indicated that the future access for Lot 615-1CR precludes the trail from staying in its current location, but the Applicant has an obligation to demonstrate that any relocation of community infrastructure is done in a way that is satisfactory to the relevant agency – in this case, the Town and SMPA. There have been efforts in the past to explore the potential to relocate the Meadows Trail into the Northern GE of Lot 615-1CR in order to allow for the development of this Lot. Town Council should understand that the granting of this request for a Class 5 Minor Subdivision,

would preclude the northern GE as an option for a future trail location. See Section 1.3 of this report for specific details on infrastructure/easement relocation.

e. The proposed subdivision meets all applicable Town regulations and standards.

Staff Finding: Although staff believes that the Applicant is meeting a majority of the Town regulations and standards, the Applicant will need to verify that the proposal results in a satisfactory relocation of the affected community infrastructure and that any wetlands on the site are not impacted negatively.

CDC 17.4.14 (F): Subdivision Design Standards and General Standards (***)

17.4.14(F)(1): Lot Standards

Staff Finding: The proposed vacation of the GE generally meets the Lot Standards of the CDC.

17.4.14(F)(2): Environmental Standards

a. Protection of Distinctive Natural Features. To the extent practical, subdivisions shall be designed to protect and preserve distinctive natural features, such as ridgelines, steep slopes, perennial streams, intermittent streams, and wetland areas. Such areas shall be left in their natural state and protected by either the use of disturbance envelopes, the establishment of open space lots where development is prohibited, or some other protective measures acceptable to the review authority.

Staff Finding: At the time of drafting this memo, staff does not believe the criteria to be met. Given the steep slopes, perennial streams, and wetland areas on the site, special consideration should be given to the preservation of these features. The majority of the steep slopes are located to the rear of the Lot, and by vacating the rear GE, any future building envelopes would be pushed further into the steep areas shown in the topographic survey.

b. Designing Subdivisions to Fit the Topography of the Land. To the extent practical, subdivisions shall be designed so that the layout of lots, the placement of building envelopes, the alignment of roads, trails, driveways, walkways and all other subdivision features shall utilize a design philosophy that generally reflects the existing natural topographic contours of the property.

Staff Finding: The topography of the Lot has necessitated a number of large retaining walls and placement of future home sites on steep slopes. Staff does not believe that the intent of this criteria is being met with the proposed layout.

c. Areas Subject to Environmental Hazard. Lots proposed for development and access roads to such development shall avoid areas subject to avalanches, landslides, rockfalls, mudflows, unstable slopes, floodplains or other areas subject to environmental or geologic hazards unless these hazards are mitigated to the satisfaction of the review authority. All mitigation measures shall be designed by a Colorado professional engineer. To the extent identified hazards cannot be mitigated to the satisfaction of the review authority, the subdivision plat shall reflect those areas as non-developable.

Staff Finding: Lot 615-1CR is existing and this request is to simply remove the General Easement from portions of the Lot, and relocate the existing Meadows Trail. With that, the future staff subdivision will propose the detached condominium units conceptually shown in the site plan that was submitted by the Applicant. Generally speaking, the future detached condominiums are located in areas of environmental and/or geologic hazards but has otherwise provided soil reports and hydrology reports verifying that the proposed design is achievable on the proposed Units. If the Applicant can revise the driveway design so that it does not negatively impact the wetland, then staff believes that this criterion can be met.

CDC 17.6.1: Environmental Regulations (***)

17.6.1(B): Wetland Regulations

Staff Note: The purpose of the wetland regulations is to preserve wetland areas and to protect important wetland functions. The CDC discusses wetlands in length and provides mitigation requirements for instances where wetland impacts are unavoidable.

From CDC Wetland Regulations 17.6.1(B)(2)(d):
"*The review authority shall only allow for wetland disturbance or fill if it is demonstrated that there is not a practicable alternative to avoiding such activities and if the following criteria are met:*

i. The proposed wetland disturbance is in general conformance with the Comprehensive Plan or is necessary to allow for reasonable use of the lot.
ii. *The Applicant has provided a wetland mitigation plan that provides for replacing the wetland areas proposed for temporary disturbance, or, for wetland fill, replacement wetland areas with the same functions and values of the impacted wetland with the mitigation provided at an appropriate ratio of 1:1 or greater.*
iii. *The United States Army Corps of Engineers ("USACE") has reviewed the proposed wetland disturbance or fill and has either recommended approval to the Town or has approved the required federal permits.*
iv. *The developer shall provide a conservation easement to the Town for the wetland area that requires it to maintain the wetland area over time.*
v. *The development has provided for specific best management practices to protect wetland resources not impacted by development from direct and indirect impacts.*".

"When wetlands are identified on a lot, it shall be the responsibility of the lot owner to ensure that these areas are not impacted by any development."

1.5 Referral Comments and Discussion:

A. Staff sent a referral email to town departments and partner agencies on June 4, 2021. This email provided the complete plan set and narratives that were provided as part of the Design Review, Variance, and Minor Subdivision Applications.
Because of the complicated nature of the application as it relates to the existing easements, utilities/infrastructure, trail location, and wetlands – staff determined it would be best to meet in person and provide a summation of the discussion to the Applicant.

B. Town Staff along with the Telluride Fire Marshall met on June 10, 2021, to discuss the development applications as submitted. Staff provided verbal comments related to their specific concerns which have been summarized below.

Public Works Department: Finn Kjome, Public Works Director indicated that the proposal was generally acceptable with the exception of noting that due to the size of the sewer main within Lawson Overlook, an additional manhole would need to be installed above the proposal within Town Road Right of Way in case of emergency.

Fire Marshall: Scott Heidergott, Fire Marshall for the Telluride Fire Protection District has concerns related to the overall length and width of the shared driveway and noted that the homes would be required to be sprinkled, standpipes installed, and the driveway identified for No Emergency Access.

Based on comments from the Fire Marshall – staff assumes the driveway may change slightly resulting in a revised design without fire turnaround. This has not been captured in an updated site plan for the project.

Parks and Recreation Department: Jim Loebe, Transit and Parks and Recreation Director provided feedback related to the proposed trail relocation and technical specifics on the proposed trail and said that by relocating the existing trail, and creating more difficult conditions on the proposed trail, the result will be more users riding on the road rather than the trail, and a degraded overall experience for the regional users on this trail system. Based on the recently submitted civil engineering plans for the realigned Meadows Trail, Staff believes that your development proposal would alter the existing alignment of the trail in a way that cannot be supported by Town Staff.

Based on these staff comments above, Planning Staff provided the Applicant with a written summation of the comments which were emailed on June 18, 2021. Staff did not receive written comment from SMPA, but it was represented that the Applicant had been in private discussions related to the relocation of the existing electrical 3 phase power located in the existing Utility Easement. It's unclear to staff if the proposed utility relocation is entirely necessary as shown, or if the relocation can be done in a way that preserves the Meadows Trail in its existing location.

C. Town Planning Staff along with Town Legal Counsel met with the Applicant's development team on June 22, 2021, to discuss the above concerns largely as they related to the proposed trail relocation and variance request. At this meeting, Town Staff suggested that the Applicant revise the plan to eliminate the variance request and better accommodate the existing trail rather than relocate the trail– potentially through a tunnel, bridge, or elevated driveway. Staff also suggested a PUD as a potential option that could allow for some cost-sharing between the Town and the Applicant. These options were not explored by the Applicant subsequent to this meeting.

D. On June 23, 2021, updated civil drawings for the proposed trail relocation were provided to staff via email. In addition to the trail revisions, there were also changes that were necessitated based on SMPA comments – specifically the requirement to create graded access to the existing transformers.

Although the proposed trail grades were slightly reduced with the revision, the proposal now indicated that improvements associated with the relocation of the Trail and Utilities would be required not just on Lot 615-1CR but also on Lot BC-513E, and Tract OSP

21A and potentially Tract OSP-21R. This would include the physical relocation of the trail on 615-1CR, BC513E, OSP21A, and OSP-21R (as necessary), and encroachments into the GE on Lot BC513E to allow for the creation of the new SMPA access – of which now requires a 3-foot boulder retaining wall, grading, and fill to occur on BC513E. Because the proposal shows improvements on adjacent properties (OS21A and BC513E), the Applicant will be required to obtain written permission from these property owners for the proposed improvements. If this is not able to be obtained, then the design must be modified to accommodate the relocated trail on Lot 615-1CR.

E. On July 1, 2021, The DRB continued both the Initial Architecture and Site Review, along with the review and recommendation for a Variance to Building Height.

F. Per Item (C) above, the Applicant provided Staff with an opinion letter from Uncompahgre Engineering on July 2, 2021, which stated that in the option of David Ballode, P.E., a bicycle tunnel under the Lots Driveway is not a feasible solution.

G. On July 7, 2021, Town Staff along with Town Legal Counsel met to discuss the updated civil engineering plan discussed above under item (D) in order to better understand the proposed changes to the trail, wetland, and electrical services. Based on the updated plans, Finn Kjome expressed hesitancy to grant the vacation of any easement on the Lot absent a better understanding of the issues presented throughout this memo.

It should be noted: Planning Division's deeming an application complete to an applicant represents only an administrative review of the development application through the Referral and Review Process. Staff may identify additional issues at any time prior to final approval. If upon conclusion of the Referral and Review Process it is determined that revisions to a development application are necessary in order to comply with the requirements of the CDC, the applicant shall be provided with an opportunity to revise the development application unless a PUD is requested. Certain aspects of these applications as they relate to the requirements and criteria of the CDC are more discretionary and subject to individual opinion and judgment, such as the need to provide adequate buffering, minimize visual impacts or minimize wetland impacts. The applicant has been encouraged by the Planning Division to amend the development application to address the discretionary plan revisions in order to be compliant with the requirements and criteria of the CDC.

Staff Recommendation: Staff has noted above a number of provisions for Council discussion and is generally conveying that the Meadows Trail is an important trail in the Town of Mountain Village and that the current plan to relocate it as proposed, is deficient in improving the trail system in this location.

If the Council otherwise determines that it is appropriate to relocate the Meadows Trail from its current alignment to the alignment proposed in the application materials, then staff recommends moving forward with the GE Easement Vacation Request to allow for the development of Lot 615-1CR as described in this application. If Council determines that the proposed relocation of community infrastructure on the Lot is not appropriate, then staff does not recommend granting of the Easement Vacation.

Town Council can alternatively ask for the trail to either remain in the same location, or request more analysis be provided that would maintain the existing or better integrity of our Meadows Trail system in this location. In the case of more information, town staff would ask for the Town Council to continue the review conditioned upon providing more information about an alternative trail location that adds benefit to the Meadows Trail system as community infrastructure.

If the Council deems this application to be appropriate for approval, Staff requests said approval condition the items listed below in the suggested motion.

PROPOSED MOTION - MINOR SUBDIVISION

Staff Note: It should be noted that reasons for approval or rejection should be stated in the findings of fact and motion.

I move to approve by Resolution a minor subdivision of Lot 615-1CR to vacate portions of the General Easement and to relocate the Meadows Trail into unimproved Road Right of Way, with the findings contained within the Staff Report of record dated July 6, 2020, and with the following conditions:

1. *It is incumbent upon an owner to understand whether utilities and town infrastructure, whether placed in the right of way or general easement, are placed in an area that may encumber access to their lot. Relocation of such above-grade infrastructure appurtenances will occur at the owner's sole expense and in coordination with the appropriate entity (fire department, SMPA, Town of Mountain Village) so that the relocated position is satisfactory.*
2. *Prior to approval of any subsequent staff subdivision application, the Applicant shall provide the town with a draft version of the governing documents for the proposed condominiums demonstrating adequate provisions for the maintenance of common area elements, and adequate easements exist for utilities, access, emergency access, and drainage.*
3. *Prior to the recordation of the subdivision with the San Miguel County Clerk and Recorder's office, the Applicant shall provide written authorization from the Owners of Lot BC513E and OS21 granting access and permissions to modify the Meadows Trail outside of the boundaries of Lot 615-1CR.*
4. *Prior to the recordation of the subdivision with the San Miguel County Clerk and Recorder's office, the Applicant shall enter into a Subdivision Improvements Agreement and provide a financial guarantee to the Town for the amount of 125% of the current estimated cost for the required public improvements and facilities.*
5. *Prior to recordation of the subdivision with the San Miguel County Clerk and Recorder's office, the Applicant shall demonstrate that impacts to the wetland have been eliminated or otherwise addressed as part of a USACE 404 Permit, or appropriate permit as determined either by the Army Corps of Engineers or a suiteable wetland specialist.*
6. *Prior to the construction of any other subdivision improvements, the Meadows Trail shall obtain design review approval for relocation, such relocation shall be completed and shall be constructed so that traffic on the trail system is not disrupted during subdivision improvement construction.*
7. *The Applicant will submit appropriate fees to staff for recordation with the San Miguel County Assessor's office within six months of approval.*
8. *Staff will review the replat document to verify consistency with CDC Sections 17.4.13.N. Plat Standards, and CDC Section 3. Plat Notes and Certifications - and provide redline comments to the Applicant before the execution of the final mylar.*

9. *Staff has the authority to provide ministerial and conforming comments on the mylar before recordation.*

Alternative Motions:

Motion to Continue: I move to continue the application so that the applicant can provide more information to demonstrate that the trail relocation improves the Meadows Trail in this location and to the satisfaction of the Town e.g. grades, location to the next Town Council meeting date on _____. .

Motion to Deny: I move to deny the Resolution for a minor subdivision of Lot 615-1CR to vacate portions of the General Easement and to relocate the Meadows Trail into unimproved Road Right of Way, with the findings contained within the Staff Report of record dated July 6, 2020.

/jjm

Exhibit 1

COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING DIVISION
455 Mountain Village Blvd.
Mountain Village, CO 81435
(970) 728-1392

June 14, 2021

Brown Dog Properties, LLC
c/o Chris Hawkins, Alpine Planning
P.O. BOX 1497
Telluride CO, 81435

Sent by email to: Chris@alpineplanningllc.com

Re: Proposed Development Application - Lot 615-1CR

Mr. Hawkins,
Alpine Planning, on behalf of Brown Dog Properties LLC, recently submitted a series of applications for the development of Lot 615-1CR - a multi-family lot with three units of condominium density, located along Lawson Overlook. As you are aware, the Lot is constrained by a number of topographical issues as well as encumbrances that limit the developable area of the site, including General Easements, Utility Easements, and Drainage Easements, some of which contain existing utility and trail facilities that will require relocation as part of the proposed plan for the Lot.

In order to better understand any potential concerns, Town Staff along with the Fire Marshall met on June 10, 2021, to discuss the development applications as submitted. Staff provided verbal comments related to their specific concerns which I have summarized below. Written agency referral comments will be provided by Town Staff as soon as possible and these comments will be forwarded to you.

Public Works Department: Finn Kjome, Public Works Director indicated that the proposal was generally acceptable with the exception of noting that due to the size of the sewer main within Lawson Overlook, an additional manhole would need to be installed above the proposal within Town Road Right of Way in case of emergency.

Fire Marshall: Scott Heidergott, Fire Marshall for the Telluride Fire Protection District has concerns related to the overall length and width of the shared driveway and noted that the homes would be required to be sprinkled, standpipes installed, and the driveway identified for No Emergency Access.

Parks and Recreation Department: Jim Loebe, Transit and Parks and Recreation Director provided feedback related to the proposed trail relocation and technical specifics on the proposed trail. As a background note, the Meadows Trail is a primary regional trail for pedestrian and bike trail users who use the corridor primarily for recreation and transportation to and from the Mountain Village, Lawson Hill, and Telluride. This trail corridor has been identified within our Trails Master Plan and has also been the subject of numerous regional trail discussions including a future Highway 145 pedestrian tunnel, linking this trail with a safer route to the Lawson Hill trail network. According to the International Mountain Biking Association (IMBA), a trail with an Average Trail Grade of

20% or more and a Maximum Trail Grade of 15% or more is considered Extremely Difficult (Double Black Diamond). By relocating the existing trail, and creating more difficult conditions on the proposed trail, the result will be more users riding on the road rather than the trail, and a degraded overall experience for the regional users on this trail system. Based on the recently submitted civil engineering plans for the realigned Meadows Trail, Staff believes that your development proposal would alter the existing alignment of the trail in a way that cannot be supported by Town Staff.

In addition to the above concerns, it has recently come to the Town's attention that the General Easements for Lot 615-1CR are in fact partially benefiting the Town of Mountain Village and partially benefiting Telluride Ski and Golf (TSG). Because the GE Easement is partially maintained by TSG, they will need to ultimately consent to the vacation of this easement in addition to the Town consenting. I do not believe Town Staff can support the vacation of these rear GE's given the proposed trail solution does not appear to adequately address staff's concerns as outlined above within this correspondence.

With that, there could be alternative options to explore that would allow for these above concerns to be potentially resolved through a Planned Unit Development (PUD) Application. A PUD would allow the owner of the Lot to apply for the entirety of the applications in a concurrent process and would also allow the developer to request specific deviations from the CDC to allow for increases to the allowed Building Height or Lot Coverage for example. Most importantly, the PUD would otherwise potentially allow for the owner to work with the Town in a public/private partnership. This partnership could potentially allow for some of the cost of the trail relocation to be shared between the owner of Lot 615-1CR and the Town. I would highly encourage that you and your client pursue the PUD process and as such provide a re-design of the proposed detached condominiums in order to creatively address the issues described above.

As always, feel free to contact our office at 970.369.8203 if you have questions or concerns about this matter.

Sincerely,

John Miller,
Senior Planner
Town of Mountain Village
455 Mountain Village Blvd. Suite A
Mountain Village, CO 81435
O:: 970-369-8203 M:: 970-417-1789
johnmiller@mtnvillage.org

John A. Miller

From: Finn KJome
Sent: Thursday, July 8, 2021 2:13 PM
To: John A. Miller; Jim Loebe
Cc: Michelle Haynes
Subject: RE: updated civil plans showing wall etc

Hi John,
Public Works main concern is the preservation of the sewer main that runs through this property. I could not find a plan that combined the existing conditions of the sewer line with the design of the driveway. There isn't enough detail to fully grasp the retaining wall below Lawson Overlook. I am concerned about a retaining wall potentially on top of the sewer line. I would also like to make it clear that Public Works will need to use the applicants driveway as access to the sewer line. The retaining wall at the end of the driveway must not prohibit access for maintenance equipment to drive the length of the sewer line.
The access to the SMPA boxes does look acceptable for Public Works to access the sewer line as it heads over the hill side. It is however unclear if any man holes will need to be raised along with the access construction. Please continue to include Public Works in the process of this application. Last I would not recommend vacating any easements until all Town issues have been met.
Finn

From: John A. Miller <JohnMiller@mtnvillage.org>
Sent: Wednesday, July 7, 2021 2:50 PM
To: Finn KJome <FKJome@mtnvillage.org>; Jim Loebe <JLoebe@mtnvillage.org>
Cc: Michelle Haynes <MHaynes@mtnvillage.org>
Subject: updated civil plans showing wall etc

Here are the updated civil plans showing encroachments, modified trail grades, and SMPA access which includes fill in the GE / on top of SS.

John A Miller III
Senior Planner
Planning & Development Services
Town of Mountain Village
455 Mountain Village Blvd, Suite A
Mountain Village, CO 81435
O :: 970.369.8203
C :: 970.417.1789

John A. Miller

From: Jim Loebe
Sent: Thursday, July 8, 2021 12:19 PM
To: John A. Miller
Cc: Michelle Haynes
Subject: Parks and Rec 615-1CR DA Comments

John,

The town has been in communication with Mr. & Mrs. Hensen regarding this property, and has provided process direction all along the way. My professional opinions expressed below should not be of of no surprise to them. Ultimately though, it is a Town Council decision whether to relocate a portion of the Meadows Trail. Given the following, I have reservations about the plan as proposed:

1) The Meadows Trail is a very important and highly used regional connector for both active transportation and recreation. The trail re-alignment as proposed in this development application will drastically impact the natural character and usability of the trail.
2) We are working with regional partners on a tunnel connection between the Meadows Trail and Lawson Hill – we would like to maintain a smooth trail system between the Meadows and Lawson Hill given the large investment to engineer and build the tunnel.
3) The draft trails master plan does not contemplate relocation of any portion of the Meadows Trail.
4) If a trail must be relocated (anywhere within TMV) there should be a general understanding that the relocation improves the trail over what was existing, and the town would not otherwise feel compelled to accept a developer initiated trail relocation that is substandard.
5) Other options were discussed, the applicants have provided an option that may work best for the owner, however, it doesn't seem like the right solution for the town as presented to date.

As the Parks and Recreation Director, I find it hard to support the trail re-alignment as proposed in this development application.

Kind regards,

Jim Loebe
Transit Director and Director of Parks and Recreation
Town of Mountain Village
O::970.369.8300
M::970.729.3434

Website | Facebook | Twitter | Instagram | Email Signup

For information about The Town of Mountain Village's response to COVID-19 (Coronavirus), please visit townofmountainvillage.com/coronavirus/

Si Usted necesita comunicarse conmigo y necesita servicio de traducción al español, simplemente háganoslo saber y podemos proporcionar tal servicio.

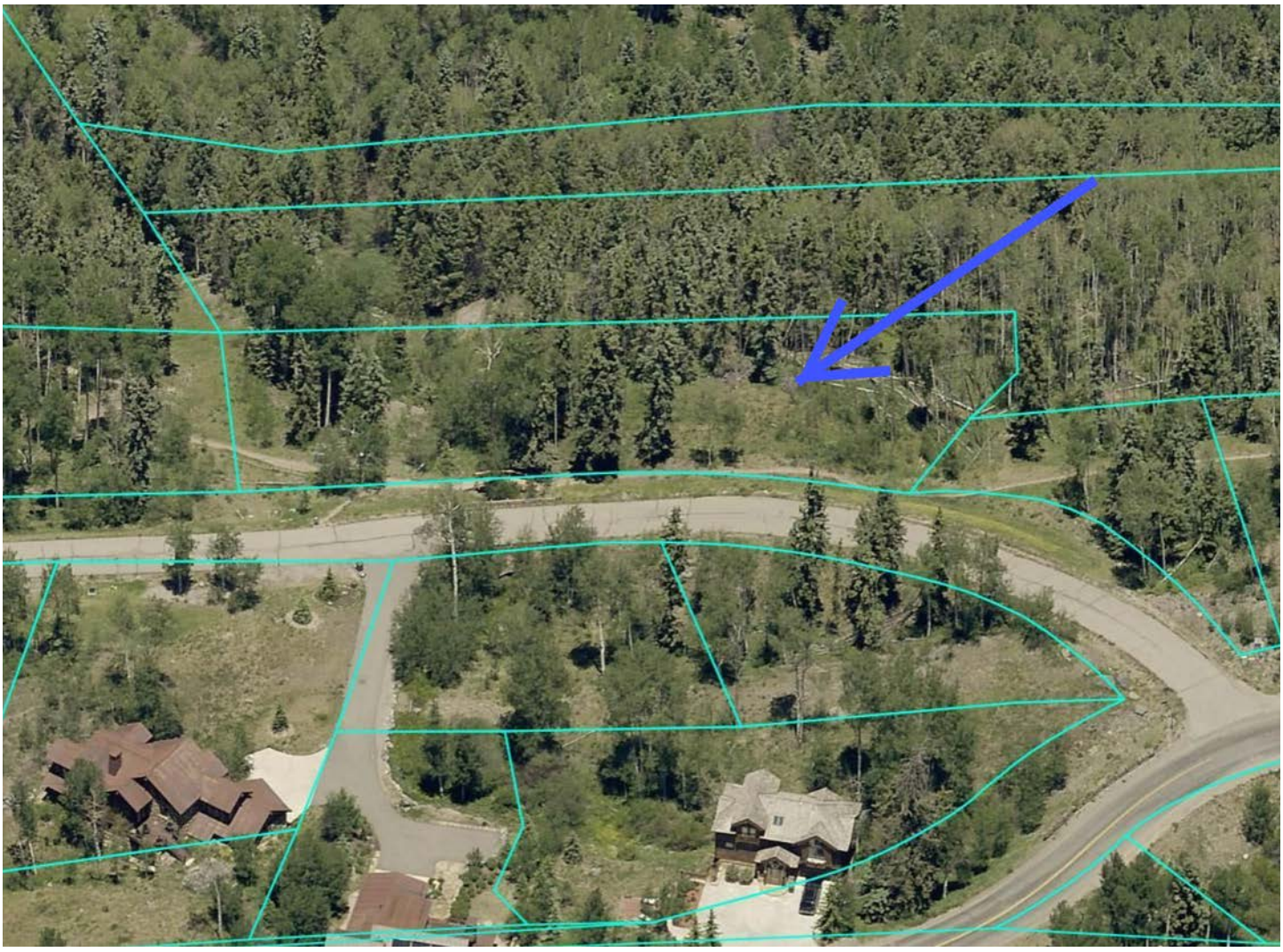
TELLURIDE FIRE PROTECTION DISTRICT

Scott Heidergott, Fire Marshal

Address: Lot 615-1CR
Mountain Village, CO 81435

1) The West House structure is over 3,600 sq ft and shall require a monitored sprinkler system.
2) The width of the driveway shall meet the code of 16' total width. 12' shall be a hard surface with the shoulders meeting the same compaction required as the hard surface and shall be an all-weather driving surface.
3) The address monument shall be minimum 4'6" from grade to the bottom of the address numbers. Address numbers shall be 6" in height, reflective coated or outlined with a reflective coating.
4) TFPD recommends the installation of a Knox Box for access during emergency situations.

Lot 615-1CR Minor Subdivision + Staff Subdivision Applications



July 8, 2021

ALPINE PLANNING

Uncompahgre Engineering, LLC

Background and Proposed Development

Brown Dog Properties, LLC ("**Owner**") is the owner of Lot 615-1CR that has an address of 235 Lawson Overlook ("**Site**") as shown in Figure 1. The Property is unique because it is located in the Multi-family Zone District and is surrounded by lots that are located in the Single-family Zone District with large open space tracts to the north and east as shown in Figure 2. The Town Official Land Use and Density Allocation List assigns three (3) multi-family condominium units to the Site with nine (9) person equivalents of density. The land around the Site used to have more multi-family zoning prior to the adoption of new zoning per the 2013 Community Development Code as shown in Figure 3. This explains the small single family and unique shaped parcels in Lots 616A - 616C to the east and the 615 lots to the south.

The Owner intends to construct three (3) single family condominiums on the Site with each home located on its own condominium land unit. The Mountain Village Community Development Code ("**CDC**") permits single-family condominium dwellings in the Multi-family Zone District. The Owner's intended development plan necessitates the submission of Design Review Process, Variance Process, Minor Subdivision and Staff Subdivision applications. While Town staff could review the staff subdivision, we are seeking the concurrent approval of the condominium map with the Minor Subdivision so both subdivision elements are being presented to the Town Council.

The Minor Subdivision Process application is needed to vacate certain general easements and to plat the condominium units as shown on the proposed subdivision plat. The Site currently has a 16-foot General Easement ("**GE**") on its perimeter. The proposed Minor Subdivision setbacks consist of:

- 16-foot front GE setback along Lawson Overlook to maintain typical GE along public right-of-way.
- 16-foot GE along the western boundary with Lot BC 513E to maintain buffering.
- 16 foot Eastern GE to where it meets an existing utility easement
- 10-foot setbacks to interior lot lines
- Vacated GE and no setbacks to northern property line or eastern property line where abutting open space tracts as shown in Figure 5.

Figure 1. Vicinity Map

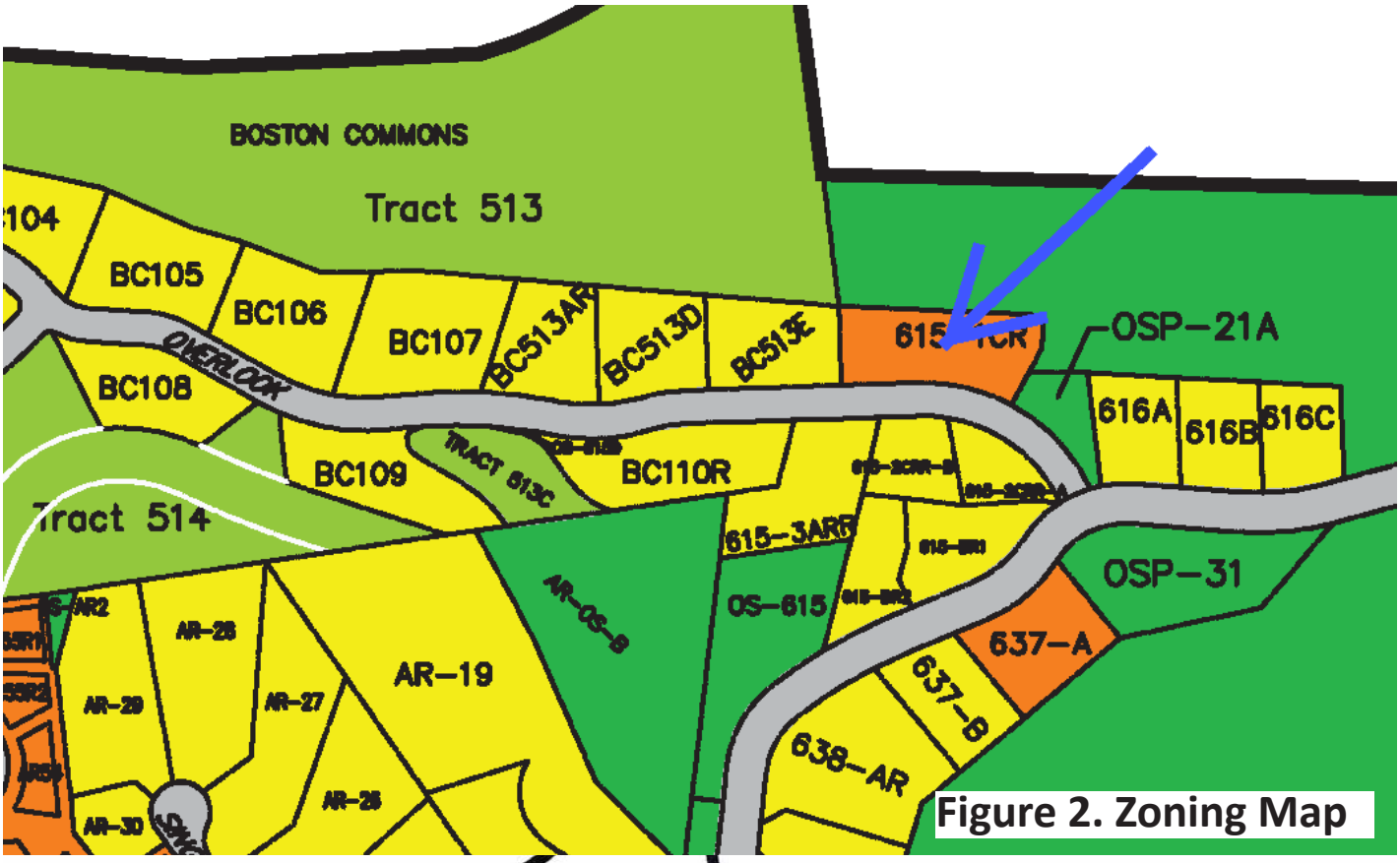


Figure 2. Zoning Map

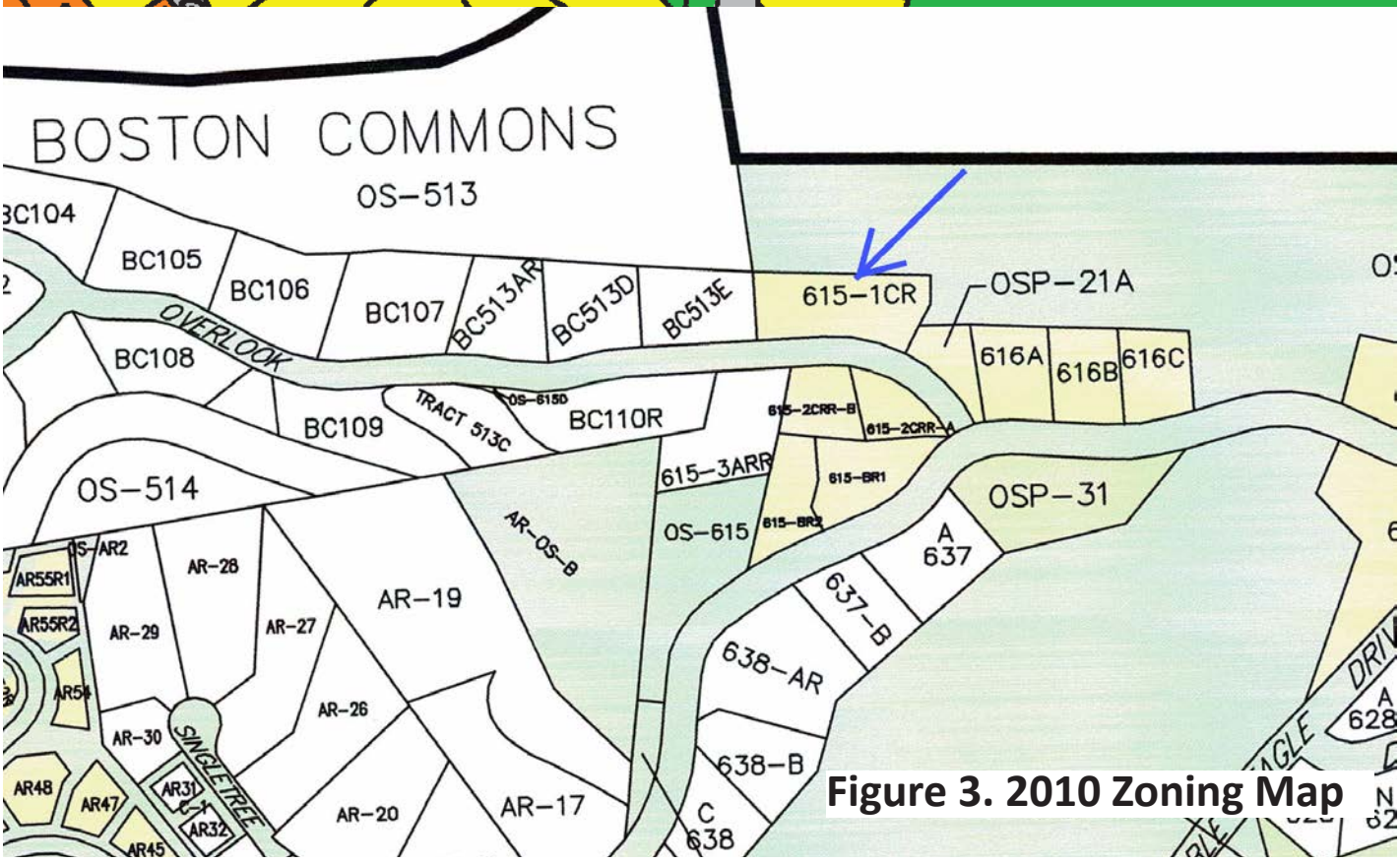


Figure 3. 2010 Zoning Map

The proposed Minor Subdivision is a class 5 development application that is reviewed and acted on by the Town Council. The Minor Subdivision is proposing the Town Council vacate certain GEs and approve the establishment of the GEs and setbacks as shown in the proposed plat.

Setbacks are primarily intended to provide an open, undeveloped buffer next to other development lots. We believe the northern GE and portion of the eastern GE can be vacated and not have any setbacks because the open space to the north and east provides a great natural buffer to the development. The proposed GE vacation is also needed to accommodate access to the Site via the proposed common driveway. Access to the site was very difficult to design and plan in accordance with Town standards due to the topography of the Site, wetlands and the bike trail through the Site with the driveway and the required emergency turnaround pushing the development sites to the north leaving very little room for development with the current 16-foot GE. The Site also contains several utility easements which also push the developments north and further downhill. The Owner is therefore proposing to vacate the northern GE and allow for the development plan as shown in the plan set. There are other examples of the Town vacating the GE and not requiring any setback, such as the Rosewood lots along the golf course and Elkstone condos next to Elk Pond, with the developments buffered by open areas along the properties.

The interior lot lines are planned with 10-foot setbacks as shown on the plat. We believe these interior setbacks are appropriate and are in line with other reduced interior lot line setbacks found throughout the town, such as Trails Edge, Lot 151R and even Lot 616 to the east of the site.

The Staff Subdivision Process application is intended to create three (3) multi-family land condominium units as shown on the plat. This condominium community provides that each land unit is owned individually with the driveway being the common element with associated access and maintenance obligations.

The Site has a high USGS elevation of 9050 in the southeast corner and low elevation of 8982 at the base of a drainage on the north side for an overall elevation change of 68 feet. Fifty-one percent of the Site area contains slopes that are 30% or greater that are found along Lawson Overlook and emanating from the drainage. The drainage was created by a culvert under Lawson Overlook as shown on the existing conditions survey. It appears that the steep slopes along Lawson Overlook may have been caused by road grading and some steep slopes in the drainage were caused by erosion from the drainage. The drainage on the Site was caused by a temporary diversions or grading that rerouted water sometime in the 1990s or 2000s. The drainage now accommodates only a small amount of water volume due to rerouting of town drainage. A small wetland area has been delineated along the drainage as shown in the existing conditions survey.

Meadows Trail Relocation

The Meadows Trail transects the Property as shown in the existing conditions survey. This trail is not located in a trail easement as highlighted in Figure 6. We are not sure how or why the trail was located across the Property outside of a trail easement, or if the trail has been there 18 years or more to create a prescriptive easement.

The Meadows Trail must be relocated to a new alignment through the Property because it is located in the only area where a common driveway can be located. There is no ability to create three individual driveways to each detached condominium unit due to grade changes and required engineering design to meet the Town Driveway Standards; and the Public Works Director was not supportive of three driveways since they would impact the main sewer line for the Town that runs through the Property, with the fill for three driveways limiting access to the sewer line.

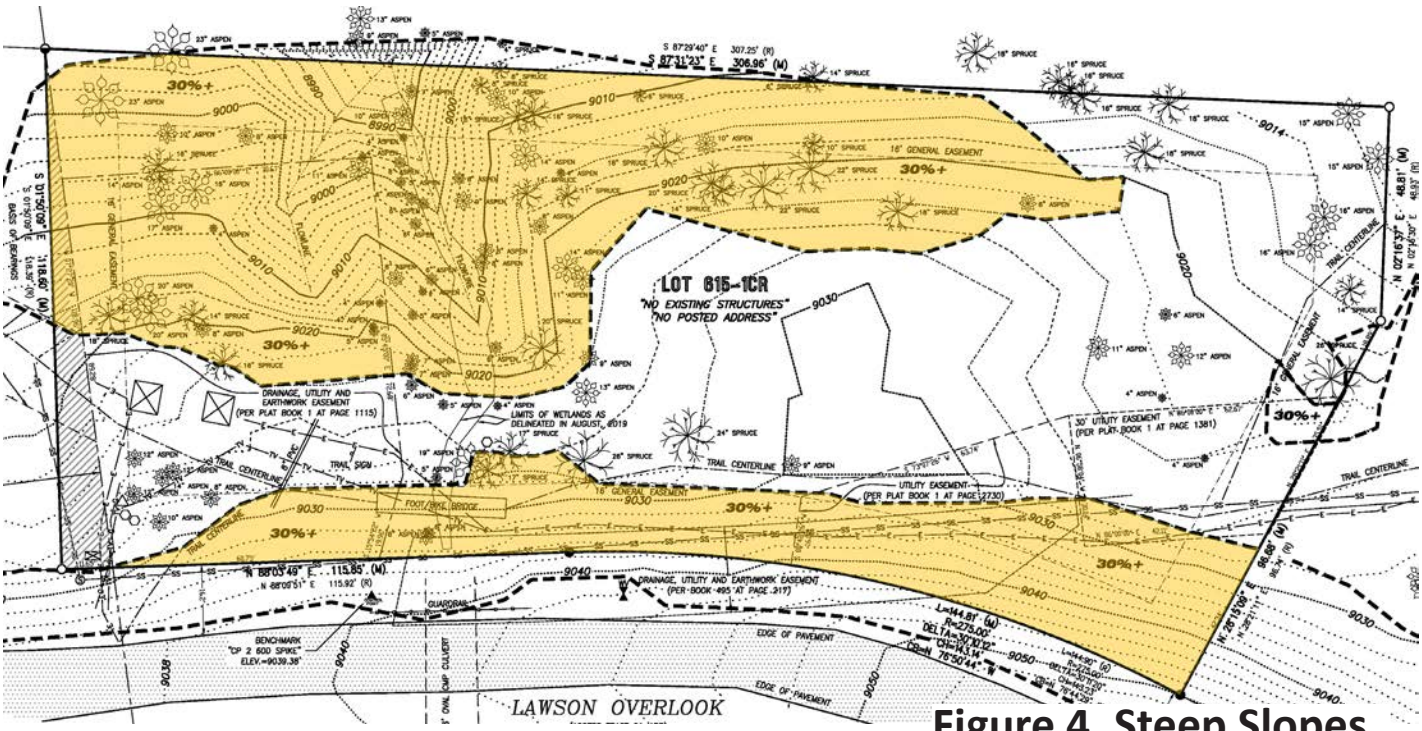


Figure 4. Steep Slopes

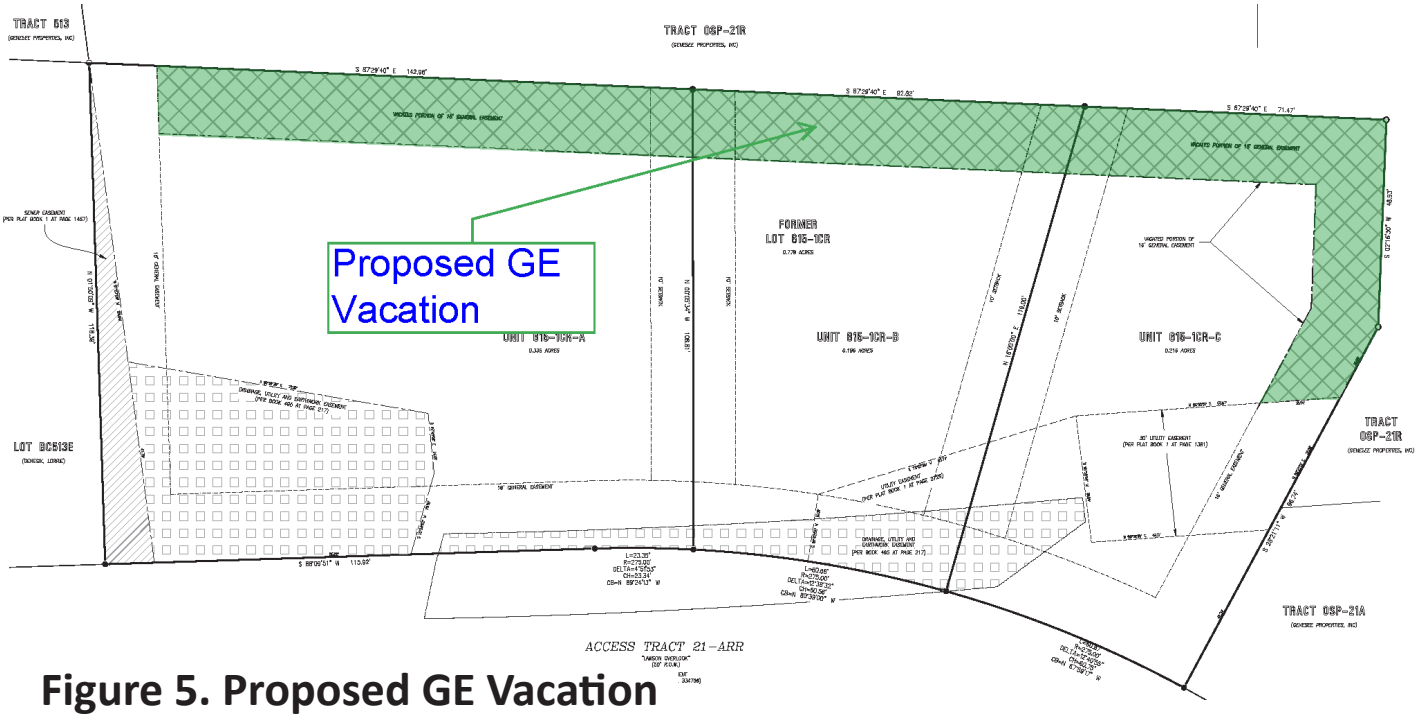
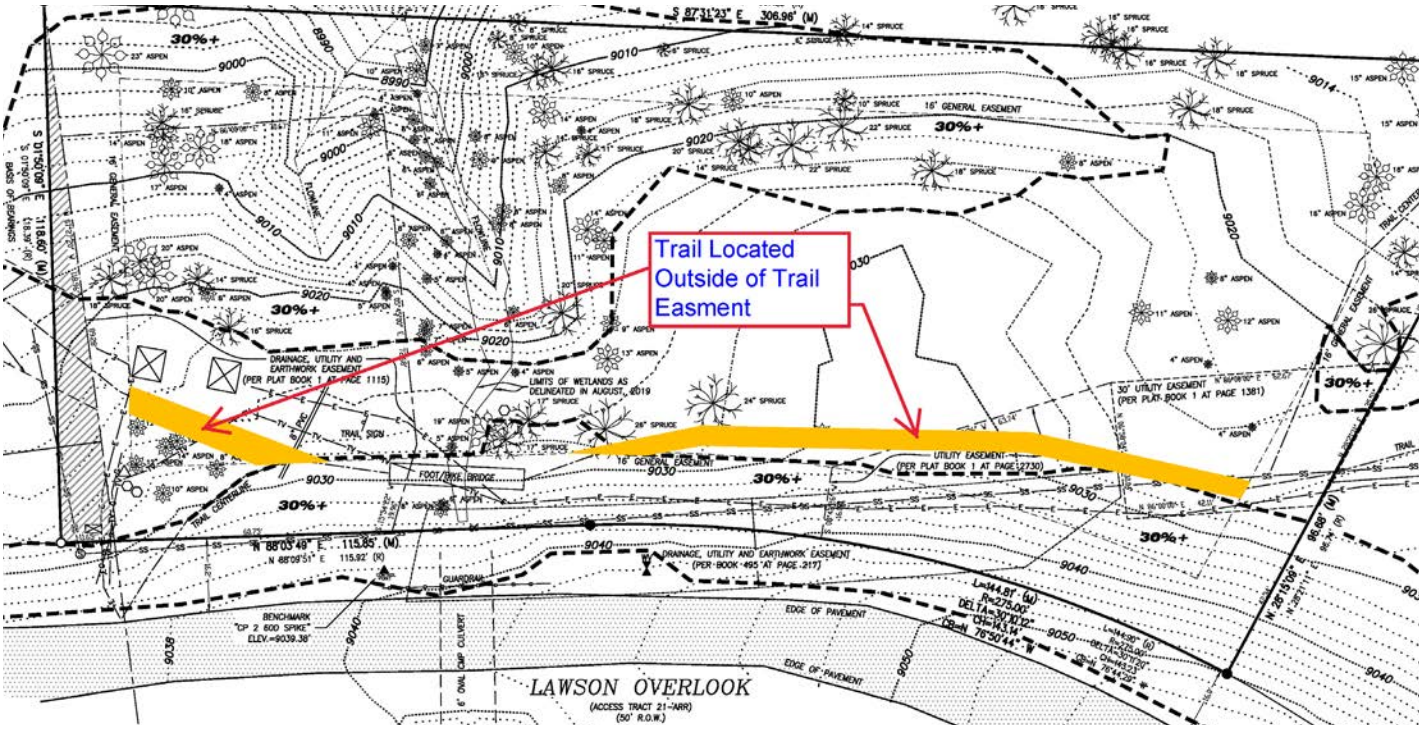


Figure 5. Proposed GE Vacation



The proposed driveway has been designed by Uncompahgre Engineering to be located in the only location that can provide access to the Property. There is no other way to design access, which means that the trail must be relocated to allow for reasonable use of the Property.

The relocated Meadows Trail on the Property is located in 16' General Easements and the Lawson Overlook Right-of-Way so no new easements are needed. We are proposing to relocated the trail on OSP-21A to the east of the Property to provide for a direct, better graded trail experience. OSP-21A is owned by Genesee Properties, Inc. The Owner's attorney reached out to the Genessee attorney and indicated that Genesee is amenable to granting a new trail easement to the Town. We are respectfully requesting the Town approval include a condition that this new easement be provided to the Town prior to the Town signing the proposed plat, and prior to reconstructing the Meadows Trail as proposed. To the west of the Property the trail plan also includes grading that extends onto Lot BC513E 16 foot General Easement to provide for required SMPA access grading for it to reach crucial transformers that are a main line into Mountain Village. This dual grading allows for trail and utility uses that are expressly allowed uses in the 16-foot general easement as follows:

> "General Easement: **There exists for the benefit of** the TSG Ski & Golf, LLC ("TSG"), and/or its assigns, a perpetual easement sixteen feet (16") in width over, across and under all areas designated as sixteen foot (16') general easement on this replat for any and all uses, improvements and activities deemed necessary by TSG; Mountain Village Metropolitan District; Telluride Mountain Village Resort Company, a Colorado non-profit corporation, doing business as the Telluride Mountain Village Owners Association(TMVOA) and **the Town** for the safe and efficient operation of the Telluride Ski Area, Telluride Golf Course and the Town, which include but are not limited to the following: **utilities**, drainage, **electrical service**, communication service, ski slope maintenance, **bicycle access**, skier access, roadway access, equestrian access, **pedestrian access**, golf cart access, snow making, waterways, slope maintenance, snow storage, **retaining walls**, snowmobile access, snow removal, snowcat access, water, sanitary sewer and storm sewer."

So the Town can authorize the proposed trail and utility access improvements, inlcuding associated grading

on Lot BC 513E without the property owners consent.

It should be noted that the Meadows Trail was completely rerouted onto Adams Ranch Road for the Coyote Court project. The proposed design does not reroute the trail onto the road, but maintains a grade separated trail to provide a good user experience.

The re-routed Meadows Trail has been designed by Uncompahgre Engineering as shown in the civil plan set to be the only location for re-routing. Town staff had asked to look at the feasibility of a tunnel under the proposed driveway, and Uncompahgre Engineering determined that such a route was not feasible. We will continue to work with Town staff on the final grading details, with the final grading providing prior to the DRB Final Architectural Review.

Wetlands

The proposed driveway must cross a small wetland area as shown in the civil plan set. The grading plan has been designed with two-24 inch culverts that will cause approximately 140 sq. ft. of wetland fill including the rip rap at the norther culvert outlets. It is not possible to avoid wetland fill and provide for reasonable access to the Property. The proposed wetland fill will be addressed with the concurrent Design Review Process application with DRB review and consideration pursuant to the CDC Wetland Regulations.

The following section analyzes how the proposed wetland fill meets the Town Wetland Regulation criteria in CDC Section 17.6.1(B)2(d), with our comments shown in *italics*:

i. The proposed wetland disturbance is in general conformance with the Comprehensive Plan or is necessary to allow for reasonable use of the lot. *The proposed disturbance conforms to the Comprehensive Plan because the Future Land Use Map envisions the Property developed with single-family detached condominiums uses as proposed. The disturbance is also needed to allow for reasonable use of the Property. The only way to access the site is with a common driveway that must cross the wetland area, with access a key component of reasonable use.*

ii. The applicant has provided a wetland mitigation plan that provides for replacing the wetland areas proposed for temporary disturbance, or, for wetland fill, replacement wetland areas with the same functions and values of the impacted wetland with the mitigation provided at an appropriate ratio of 1:1 or greater. *The grading plan shows 1:1 mitigation by the creation of a new wetland area south of the proposed culverts. The details of this mitigation plan will be provided to the DRB with the Final Architectural Review application.*

iii. The United States Army Corps of Engineers ("USACE") has reviewed the proposed wetland disturbance or fill and has either recommended approval to the Town or has approved the required federal permits. *The Owner has submitted an application to the USACE for the proposed fill. This permit will be provided to the Town prior to the DRB Final Architectural Review hearing.*

iv. The developer shall provide a conservation easement to the Town for the wetland area that requires it to maintain the wetland area over time. *The Owner will prepare a draft conservation easement to the Town to ensure the wetland area is maintained over time.*

v. The development has provided for specific best management practices to protect wetland resources not impacted by development from direct and indirect impacts. *The Final Architectural Review plan set will include detailed Best Management Practices to ensure wetland resources on the Property are protected during construction, including silt fences, waddles or similar methods.*

Subdivision Design Standards Compliance

The proposed subdivision complies with the Subdivision Design Standards and General Standards in CDC 17.4.13(F). Condominium maps do not have to provide 50 feet of frontage. Vehicle and utility access has been designed to meet the CDC requirements. The proposed condominium land units are comparable to the lots that are located to the east of the site. Solar access is provided. Necessary General Easements and setbacks are provided. The proposed condominium land units have been designed with the land use patterns envisioned in the Comprehensive Plan; topographical considerations; access; adequate building area for each unit; and availability of infrastructure.

The proposed subdivision has been designed to meet the following Environmental Standards, with our comments shown in *italics*:

a. Protection of Distinctive Natural Features. To the extent practical, subdivisions shall be designed to protect and preserve distinctive natural features, such as ridgelines, steep slopes, perennial streams, intermittent streams and wetland areas. Such areas shall be left in their natural state and protected by either the use of disturbance envelopes, the establishment of open space lots where development is prohibited or some other protective measures acceptable to the review authority. *The Property is located on a Ridgeline Lot so it is not practical to protect ridgelines. The Property also contains extensive steep slopes that cannot be avoided (Please refer to Steep Slope section). Development is protecting the intermittent stream through the site with culverts required to provide access. It is not possible to avoid limited wetland fill for the access, with the wetland impacts mitigated by on-site creation of wetlands and the use of Best Management Practices during construction.*

b. Designing Subdivisions to Fit the Topography of the Land. To the extent practical, subdivisions shall be designed so that the layout of lots, the placement of building envelopes, the alignment of roads, trails, driveways, walkways and all other subdivision features shall utilize a design philosophy that generally reflects the existing natural topographic contours of the property. *The Subdivision and associated improvements have been designed to fit the steep topography of the site, with soils report indicating development is feasible in all areas as proposed.*

c. Areas Subject to Environmental Hazard. Lots proposed for development and access roads to such development shall avoid areas subject to avalanches, landslides, rockfalls, mudflows, unstable slopes, floodplains or other areas subject to environmental or geologic hazards unless these hazards are mitigated to the satisfaction of the review authority. All mitigation measures shall be designed by a Colorado professional engineer. To the extent identified hazards cannot be mitigated to the satisfaction of the review authority, the subdivision plat shall reflect those areas as non-developable. *The proposed subdivision is not located in an area subject to geologic hazards per the submitted soils/geotechnical report.*

The subdivision provides for the CDC and agency required Fire Protection, driveway improvements and infrastructure. The proposed condominium map and associated declaration provide for the required easements and maintenance of project infrastructure.

Steep Slopes

The Property contains steep slopes that are 30% or greater as shown in Figure 4. The area of steep slopes is approximately 17,307 sq. ft. that represents 51% of the Site area.

Section 17.6.1(C)(2)(a) of the Community Development Code CDC states that:

> "Building and development shall be located off slopes that are thirty percent (30%) or greater to the extent practical.
>
> i. In evaluating practicable alternatives, the Town recognizes that is may be necessary to permit disturbance of slopes that are 30% or greater on a lot to allow access to key viewsheds, avoid other environmental issues, buffer development and similar site-specific design considerations."

It is not practicable to avoid all steep slope areas because over half of the Site contains steep slopes. In addition, the steep slopes leave only one spot for driveway access that pushes the permitted density and uses down the Site. It is also important to note that a large area of steep slopes appears to be steeper in grade due to the drainage and erosion, and did not exist with such steeper grades when Mountain Village was first platted and planned. The construction of Lawson Overlook also appears to have created additional steep slopes due to road grading and fill.

CDC Section 17.6.1(C)(2)(c) states the review authority will only allow for steep slope disturbance if the following criteria are met, with our comments shown in *italics*:

i. The proposed steep slope disturbance is in general conformance with the Comprehensive Plan. *The proposed steep slope disturbance is envisioned by the Plan. The Future Land Use Map envisions the development of the Site with single-family development (detached condominiums are single-family-type dwellings).*

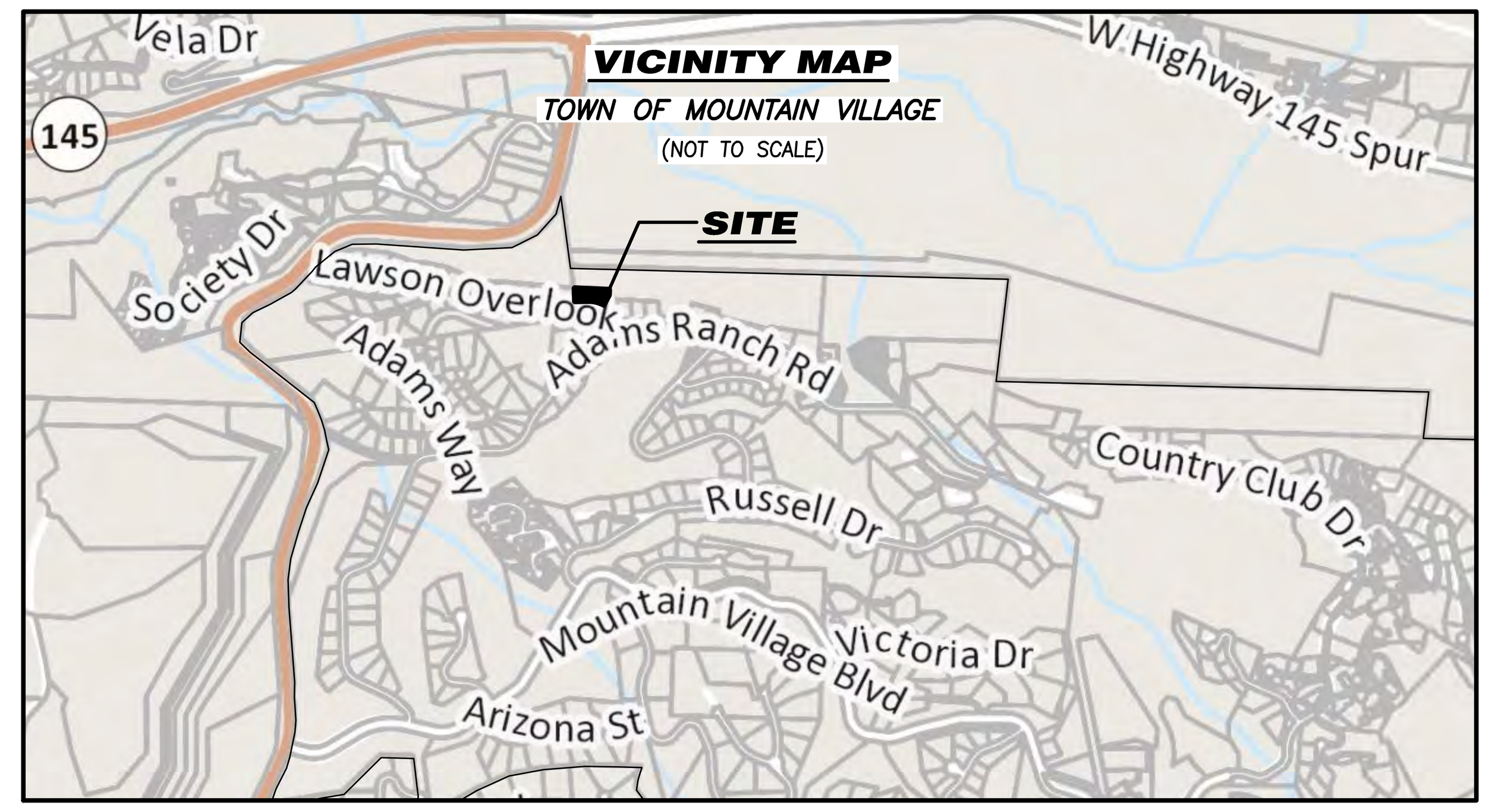
ii. The proposed disturbance is minimized to the extent practical. *The disturbance to the steep slope areas has been minimized. The West House has been designed with downhill columns rather than a full foundation to minimize steep slop disturbance. An 8-foot tall retaining wall for the West and Middle houses' common driveway is designed to minimize slope impacts that would be caused by two 4-foot tall walls. The Middle House and East House have been designed with lower level, walk out basements that are set into the existing topography and grades, with finished grade to remain the same as existing grade.*

iii. A Colorado professional engineer or geologist has provided:

(a) A soils report or, for a subdivision, a geologic report; or

(b) An engineered civil plan for the lot, including grading and drainage plans.

And the proposal provides mitigation for the steep slope development in accordance with the engineered plans. *A Colorado PE has designed the proposed grading plans. A geotechnical report has been provided to the Town.*



OWNER'S AND DECLARANT'S CERTIFICATE:

*BROWN DOG PROPERTIES, LLC ("**Owner**" or "**Declarant**") is the current fee simple owner of the following described real property located within the municipal boundaries of the Town of Mountain Village, San Miguel County, Colorado ("**Lot 615-1CR**") further described as follows:*

LOT 615–1CR, TOWN OF MOUNTAIN VILLAGE, ACCORDING TO THE REPLAT OF LOTS BC110, BC513A, 615–1C, 615–2CR, 615–3AR, TRACT 21–AR, TRACT OSP–21, TRACTS OS–615A, OS–615B, OS–615C AND OLD HIGHWAY ROAD, RECORDED JUNE 7, 2000 IN PLAT BOOK 1 AT PAGE 2729,

COUNTY OF SAN MIGUEL, STATE OF COLORADO.

The Owner does hereby make and approve the within plat and by these presents has caused the property described hereon to be laid out, platted and subdivided the same into units, as shown on this plat under the name and style of Unit 615–1CR–A, Unit 615–1CR–B and Unit 615–1CR–C, The Owner as Declarant also has created the Units and Common Elements as shown on this plat and as set forth in the Declaration of Covenants, Conditions and Restrictions for Sundance Estates, a Common Interest Community recorded herewith.

Town of Mountain Village.

ACKNOWLEDGMENT:

State of)
) ss
County of)

The foregoing signature was acknowledged before me this ______ day of __________________, 2021 A.D. by ____________________________ as _____________________ of BROWN DOG PROPERTIES, LLC.

My commission expires __________________.
Witness my hand and seal.

____
Notary Public

TOWN OF MOUNTAIN VILLAGE APPROVAL:

I, ______________________, as Mayor of the Town of Mountain Village, Colorado, do hereby certify that this Plat has been approved by the Town by the Resolution recorded herewith and has authorized and directed me to execute this document.

____
Mayor Date

I, Michelle Haynes, as Planning and Development Services Director of the Town of Mountain Village do hereby certify that this Plat has been approved by the Town by the Resolution recorded herewith.

____
Michelle Haynes, Date
Planning and Development Services Director

SURVEYOR'S CERTIFICATE:

I, Jeffrey C. Haskell of Foley Associates, Inc., being a Colorado Licensed Surveyor, do hereby certify that this Minor Subdivison Plat of Units 615–1CR–A, 615–1CR–B and 615–1CR–C, a Replat of Lot 615–1CR, Town of Mountain Village; and Map for Sundance Estates, a Common Interest Community was made by me and under my direct responsibility, supervision and checking, in compliance with the applicable provisions of Title 38, Article 51, C.R.S., and that both are true and accurate to the best of my knowledge and belief.

____
P.L.S. No. 37970 Date

NOTES:

1. Approval of this plat may create a vested property right pursuant to Article 68 of Title 24, C.R.S., as amended.

2. Easement research and legal descriptions provided by Land Title Guarantee Company, Order Number TLR86011307, dated March 01, 2021 at 5:00 P.M.

3. NOTES OF CLARIFICATION:

a. The Configuration of the following lots, tracts, and right–of–way have been modified by this Plat:

The 16' General Easement and the Drainage, Utility and Earthwork Easement

b. The following lots have been created by this Plat:

Unit 615–1CR–A, Unit 615–1CR–B,
Unit 615–1CR–C

c. The following units have been deleted by this Plat:

Lot 615–1CR

4. BASIS OF BEARINGS: The bearing between found monuments along the Northern boundary of Lot 615–1CR, as shown hereon, was assumed to have the record bearing of S 87°29'40" E according to the legal description hereon.

5. Lineal Units represented hereon are shown in U.S. Survey Feet or a decimal portion thereof.

6. NOTICE: According to Colorado law, you must commence any legal action based upon 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 hereon.

TREASURER'S CERTIFICATE:

I, the undersigned, Treasurer of the County of San Miguel, do hereby certify that according to the records of the San Miguel County Treasurer there are no liens against the subdivision or any part thereof for unpaid state, county, municipal or local taxes or special assessments due and payable, in accordance with Land Use Code Section 3–101.

Dated this ____ day of _______________, 2021.

____
San Miguel County Treasurer

TITLE INSURANCE COMPANY CERTIFICATE:

Land Title Guarantee Company does hereby certify that we have examined the title to all lands herein shown on this plat and that the title to this land is in the names of those persons shown in the Owners Certificate which is on the face hereof and is free of all liens and taxes, except as follows:

____
Title Insurance Company Representative

RECORDER'S CERTIFICATE:

This plat was filed for record in the office of the San Miguel County Clerk and Recorder on this ________ day of ______________________________________, 2021,

at Plat Book ______________,

Page _____________,

Reception No. ____________________________,

Time _______________.

____
San Miguel County Clerk

Minor Subdivision Plat of Units 615-1CR-A, 615-1CR-B and 615-1CR-C, a Replat of Lot 615-1CR, Town of Mountain Village; and Map for Sundance Estates, a Common Interest Community

Located within the SW 1/4 of Section 33, T.43N., R.9.W., N.M.P.M., County of San Miguel, State of Colorado.

Project Mgr:	JH
Technician:	FO
Technician:	
Checked by:	
Start date:	05/20/2019

Rev.	description	date	by

FOLEY ASSOCIATES, INC.
ENGINEERING · PLANNING · SURVEYING
970-728-6153 970-728-6050 fax
P.O. BOX 1385
125 W. PACIFIC, SUITE B-1
TELLURIDE, COLORADO 81435

Drawing path: dwg\01034 Replat 04–21.dwg | Sheet1 of 3 | Project #: 01034


LEGEND
FOUND No. 5 REBAR AND 1½" ALUMINUM CAP, LS 24954
FOUND No. 5 REBAR, NO CAP
SET 18" No. 5 REBAR AND 1½" ALUMINUM CAP, LS 37970
SCALE: 1"=16'
0 4 8 12 16 32
N
TRACT 513
(GENESEE PROPERTIES, INC)
TRACT OSP-21R
(GENESEE PROPERTIES, INC)
S 87°29'40" E 142.96'
S 87°29'40" E 92.82'
S 87°29'40" E 71.47'
VACATED PORTION OF 16' GENERAL EASEMENT
VACATED PORTION OF 16' GENERAL EASEMENT
SEWER EASEMENT
(PER PLAT BOOK 1 AT PAGE 1457)
N 01°50'09" W 118.39'
16' GENERAL EASEMENT
10' SETBACK
N 00°05'34" W 108.61'
10' SETBACK
FORMER
LOT 615-1CR
0.778 ACRES
10' SETBACK
N 16°00'00" E 119.00'
10' SETBACK
VACATED PORTION OF
16' GENERAL EASEMENT
S 02°16'30" W 48.93'
UNIT 615-1CR-A
0.336 ACRES
UNIT 615-1CR-B
0.196 ACRES
UNIT 615-1CR-C
0.216 ACRES
DRAINAGE, UTILITY AND EARTHWORK EASEMENT
(PER BOOK 495 AT PAGE 217)
LOT BC513E
(DENESIK, LORRIE)
16' GENERAL EASEMENT
UTILITY EASEMENT
(PER PLAT BOOK 1 AT PAGE 2729)
30' UTILITY EASEMENT
(PER PLAT BOOK 1 AT PAGE 1381)
16' GENERAL EASEMENT
TRACT
OSP-21R
(GENESEE PROPERTIES, INC)
DRAINAGE, UTILITY AND
EARTHWORK EASEMENT
(PER BOOK 495 AT PAGE 217)
S 88°09'51" W 115.92'
L=23.35'
R=275.00'
DELTA=4°51'53"
CH=23.34'
CB=N 89°24'13" W
L=60.68'
R=275.00'
DELTA=12°38'32"
CH=60.56'
CB=N 80°39'00" W
S 28°21'11" W 96.74'
TRACT OSP-21A
(GENESEE PROPERTIES, INC)
L=60.87
R=275.00'
DELTA=12°40'55"
CH=60.75'
CB=N 67°59'17" W
ACCESS TRACT 21-ARR
"LAWSON OVERLOOK"
(50' R.O.W.)
ACCESS EASEMENT
(PER RECEPTION No. 334706)

Minor Subdivision Plat of Units 615-1CR-A, 615-1CR-B and 615-1CR-C, Town of Mountain Village, a Replat of Lot 615-1CR

Located within the SW ¼ of Section 33, T.43N., R.9W., N.M.P.M., County of San Miguel, State of Colorado.

Project Mgr:	JH
Technician:	FO
Technician:	
Checked by:	
Start date:	05/20/2019

Rev.	description	date	by

FOLEY ASSOCIATES, INC.
ENGINEERING · PLANNING · SURVEYING
970-728-6153 970-728-6050 fax
P.O. BOX 1385
125 W. PACIFIC, SUITE B-1
TELLURIDE, COLORADO 81435

Drawing path: dwg\01034 Replat 04-21.dwg | Sheet2 of 3 | Project #: 01034

LEGEND
FOUND No. 5 REBAR AND 1½" ALUMINUM CAP, LS 24954
FOUND No. 5 REBAR, NO CAP
SET 18" No. 5 REBAR AND 1½" ALUMINUM CAP, LS 37970
SCALE: 1"=16'
0 4 8 12 16 32
N
TRACT 513
(GENESEE PROPERTIES, INC)
TRACT OSP-21R
(GENESEE PROPERTIES, INC)
S 87°29'40" E 142.96'
S 87°29'40" E 92.82'
S 87°29'40" E 71.47'
S 02°16'30" W 48.93'
SEWER EASEMENT
(PER PLAT BOOK 1 AT PAGE 1457)
N 01°50'09" W 118.39'
16' GENERAL EASEMENT
10' SETBACK
N 00°05'34" W 108.61'
10' SETBACK
FORMER
LOT 615-1CR
0.778 ACRES
10' SETBACK
N 16°00'00" E 119.00'
10' SETBACK
UNIT 615-1CR-A
0.336 ACRES
UNIT 615-1CR-B
0.196 ACRES
UNIT 615-1CR-C
0.216 ACRES
DRAINAGE, UTILITY AND EARTHWORK EASEMENT
(PER BOOK 495 AT PAGE 217)
TYPICAL EDGE OF DRIVEWAY
(GENERAL COMMON ELEMENT)
30' UTILITY EASEMENT
(PER PLAT BOOK 1 AT PAGE 1381)
LOT BC513E
(DENESIK, LORRIE)
TRACT
OSP-21R
(GENESEE PROPERTIES, INC)
TYPICAL EDGE OF DRIVEWAY
(GENERAL COMMON ELEMENT)
16' GENERAL EASEMENT
UTILITY EASEMENT
(PER PLAT BOOK 1 AT PAGE 2729)
TYPICAL EDGE OF DRIVEWAY
(GENERAL COMMON ELEMENT)
DRAINAGE, UTILITY AND
EARTHWORK EASEMENT
(PER BOOK 495 AT PAGE 217)
16' GENERAL EASEMENT
S 28°21'11" W 96.74'
S 88°09'51" W 115.92'
L=23.35'
R=275.00'
DELTA=4°51'53"
CH=23.34'
CB=N 89°24'13" W
L=60.68'
R=275.00'
DELTA=12°38'32"
CH=60.56'
CB=N 80°39'00" W
L=60.87'
R=275.00'
DELTA=12°40'55"
CH=60.75'
CB=N 67°59'17" W
TRACT OSP-21A
(GENESEE PROPERTIES, INC)
ACCESS TRACT 21-ARR
"LAWSON OVERLOOK"
(50' R.O.W.)
ACCESS EASEMENT
(PER RECEPTION No. 334706)

Map for Sundance Estates, a Common Interest Community, Units 615-1CR-A, 615-1CR-B and 615-1CR-C, Town of Mountain Village

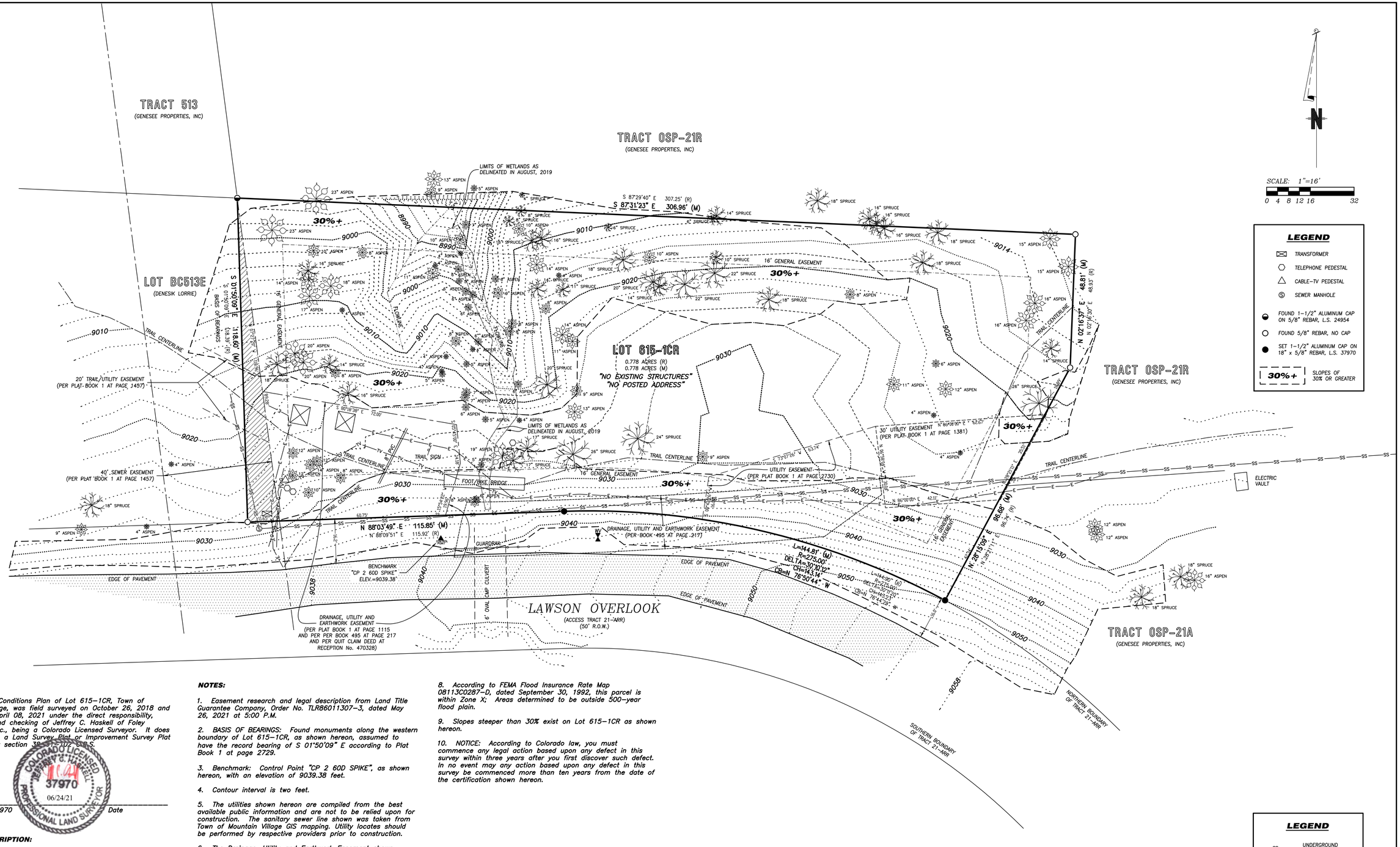
Located within the SW ¼ of Section 33, T.43N., R.9.W., N.M.P.M., County of San Miguel, State of Colorado.

Project Mgr:	JH
Technician:	FO
Technician:	
Checked by:	
Start date:	05/20/2019

Rev.	description	date	by

FOLEY ASSOCIATES, INC.
ENGINEERING · PLANNING · SURVEYING
970-728-6153 970-728-6050 fax
P.O. BOX 1385
125 W. PACIFIC, SUITE B-1
TELLURIDE, COLORADO 81435

Drawing path: dwg\01034 Replat 04-21.dwg | Sheet3 of 3 | Project #: 01034



This Existing Conditions Plan of Lot 615-1CR, Town of Mountain Village, was field surveyed on October 26, 2018 and updated on April 08, 2021 under the direct responsibility, supervision and checking of Jeffrey C. Haskell of Foley Associates, Inc., being a Colorado Licensed Surveyor. It does not constitute a Land Survey Plat or Improvement Survey Plat as defined by section 38-51-102, C.R.S.

COLORADO LICENSED JEFFREY C. HASKELL 37970 PROFESSIONAL LAND SURVEYOR
06/24/21

P.L.S. NO. 37970 *Date*

LEGAL DESCRIPTION:

LOT 615-1CR, TOWN OF MOUNTAIN VILLAGE, ACCORDING TO THE REPLAT OF LOTS BC110, BC513A, 615-1C, 615-2CR, 615-3AR, TRACT 21-AR, TRACT OSP-21, TRACTS OS-615A, OS-615B, OS-615C AND OLD HIGHWAY ROAD, RECORDED JUNE 7, 2000 IN PLAT BOOK 1 AT PAGE 2729,

COUNTY OF SAN MIGUEL, STATE OF COLORADO

NOTES:

1. Easement research and legal description from Land Title Guarantee Company, Order No. TLR86011307-3, dated May 26, 2021 at 5:00 P.M.

2. BASIS OF BEARINGS: Found monuments along the western boundary of Lot 615-1CR, as shown hereon, assumed to have the record bearing of S 01°50'09" E according to Plat Book 1 at page 2729.

3. Benchmark: Control Point "CP 2 60D SPIKE", as shown hereon, with an elevation of 9039.38 feet.

4. Contour interval is two feet.

5. The utilities shown hereon are compiled from the best available public information and are not to be relied upon for construction. The sanitary sewer line shown was taken from Town of Mountain Village GIS mapping. Utility locates should be performed by respective providers prior to construction.

6. The Drainage, Utility and Earthwork Easement shown hereon was revised by a Quit Claim Deed as recorded on May 25, 2021 in the office of the San Miguel County Clerk and Recorder at Reception No. 470328.

7. Trees greater than 3" in diameter have been located as shown hereon

8. According to FEMA Flood Insurance Rate Map 08113C0287-D, dated September 30, 1992, this parcel is within Zone X; Areas determined to be outside 500-year flood plain.

9. Slopes steeper than 30% exist on Lot 615-1CR as shown hereon.

10. 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 hereon.

Existing Conditions Plan
Lot 615-1CR, Town of Mountain Village,
San Miguel County, Colorado.

Project Mgr:	JH
Technician:	MC
Technician:	
Checked by:	CC
Start date:	04/12/2021

Rev.	description	date	by

FOLEY ASSOCIATES, INC.
ENGINEERING · PLANNING · SURVEYING
970-728-6153 970-728-6050 fax
P.O. BOX 1385
125 W. PACIFIC, SUITE B-1
TELLURIDE, COLORADO 81435

Drawing path: dwg\01034 TOPO 04-21.dwg | Sheet1 of 1 | Project #: 01034

LOT SIZE	15,945 S.F.
ALOWABLE	6,318 S.F.
SITE COVERAGE	3,395 S.F. (21.2%)
INCLUDES DECK, PATIO, COVERED ENTRY	

LOT SIZE	8,548 S.F.
SITE COVERAGE	2,741 S.F. (32%)
INCLUDES DECK, PATIO, COVERED ENTRY	

LOT SIZE	9,429 S.F.
ALOWABLE	3,771 S.F.
SITE COVERAGE	2,808 S.F. (29.7%)
INCLUDES DECK, PATIO, COVERED ENTRY	

142'-9"
90'-10"
71'-5"
10' SETBACK
10' SETBACK
10' SETBACK
10' SETBACK
CONC PATIO BELOW
DECK @ MAIN LVL
RIDGE 18'-0" (EL 9042.5)
RIDGE 22'-2" (EL 9046.67)
(ELEV 9026.5) +100'-0" T.O. FLYND
RETAINING WALL PER CIVIL DWGS TO MEET CDC DESIGN REGULATIONS
(ELEV 9027.5) +101'-0" T.O. CONC
RIDGE 18'-3" (EL 9044.83)
(ELEV 9026.5) +100'-0" T.O. FLYND
RIDGE 15'-2" (EL 9039.67)
CONC WALK
CONTROL POINT
RIDGE 15'-3" (EL 9043.21)
(ELEV 9028) +98'-6" T.O. CONC
(ELEV 9029.5) +100'-0" T.O. FLYND
RIDGE 14'-9" (EL 9041.17)
CONC WALK
RIDGE 17'-8" (EL 9041.17)
DECK @ MAIN LVL
CONC PATIO BELOW
RIDGE PT. 19'-4" (EL 9044.83)
(ELEV 9028) +98'-6" T.O. CONC
RIDGE 13'-4" (EL 9042.67)
(ELEV 9028.5) +100'-0" T.O. FLYND
16'-0"
38'-0"
RIDGE 14'-5" (EL 9042.67)
CONC WALK
32' radius
FIRE-DEPT HAMMERHEAD
33'-0"
16' WIDE DRIVE
12' PAVED 2' GUTTER EA SIDE
RETAINING WALL PER CIVIL DWGS TO MEET CDC DESIGN REGULATIONS
RETAINING WALL PER CIVIL DWGS TO MEET CDC DESIGN REGULATIONS
NEW BIKE TRAIL
60'-0"
60'-4"
16.0'
6'h ADDRESS MONUMENT RUSTED METAL FINISH
LAWSON OVERLOOK
8990
9000
9010
9020
9030
9040
9050
9038
9058
9028
9026
9014

DRIVEWAY AND TURNAROUND TO BE SIGNED "NO PARKING ANYTIME"

EACH RESIDENCE TO BE ADDRESSED ON THE HOUSE

SNOWMELT AREAS TO BE PROVIDED AT FINAL SUBMITTAL

REFER TO CIVIL FOR UTILITY LAYOUT

SITE SURVEY W/ BUILDING OVERLAY

SCALE = 1" = 10'-0"

SCALE: 1" = 10'

0 2 4 6 8 10 20

LEGEND

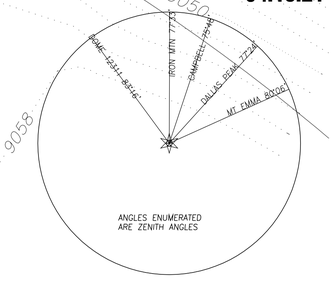
ASPEN TREE

SPRUCE TREE

FOUND No. 5 REBAR, NO CAP

FOUND No. 5 REBAR AND 1½" ALUMINUM CAP, LS 24954

PLAT MAP 04.15.21



ARCHITECT

Terri Montoya
Architects LLC
PO Box 1367
Salmon, ID 83467
Ph: 970.319.4305

CONSTRUCTION DOCUMENTS FOR

LOT 615 - 1CR Single Family Residences

COLORADO

MOUNTAIN VILLAGE

SEAL

REVISIONS:

DRAWN BY: TLM
CHECKED: TLM
DATE: 4.15.21

SHEET NUMBER:

Overall Site Plan

A101

GENERAL CIVIL ENGINEERING NOTES:

1. THE EXISTING UTILITY LINES SHOWN ON THE PLANS ARE APPROXIMATE. AT LEAST TWO (2) FULL WORKING DAYS PRIOR TO 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, CABLE TV AND FIBEROPTIC: TOWN OF MOUNTAIN VILLAGE
NATURAL GAS: BLACK HILLS ENERGY
POWER: SAN MIGUEL POWER
TELEPHONE: CENTURY LINK

2. 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 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 NOTIFY THE ENGINEER. ANY DISCHARGE REQUIREMENTS SHALL BE COORDINATED 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-PROOF 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 FEASIBLE 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 MONUMENTS AND PROPERTY CORNERS DURING GRADING AND CONSTRUCTION.

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

25. HOT TUBS SHALL DRAIN TO THE SANITARY SEWER (OR PUMPED TO AA CLEAN-OUT).

26. 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:

SUBMITTAL	2021-06-23

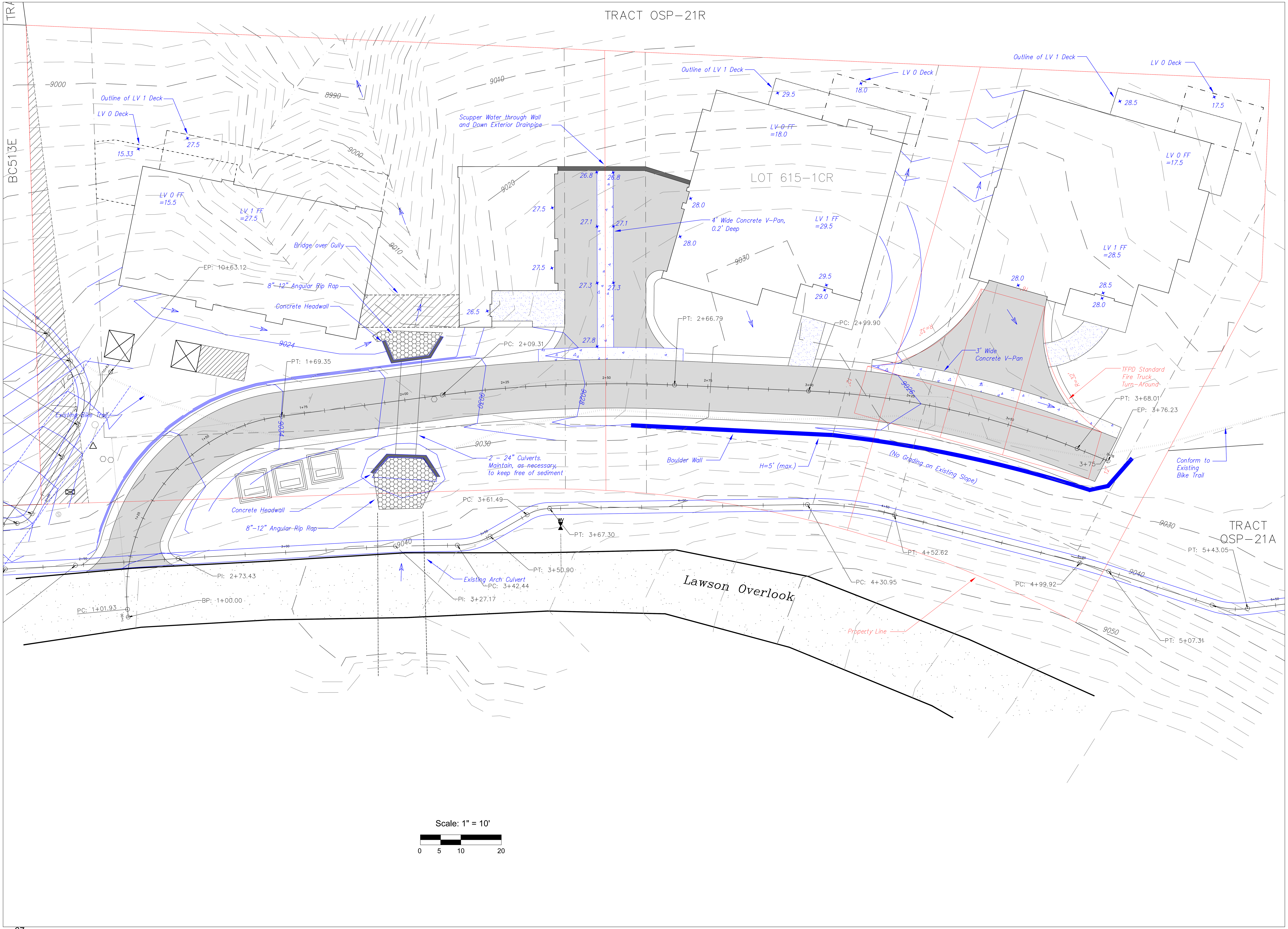
Lot 615
Lawson Overlook
Mountain Village, CO

COLORADO LICENSED
Kenneth Wilcox
29645
06-23-21
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

CONTRACTOR TO REVIEW AND COMPARE ALL CHAPTERS AND INTERDISCIPLINARY DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO ANY FIELD WORK BEING DONE IN ACCORDANCE WITH AIA DOCUMENT A201

Notes

C1



Uncompahgre Engineering, LLC

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

SUBMISSIONS:

SUBMITTAL	2021-06-23

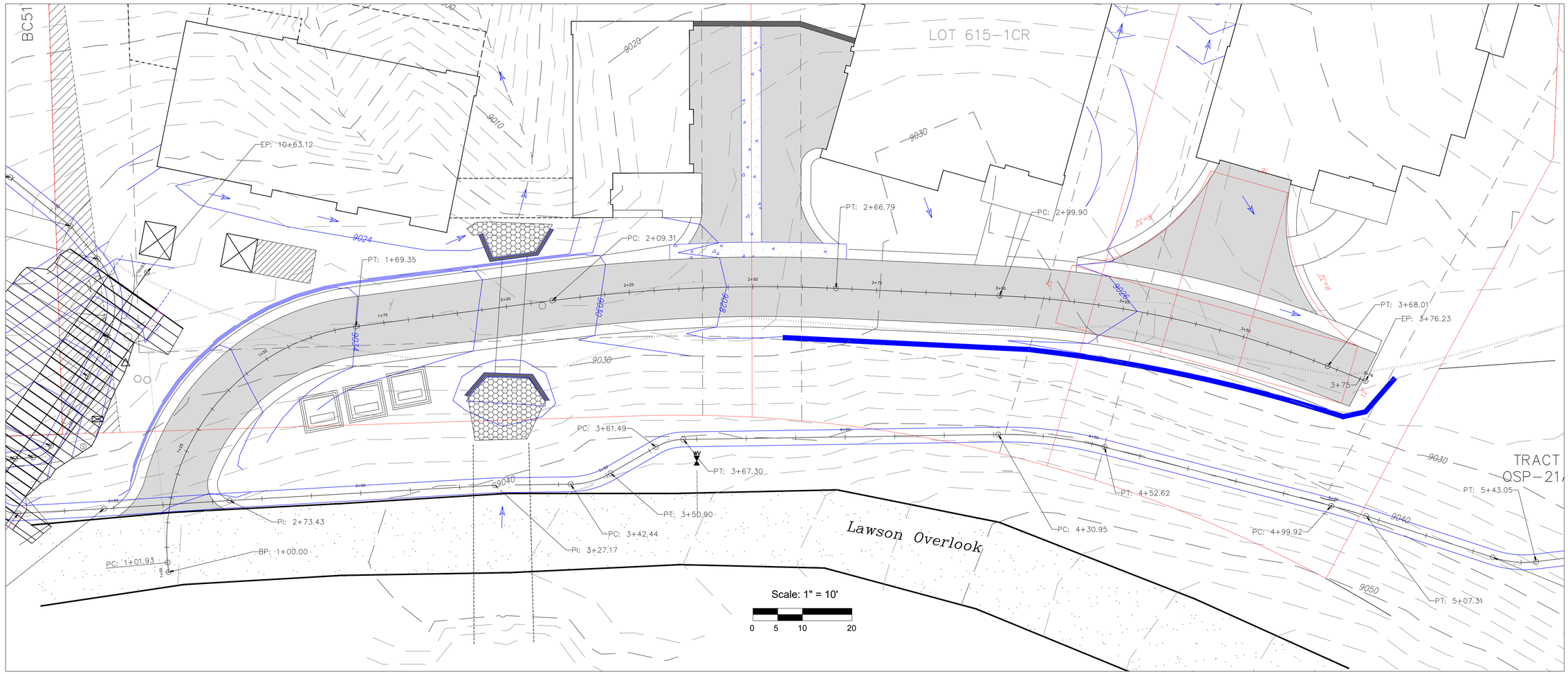
Lot 615
Lawson Overlook
Mountain Village, CO

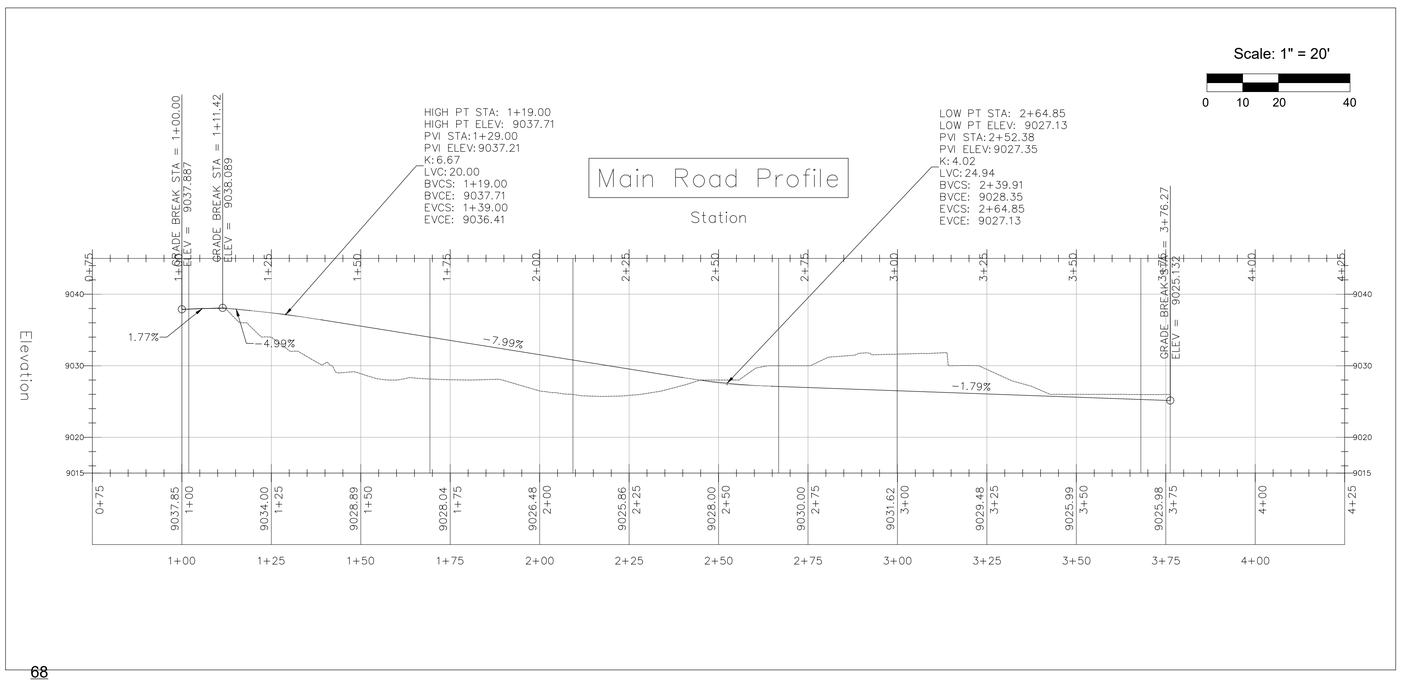
NOT FOR CONSTRUCTION

CONTRACTOR TO REVIEW AND COMPARE ALL CHAPTERS AND INTERDISCIPLINARY DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO ANY FIELD WORK BEING DONE IN ACCORDANCE WITH AIA DOCUMENT A201

Site Grading and Drainage

C2.1





Uncompahgre Engineering, LLC

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

SUBMISSIONS:

SUBMITTAL	2021-06-23

Lot 615
Lawson Overlook
Mountain Village, CO

COLORADO LICENSED
29645
PROFESSIONAL ENGINEER
06-23-21
NOT FOR CONSTRUCTION

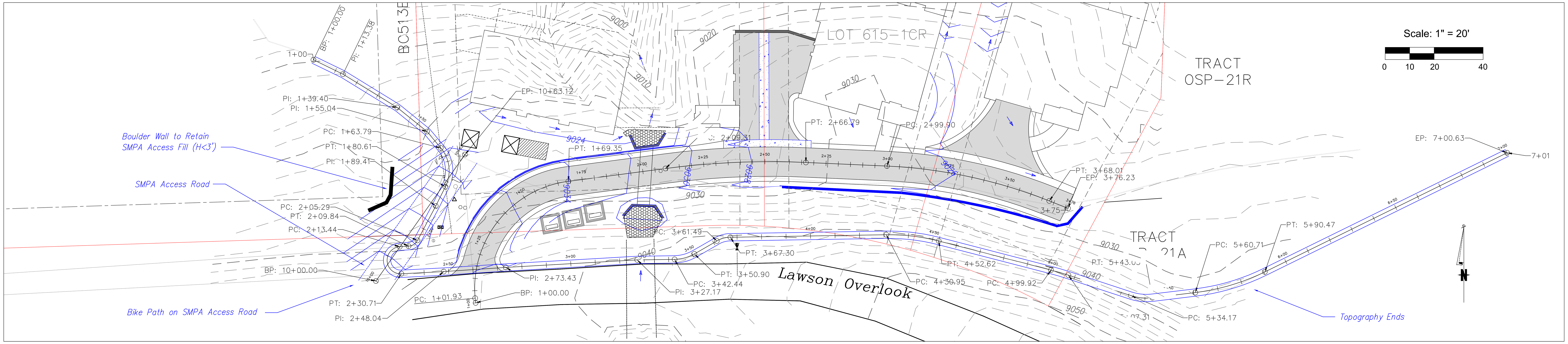
CONTRACTOR TO REVIEW AND COMPARE ALL CHAPTERS AND INTERDISCIPLINARY DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO ANY FIELD WORK BEING DONE IN ACCORDANCE WITH AIA DOCUMENT A201

Site Plan

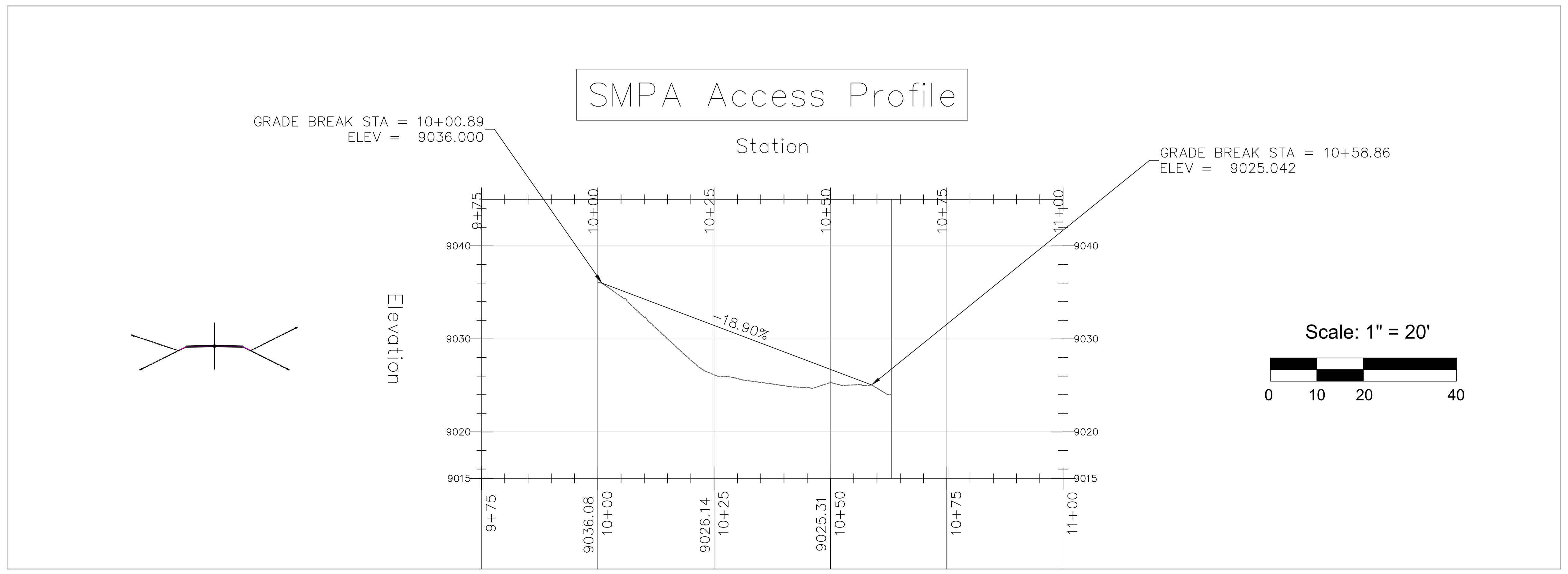
with

Driveway Profile

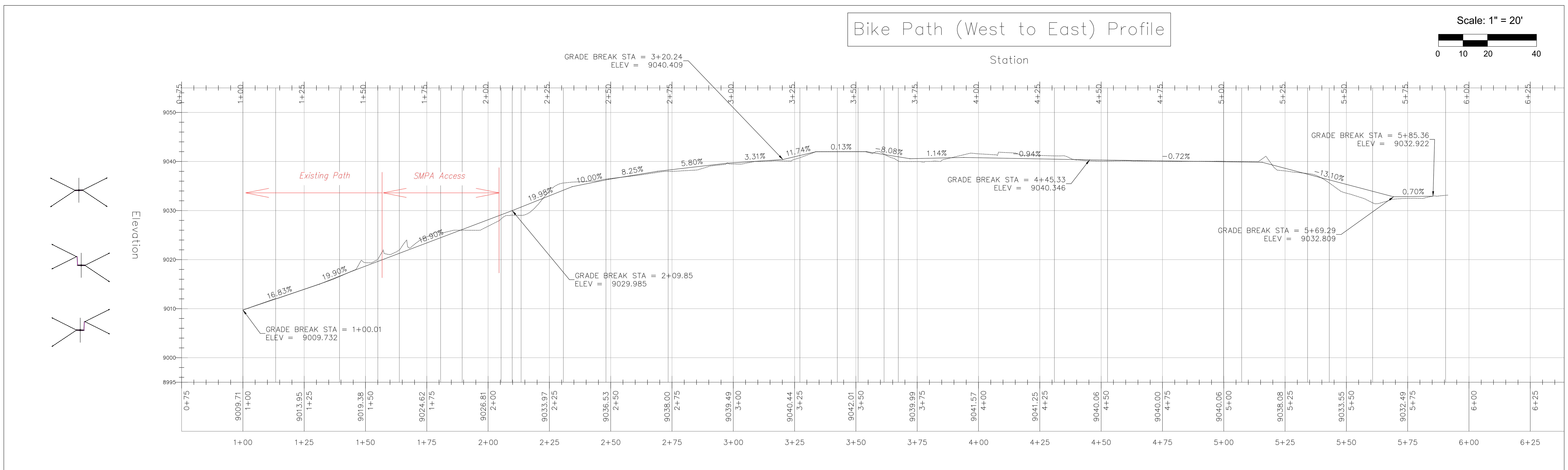
C2.2



SMPA Access Profile



Bike Path (West to East) Profile



Uncompahgre Engineering, LLC

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

SUBMISSIONS:

SUBMITTAL 2021-04-22

Lot 615
Lawson Overlook
Mountain Village, CO

COLORADO LICENSED PROFESSIONAL ENGINEER 29645 04-22-21
NOT FOR CONSTRUCTION

CONTRACTOR TO REVIEW AND COMPARE ALL CHAPTERS AND INTERDISCIPLINARY DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO ANY FIELD WORK BEING DONE IN ACCORDANCE WITH AIA DOCUMENT A201

Bike Path

with

Profile

C2.3

TRACT 513

TRACT OSP–21R

BC513E

LOT 615–1CR

TRACT OSP–21A

Lawson Overlook

New Transformer

This "UE" represents 3 – 3–Phase wires (9 total wires). They all need to be turned in individually to one of the Junction Boxes as shown.

3P = 3 Phase and Indicates 3 Conduits per Run

Existing Service Line to be Cleaned Back to Main and Corp Stop Turned Off. Tap 3 New 2" Service Lines at this Location.

Scale: 1" = 10'

0 5 10 20

Uncompahgre Engineering, LLC

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

SUBMISSIONS:

SUBMITTAL	2021–06–23

Lot 615
Lawson Overlook
Mountain Village, CO

NOT FOR CONSTRUCTION

Utilities

C3

Uncompahgre Engineering, LLC
P.O. Box 3945
Telluride, CO 81435
dballode@msn.com (970) 729-0683

July 01, 2021

To: Frank Hensen

RE: Bicycle Tunnel under Lot 615C Driveway

Dear Frank:

As requested, I have explored the possibility of installing a bicycle tunnel (culvert) under the Lot 615C. My conclusion is that it isn't feasible.

According to the CDOT Bicycle and Pedestrian Manual, the operating height for a bicyclist is 100 inches or 8.3' tall. I assume that a 10' culvert could provide this (the bottom of it being poured flat). You'll still need cover on top of that, so adding 2' would require 10.3' from Finished Grade of Road to the path.

The location that is most promising is crossing at approx. STA 1+35. The FG of the road is at elevation 9037. The downhill side is at about 9028, so it could probably be graded out enough to work, However, the grade on the uphill side of the culvert is 9035, so it would require a retaining wall 7'-8' tall to provide enough clearance. That wall would be in the Town's ROW and holding up the fill of the main road.

Assuming that the bicyclists entering from the east would be on a 20% grade, the wall would have to continue for 40'. So a bicyclist coming from the east would need to cross over the existing arch culvert and immediately start down at a 20% grade in order to be low enough to get under the driveway. To get over the arch culvert, the bicyclist would need to be riding on about the 9038 contour which is very close to the proposed alignment.

That scenario would also force a wall on the north side to hold up the 3-phase transformers.

That's a very cursory look at the grades, but a tunnel will also cause issues with the utilities which is not part of this opinion letter.

As stated previously, I don't believe that this is a feasible – or reasonable - solution.

Sincerely,

David Ballode, P.E.
Uncompahgre Engineering, LLC

Lambert and Associates

CONSULTING GEOTECHNICAL ENGINEERS AND MATERIAL TESTING

9 April, 2021

Hensen Construction
160 H Society Drive
Telluride, Colorado

Attention: Mr. Frank Hensen PN: M21021GE

Subject: Geotechnical Engineering Study for the
Three Proposed Residential Structures
Lot 615-1CR, Lawson Overlook
Telluride, Colorado

Mr. Hensen:

Lambert and Associates has initiated the geotechnical engineering study for the three proposed residential structures at Lot 615-1CR, Telluride, Colorado.

The subsurface exploration consisted of observing, describing and sampling the soil materials encountered in three (3) excavator advanced test excavations on April 1, 2021.

The laboratory tests of the soil samples obtained are in progress.

Please contact us with any questions.

Respectfully submitted,
LAMBERT AND ASSOCIATES

Daniel Lambert, P.E.

P.O. Box 3986
Grand Junction, CO 81502
(970) 245 6506

P.O. Box 45
Montrose, CO 81402
(970) 249 2154

Lambert and Associates

CONSULTING GEOTECHNICAL ENGINEERS AND MATERIAL TESTING

GEOTECHNICAL ENGINEERING STUDY

PROPOSED SINGLE FAMILY RESIDENTIAL STRUCTURES

LOT 615-1CR, LAWSON OVERLOOK

TELLURIDE, COLORADO

Prepared for:

HENSEN CONSTRUCTION

PROJECT NUMBER: M21021GE

MAY 18, 2021

P.O. Box 3986
Grand Junction, CO 81502
(970) 245 6506

P.O. Box 45
Montrose, CO 81402
(970) 249 2154

Lambert and Associates

CONSULTING GEOTECHNICAL ENGINEERS AND MATERIAL TESTING

May 18, 2021

Hensen Construction
P.O. Box 1497
Telluride, Colorado

Attention: Mr. Frank Hensen

PN: M21021GE

Subject: Geotechnical Engineering Study for the
Proposed Single Family Residential Structures
Lot 615-1CR Lawson Overlook
Telluride, Colorado

Mr. Hensen:

Lambert and Associates is pleased to present our geotechnical engineering study for the subject project. The field study was completed on April 1, 2021. The laboratory study was completed on May 14, 2021. The analysis was performed and the report prepared from May 14 through 18, 2021. Our geotechnical engineering report is attached.

We are available to provide material testing services for soil and concrete and provide foundation excavation observations during construction. We recommend that Lambert and Associates, the geotechnical engineer, for the project provide material testing services to maintain continuity between design and construction phases.

If you have any questions concerning the geotechnical engineering aspects of your project please contact us. Thank you for the opportunity to perform this study for you.

Respectfully submitted,

LAMBERT AND ASSOCIATES

Daniel R. Lambert, P.E.

P.O. Box 3986
Grand Junction, CO 81502
(970) 245 6506

P.O. Box 45
Montrose, CO 81402
(970) 249 2154

TABLE OF CONTENTS

1.0 INTRODUCTION

This report presents the results of the geotechnical engineering study we conducted for the proposed residential structures. The study was conducted at the request of Mr . Frank Hensen, Hensen Construction, in general accordance with our proposal for geotechnical engineering services dated March 11, 2021.

The conclusions, suggestions and recommendations presented in this report are based on the data gathered during our site and laboratory study and on our experience with similar soil conditions. Factual data gathered during the field and laboratory work are summarized in Appendices A and B.

1.1 Proposed Construction

It is our understanding the proposed construction is to include three single family residential structures and associated utilities.

1.2 Scope of Services

Our services included geotechnical engineering field and laboratory studies, analysis of the acquired data and report preparation for the proposed site. The scope of our services is outlined below.

- The field study consisted of describing and sampling the soil materials encountered in three (3) excavated test pits in the general vicinity of the proposed structures.

- The materials encountered in the test excavations were described and samples retrieved for the subsequent laboratory study.

- The laboratory study included tests of select soil samples obtained during the field study to help assess:

. the soil strength potential (internal friction angle and cohesion) of samples tested,
. the swell and expansion potential of the samples tested,
. the settlement/consolidation potential of the samples tested, and
. the moisture content and density of samples tested.

- This report presents our geotechnical engineering comments, suggestions and recommendations for planning and design of site development including:

- viable foundation types for the conditions encountered,
- allowable bearing pressures for the foundation types,
- lateral earth pressure recommendations for design of laterally loaded walls,
- geotechnical engineering considerations and recommendations for concrete slab on grade floors, and
- geotechnical engineering considerations and recommendations for compacted structural fill.

- Our comments, suggestions and recommendations are based on the subsurface soil and ground water conditions encountered during our site and laboratory studies.

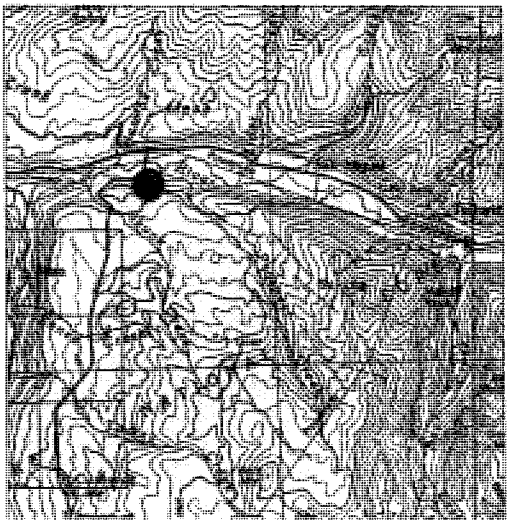
- Our study did not include any environmental or geologic hazard issues.

2.0 SITE CHARACTERISTICS

Site characteristics include observed existing and pre-existing site conditions that may influence the geotechnical engineering aspects of the proposed site development.

2.1 Site Location

The site is located on Lot 615-1CR, Lawson Overlook, Telluride, Colorado.



● Indicates approximate project location

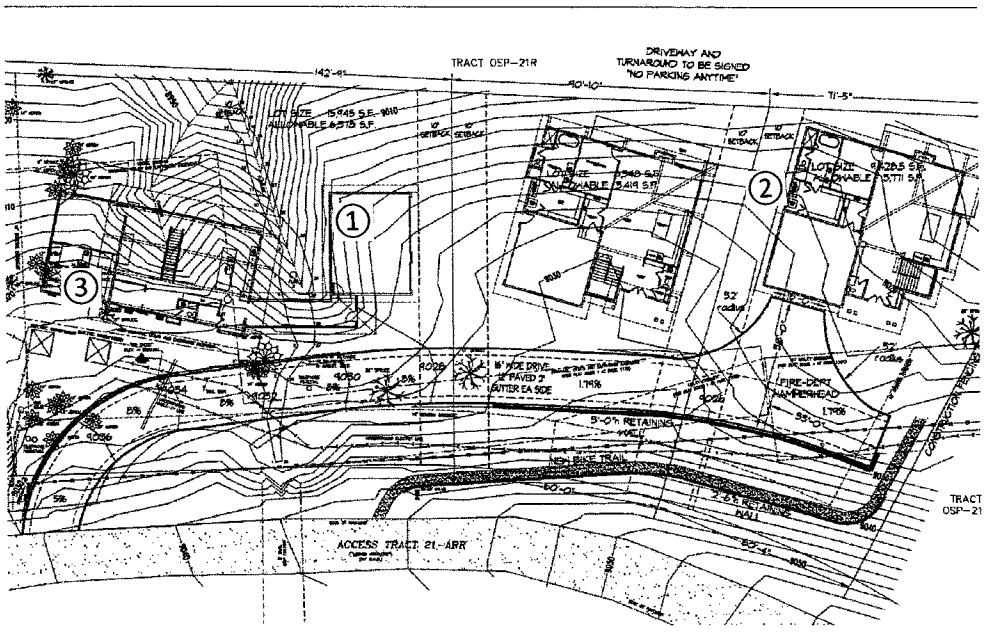
Figure 1. Project Vicinity Map

2.2 Site Conditions

The site is currently a vacant lot. The lot is vegetated with weeds and grasses. The site exhibits positive surface drainage to the north. The site is bordered to the south by Lawson Overlook, to the west and east by lots similar in terrain and to the north by a hillside and drainage.

2.3 Subsurface Conditions

The subsurface exploration consisted of observing, describing and sampling the soil materials encountered in three (3) excavator advanced test excavations.



○ Indicates approximate test exc. location

Figure 2. Test Excavation Location Sketch

The soil materials encountered within the test excavations generally consisted of clayey sand with gravels and rock fragments to the depths explored, approximately seven (7) to nine and one half (9-1/2) feet below existing site grades. The logs describing the soil materials encountered in the test excavations are presented in Appendix A.

At the time of our field study the proposed development site was not irrigated. It has been our experience that after the site is developed and once landscape irrigation begins the free subsurface water level may tend to rise. In some cases the free subsurface water level rise, as a result of landscape irrigation and other development influences, can be fairly dramatic

and the water level may become shallow.

It is difficult to predict if unexpected subsurface conditions will be encountered during construction. Since such conditions may be found, we suggest that the owner and the contractor make provisions in their budget and construction schedule to accommodate unexpected subsurface conditions.

2.4 Site Geology

A brief discussion of the general geology of the area near the site is presented in Appendix C. The surface geology of the site was determined by observation of the surface conditions at the site and observing the soils encountered in the test borings on the site.

2.5 Seismicity

According to the International Building Code, 2018 Edition, and ASCE Standard ASCE/SEI 7-10, Table 20.3-1 Site Classification, based on the subsurface conditions encountered and the assumption that the soils described in the test borings are likely representative of the top 100 feet of the soil profile, we recommend that the site soil profile be S_D, Stiff soil.

3.0 PLANNING AND DESIGN CONSIDERATIONS

A geologic hazard study was not requested as part of the scope of this report, however there are some conditions which were observed at the site during the field study which may influence the development.

All of the suggestions and design parameters presented in this report are based on high quality craftsmanship, care during construction and post construction cognizance of the potential for swell or settlement of the site support materials and appropriate post construction maintenance.

Visual observations of the slope contiguous to the proposed building location did not disclose information that may indicate that there is a large scale slope instability condition at the site. Excavation cuts or fill placement which change the grade substantially could increase the probability of slope instability problems. It is our understanding that lot slope stability was addressed during the subdivision development process.

All construction excavations should be sloped to prevent excavation wall collapse. We

suggest that as a minimum the excavation walls should be sloped at an inclination of one-and-one-half (1-1/2) to one (1) (horizontal to vertical) or flatter. The area above the foundation excavations should be observed at least daily for evidence of slope movement during construction. If evidence of slope movement is observed we should be contacted immediately.

Development in areas near slopes results in several factors that influence future slope stability. Typically, development changes surface drainage patterns and may also influence subsurface drainage. Because water is usually the dominating factor influencing slope stability, drainage should be addressed at all stages of the development. Development that substantially changes the surface grades by excavating and filling not only changes drainage patterns, but also changes loads and stresses in the slopes. Basements and retaining walls do the same.

The following precautionary measures should be included in the site development. The areas above the slopes should be kept as dry as possible. This may be aided by providing positive surface and subsurface drainage. A combination of drainage swales and subsurface drains may be used to intercept surface runoff and subsurface water uphill and divert it so that it does not influence the site. Subsurface drains are discussed below.

We anticipate that excavation and fill placement operations may be associated with the proposed site development. Excavations in the area which generate vertical or sloped exposures should be kept to a minimum.

Excavations which result in cut slopes with a vertical height greater than about four (4) feet or with a slope or structure above should be analyzed on a site specific basis. Temporary excavation cut slopes in competent material should not exceed a one-and-one-half to one (1-1/2 to 1) (horizontal to vertical) inclination. All construction excavations should conform to Occupational Safety and Health Administration (OSHA) standards or safer. All permanent slopes should be constructed with inclinations of three to one or flatter.

Slope and excavation surfaces should be protected by vegetation and/or other means to prevent erosion. Surface runoff should not be allowed to cascade over the top of a slope or to pond at the toe of any slope.

Generally, fill material placed on a sloping site surface which will be used to support structures or additional fill material should be placed so that the contact between the existing site surface and the added fill material will be strong enough to support the added load. This should be addressed on a site and fill area specific basis. The technique recommended will be based on the site configuration, the finished fill configuration the actual material to be used for the

fill material and the size of the area thus constructed. Frequently the preparation of the site area to receive fill material will include keying and benching of the native material in the area to receive fill material, placing the material in thin horizontal lifts which are compacted at the appropriate moisture content and the installation of a subsurface drain system at the fill material/natural material contact. We are available to, and recommend that, we discuss this with you and provide site and fill specific recommendations when this portion of your development plan merits the additional study.

4.0 ON-SITE DEVELOPMENT CONSIDERATIONS

We anticipate that the subsurface water elevation may fluctuate with seasonal and other varying conditions. Excavations may encounter subsurface water and soils that tend to cave or yield. If water is encountered it may be necessary to dewater construction excavations to provide more suitable working conditions. Excavations should be well braced or sloped to prevent wall collapse. Federal, state and local safety codes should be observed. All construction excavations should conform to Occupational Safety and Health Administration (OSHA) standards or safer.

The site construction surface should be graded to drain surface water away from the site excavations. Surface water should not be allowed to accumulate in excavations during construction. Accumulated water could negatively influence the site soil conditions. Construction surface drainage should include swales, if necessary to divert surface water away from the construction excavations.

Several trees currently occupy the site. Organic soil materials in areas to receive fill material or structure components should be removed. The organic soil materials are not suitable for support of the structure or structural components.

It has been our experience that sites in developed areas may contain existing subterranean structures or poor quality man placed fill. If subterranean structures or poor quality man placed fill are suspected or encountered, they should be removed and replaced with compacted structural fill as discussed under COMPACTED STRUCTURAL FILL below.

The soil materials exposed in the bottom of the excavation may be moist and may become yielding under construction traffic during construction. It may be necessary to use techniques for placement of fill material or foundation concrete which limits construction traffic in the vicinity of the very moist soil material. If yielding should occur during construction it may be necessary to construct a subgrade stabilization fill blanket or similar to provide construction

traffic access. The subgrade stabilization blanket may include over excavating the subgrade soils one (1) to several feet and replacing with aggregate subbase course type material. The stabilization blanket may also include geotextile stabilization fabric at the bottom of the excavation prior to placement of aggregate subbase course stabilization fill. Other subgrade stabilization techniques may be available. We are available to discuss this with you.

5.0 FOUNDATION RECOMMENDATIONS

Geotechnical engineering considerations which influence the foundation design and construction recommendations presented below are discussed in Appendix D.

We have analyzed spread footing foundations as a potential foundation system for the proposed structure. These are discussed below. Due to the number of possible foundation types available and design and construction techniques there may be design alternatives which we have not presented in this report.

We recommend that the entire structure be supported on only one foundation type. Combining foundation types will result in differential and unpredictable foundation performance between the varying foundation types. We recommend that the structure footprint not be traversed by the cut/fill contact which would result in a portion of the structure underlain by fill material and part of the structure underlain by materials exposed by excavated cut. If this condition will exist please contact us so that we can revise our recommendations to accommodate the cut/fill contact scenario.

All of the design parameters presented below are based on techniques performed by an experienced competent contractor and high quality craftsmanship and care during construction. We recommend post construction cognizance of the volume change potential of the near surface soil materials and the need for appropriate post construction maintenance.

The spread footing recommendations include recommended design and construction techniques to reduce the influence of movement of the soil materials supporting the foundation but should not be interpreted as solutions for completely mitigating the potential for movement from the support soil material volume change.

Exterior column supports should be supported by foundations incorporated into the foundation system of the structure not supported on flatwork. Column supports placed on exterior concrete flatwork may move if the support soils below the concrete slab on grade become wetted and swell or freeze and raise or settle. Differential movement of the exterior columns may

cause stress to accumulate in the supported structure and translate into other portions of the structure.

5.1 Spread Footing Foundations

In our analysis it was necessary to assume that the material encountered in the test borings extended throughout the building site and to a depth below the maximum depth of the influence of the foundations. We should be contacted to observe the soil materials exposed in the foundation excavations prior to placement of foundations to verify the assumptions made during our analysis.

The bottom of the foundation excavations should be thoroughly cleaned and observed when excavated. Any loose or disturbed material exposed in the foundation excavation should be removed or compacted prior to placing foundation concrete.

The bottom of the foundation excavations should be compacted prior to placing compacted structural fill or foundation concrete. We suggest the materials exposed be compacted to at least ninety (90) percent of the materials moisture content-dry density relationship (Proctor) test, ASTM D1557. Excavation compaction is to help reduce the influence of any disturbance that may occur during the excavation operations. Any areas of loose, low density or yielding soils evidenced during the excavation compaction operation should be removed and replaced with compacted structural fill. Caution should be exercised during the excavation compaction operations. Excess rolling or compacting may increase pore pressure of the subgrade soil material and degrade the integrity of the support soils. Loose or disturbed material in the bottom of the foundation excavations which are intended to support structural members will likely result in large and unpredictable amounts of settlement, if the loose or disturbed material is not removed or compacted.

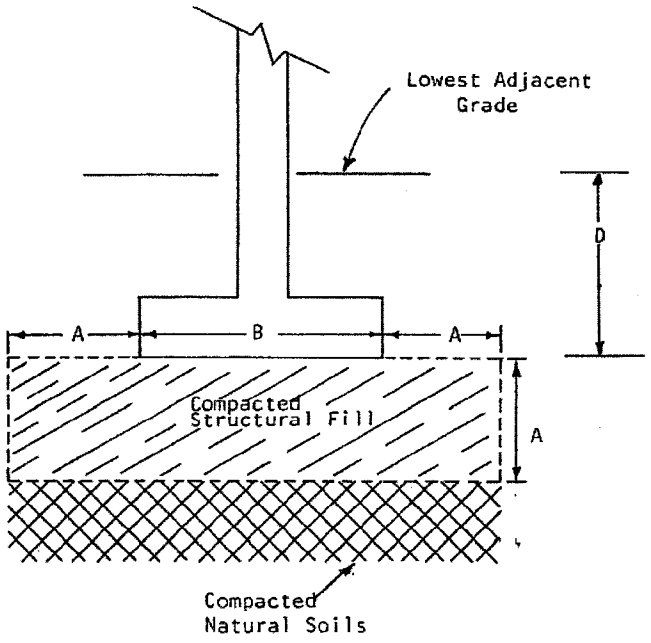
The bottom of any footings exposed to freezing temperatures should be placed below the maximum depth of frost penetration for the area. Refer to the local building code for details.

All footings should be appropriately proportioned to reduce the post construction differential settlement. Footings for large localized loads should be designed for bearing pressures and footing dimensions in the range of adjacent footings to reduce the potential for differential settlement. We are available to discuss this with you.

Foundation walls should be reinforced for geotechnical engineering purposes. The structural engineer should be consulted for foundation design. The structural engineering reinforcing

design tailored for this project will be more appropriate than the suggestions presented above.

We recommend the use of a blanket of structure fill material beneath the spread footing foundation members. Spread footings may be placed either on the natural undisturbed soils or on a blanket of compacted structural fill. The blanket of compacted structural fill is to help provide uniform support for the footings and to help reduce the theoretical calculated post construction settlement. The theoretical calculated post construction settlement and associated fill thickness supporting the footings are presented below.



B = Footing Width
A = Compacted Structural Fill Thickness and Fill Width Beyond Footing Edge
D = Footing Embedment Below Lowest Adjacent Grade

Figure 3. Conceptual Sketch of Footing Subgrade Treatment and Embedment Concept

We suggest that you consider the foundation be supported on a blanket of compacted structural fill material to help mask the influence of volume change soil materials supporting the footings. The blanket of compacted structural fill will not prevent movement of the footings from volume change in the support soil materials but will mask the influence of volume changes of the soils supporting the footings. If the footings are supported on a blanket of compacted structural fill the blanket of compacted structural fill should extend beyond each edge of each footing a distance at least equal to the fill thickness. This concept is shown on Figure 3. Geotechnical engineering recommendations for constructing compacted structural fill are presented below.

All footings should have a minimum depth of embedment of at least one (1) foot below the lowest adjacent grade when placed either on the natural undisturbed soils or a blanket of compacted structural fill. Deeper embedment will be needed for footings exposed to exterior climate.

The bearing capacity will depend on the minimum depth of embedment of the bottom of the footings below the lowest adjacent grade and the support characteristics of the soils supporting the foundation. Other characteristics may influence embedment. The embedment concept is shown on Figure 3.

Bearing capacity and associated minimum depth of embedment of the bottom of the footing below the lowest adjacent grade are presented below.

FOUNDATIONS BEARING UPON NATIVE SOIL MATERIALS OR COMPACTED STRUCTURAL FILL MATERIAL OVERLYING NATIVE SOIL MATERIALS

SPREAD FOOTING SOIL BEARING CAPACITY (POUNDS PER SQUARE FOOT)		D* (feet)
CONTINUOUS	ISOLATED	
1,225	1,000	1
1,950	1,500	2
2,450	2,100	3

D* Minimum depth of embedment for footings adjacent to level areas.

If deeper embedment is considered for increased bearing capacity greater than presented above, we should be contacted to provide additional analysis and recommendations as needed. The bearing capacity design value is based on several considerations and these may change with depth.

The bearing capacity may be increased by about twenty (20) percent for transient loads such as wind and seismic loads.

It is our opinion that footings exposed to frost or freezing ground influences and all exterior footings should be embedded to frost depth or deeper. Interior footings should have a minimum depth of embedment of at least one (1) foot on all sides to provide a more predictable long term performance of the footing. We understand that construction techniques typically used in the area may result in some of the footings in the crawl space constructed without significant embedment of the bottom of the footing below the lowest adjacent grade. For this reason we have provided design values for footings constructed with little or no embedment. It is our opinion that the performance of footing constructed without embedment may be influenced by erosion, temperature changes, moisture content changes, swell potential

of the soil supporting the footings and weathering of the soils supporting the footings and will have a less predictable settlement response than footings with embedment.

Exterior footings and footings with uneven backfill may result in movement of the footings. Embedment of the footings on all sides will help reduce the potential for movement of footings with uneven backfill. We do not recommend exterior footings or footings with uneven backfill be constructed without a minimum depth of embedment of the bottom of the footing below the lowest adjacent grade of at least one (1) foot on all sides of the interior footings and frost depth for exterior footings.

The minimum depth of embedment is sufficient only to develop the bearing capacity for design purposes and does not account for frost influences. Actual design and construction should result in interior footings with one (1) foot or more embedment and exterior footings with frost depth or more embedment. Typically deeper embedment will increase bearing capacity and decrease post construction settlement and decrease the influence of expansive soils.

The soil samples tested had measured swell pressures of less than 100 to approximately 150 pounds per square foot, however, the actual swell pressure of the support materials could be greater. When wetted the site soil materials may have the ability to raise supported foundation members with loads less than the swell pressure. The foundation design should be as rigid as possible with as high of a dead load as can be available. The greater the dead load on the footings the less the potential for movement from the foundation soils should they become wetted. If the soils become wetted they may swell and may raise the foundation portions supported on the wetted soils. If the structure is supported on spread footings the owner must realize that post construction movement of the footings is possible. We are available to discuss the implications of supporting foundations on swelling soils.

Interior column loads supported on spread footings which are structurally connected to the other foundation members will provide more uniform performance of the interior footings with respect to the other foundation members and will help reduce the potential differential settlement between interior and exterior foundation members. The foundation walls should be designed to act as beams to distribute stresses associated with the swelling volume changes of soils. The beam design should be addressed by the project structural engineer.

Exterior column supports should be supported by foundations incorporated into the foundation system of the structure not supported on flatwork. Column supports placed on exterior concrete flatwork may move if the support soils below the concrete slab on grade become wetted and swell or freeze and raise or settle. Differential movement of the exterior columns may

cause stress to accumulate in the supported structure and translate into other portions of the structure.

The calculated theoretical estimated post construction settlement and swell potential may be reduced by placing the footings on a blanket of compacted structural fill. The calculated theoretical estimated post construction settlement and associated thickness of compacted structural fill are presented below.

THICKNESS OF COMPACTED STRUCTURAL FILL SUPPORTING FOOTINGS	CALCULATED THEORETICAL ESTIMATED POST CONSTRUCTION SETTLEMENT FOR CONTINUOUS SPREAD FOOTINGS (INCHES)
0	1 to 1-3/8
1 foot	3/4 to 1
2 feet	1/2 to 3/4

THICKNESS OF COMPACTED STRUCTURAL FILL SUPPORTING FOOTINGS	CALCULATED THEORETICAL ESTIMATED POST CONSTRUCTION SETTLEMENT FOR ISOLATED SPREAD FOOTINGS (INCHES)
0	1 to 1-1/4
1 foot	3/4 to 7/8
2 feet	1/2 to 5/8

The calculated theoretical settlement estimated values above are appropriate for continuous spread footings with a width of about two (2) feet or less and isolated spread footings with a width of about three (3) feet or less. Larger footings should be analyzed on a footing, load and width specific basis.

Footings should be sized so that each footing is in a similar size and load range as nearby footings to encourage similar performance. Very large footings or heavily loaded footings will influence the support soil materials to a deeper depth than small or lightly loaded footings and therefore will have different post construction performance characteristics.

The calculated settlement estimates are theoretical only. Actual settlement could vary throughout the site and with time.

If the footings are supported on a blanket of compacted structural fill, the blanket of compacted

structural fill should extend beyond each edge of each footing a distance at least equal to the fill thickness. This concept is shown on Figure 3. Compacted Structural Fill is discussed in Section 7.0 below.

The site soil samples tested have measured swell pressures of less than 100 to approximately 150 pounds per square foot, however, the actual swell pressure of the support material could be greater. This swell pressure was measured for soils at the initial moisture content of the soil sample tested. The swell potential of the site soil materials could vary significantly and could be greater than that measured. The measured swell pressure may be influenced by disturbance of the sample during the sampling operation and the soil suction potential and initial moisture content.

Changes in the initial moisture content will significantly influence the swell pressure of the site soils. If the initial moisture content of the foundation soils is less than that of the test sample the actual swell pressures will likely be significantly higher than measured. If the initial moisture content of the foundation soils is greater than that of the test sample the actual swell pressures may be less than measured.

The bottom of the foundation excavations should be thoroughly cleaned and observed by the project Geotechnical Engineer or his representative when excavated. Any loose or disturbed material exposed in the foundation excavation should be removed or remedied prior to additional construction.

We recommend that we be contacted to observe the foundation excavations and backfill operations during construction to verify the soil support conditions and our assumptions upon which our recommendations are based. If necessary we may revise our recommendations based on our observations. We are available to provide material testing services during the construction phase of the project.

If lightly loaded structure members are supported on spread footings on expansive soil material then the owner must realize that post construction movement of the footings is likely. These lightly loaded areas of the footing should be designed with sufficient structural integrity to resist the forces from swelling soils.

Foundation members that will have significantly small or low dead loads, such as foundations beneath wall openings such as doorways, may be provided with a strengthened grade beam and/or positive separation between the foundation concrete and the underlying soil materials. That separation may be provided by using commercial void form material. We recommend

that the structural engineer be consulted concerning the void form design concept.

If the void form design concept is part of the foundation design we suggest that the foundation design may consider including a four (4) to six (6) inch corrugated paper void form material beneath the footings in the lightly loaded portions of the foundation. The corrugated paper void forms provide temporary support for foundation concrete during construction. The low strength of the void form material is intended to allow the underlying soil materials to expand into the void form thereby exerting less or no uplift pressure on the foundation in the areas it is used. We are available to discuss the implications of supporting foundations on swelling soils.

6.0 INTERIOR FLOOR SLAB DISCUSSION

It is our understanding that, as currently planned, the floor may be either a concrete slab on grade or a supported structural floor. The natural soils that will support interior floor slabs are stable at their natural moisture content. However, the owner should realize that when wetted, the site soils may experience volume changes. The site soil samples tested had measured swell pressures of less than 100 to approximately 150 pounds per square foot and an associated magnitudes of up to 0.8 percent of the wetted soil volume at a surcharge load of 100 pounds per square foot and the actual swell pressure could be greater.

The recommendations in this report do not address a monolithic floor slab/footing combination. The design and construction characteristics of the monolithic floor slab need geotechnical engineering design parameters tailored specifically for a monolithic slab and integral footing. Generally this type foundation/floor combination in this area with these site conditions does not perform as well as other choices.

Conditions which vary from those encountered during our field study may become apparent during excavation. We should be contacted to observe the conditions exposed at concrete slab on grade subgrade elevation to verify the assumptions made during the preparation of this report and to provide additional geotechnical engineering suggestions and recommendations as needed.

Engineering design dealing with swelling soils is an art which is still developing. The owner is cautioned that the soils on this site may have swelling potential and concrete slab on grade floors and other lightly loaded members may experience movement when the supporting soils become wetted. If the owner is willing to accept the risk of possible damage from swelling soils supporting concrete slab on grade floors, the following recommendations to help reduce

the damage from swelling soils should be followed. These recommendations are based on generally accepted design and construction procedures for construction on soils that tend to experience volume changes when wetted and are intended to help reduce the damage caused by swelling soil materials. Lambert and Associates does not intend that the owner, or the owner's consultants should interpret these recommendations as a solution to the problems of swelling soils, but as measures to reduce the influence of swelling soils.

The shallow soil materials tested have a low volume change potential under light loading conditions. Concrete slab on grade floors may experience movement when supported by the natural onsite soils. Concrete slab on grade floors will perform best if designed to tolerate movement introduced by the subgrade soil materials.

Concrete flatwork, such as concrete slab on grade floors, should be underlain by compacted structural fill. The layer of compacted fill should be at least one (1) foot thick or thicker and constructed as discussed under COMPACTED STRUCTURAL FILL below. A one (1) foot thick or thicker blanket of structural fill material beneath the concrete flatwork is not sufficient to entirely mask the settlement or swell potential of the subgrade soil material but will only provide better subgrade conditions for construction. The concrete slab on grade should be designed by a structural engineer to be compatible with the site soil conditions.

The natural soil materials exposed in the areas supporting concrete slab on grade floors should be kept very moist during construction prior to placement of concrete slab on grade floors. This is to help increase the moisture regime of the potentially expansive soils supporting floor slabs and help reduce the expansion potential of the soils. We are available to discuss this concept with you.

Concrete slab on grade floors should be provided with a positive separation, such as a slip joint, from all bearing members and utility lines to allow their independent movements and to help reduce possible damage that could be caused by movement of soils supporting interior slabs. The floor slab should be constructed as a floating slab. All water and sewer pipe lines should be isolated from the slab. Any equipment placed on the floating floor slab should be constructed with flexible joints to accommodate future movement of the floor slab with respect to the structure. We suggest partitions constructed on the concrete slab on grade floors be provided with a void space above or below the partitions to relieve stresses induced by elevation changes in the floor slab.

Floor slabs should not contact/extend directly over foundations or foundation members. Floor slabs which directly contact foundations or foundation members will likely experience post

construction movement as a result of foundation movements. We are available to discuss this with you.

The concrete slabs should be scored or jointed to help define the locations of any cracking. We recommend that joint spacing be designed as outlined in ACI 224R. In addition joints should be scored in the floors a distance of about three (3) feet from, and parallel to, the walls.

It should be noted that when curing fresh concrete experiences shrinkage. This shrinkage almost always results in some cracks in the finished concrete. The actual shrinkage depends on the configuration and strength of the concrete and placing and finishing techniques. The recommended joints discussed above are intended to help define the location of the cracks but should not be interpreted as a solution to shrinkage cracks. The owner must understand that concrete flatwork will contain shrinkage cracks after curing and that all of the shrinkage cracks may not be located in control joints. Some cracking at random locations may occur.

If moisture migration through the concrete slab on grade floors will adversely influence the performance of the floor or floor coverings we suggest that a moisture barrier may be installed beneath the floor slab to help discourage capillary and vapor moisture rise through the floor slab. The moisture barrier may consist of a heavy plastic membrane, six (6) mil or greater, protected on the top and bottom by clean sand. The clean sand will help to protect the plastic from puncture. The layer of clean sand on the top of the plastic membrane will help the overlying concrete slab cure properly. According to the American Concrete Institute, proper curing requires at least three (3) to six (6) inches of clean sand between the plastic membrane and the bottom of the concrete. The plastic membrane should be lapped and taped or glued and protected from punctures during construction.

If the moisture content of the slab on grade floor will be influencial to the performance of the future floor coverings then the moisture content of the slab can be measured. We are available to monitor the floor slab moisture content prior to the installation of the floor covering. If this service is needed please contact us during the construction phase of the project.

The Portland Cement Association suggests that welded wire reinforcing mesh is not necessary in concrete slab on grade floors when properly jointed. It is our opinion that welded wire mesh may help improve the integrity of the slab on grade floors. We suggest that concrete slab on grade floors should be reinforced, for geotechnical purposes, with at least 6 x 6 - W2.9 x W2.9 (6 x 6 - 6 x 6) welded wire mesh positioned midway in the slab. The structural engineer should be contacted for structural design of floor slabs.

7.0 COMPACTED STRUCTURAL FILL

Material characteristics desirable for compacted structural fill are discussed in Appendix D. Areas that are over excavated or slightly below grade should be backfilled to grade with properly compacted structural fill or concrete, not loose fill material. If backfilled with other than compacted structural fill material or concrete there will be significant post construction settlement proportional to the amount of loose material.

If the natural on site soil materials are used for compacted structural fill material they should be conditioned by removing rocks larger than about three (3) inches. Care should be taken so that areas of the natural on site soils which have appreciable expansive fine grained portions are not used for compacted structural fill material.

If the on site soil materials are used as compacted structural fill the soils should be moisture conditioned to about two (2) to four (4) percent wet of optimum moisture content and compacted to at least ninety (90) percent of the maximum dry density as defined by ASTM D1557, modified moisture-density relationship (Proctor) test. The soil materials should be placed in thin lifts about six (6) inches in compacted thickness and compacted.

All areas to receive compacted structural fill should be properly prepared prior to fill placement. The preparation should include removal of all organic or deleterious material. The areas to receive fill material should be compacted after the organic deleterious material has been removed prior to placing the fill material. The area may need to be moisture conditioned for compaction. Any areas of soft, yielding, or low density soil, evidenced during the excavation compaction operation should be removed. The area excavated to receive fill should be moisture conditioned to wet of optimum moisture content as part of the preparation to receive fill. Fill should be moisture conditioned, placed in thin lifts not exceeding six (6) inches in compacted thickness and compacted to at least ninety (90) percent of maximum dry density as defined by ASTM D1557, modified moisture content-dry density (Proctor) test.

After placement of the structural fill the surface should not be allowed to dry prior to placing concrete or additional fill material. This may be achieved by periodically moistening the surface of the compacted structural fill as needed to prevent drying of the structural fill. We are available to discuss this with you.

The soil materials exposed in the bottom of the excavation may be very moist and may become yielding under construction traffic during construction. It may be necessary to use techniques for placement of fill materials or foundation concrete which limit construction traffic

in the very moist soil materials. If yielding should occur during construction it may be necessary to construct a subgrade stabilization fill blanket or similar to provide construction traffic access. We are available to discuss this with you.

We recommend that the geotechnical engineer or his representative be present during the excavation compaction and fill placement operations to observe and test the material.

8.0 LATERAL EARTH PRESSURES

Laterally loaded walls supporting soil, such as basement walls, will act as retaining walls and should be designed as such. Walls that are designed to deflect and mobilize the internal soil strength should be designed for active earth pressures. Walls that are restrained so that they are not able to deflect to mobilize internal soil strength should be designed for at-rest earth pressures. The values for the lateral earth pressures will depend on the type of soil retained by the wall, backfill configuration and construction technique. If the backfill is not compacted the lateral earth pressures will be very different from those noted below.

Lateral earth pressure (L.E.P.) values are presented below:

	Level Backfill with on-site soils (pounds per cubic foot per foot of depth)
Active L.E.P.	51
At-rest L.E.P.	72
Passive L.E.P.	308

The soil samples tested had measured swell pressures up to approximately 150 pounds per square foot and the actual swell pressure of the backfill material could be greater. Our experience has shown that the actual swell pressure may be much higher. If the retained soils should become moistened after construction the soil may swell against retaining walls. The walls should be designed to resist the swell pressure of the soil materials if these are used as part of the backfill within the zone of influence. The zone of influence concept is presented below.

The above lateral earth pressures may be reduced by overexcavating the wall backfill area beyond the zone of influence and backfilling with crushed rock type material.

The lateral earth pressure design parameters may change significantly if the area near the wall

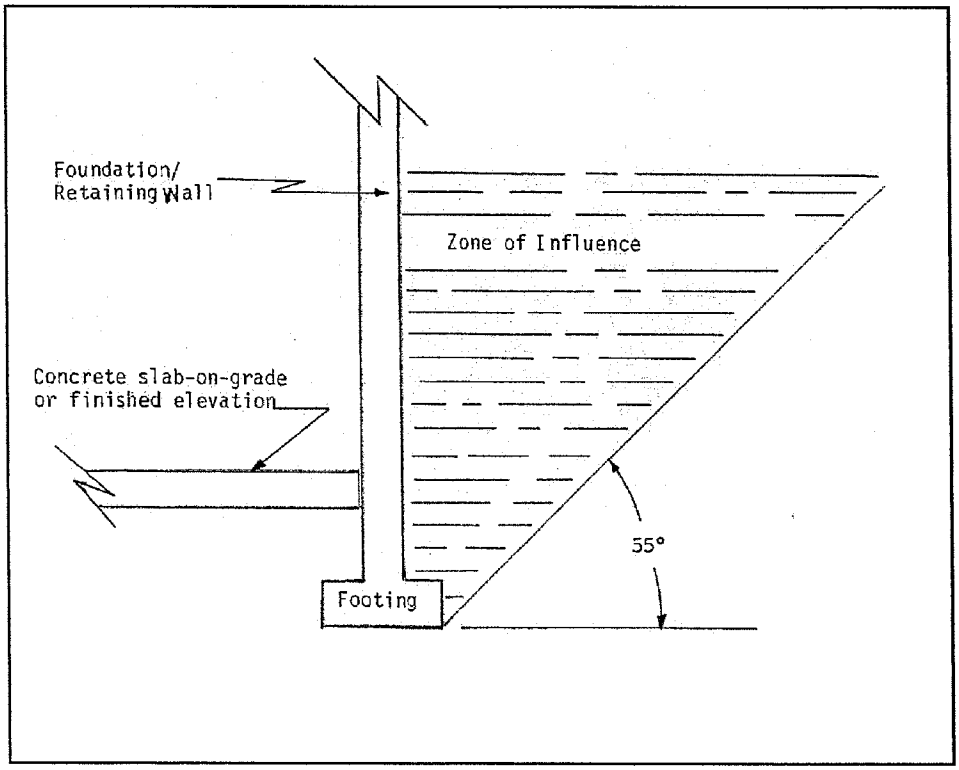
is loaded or surcharged or is sloped. If any of these conditions occur we should be contacted for additional design parameters tailored to the specific site and structure conditions.

Suggested lateral earth pressure (L.E.P.) values if the backfill is overexcavated beyond the zone of influence and backfilled with crushed rock are presented below.

	Level Backfill with crushed rock material (pounds per cubic foot per foot of depth)
Active L.E.P.	25
At-rest L.E.P.	40

If the area behind a wall retaining soil material is sloped we should be contacted to provide lateral earth pressure design values tailored for the site specific sloped conditions.
Resistant forces used in the design of the walls will depend on the type of soil that tends to resist movement. We suggest that you consider a coefficient of friction of 0.25 for the on site soil.

The lateral earth pressure values provided above, for design purposes, should be treated as equivalent fluid pressures. The lateral earth pressures provided above are for level well drained backfill and do not include surcharge loads or additional loading as a result of compaction of the backfill. Unlevel or non-horizontal backfill either in front of or behind walls retaining soils will significantly influence the lateral earth pressure values. Care should be taken during construction to



prevent construction and backfill techniques from overstressing the walls retaining soils. Backfill should be placed in thin lifts and compacted, as discussed in this report to realize the lateral earth pressure values.

Walls retaining soil should be designed and constructed so that hydrostatic pressure will not accumulate or will not affect the integrity of the walls. Drainage plans should include a subdrain behind the wall at the bottom of the backfill to provide positive drainage. Exterior retaining walls should be provided with perimeter drain or weep holes to help provide an outlet for collected water behind the wall. The ground surface adjacent to the wall should be sloped to permit rapid drainage of rain, snow melt and irrigation water away from the wall backfill. Sprinkler systems should not be installed directly adjacent to retaining or basement walls.

9.0 DRAIN SYSTEM

A drain system should be provided around building spaces below the finished grade and behind any walls retaining soil. The drain systems are to help reduce the potential for hydrostatic pressure to develop behind retaining walls. A sketch of the drain system is shown on Figure 5.

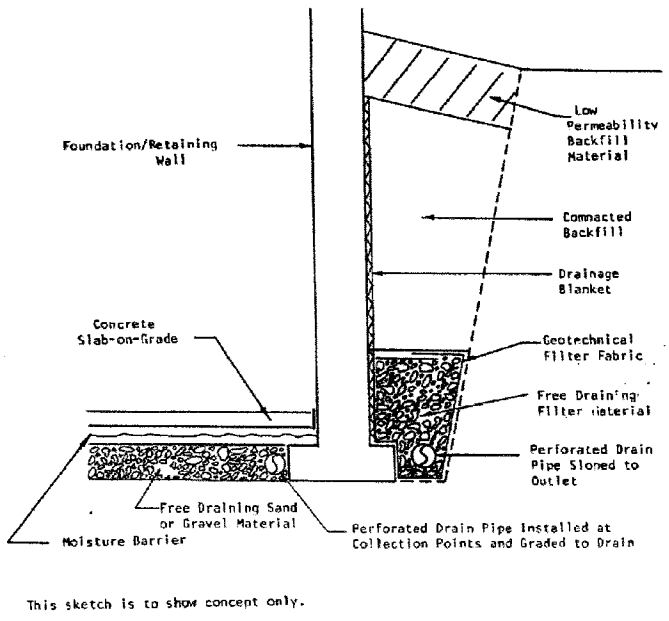


Figure 5. Conceptual Sketch of Foundation Drain System

Subdrains should consist of a three (3) or four (4) inch diameter perforated rigid pipe surrounded by a filter. The filter should consist of a filter fabric or a graded material such as washed concrete sand or pea gravel. If sand or gravel is chosen the pipe should be placed in the middle of about four (4) cubic feet of aggregate per linear foot of pipe. The drain system should be sloped to positive gravity outlets. If the drains are daylighted the drains should be provided with all weather outlets and the outlets should be maintained to prevent them from being plugged or frozen. We do not recommend that the drains be discharged to dry well type

structures. Dry well structures may tend to fail if the surrounding soil material becomes wetted and swells or if the ground water rises to a elevation of or above the discharge elevation in the dry well. We should be called to observe the soil exposed in the excavations and to verify the details of the drain system.

10.0 CRAWL SPACE CONSIDERATIONS

We anticipate that moist conditions may exist in crawl space areas during wetter seasons. We suggest that if it is desired to reduce the influence of water in the crawl space area a foundation drain should be installed as discussed above.

The surface of the crawl space may be provided with a layer of about six (6) inches of clean washed gravel or an impervious geotextile fabric to reduce the inconvenience of very moist or muddy crawl space conditions if these should occur. The crawl space should be adequately vented to reduce the potential for humidity to accumulate in the crawl space area.

11.0 BACKFILL

Backfill areas and utility trench backfill should be constructed such that the backfill will not settle after completion of construction, and that the backfill is relatively impervious for the upper few feet. The backfill material should be free of trash and other deleterious material. It should be moisture conditioned and compacted to at least ninety (90) percent relative compaction using a modified moisture content-dry density (Proctor) relationship test (ASTM D1557). Only enough water should be added to the backfill material to allow proper compaction. Do not pond, puddle, float or jet backfill soil materials.

Improperly placed backfill material will allow water migration more easily than properly recompacted fill. Improperly compacted fill is likely to settle, creating a low surface area which further enhances water accumulation and subsequent migration to the foundation soils.

Improperly placed backfill will allow water to migrate along the utility trench or backfill areas to gain access to the subgrade support soils with subsequent mobilization of the swell or settlement mechanism resulting in movement of the supported structure. Moisture migration could also result in the inconvenience of free water in the crawl space.

Backfill placement techniques should not jeopardize the integrity of existing structural members. We recommend recently constructed concrete structural members be appropriately cured prior to adjacent backfilling.

12.0 SURFACE DRAINAGE

The foundation soil materials should be prevented from becoming wetted after construction. Post construction wetting of the soil support soil materials can initiate swell potential or settlement potential as well as decrease the bearing capacity of the support soil materials. Protecting the foundation from wetting can be aided by providing positive and rapid drainage of surface water away from the structure.

The final grade of the ground surface adjacent to the structure should have a well defined slope away from the foundation walls on all sides. The ability to establish proper site surface drainage away from the structure foundation system may be influenced by the existing topography, existing structure elevations and the grades and elevations of the ground surface adjacent to the proposed structure. We suggest where possible a minimum fall of the surface grade away from the structure be that which will accommodate other project grading constraints and provide rapid drainage of surface water away from the structure. If there are no other project constraints we suggest a fall of about one (1) foot in the first ten (10) feet away from the structure foundation. Appropriate surface drainage should be maintained for the life of the project. Future landscaping plans should include care and attention to the potential influence on the long term performance of the foundation and/or crawl space if improper surface drainage is not maintained.

Roof runoff should be collected in appropriate roof drainage collection devices, such as eve gutters or similar, and directed to discharge in appropriate roof drainage systems. Roof runoff should not be allowed to fall on or near foundations, backfill areas, flatwork, paved areas or other structural members. Downspouts and faucets should discharge onto splash blocks that extend beyond the limits of the backfill areas. Splash blocks should be sloped away from the foundation walls. Snow storage areas should not be located next to the structure. Proper surface drainage should be maintained from the onset of construction through the proposed project life.

If significant water concentration and velocity occurs erosion may occur. Erosion protection may be considered to reduce soil erosion potential. A landscape specialist or civil engineer should be consulted for surface drainage design, erosion protection and landscaping considerations.

13.0 LANDSCAPE IRRIGATION

An irrigation system should not be installed next to foundations, concrete flatwork or paved

areas. If an irrigation system is installed, the system should be placed so that the irrigation water does not fall or flow near foundations, flatwork or pavements. The amount of irrigation water should be controlled.

We recommend that wherever possible xeriscaping concepts be used. Generally, the xeriscape includes planning and design concepts which will reduce irrigation water. The reason we suggest xeriscape concepts for landscaping is because the reduced landscape water will decrease the potential for water to influence the long term performance of the structure foundations and flatwork. Many publications are available which discuss xeriscape. Colorado State University Cooperative Extension has several useful publications and most landscape architects are familiar with the subject. Montrose Botanical Society has a Botanical Garden, 1800 Pavilion Drive, south of Niagara Drive, Montrose, Colorado, that has a very good exhibit with examples and information regarding successful xeriscape concepts.

Due to the expansive nature of the soils tested we suggest that the owner consider landscaping with only native vegetation which requires only natural precipitation to survive. Additional irrigation water will greatly increase the likelihood of damage to the structure as a result of volume changes of the material supporting the structure.

Impervious geotextile material may be incorporated into the project landscape design to reduce the potential for irrigation water to influence the foundation soils.

14.0 SOIL CORROSIVITY TO CONCRETE

The chemical tests to help identify the potential for soil corrosivity to concrete were not complete at the time of this report. The chemical tests will be presented when available.

It has been our experience that much of the soils in the area contain sufficient water soluble sulfate content to be corrosive to concrete. We suggest sulfate resistant cement be used in concrete which will be in contact with the on-site soils. American Concrete Institute recommendations for sulfate resistant cement based on the water soluble sulfate content should be used.

15.0 RADON CONSIDERATIONS

Our experience indicates that many of the soils in western Colorado produce small quantities of radon gas. Radon gas may tend to collect in closed poorly ventilated structures. Radon considerations are presented in Appendix D.

16.0 POST DESIGN CONSIDERATIONS

The project geotechnical engineer should be consulted during construction of the project to observe site conditions and open excavations during construction and to provide materials testing of soil and concrete.

This subsurface soil and foundation condition study is based on limited sampling; therefore, it is necessary to assume that the subsurface conditions do not vary greatly from those encountered in the field study. Our experience has shown that significant variations are likely to exist and can become apparent only during additional on site excavation. For this reason, and because of our familiarity with the project, Lambert and Associates should be retained to observe foundation excavations prior to foundation construction, to observe the geotechnical engineering aspects of the construction and to be available in the event any unusual or unexpected conditions are encountered. The cost of the geotechnical engineering observations and material testing during construction or additional engineering consultation is not included in the fee for this report. We recommend that your construction budget include site visits early during construction schedule for the project geotechnical engineer to observe foundation excavations and for additional site visits to test compacted soil.

We recommend that the observation and material testing services during construction be retained by the owner or the owner's engineer or architect, not the contractor, to maintain third party credibility. We are experienced and available to provide material testing services. We have included a copy of a report prepared by Van Gilder Insurance which discusses testing services during construction. It is our opinion that the owner, architect and engineer be familiar with the information. If you have any questions regarding this concept please contact us.

We suggest that your construction plans and schedule include provisions for geotechnical engineering observations and material testing during construction and your budget reflect these provisions.

It is difficult to predict if unexpected subsurface conditions will be encountered during construction. Since such conditions may be found, we suggest that the owner and the contractor make provisions in their budget and construction schedule to accommodate unexpected subsurface conditions.

16.1 Structural Fill Quality

It is our understanding that the proposed development may include compacted structural fill. The quality of compacted structural fill will depend on the type of material used as structural fill, fill lift thickness, fill moisture condition and compactive effort used during construction of the structural fill. Engineering observation and testing of structural fill is essential as an aid to safeguard the quality and performance of the structural fill.

Fill materials placed on sloped areas require special placement techniques that key the fill materials unto the underlying support materials. These techniques include a toe key at the toe contact of the slope fill and benching the fill/natural contact up the slope into the competent natural material. The placing technique will also include subdrains at several locations to intercept subsurface water and route it away from the fill materials. We are available to discuss these techniques with you and your earthwork contractor.

Testing of the structural fill normally includes tests to determine the grain size distribution, swell potential and moisture-density relationship of the fill material to verify the material suitability for use as structural fill. As the material is placed the in-place moisture content and dry density are tested to indicate the relative compaction of the placed structural fill. We recommend that your budget include provisions for observation and testing of structural fill during construction.

Testing of the compacted fill material should include tests of the moisture content and density of the fill material placed and compacted prior to placement of additional fill material. We suggest that a reasonable number of density tests of the fill material can best be determined on a site, material and construction basis although as a guideline we suggest one test per about each 300 to 500 square feet of each lift of fill material. Utility trench backfill may need to be tested about every 100 linear feet of lift of backfill.

16.2 Concrete Quality

It is our understanding current plans include reinforced structural concrete for foundations and walls and may include concrete slabs on grade and pavement. To insure concrete members perform as intended, the structural engineer should be consulted and should address factors such as design loadings, anticipated movement and deformations.

The quality of concrete is influenced by proportioning of the concrete mix, placement, consolidation and curing. Desirable qualities of concrete include compressive strength, water

tightness and resistance to weathering. Engineering observations and testing of concrete during construction is essential as an aid to safeguard the quality of the completed concrete.

Testing of the concrete is normally performed to determine compressive strength, entrained air content, slump and temperature. We recommend that your budget include provisions for testing of concrete during construction. We suggest that a reasonable frequency of concrete tests can best be determined on a site, materials and construction specific basis although as a guideline American Concrete Institute, ACI, suggests one test per about each fifty (50) cubic yards or portion thereof per day of concrete material placed.

17.0 LIMITATIONS

It is the owner's and the owner's representatives' responsibility to read this report and become familiar with the recommendations and suggestions presented. We should be contacted if any questions arise concerning the geotechnical engineering aspects of this project as a result of the information presented in this report.

The scope of services for this study does not include either specifically or by implication any environmental or biological (such as mold, fungi, bacteria, etc.) Assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be performed.

The proposed building site contains soil materials with significant swell potential. For this reason we suggest that you consult, as suggested by Senate Bill 13, a copy of Colorado Geological Survey Special Publication 11, "Home Construction on Shrinking and Swelling Soils", and a copy of CGS Special Publication 14, "Home Landscaping and Maintenance on Swelling Soils". We are available to discuss this with you.

The recommendations outlined above are based on our understanding of the currently proposed construction. We are available to discuss the details of our recommendations with you and revise them where necessary. This geotechnical engineering report is based on the proposed site development and scope of services as provided to us by Mr Frank Hensen, Hensen Construction, on the type of construction planned, existing site conditions at the time of the field study, and on our findings. Should the planned, proposed use of the site be altered, Lambert and Associates must be contacted, since any such changes may make our suggestions and recommendations inappropriate. This report should be used ONLY for the planned development for which this report was tailored and prepared, and ONLY to meet

information needs of the owner and the owner's representatives. In the event that any changes in the future design or location of the building are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of this report are modified or verified in writing. It is recommended that the geotechnical engineer be provided the opportunity for a general review of the final project design and specifications in order that the earthwork and foundation recommendations may be properly interpreted and implemented in the design and specifications.

This report does not provide earthwork specifications. We can provide guidelines for your use in preparing project specific earthwork specifications. Please contact us if you need these for your project.

This report presents both suggestions and recommendations. The suggestions are presented so that the owner and the owner's representatives may compare the cost to the potential risk or benefit for the suggested procedures.

This report contains suggestions and recommendations which are intended to work in concert with recommendations provided by the other design team members to provide somewhat predictable foundation performance. If any of the recommendations are not included in the design and construction of the project it may result in unpredictable foundation performance or performance different than anticipated. We recommend that we be requested to provide geotechnical engineering observation and materials testing during the construction phase of the project as discussed in this report. The purpose for on site observation and testing by us during construction is to help provide continuity of service from the planning of the project through the construction of the project. This service will also allow us to revise our recommendations if conditions occur or are discovered during construction that were not evidenced during the initial study. We suggest that the owner and the contractor make provisions in their construction budget and construction schedule to accommodate unexpected subsurface conditions.

We represent that our services were performed within the limits prescribed by you and with the usual thoroughness and competence of the current accepted practice of the geotechnical engineering profession in the area. No warranty or representation either expressed or implied is included or intended in this report or our contract. We are available to discuss our findings with you. If you have any questions please contact us. The supporting data for this report is included in the accompanying figures and appendices.

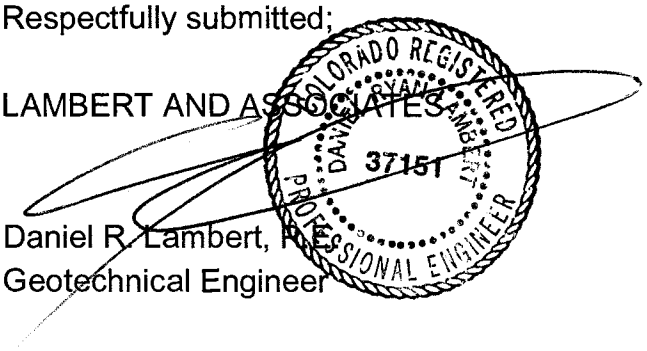
This report is a product of Lambert and Associates. Excerpts from this report used in other documents may not convey the intent or proper concepts when taken out of context, or they may be misinterpreted or used incorrectly. Reproduction, in part or whole, of this document without prior written consent of Lambert and Associates is prohibited.

This report and information presented can be used only for this site, for this proposed development, and only for the client for whom our work was performed. Any other circumstances are not appropriate applications of this information. Other development plans will require project specific review by us.

Please call when further consultation or observations and tests are required.

If you have any questions concerning this report or if we may be of further assistance, please contact us.

Respectfully submitted;



LAMBERT AND ASSOCIATES

Daniel R. Lambert, P.E.
Geotechnical Engineer

APPENDIX A

The field study was performed on April 1, 2021. The field study consisted of logging and sampling the soils encountered in three (3) excavated test pits in the general vicinity of the proposed structures. The logs of the soils encountered in the test excavations are presented on Figures A2 through A4.

The test excavations were logged by Lambert and Associates and samples of significant soil types were obtained.

The engineering field description and major soil classification are based on our interpretation of the materials encountered and are prepared according to the Unified Soil Classification System, ASTM D2488. The description and classification which appear on the test boring log is intended to be that which most accurately describes a given interval of the test boring (frequently an interval of several feet). Occasionally discrepancies occur in the Unified Soil Classification System nomenclature between an interval of the soil log and a particular sample in the interval. For example, an interval on the test boring log may be identified as a silty sand (SM) while one sample taken within the interval may have individually been identified as a sandy silt (ML). This discrepancy is frequently allowed to remain to emphasize the occurrence of local textural variations in the interval.

The stratification lines presented on the logs are intended to present our interpretation of the subsurface conditions encountered in the test boring. The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

KEY TO LOG OF TEST EXCAVATION

Date Exc: **Field Engineer:** **Test Pit Number:**

Location: **Elevation:**

Total Depth: **Depth to Water at Time of Drilling:**

Symbol	Depth	Sample Type	Sample N	Soil Description	Laboratory Test Results
	0			Sand, silty, medium dense, moist, tan (SM)	Notes in this column indicate tests performed and test results if not plotted.
				Unified Soil Classification	
				Indicates Bulk Bag Sample	DD: Indicates dry density in pounds per cubic foot
		C		Indicates Drive Sample	MC: Indicates moisture content as percent of dry unit weight
	5			Incicates Sampler Type:	LL: Indicates Liquid Limit
				C - Modified California St - Standard Split Spoon H - Hand Sampler	PL: Indicates Plastic Limit
					PI: Indicates Plasticity Index
			7/12	Indicates seven blows required to drive the sampler twelve inches with a hammer that weighs one hundred forty pounds and is dropped thirty inches.	
	10			BOUNCE: Indicates no further penetration occurred with additional blows with the hammer	
				NR: Indicates no sample recovered	
				CAVED: Indicates depth the test boring caved after drilling	
	15			▼ Indicates the location of free subsurface water when measured	
				CLAY SILT SAND GRAVEL CLAYSTONE SANDSTONE	Note: Symbols are often used only to help visually identify the described information presented on the log.
	20				
	25				

Project Name: Lot 615-1 CR - Lawson Overlook **Project No.** M21021GE **Figure:** A1

LOG OF TEST EXCAVATION

Date Drilled: April 1, 2021 **Field Engineer:** DRL **Exc Number:** 1

Location: See test boring location diagram **Elevation:**

Diameter: **Total Depth:** 9-1/2 feet **Depth to Water at Time of Exc:** None Encountered

Symbol	Depth	Sample Type	Sample N	Soil Description	Laboratory Test Results
	0			Sand, clayey, gravels, moist, med dense to dense, gray, brown	
				* Intermittent Sandy Clay Lenses	
	5	Bulk			Direct Shear Test: DD: 114 pcf MC: 7.8%
				* Intermittent Cobbles	
		Bulk			Swell/Consolidation Test: DD: 120 pcf MC: 5.9%
	10			Bottom of Excavation at 9-1/2 feet	
	15				
	20				
	25				

Project Name: Lot 615-1 CR - Lawson Overlook **Project Number:** M21021GE **Figure:** A2

Lambert and Associates

CONSULTING GEOTECHNICAL ENGINEERS AND MATERIAL TESTING

LOG OF TEST EXCAVATION

Date Drilled: April 1, 2021 **Field Engineer:** DRL **Exc Number:** 2

Location: See test boring location diagram **Elevation:**

Diameter: **Total Depth:** 9-1/2 feet **Depth to Water at Time of Exc:** None Encountered

Symbol	Depth	Sample Type	Sample N	Soil Description	Laboratory Test Results
	0			Sand, clayey, gravels, moist, med dense to dense, gray, brown	
				* Intermittent Sandy Clay Lenses	
	5	Bulk			Swell/Consolidation Test: DD: 114 pcf MC: 7.6%
				* Intermittent Cobbles	
		Bulk		* Intermittent Silty Sandy Lenses	
	10			Bottom of Excavation at 9-1/2 feet	
	15				
	20				
	25				

Project Name: Lot 615-1 CR - Lawson Overlook **Project Number:** M21021GE **Figure:** A3

Lambert and Associates

CONSULTING GEOTECHNICAL ENGINEERS AND MATERIAL TESTING

LOG OF TEST EXCAVATION

Date Drilled: April 1, 2021 **Field Engineer:** DRL **Exc Number:** 3

Location: See test boring location diagram **Elevation:**

Diameter: **Total Depth:** 7 feet **Depth to Water at Time of Exc:** None Encountered

Symbol	Depth	Sample Type	Sample N	Soil Description	Laboratory Test Results
	0	Bulk		Sand, clayey, gravels, moist, med dense to dense, gray, brown	
				* Intermittent Sandy Clay Lenses	
	5			* Intermittent Cobbles	Swell/Consolidation Test: DD: 115 pcf MC: 8.3%
				Bottom of Excavation at 7 feet	
	10				
	15				
	20				
	25				

Project Name: Lot 615-1 CR - Lawson Overlook **Project Number:** M21021GE **Figure:** A4

Lambert and Associates

CONSULTING GEOTECHNICAL ENGINEERS AND MATERIAL TESTING

APPENDIX B

The laboratory study consisted of performing:
. Moisture content and dry density tests, and
. Swell-consolidation tests.

It should be noted that samples obtained using a drive type sleeve sampler may experience some disturbance during the sampling operations. The test results obtained using these samples are used only as indicators of the in situ soil characteristics.

TESTING

Moisture Content and Dry Density

Moisture content and dry density were determined for each sample tested of the samples obtained. The moisture content was determined according to ASTM Test Method D2216 by obtaining the moisture sample from the drive sleeve. The dry density of the sample was determined by using the wet weight of the entire sample tested. The results of the moisture and dry density determinations are presented on the logs of excavations, Figures A2 through A4.

Swell Tests

Loaded swell tests were performed on the samples obtained during the field study. These tests are performed in general accordance with ASTM Test Method D2435 to the extent that the same equipment and sample dimensions used for consolidation testing are used for the determination of expansion. A sample is subjected to static surcharge, water is introduced to produce saturation, and volume change is measured as in ASTM Test Method D2435. Results are reported as percent change in sample height.

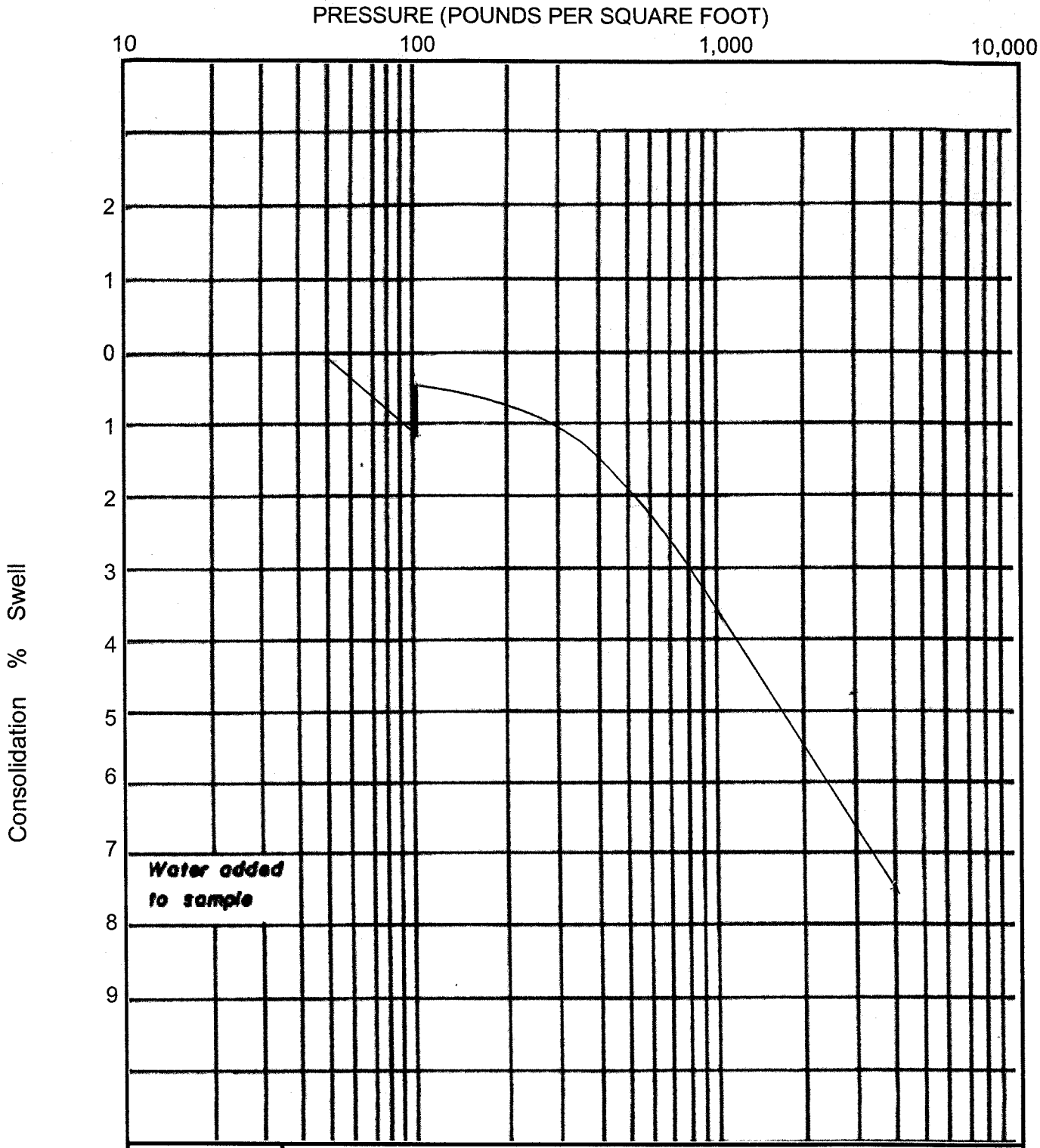
Consolidation Tests

One dimensional consolidation properties of the samples were evaluated according to the provisions of ASTM Test Method D2435. Water was added in all cases during the test. Exclusive of special readings during consolidation rate tests, readings during an increment of load were taken regularly until the change in sample height was less than 0.001 inch over a two hour period. The results of the swell-consolidation load test are summarized on Figures B1 through B3, swell-consolidation test.

It should be noted that the graphic presentation of consolidation data is a presentation of volume change with change in axial load. As a result, both expansion and consolidation can be illustrated.

Direct Shear Strength Test

Direct shear strength properties of the samples were evaluated in general accordance with testing procedures defined by ASTM Test Method D3080. The results of the direct shear tests are summarized on Figure B4, direct shear test.

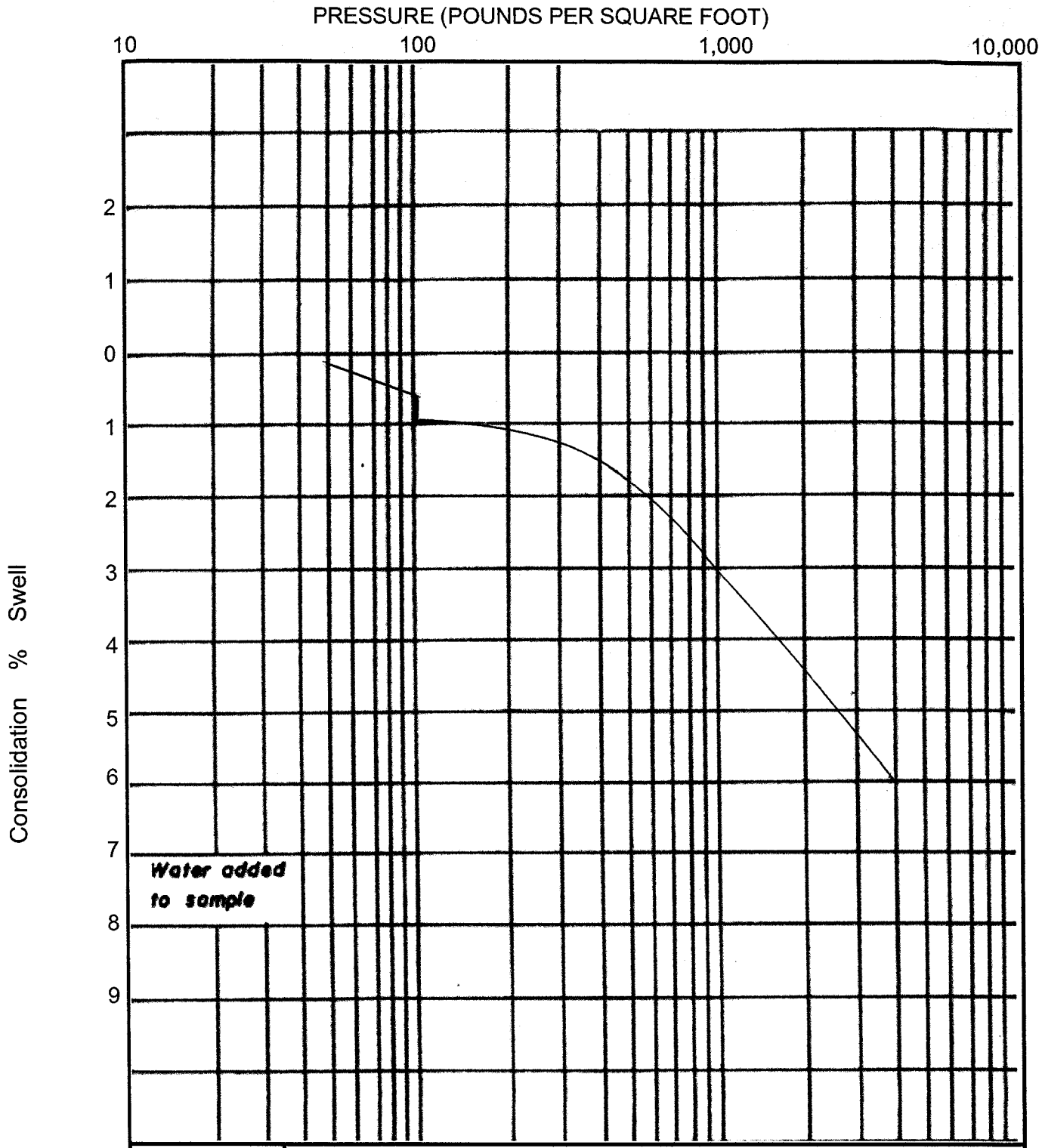


	SUMMARY OF TEST RESULTS				
Boring No. 1 Depth 7-8 ft	Moisture Content %	Dry Density PCF	Height in	Diameter In	Swell Pressure PSF
Initial	5.9	120	1.00	1.94	± 150
Final	14.1	131	0.924	1.94	
Soil Description	Sand, gravel, clayey, brown				

SWELL-CONSOLIDATION TEST

Lambert and Associates

Project No.	M21021GE
Date:	May 18, 2021
Figure:	B1

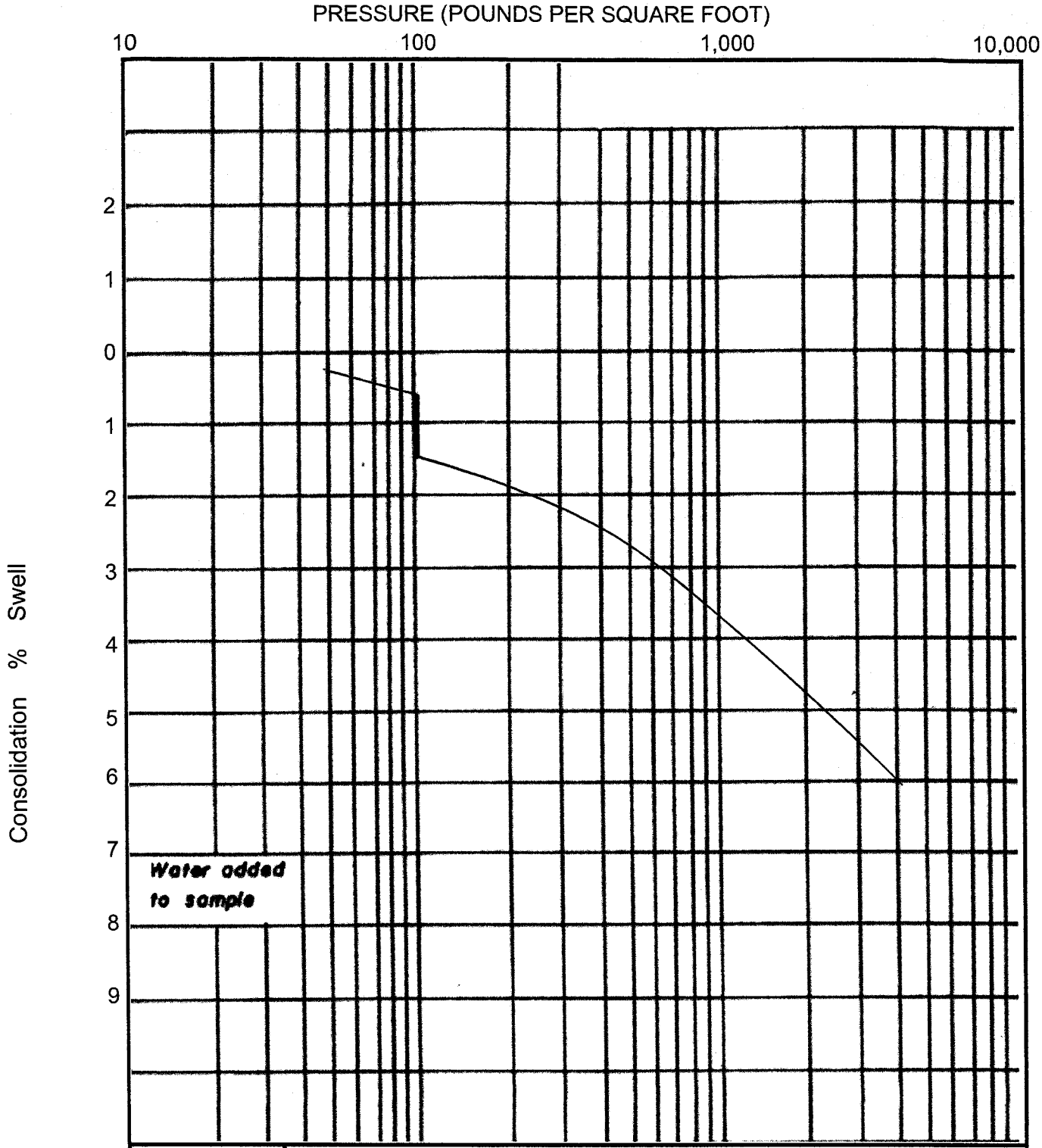


	SUMMARY OF TEST RESULTS				
Boring No. 2 Depth 4-5 ft	Moisture Content %	Dry Density PCF	Height in	Diameter In	Swell Pressure PSF
Initial	7.6	114	1.00	1.94	≤ 100
Final	16.2	121	0.940	1.94	
Soil Description	Sand, gravel, clayey, brown				

SWELL-CONSOLIDATION TEST

Lambert and Associates

Project No.	M21021GE
Date:	May 18, 2021
Figure:	B2



	SUMMARY OF TEST RESULTS				
Boring No. 3 Depth 4-5 ft	Moisture Content %	Dry Density PCF	Height in	Diameter In	Swell Pressure PSF
Initial	8.3	115	1.00	1.94	≤ 100
Final	17.2	122	0.940	1.94	
Soil Description	Sand, gravel, clayey, brown				

SWELL-CONSOLIDATION TEST

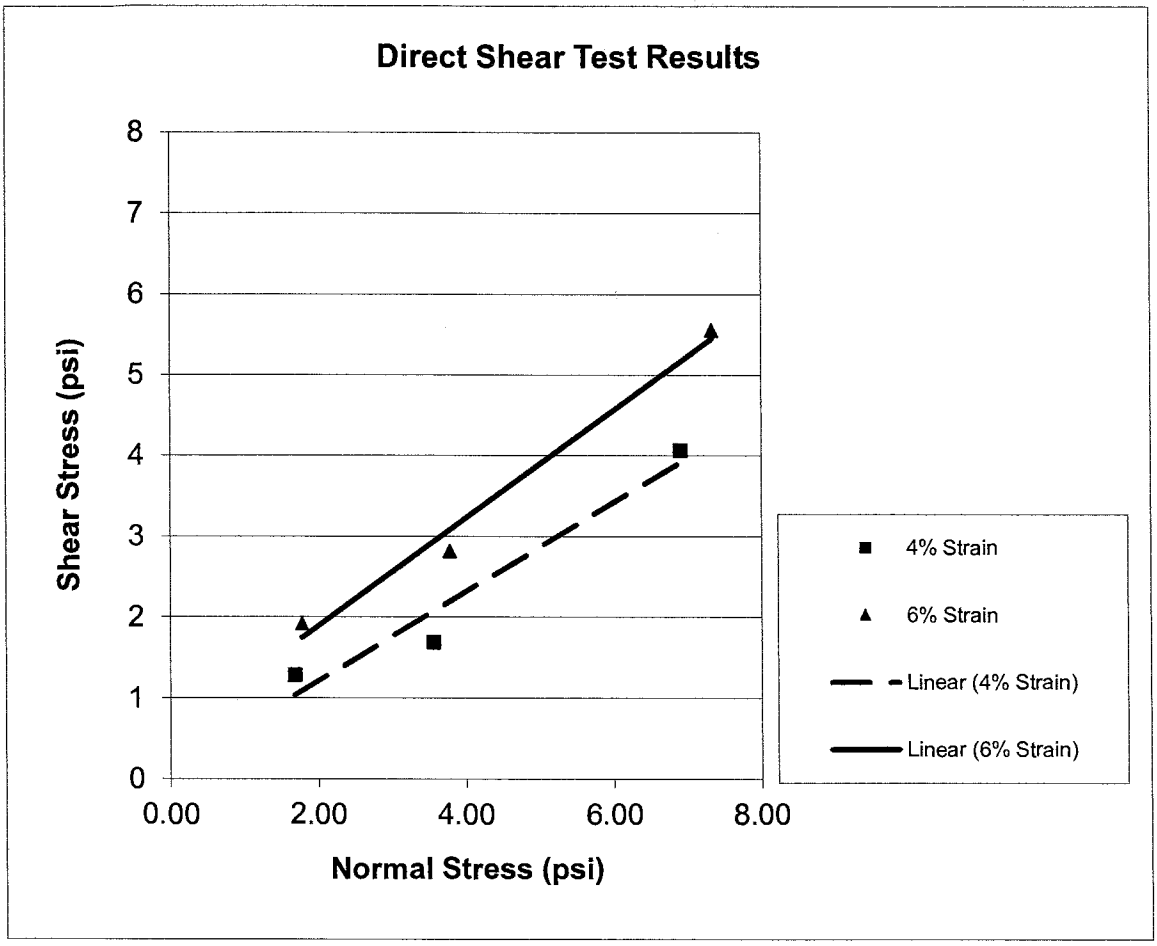
Lambert and Associates

Project No.	M21021GE
Date:	May 18, 2021
Figure:	B3

Lambert and Associates

CONSULTING GEOTECHNICAL ENGINEERS AND MATERIAL TESTING

Project:	Lot 615-1CR	**Project Number:**	M21021GE	**Date Sampled:**	4/1/2021
Location:	Telluride, CO	**Sample Source:**	TB 1 @ 4-5 ft	**Lab Sample #:**	4182
Sample Description:	Sand, gravel, clayey, brown	**Date Tested:**	5/10/2021	**Tested By:**	AC



% Strain	Cohesion (psf)	Friction Angle (deg)
4	16	29
6	81	34

Project No.:	M21021GE
Date:	May 18, 2021
Figure:	B4

APPENDIX C

GEOLOGY DISCUSSION
SOUTHWEST COLORADO GEOLOGY

Southwest Colorado exhibits many geologic features formed by a multitude of geologic processes. Regional inundation, uplift, volcanism and glaciation are responsible for some of the complex geology of the region. Many theories and speculations concerning the mode of occurrence of the regions's geology have been presented over the years. This cursory discussion of the geology of southwest Colorado presents some theories accepted by the geologic community, but is only intended to introduce the basic concepts and restraints that arise due to geologic activity.

Prior to the formation of the Rocky Mountains southwest Colorado was a primarily a flat lying region with little topographic expression. The North American continent was experiencing many episodes of deposition. The Transcontinental Sea was transgressing and regressing across the continent, these transgressions and regressions are the cause for such diverse rock types. The stratigraphic column in southwestern Colorado expresses rock types from variable depositional environments. Limestones are formed in deeper water, sandstones are formed in beach and tidal flat environments, while arkosic sandstone and conglomerates are formed in alluvial plains and fans. Particle size and mineralogic content in rock units are related to the depositional environment. A sandstone or conglomerate would not be likely to form in a deep sea environment because there would not be enough energy to carry such large particles a great distance from the source lands. As one observes the stratigraphic column of southwest Colorado a siltstone may be overlain by a sandstone which is in turn overlain by a siltstone. This represents a regressional then transgressional sequence. Many such sequences or combinations of other rock units are exhibited throughout southwest Colorado.

The final regression of the sea may have been caused by orogenic activity and uplift. This uplift was not confined to Colorado, it was a regional uplift that occurred in many stages. The uplift is what caused the formation of the ancestral rockies. The Larimide Orogenic episode is responsible for the formation of the San Juan dome. (Note: The San Juan dome theory is not accepted by the entire geologic community. It is used here for descriptive purposes). The San Juan dome was essentially an upwarp of the stratigraphy formed by sedimentation during the Transcontinental Sea. An actual dome probably never

existed due to erosion during the uplift. The idea being that a dome of sediments and rock units would have existed had erosion and diastrophism not taken place. The orientation of bedding planes forms a radial pattern around the San Juan region which seems to vindicate this theory.

The stresses need to "upwarp" this large area were obviously tremendous. Locally occurring stresses may not be sufficient to move this quantity of material, global tectonics, directly or indirectly, may have been involved. Compression of the entire North American plate could have occurred. The magnitude of the stresses and the deep seated origin of these stresses also have caused extensive volcanism. Colorado has many large remnants of Calderas that were active during the orogenic activity. The Silverton and Lake City Calderas are the largest in the San Juan region. Activity in the Silverton Caldera has been estimated (radiometrically) to have occurred 22 million years ago. Calderas of this magnitude are believed to have formed by the collapse of epierogenic magma chambers. Volcanic and metamorphic rock bodies are common in the San Juan region, many of these units are related to the orogenic activity in the region.

Faults associated with local orogenic activity are another common geologic feature found in southwestern Colorado. As stated previously, extreme stresses were probably associated with the formation of the San Juan Mountains and may be responsible for deep-seated volcanic and metamorphic processes. These stresses had to be released, the geologic mode for stress release is faulting. Diastrophic activity in the area today is quite low, the lack of seismic activity indicates that stresses are not currently being released. An explanation for the loss of stresses is through faulting.

The last episode of regional geologic activity in the area was glaciation. The most recent period of glacial activity ended approximately 10,000 years ago. Glacial activity is responsible for much of the topographic expression in the area. "U-Shaped" valleys, moraine deposits, tarns, (glacial formed lakes), and rock glaciers are the most prominent features which are found in southwestern Colorado as a result of glacial activity. The valley configurations are a result of the erosional activity of the glaciers. Moraine deposits developed during the glacial activity. Rock glaciers are moving masses of rock which are thought to have an ice core which may be the last remnant of glacial ice. As the surbsurface ice core moves and melts, the overlying mass of rock also moves.

APPENDIX D

GENERAL GEOTECHNICAL ENGINEERING CONSIDERATIONS

D1.0 INTRODUCTION

Appendix D presents general geotechnical engineering considerations for design and construction of structures which will be in contact with soils. The discussion presented in this appendix are referred to in the text of the report and are intended as tutorial and supplemental information to the appropriate sections of the text of the report.

D2.0 FOUNDATION RECOMMENDATIONS

Two criteria for any foundation which must be satisfied for satisfactory foundation performance are:

- contact stresses must be low enough to preclude shear failure of the foundation soils which would result in lateral movement of the soils from beneath the foundation, and
- settlement or heave of the foundation must be within amounts tolerable to the superstructure.

The soils encountered during our field study have varying engineering characteristics that may influence the design and construction considerations of the foundations. The characteristics include swell potential, settlement potential, bearing capacity and the bearing conditions of the soils supporting the foundations. The general discussion below is intended to increase the readers familiarity with characteristics that can influence any structure.

D2.1 Swell Potential

Some of the materials encountered during our field study at the anticipated foundation depth may have swell potential. Swell potential is the tendency of the soil to increase in volume when it becomes wetted. The volume change occurs as moisture is absorbed into the soil and water molecules become attached to or adsorbed by the individual clay platlets. Associated with the process of volume change is swell pressure. The swell pressure is the force the soil applies on its surroundings when moisture is absorbed into the soil. Foundation design considerations concerning swelling soils include structure tolerance to movement and dead load pressures to help restrict uplift. The structure's tolerance to movement should be addressed by the structural engineer and is dependent upon many facets of the design including the overall structural concept and the building material. The uplift forces or pressure due to wetted clay soils can be addressed by designing the foundations with a minimum dead load and/or placing the foundations on a blanket of compacted structural fill. The compacted structural fill blanket will increase the dead load on the swelling foundations soils and will

increase the separation of the foundation from the swelling soils. Suggestions and recommendations for design dead load and compacted structural fill blanket are presented below. Compacted structural fill recommendations are presented under COMPACTED STRUCTURAL FILL below.

D2.2 Settlement Potential

Settlement potential of a soil is the tendency for the soil to experience volume change when subjected to a load. Settlement is characterized by downward movement of all or a portion of the supported structure as the soil particles move closer together resulting in decreased soil volume. Settlement potential is a function of;

- foundation loads,
- depth of footing embedment,
- the width of the footing, and
- the settlement potential or compressibility of the influenced soil.

Foundation design considerations concerning settlement potential include the amount of movement tolerable to the structure and the design and construction concepts to help reduce the potential movement. The settlement potential of the foundation can be reduced by reducing foundation pressures and/or by placing the foundations on a blanket of compacted structural fill. The anticipated post construction settlement potential and suggested compacted fill thickness recommendations are based on site specific soil conditions and are presented in the text of the report.

D2.3 Soil Support Characteristics

The soil bearing capacity is a function of;

- the engineering properties of the soil material supporting the foundations,
- the foundation width,
- the depth of embedment of the bottom of the foundation below the
- lowest adjacent grade,
- the influence of the ground water, and
- the amount of settlement tolerable to the structure.

Soil bearing capacity and associated minimum depth of embedment are presented in the text of the report.

The foundation for the structure should be placed on relatively uniform bearing conditions. Varying support characteristics of the soils supporting the foundation may result in nonuniform or differential performance of the foundation. Soils encountered at foundation depths may contain cobbles and boulders. The cobbles and boulders encountered at foundation depths

may apply point loads on the foundation resulting in nonuniform bearing conditions. The surface of the formational material may undulate throughout the building site. If this is the case it may result in a portion of the foundation for the structure being placed on the formational material and a portion of the foundation being placed on the overlying soils. Varying support material will result in nonuniform bearing conditions. The influence of nonuniform bearing conditions may be reduced by placing the foundation members on a blanket of compacted structural fill. Suggestions and recommendations for constructing compacted structural fill are presented under COMPACTED STRUCTURAL FILL below and in the text of the report.

D3.0 COMPACTED STRUCTURAL FILL

Compacted structural fill is typically a material which is constructed for direct support of structures or structural components.

There are several material characteristics which should be examined before choosing a material for potential use as compacted structural fill. These characteristics include;

- the size of the larger particles,
- the engineering characteristics of the fine grained portion of material matrix,
- the moisture content that the material will need to be for compaction with respect to the existing initial moisture content,
- the organic content of the material, and
- the items that influence the cost to use the material.

Compacted fill should be a non-expansive material with the maximum aggregate size less than about two (2) inches and less than about twenty five (25) percent coarser than three quarter (3/4) inch size.

The reason for the maximum size is that larger sizes may have too great an influence on the compaction characteristics of the material and may also impose point loads on the footings or floor slabs that are in contact with the material. Frequently pit-run material or crushed aggregate material is used for structural fill material. Pit-run material may be satisfactory, however crushed aggregate material with angular grains is preferable. Angular particles tend to interlock with each other better than rounded particles.

The fine grained portion of the fill material will have a significant influence on the performance of the fill. Material which has a fine grained matrix composed of silt and/or clay which exhibits expansive characteristics should be avoided for use as structural fill. The moisture content of the material should be monitored during construction and maintained near optimum moisture content for compaction of the material.

Soil with an appreciable organic content may not perform adequately for use as structural fill material due to the compressibility of the material and ultimately due to the decay of the organic portion of the material.

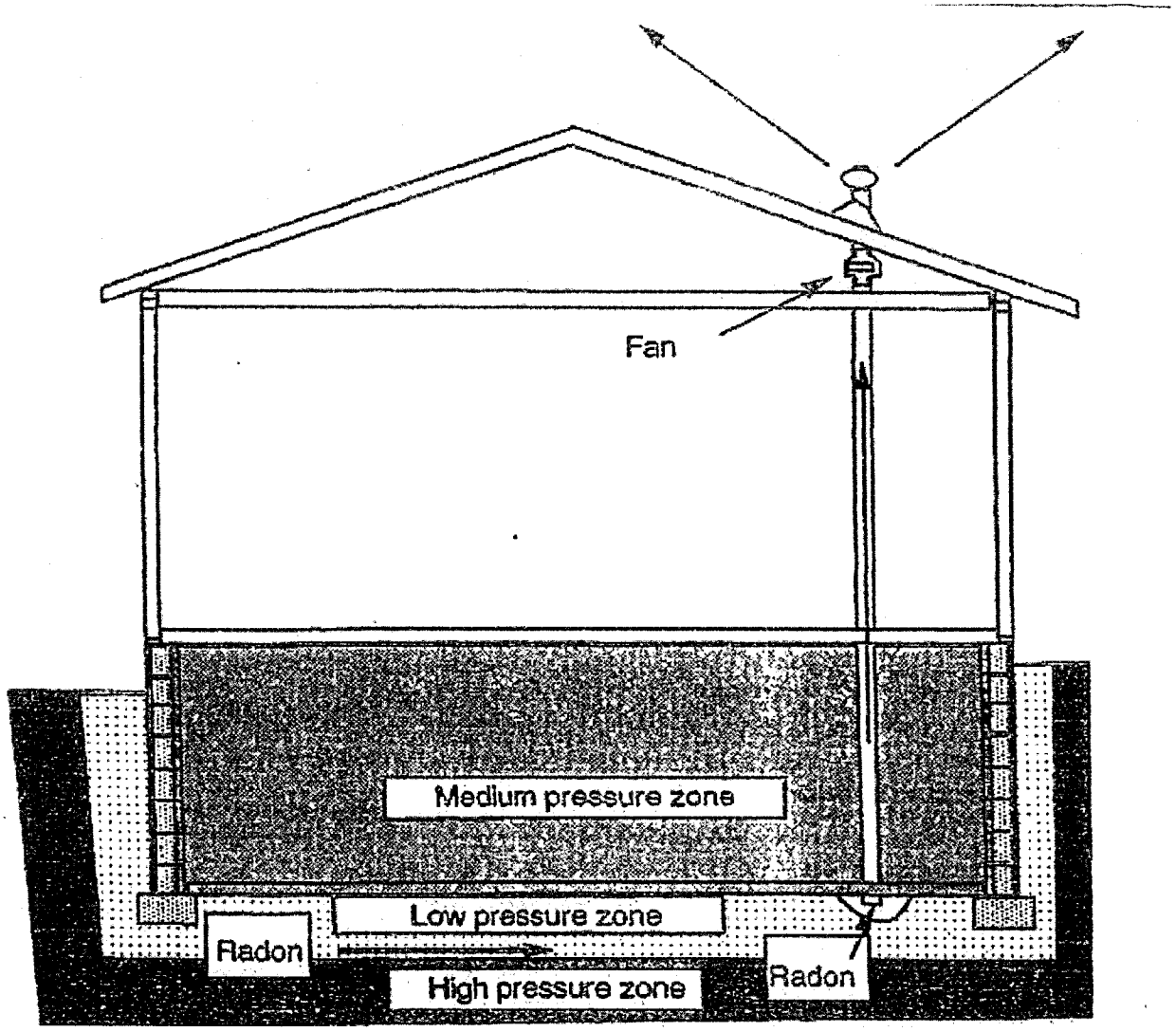
D4.0 RADON CONSIDERATIONS

Information presented in "Radon Reduction in New Construction, An Interim Guide: OPA-87-009 by the Environmental Protection Agency dated August 1987 indicates that currently there are no standard soil tests or specific standards for correlating the results of soil tests at a building site with subsequent indoor radon levels. Actual indoor levels can be affected by construction techniques and may vary greatly from soil radon test results. Therefore it is recommended that radon tests be conducted in the structure after construction is complete to verify the actual radon levels in the home.

We suggest that you consider incorporating construction techniques into the development to reduce radon levels in the residential structures and provide for retrofitting equipment for radon gas removal if it becomes necessary.

Measures to reduce radon levels in structures include vented crawl spaces with vapor barrier at the surface of the crawl space to restrict radon gas flow into the structure or a vented gravel layer with a vapor barrier beneath a concrete slab-on-grade floor to allow venting of radon gas collected beneath the floor and to restrict radon gas flow through the slab-on-grade floor into the structure. These concepts are shown on Figure D1.

If you have any questions or would like more information about radon, please contact us or the State Health Department at 303-692-3030.



This figure was excerpted from an EPA manual "Radon-resistant Construction Techniques for New Residential Construction" and reproduced here for reference only

RADON FLOW CONCEPT

Lambert and Associates

Project No.	M21021GE
Date:	May 18, 2021
Figure:	D1

Hydrology Report
Lot 615-1CR
Town of Mountain Village, CO

Prepared for:

Mr. Frank Hensen

Prepared by:

David Ballode, P.E.
Uncompahgre Engineering, LLC
October 26, 2020

Uncompahgre Engineering, LLC
P.O. Box 3945
Telluride, CO 81435
dballode@msn.com (970) 729-0683

Background:

Brown Dog Properties, LLC, the Owner of Lot 615-1CR (The Lot), a .78 acre lot located north of Lawson Overlook and zoned as multi-family. The Owners would like to subdivide the lot as a Single-Family Common Interest Community (SFCIC) and build three freestanding homes on the lot.

The west side of the lot contains a portion of a Drainage, Utility and Earthwork Easement recorded in Plat Book 1, at Page 1115, (hereafter called the Easement). The Owners wish to construct a home on the west side of the Lot and desire to modify the Easement and vacate the portion that is located under and around the home site so they have free and clear title without encumbrances from the Easement. Some portions of the Easement contain utilities although none exist or are planned in the portion that the Owners want to vacate.

There are two gullies on the western end of the Lot where the home would be built, the eastern gully where the water runs and an apparently inactive western gully. During a 6/30/20, on-site meeting with members of the Town of Mountain Village (TMV), Telluride Ski & Golf (TSG) and the Owners, the topic of vacating a portion of the Easement was addressed. TSG requested a hydrology assessment be performed to analyze the stormwater drainage from the surrounding watershed and to verify that the western gully is indeed inactive and that it would not be needed for future drainage and that it would not be negatively impacted by the proposed development and construction. The Owners agreed to TSG's request, so the Owner's commissioned this report.

Purpose of Report:

The purpose of this report is to analyze the stormwater discharge at Lot 615-1CR and to address any potential impacts that may result from the planned development of this lot, specifically in the area of the Easement proposed to be modified and vacated. This report addresses the issue in the following three items:

1. Analyze the runoff impacting Lot 615-1CR and determine how the flows are directed through the Easement and if the Easement is necessary to convey flows.
2. Assess the potential impact of construction of a home that is cantilevered and bridging over the Easement gullies and how it might impact the drainage or contribute to erosion in the Lot 615-1CR development.
3. Assess the need for the portion of the drainage Easement located on the west side of the lot being proposed to be vacated.

Hydrology:

The drainage basin that is being analyzed is a large basin that drains to the arch culvert underneath Lawson Overlook. Lot 615-1CR sits immediately north of the outfall from that arch culvert. The watershed map that the hydrology calculations are based on is shown in the Appendix and the approximate location of Lot 615-1CR is identified.

This analysis started by delineating the watershed limits on an aerial topographic map of the Mountain Village. That delineation was then field-checked. Note on the watershed map that the entire watershed

that drains to Lot 615C is a combination of Watersheds A and B. However, after field observations, it was determined that Watershed A actually does not contribute to the stormwater discharge at Lot 615 in any meaningful way. That water simply goes into a large wetlands/low area adjacent to the 15th hole on the golf course. That wetlands is extensive and there is no culvert under the cart path to allow for drainage from south to north. Water may seep under the path and eventually discharge across Russell Drive in the 18" culvert that's identified on the map, but that water would be delayed so much that it would have no effect on the peak flow that I calculated. The travel time of that water ended up skewing the peak flow time so much that the hydrologic results were skewed. So, Watershed A was dropped out of the analysis and Watershed B is the only contributing area addressed in this report.

Due to the relatively small size of the basin, the time was not taken to analyze all of the ponding that occurs near Double Eagle Way or at Adams Ranch Road. That would require topographic information that was not available. Instead, this report assumes no ponding so the peak discharge is not attenuated. For that reason, these results are expected to be over-stated.

The hydrology was calculated using the SCS method with hydrographs produced using the Hydrocad software program. Time of Concentration velocities and SCS curve numbers were determined through tables found in the USDA's industry-standard TR-55 manual and CODT's Drainage Manual. All tables used are included in the appendix. There is quite a lot of varied terrain and use from dense wood to manicured golf course. Three separate TR-55 pages showing curve numbers are included in the appendix and the aggregate Curve Number used for the basin is 65. Once all of the variables were determined, they were run through Hydrocad and hydrographs are included for the 10, 25, and 100 year storms. The discharge for those storms are as follows: the 10-year Q = 6.8 cfs, the 25-year Q is 15.9 cfs, and the 100-year Q is 37.8 cfs.

After the hydrographs were produced, the results were compared to an open channel flow analysis of the small drainage channel located just upstream of the Lawson Overlook arch culvert. That stream geometry can convey about 18 cfs and is expected that the stream can contain between a 10 to 25-year storm. There aren't any erosive features suggesting that it over-tops. It is also doubtful that the channel was formed from erosion - it appears as though it were dug out at one point and has re-vegetated with fairly steep slopes. Steep side slopes like that are not indicative of a natural process, so the 18 cfs seems to be a fair volume for what that channel might see. Since the results of the hydrographs were consistent with field observations, no further calibration of the design storm was deemed necessary.

The 25-year and 100-year peak Q's were then used to size culverts that can convey those amounts. Using CDOT nomographs, it was determined that a 24" culvert could convey the 25-year storm and 2-24" side-by-side culverts could convey the 100-year storm. After discussing with Mr. Hensen (the Owner of the property)the Owner, it was decided size the conveyance structures for the 100-year storm.

All of the information used to calculate the peak discharges are included in the Appendix as well as the peak discharge hydrographs from the Hydrocad program.

After all of that was done, the 1989 Banner hydrology report was reviewed. That report called for the upsizing for the Adams Ranch culvert to a 30", which is in line with this report's findings. It should be noted that an over-sized 48" culvert is installed, but not due to a hydrology/hydraulic requirement. That 48" culvert entrance was inspected and there are no signs of erosion or high water that would indicate this size is necessary. It appears that high water is much less than half of the total depth of that culvert.

A more detailed analysis could be done to model the ponding that occurs in the watershed, but it does not seem to be worth the time or expense. An 18" culvert is the minimum in the Village and the 25-year storm can be conveyed in a 24". Conveying the 100-year storm is advised due to the discharge point being located near the break-over point down to the Valley Floor.

In order to minimize any erosion at the outlet, energy dissipators will be installed at both the outlet of the arch culvert and at the outlet of the newly-installed 24" culverts as shown on the C2 in the appendix. The

outlet from these culverts will be directed to the eastern gully. No stormwater will be directed to the dry, western gully.

Development Concerns:

Home Foundation:

Based on information provided by the Owners, the development of the western home on the lot will include the construction of a single-family home cantilevered over the dry western gully. The garage will sit to the east of the eastern gully and will be connected to the house via a bridge.

Before the foundation is constructed, there are some steep side slopes near the top of the existing gullies that will continue to erode due to exposure to the natural elements. These slopes will be laid back to a flatter angle - or to the angle of repose – in order to stabilize the slope. Additional stabilization can be achieved by re-vegetation of the slopes with native seed grasses.

The home will be designed to have a foundation that provides retainage of the existing slope and supports the northern side of the house being cantilever over the dry gully in the area of the Easement. This foundation will likely include some deep foundation (i.e. micropiles) elements that will transfer the load well below current slope conditions. The garage foundation and connector bridge are located outside the Easement area. The installation of the house foundation that retains the uphill slope will aid in preventing future erosion from occurring at the upper end of the west gully.

Site Drainage and Roof Drainage:

Site drainage will direct any surface water back to the eastern gully. A concept plan showing this is included in the appendix (the C2 Sheet). Foundation drains shall be installed to direct subsurface water collected at the foundation/retaining wall and daylight a safe distance away from the structure. Roof drainage will be captured in gutters and downspouts that will direct that water away from areas that may be susceptible to erosion. All drainage discharge locations shall have energy dissipators installed at their outlets.

Conclusion:

Based on the findings and recommendations of this report, there is no need to view the western gully as contributing to the watershed drainage, as indicated by the Easement. It appears that the western gully was formed under a condition that does not exist today. Currently, all of the drainage is directed to the eastern gully, and has been since Lawson Overlook was constructed and the arch culvert installed. The western gully currently does not have a concentrated flow directed to it and the proposed drainage improvements will ensure that nothing will be directed to it in the future. All flows will be directed to the eastern gully.

APPENDIX

Design Point (Arch Culvert at Lot 615-1CR)

48" CMP

Reach J

Watershed B = 95.6 acres
(Total Contributing Area)

Reach I

Adams Ranch

Prairie Point

Reach H

Reach G

18" CMP (Outlet Plugged)

24" CMP

15th Hole Wetlands

Watershed A = 57.4 acres
Does not Contribute

MV Blvd

W.S. 9283.0

W.S. 9296.5

9029.0 9107.5 9057.6 9166.2 9139.4 9084.6 9083.0 9213.3 9205.3 9188.7 9177.2 9183.0 9196.0 9221.2 9075.7 9070.1 9198.1 9277.6 9167.9 9124.2 9152.2 9213.8 9272.6 9284.9 9272.7 9276.5 9225.2 9308.2 9337.1 9316.2 9309.7 9302.3 9261.3 9346.3 9361.3 9275.1 9298.1 9380.8 9356.4 9329.1 9327.8 9304.5 9304.3 9366.6 9507.3 9528.5 9468.7 9652.7 9495.7 9494.5 9642.6 9587.6 9609.2 9589.9 127

Scale: 1" = 200'

0 100 200 400

Uncompahgre Engineering, LLC

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

SUBMISSIONS:

SUBMITTAL	2020-10-10

Hensen Residence
Lot 615C
Mtn. Village, CO

COLORADO LICENSED
29645
10-10-20
PROFESSIONAL ENGINEER

CONTRACTOR TO REVIEW AND COMPARE ALL CHAPTERS AND INTERDISCIPLINARY DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO ANY FIELD WORK BEING DONE IN ACCORDANCE WITH AIA DOCUMENT A201

Watershed Map

Exhibit A

NOAA Atlas 14, Volume 8, Version 2
Location name: Telluride, Colorado, USA*
Latitude: 37.9432°, Longitude: -107.8681°
Elevation: 9119.33 ft**
* source: ESRI Maps
** source: USGS

Rainfall Data from NOAA Website

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.163 (0.143-0.196)	0.185 (0.162-0.223)	0.234 (0.204-0.282)	0.286 (0.247-0.346)	0.374 (0.314-0.491)	0.457 (0.366-0.600)	0.551 (0.416-0.739)	0.659 (0.466-0.905)	0.820 (0.545-1.15)	0.956 (0.605-1.34)
10-min	0.239 (0.209-0.287)	0.271 (0.237-0.326)	0.342 (0.298-0.413)	0.418 (0.361-0.507)	0.548 (0.460-0.718)	0.669 (0.535-0.878)	0.807 (0.610-1.08)	0.964 (0.682-1.33)	1.20 (0.798-1.69)	1.40 (0.886-1.96)
15-min	0.291 (0.255-0.350)	0.331 (0.290-0.398)	0.417 (0.363-0.504)	0.510 (0.440-0.619)	0.669 (0.561-0.876)	0.816 (0.653-1.07)	0.984 (0.743-1.32)	1.18 (0.831-1.62)	1.46 (0.974-2.06)	1.71 (1.08-2.39)
30-min	0.376 (0.330-0.452)	0.425 (0.372-0.512)	0.534 (0.465-0.645)	0.652 (0.563-0.791)	0.853 (0.717-1.12)	1.04 (0.833-1.37)	1.25 (0.948-1.68)	1.50 (1.06-2.06)	1.87 (1.24-2.63)	2.18 (1.38-3.06)
60-min	0.461 (0.404-0.554)	0.517 (0.453-0.623)	0.641 (0.558-0.774)	0.772 (0.667-0.937)	0.997 (0.835-1.30)	1.20 (0.963-1.58)	1.44 (1.09-1.93)	1.71 (1.21-2.35)	2.12 (1.41-2.97)	2.46 (1.56-3.44)
2-hr	0.546 (0.481-0.651)	0.609 (0.537-0.728)	0.747 (0.655-0.895)	0.893 (0.776-1.07)	1.14 (0.962-1.47)	1.37 (1.10-1.77)	1.63 (1.24-2.16)	1.92 (1.37-2.61)	2.36 (1.59-3.29)	2.73 (1.75-3.80)
3-hr	0.614 (0.544-0.729)	0.685 (0.606-0.814)	0.832 (0.732-0.991)	0.982 (0.857-1.18)	1.23 (1.04-1.57)	1.46 (1.18-1.87)	1.71 (1.31-2.25)	2.00 (1.44-2.70)	2.43 (1.65-3.36)	2.79 (1.81-3.86)
6-hr	0.789 (0.703-0.928)	0.884 (0.787-1.04)	1.07 (0.943-1.26)	1.24 (1.09-1.47)	1.51 (1.28-1.90)	1.75 (1.43-2.22)	2.02 (1.56-2.61)	2.31 (1.67-3.07)	2.74 (1.87-3.73)	3.09 (2.02-4.24)
12-hr	1.05 (0.943-1.23)	1.19 (1.07-1.39)	1.44 (1.28-1.68)	1.66 (1.47-1.95)	2.00 (1.69-2.46)	2.28 (1.87-2.84)	2.58 (2.01-3.30)	2.91 (2.13-3.82)	3.37 (2.33-4.55)	3.75 (2.49-5.10)
24-hr	1.36 (1.23-1.57)	1.55 (1.40-1.79)	1.87 (1.68-2.17)	2.16 (1.92-2.51)	2.57 (2.19-3.11)	2.91 (2.39-3.57)	3.26 (2.55-4.11)	3.63 (2.68-4.71)	4.15 (2.90-5.53)	4.56 (3.07-6.16)
2-day	1.70 (1.54-1.94)	1.92 (1.74-2.20)	2.30 (2.08-2.65)	2.63 (2.36-3.04)	3.11 (2.66-3.72)	3.48 (2.89-4.23)	3.88 (3.06-4.83)	4.29 (3.20-5.49)	4.85 (3.43-6.40)	5.29 (3.61-7.08)
3-day	1.94 (1.76-2.20)	2.18 (1.98-2.48)	2.58 (2.34-2.95)	2.93 (2.63-3.36)	3.43 (2.95-4.07)	3.82 (3.19-4.61)	4.23 (3.36-5.24)	4.65 (3.50-5.93)	5.24 (3.74-6.87)	5.69 (3.92-7.58)
4-day	2.13 (1.94-2.41)	2.38 (2.17-2.70)	2.81 (2.55-3.20)	3.18 (2.87-3.64)	3.70 (3.20-4.39)	4.12 (3.45-4.95)	4.55 (3.63-5.61)	5.00 (3.77-6.35)	5.61 (4.02-7.33)	6.08 (4.21-8.08)
7-day	2.56 (2.35-2.88)	2.87 (2.63-3.23)	3.39 (3.09-3.82)	3.83 (3.47-4.34)	4.45 (3.86-5.23)	4.95 (4.17-5.90)	5.45 (4.39-6.68)	5.98 (4.56-7.54)	6.70 (4.86-8.69)	7.26 (5.08-9.57)
10-day	2.95 (2.72-3.31)	3.29 (3.03-3.69)	3.86 (3.53-4.34)	4.35 (3.95-4.91)	5.03 (4.39-5.88)	5.57 (4.72-6.61)	6.13 (4.96-7.47)	6.71 (5.14-8.41)	7.49 (5.47-9.68)	8.10 (5.71-10.6)
20-day	4.14 (3.84-4.60)	4.53 (4.19-5.03)	5.17 (4.76-5.75)	5.71 (5.22-6.39)	6.47 (5.69-7.47)	7.07 (6.04-8.30)	7.68 (6.28-9.25)	8.31 (6.45-10.3)	9.16 (6.78-11.7)	9.81 (7.02-12.8)
30-day	5.12 (4.76-5.65)	5.58 (5.18-6.16)	6.33 (5.86-7.01)	6.96 (6.39-7.74)	7.82 (6.90-8.96)	8.49 (7.29-9.89)	9.16 (7.53-11.0)	9.84 (7.69-12.1)	10.7 (8.01-13.6)	11.4 (8.25-14.8)
45-day	6.31 (5.89-6.92)	6.93 (6.46-7.61)	7.92 (7.36-8.72)	8.73 (8.05-9.66)	9.82 (8.68-11.2)	10.6 (9.16-12.3)	11.4 (9.45-13.6)	12.2 (9.61-15.0)	13.2 (9.94-16.7)	14.0 (10.2-18.0)
60-day	7.28 (6.81-7.95)	8.09 (7.56-8.85)	9.37 (8.73-10.3)	10.4 (9.62-11.5)	11.7 (10.4-13.3)	12.7 (11.0-14.6)	13.7 (11.4-16.2)	14.6 (11.5-17.8)	15.8 (11.9-19.8)	16.6 (12.2-21.3)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

615-C

Split the Difference

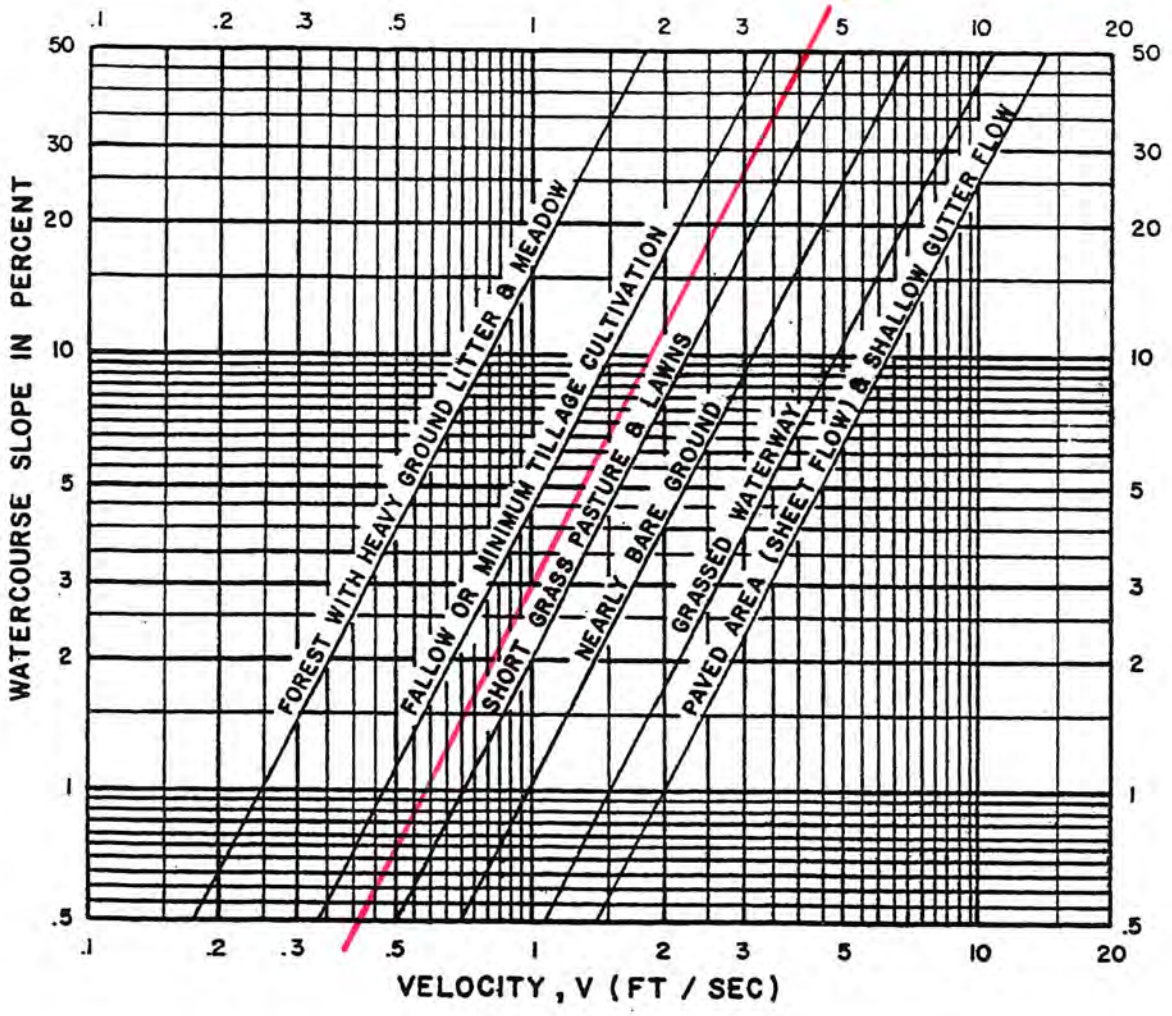


Figure 7-2 Velocities for Estimation of Time of Concentration

From: TR-55

CN Sheet 1/3

Table 2-2a Runoff curve numbers for urban areas [1]

Cover description		Curve numbers for hydrologic soil group			
Cover type and hydrologic condition	Average percent impervious area [2]	A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.) [3]:					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) [4]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation) [5]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

Used Avg of 65

[1] Average runoff condition, and $I_a = 0.2S$.

[2] The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

[3] CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

[4] Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

[5] Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

From: TR-55

CN Sheet 2/3

Table 2-2c Runoff curve numbers for other agricultural lands [1]

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition	A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. [2]	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. [3]	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	30 [4]	48	65	73
Woods—grass combination (orchard or tree farm). [5]	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods. [6]	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30 [4]	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

Used Avg of 65

1 Average runoff condition, and $I_a = 0.2S$.

2 *Poor:* <50%) ground cover or heavily grazed with no mulch.
Fair: 50 to 75% ground cover and not heavily grazed.
Good: > 75% ground cover and lightly or only occasionally grazed.

3 *Poor:* <50% ground cover.
Fair: 50 to 75% ground cover.
Good: >75% ground cover.

4 Actual curve number is less than 30; use CN = 30 for runoff computations.

5 CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

6 *Poor:* Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.
Fair: Woods are grazed but not burned, and some forest litter covers the soil.
Good: Woods are protected from grazing, and litter and brush adequately cover the soil.

From : TR-55

CN Sheet 3/3

Table 2-2d Runoff curve numbers for arid and semiarid rangelands 1/

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition 2/	A 3/	B	C	D
Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element.	Poor		80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush.	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-juniper—pinyon, juniper, or both; grass understory.	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush with grass understory.	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus.	Poor	63	77	85	88
	Fair	55	72	81	86
	Good	49	68	79	84

1 Average runoff condition, and I_a = 0.2S. For range in humid regions, use table 2-2c.
2 Poor: <30% ground cover (litter, grass, and brush overstory).
Fair: 30 to 70% ground cover.
Good: > 70% ground cover.
3 Curve numbers for group A have been developed only for desert shrub.

Used Avg of 65

Date: 2020-10-10
Time of Concentration Calculations fro Lot 615C

Ti = Overland Flow (Reach G)
400 LF @ 5.0% = 7.8 min.

S=5.0
C=0.55
D=180

Velocities - Split between Grassed Waterway and Nearly Bare Ground

Reach G
690 LF @ 35' = 5.1%
V=1.5
T=7.7 min

Reach H
810 LF @ 90' = 11.1%
V=1.9
7.1 min

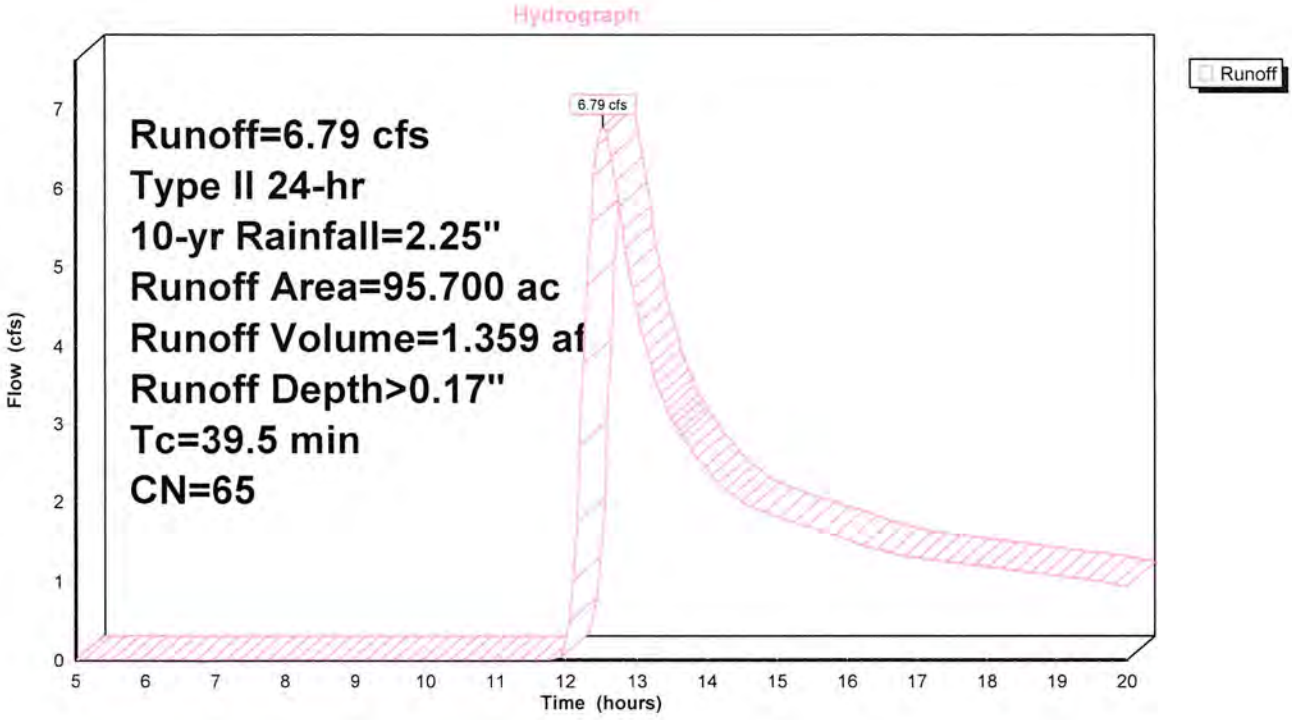
Reach I
1150 LF @ 85' = 7.4%
V=1.5
12.8 min

Reach J
420 LF @ 35' = 8.3%
V=1.7
4.1 min

Total Tc = 39.5 min ← Tc = 39.5 min for SCS Hydrograph Calculation

Subcatchment 1S: Basin B

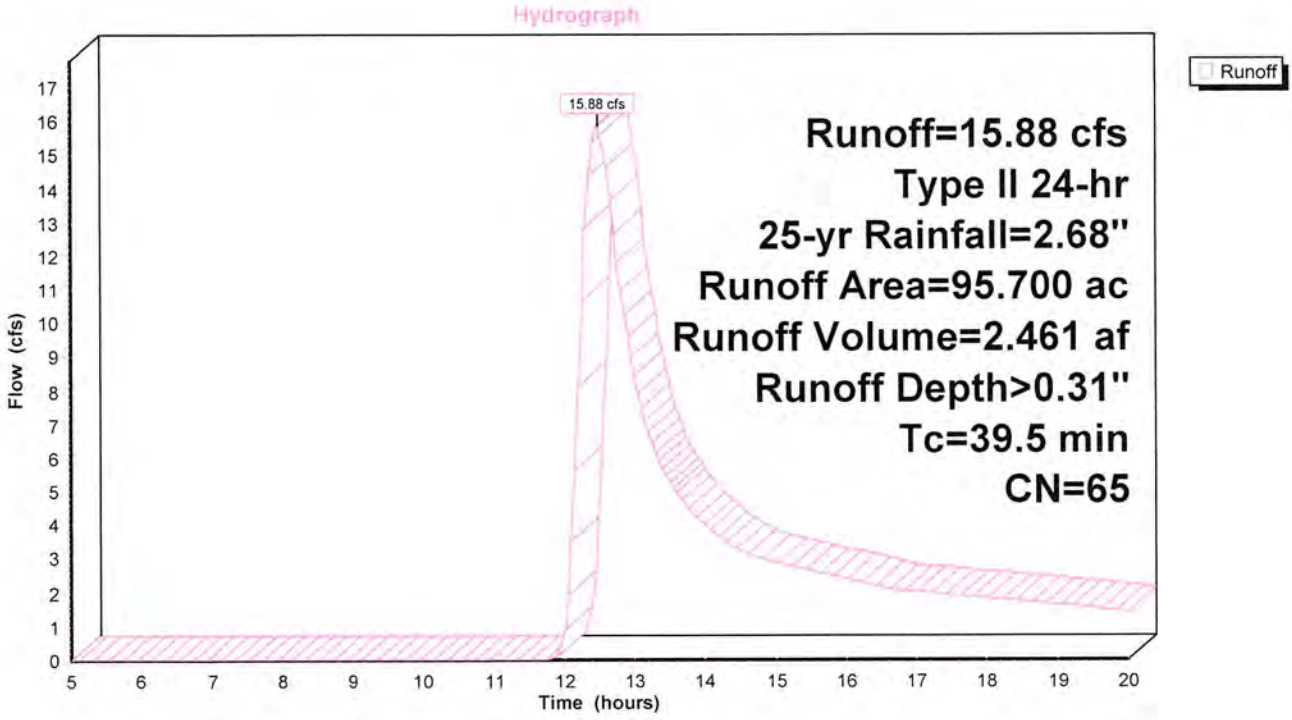
615 - C
10 - yr
Q = 6.8 cfs



Hydrocad Output

Subcatchment 1S: Basin B

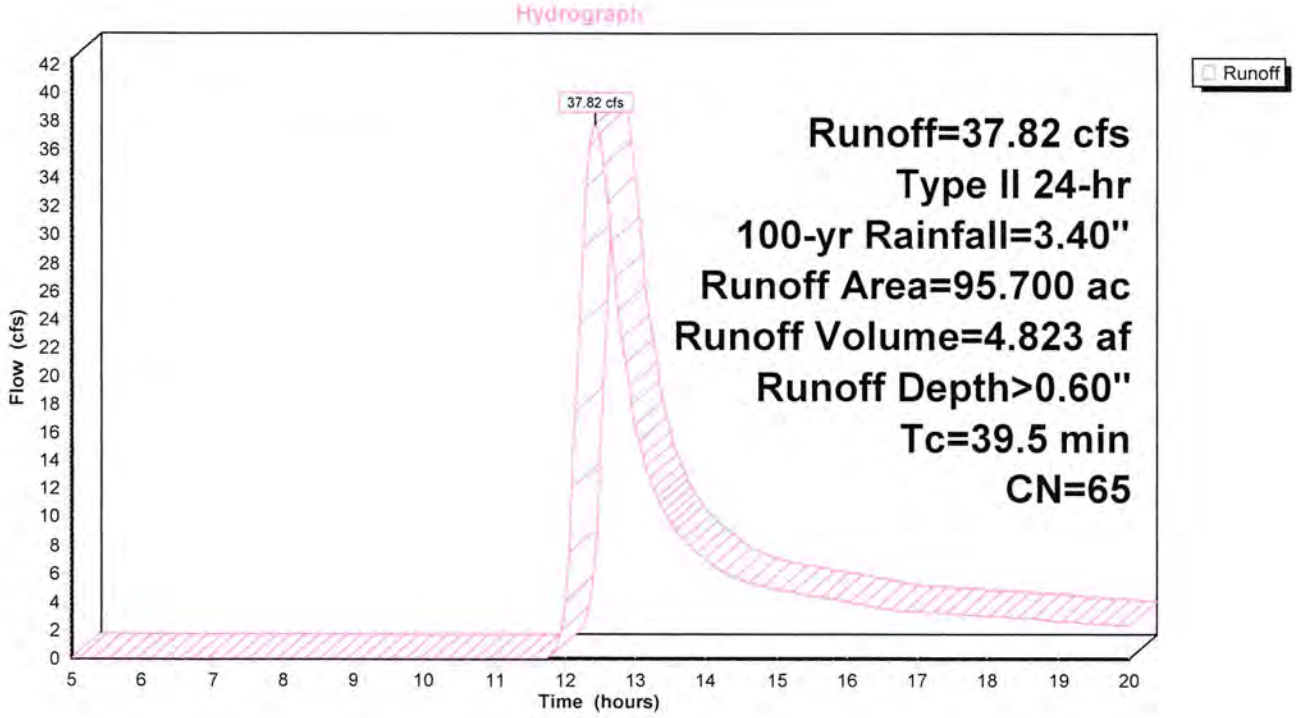
615-C
25-yr
Q = 15.9 cfs



Hydrocad Output

Subcatchment 1S: Basin B

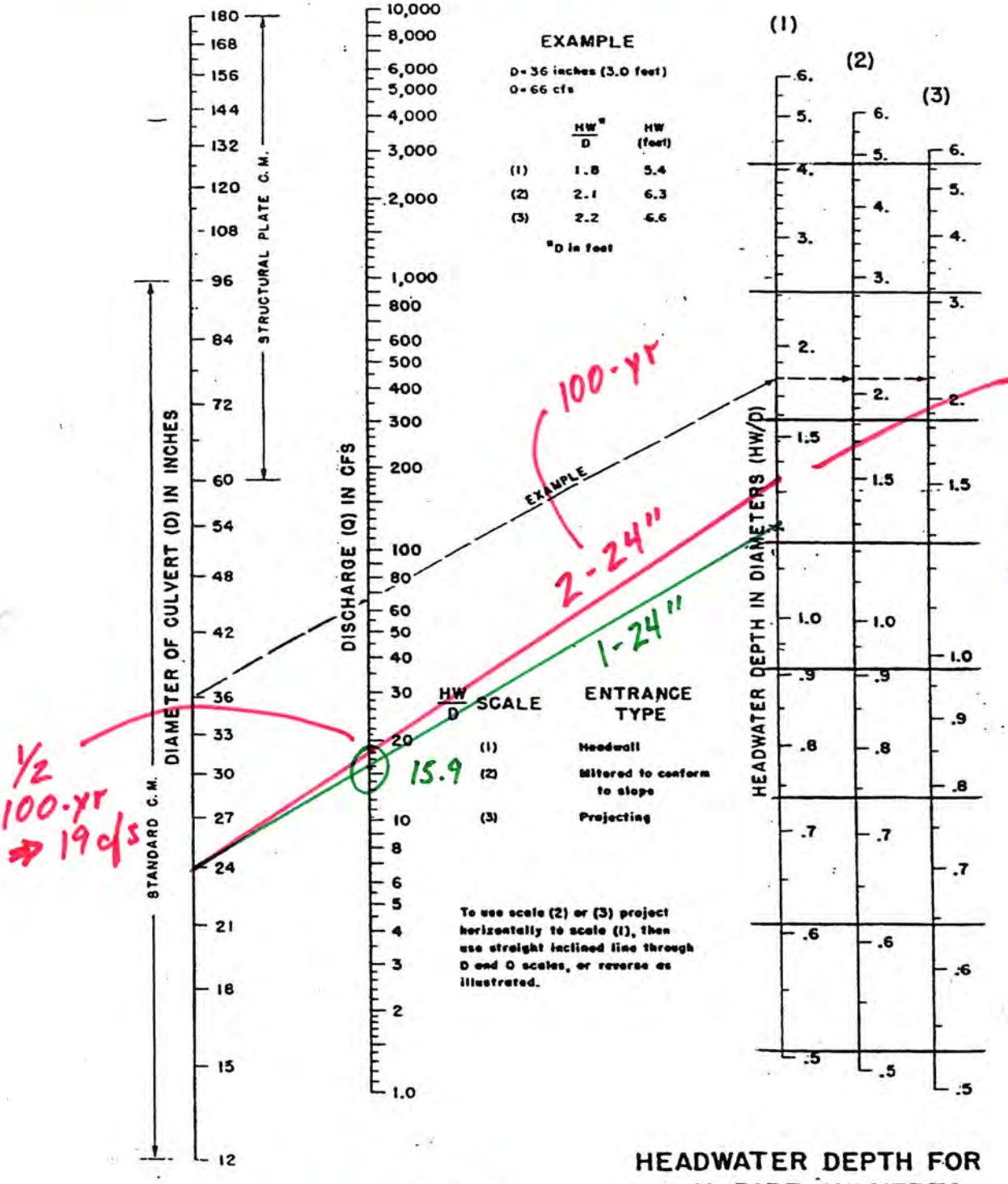
615-C
100-yr
Q = 37.8 cfs



Hydrocad Output

25 - year

100 - year



HEADWATER DEPTH FOR C. M. PIPE CULVERTS WITH INLET CONTROL

100 yr = 37.8 cfs

Split ⇒ 19 cfs

9-61

CDOT Nomograph

Exhibit 3

June 3, 2020

Law Office of Daniel T. Zemke P.C.
220 East Colorado Ave., Suite 217
Telluride, CO 81435

Re: Henson – Easements

Dear Mr. Zemke:

As you know, last summer the Town and your client, Frank Henson, had a number of discussions regarding the usage and location of the Meadows Trail as it crosses Lot 615-1CR and never came to any sort of resolution on a trail location that would work well with Mr. Henson's development ideas. The purpose of this letter is to clarify the Town's position with respect to the existing trail and how to proceed forward.

Over the winter I was directed to look more deeply into the status and origin of the existing easements on and around Lot 615-1CR. Below is a summary of what I found and the position the Town is taking in respect to the existing trail and easement.

Lot 615-1CR: The most informative document of record is the plat for Lot 615-1CR, recorded June 7, 2000, at Reception No. 334699 ("**2000 Lot 615-1CR Plat**" "**Exhibit A**"). On this plat, as it relates to Lot 615-1CR,, there is a Drainage, Utility and Earthworks Easement (the "**Lot 615-1CR Drainage, Utility and Earthworks Easement**") which connects to both the BC Trail and Utility Easement and the Tract OSP-21 Utility Easement. The Lot 615-1CR Drainage, Utility and Earthworks Easement also shows up on the plat recorded January 23, 1991, at Reception No. 269361 (Plat Book 1, Page 1115), so it was established at that time. From what the Town could gather, the sewer line and resulting trail were built sometime around this time. Therefore, the Meadows Trail has always been associated with the Lot 615-1CR Drainage, Utility and Earthworks Easement.

Lots to West. The Boston Commons Lots to the west of Lot 615-1CR are subject to a plat recorded on March 11, 1993, at Reception No. 283263 (Plat Book 1 Page 1457) (the "**Boston Commons Plat**" "**Exhibit B**"), which is subject to a 20-foot Trail and Utility Easement (the "**BC Trail and Utility Easement**"), which has clearly defined trail uses and is the location of the Meadows Trail.

Lot to East. Tract OSP-21 to the east of Lot 615-1CR has a plat recorded on December 31, 1992, Reception No. 281916 (Plat Book, 1 Page 1381) ("**Tract OSP-21 Plat**" "**Exhibit C**"), which includes a 30-foot Utility Easement with notes on the allowed use of such easement, which uses are typically associated with Mountain Village General Easements for the safe and efficient operation of the Town of Mountain Village and include "bicycle access" ("**Tract OSP-21 Utility Easement**"). This easement ties into the eastern portion of Lot 615-1CR and the Lot 615-1CR Drainage, Utility and Earthworks Easement.

The Town would take the position that the most reasonable interpretation, in light of all the facts, is that the Lot 615-1CR Drainage, Utility and Earthworks Easement also included trail uses as (1) the trail has been existence since the inception of the such easement, and (2) to not provide for trail uses would frustrate the purpose of the Tract OSP-21 Utility Easement and the BC Trail and Utility Easement for the Meadows Trail. Therefore, the Town is of the position that the Meadows Trail is a valid and legally existing trail in its current location.

With that said, the Town will continue to work with Mr. Henson to accommodate his development plans on this property through reasonable solutions to the trail that do not require significant expenditures of Town funds (i.e.: bridging the drainage swale) or major disruptions to the trails usage and functionality (i.e.: routing it to the adjacent roadway).

Sincerely,

James Mahoney

James Mahoney, Esq

Exhibit 4

OPEN SPACE AND RECREATION

Residents of Mountain Village are privileged to be able to live in a recreational paradise. Recreation is integral to the Mountain Village way of life. The town needs to make strides in terms of its basic level of service for year-round opportunities for a wider range of activities. As identified in the Comparable Communities Study, providing expanded recreational amenities, such as a recreation center, not only improves the quality of life for residents, but also broadens the town's appeal to visitors with family members of all ages. Furthermore, places like Breckenridge have found that having expanded recreational amenities increases the time that second homeowners spend there. Open space is a key principle of the Comprehensive Plan, with more than 60% of the total land area in Mountain Village planned as open space. Modifications to open space categories and to open space areas are made only to realize the Mountain Village Vision and to increase the predictability of what can occur on those lands, allowing the town to better plan for civic improvements, and land owners to better understand what is possible for areas near to them. More specificity concerning open space uses is provided within the Land Use Element section of the Comprehensive Plan.

Open space is a key principle of the Comprehensive Plan, with more than 60% of the total land area in Mountain Village planned as open space.

I. Mountain Village continues to provide a world-class recreational experience by strengthening its existing facilities and programs and exploring opportunities for new ones.

A. Create a system of parks – pocket and neighborhood parks – and recreational facilities which allow for easy access and a number of amenities.

B. Identify ongoing open space and recreational needs and issues in partnership with the Open Space and Recreation Advisory Board (OSRAB).

C. Construct an indoor, multipurpose recreational center that serves the year-round needs of residents and bolsters the visitor experience with desired amenities such meeting spaces, a theatre, and weights and fitness classrooms. Other amenities at the recreation center could include a bowling alley, indoor volleyball and an indoor tennis center that also serves as a multipurpose facility for conferencing or exposition space, music events, or special events, with strong connections provided to surrounding hotbed development and the Telluride Conference Center.

D. Diversify winter outdoor recreational amenities and programs to serve a broader range of visitors and residents such as a Nordic Center for cross-country skiing and snowshoeing, with a small event space for the community.

E. Increase outdoor activity programming in the summer and shoulder seasons by building upon the town's existing facilities and the growing demand for mountain biking, hiking, photography/ interpretation, tennis, climbing, horseback riding, physical and mental health and wellness, and other activities.

F. Explore expanding the pond in Conference Center Plaza per the Mountain Village Center Subarea

to provide a new recreational and open space amenity that adds vibrancy to this plaza area.

G. Explore expanding recreation opportunities at Elk Pond as provided for in the Town Hall Center Subarea.

H. Strongly consider the creation of a lift-served alpine slide from Gorrono Ranch Restaurant area down to The Beach. This lift also may provide summer access to the Gorrono area for residents and visitors.

   i. Evaluate the installation of a zip line in the area of the proposed alpine slide.

I. Encourage and promote recreational races and events in Mountain Village where and whenever possible.

J. Implement the Potential Recreation Projects Plan developed by the OSRAB.

II. Mountain Village continues to work with regional partners to provide a world-class recreational experience.

A. Address recreational projects and programs of mutual benefit with TSG, the Town of Telluride and San Miguel County.

B. Strengthen existing partnerships and forge new ones with local and regional land agencies and recreational groups to expand and enhance the town's recreational programs throughout the year.

C. Provide residents and visitors with diverse and exciting recreational opportunities throughout the year with the Town of Telluride and San Miguel County collaboration, where possible, recognizing that neither towns nor the county provides a comprehensive set of amenities and programs on their own, but together they can.

III. Mountain Village expands its community-wide trail network through collaboration with public agencies, regional partners, and private developers.

A. Improve the trail network and way-finding system throughout Mountain Village, collaboratively with landowners and public agencies, in order to encourage non-vehicular transportation, greater access to recreation, and overall community connectivity.

B. Identify a primary trail route, along existing roads as much as possible, connecting key destinations throughout town. Create this paved, down-lighted and well-marked trail.

C. Identify regional trail connections and how to improve and integrate such trails into the town's recreational offerings (i.e. Valley Floor trails).

D. Identify a primary area for equestrian trails and stabling and integrate such area into the town's recreational trails and other offerings.

E. Obtain easements and construct and maintain trails as shown on the Potential Recreation Projects Plan.

IV. Mountain Village preserves a system of open space that reinforces its natural amenities and scenic beauty, provides a foundation for year-round recreational activities, and helps meet the community's housing and social needs.

A. Create neighborhood parks one- to two- acres in size with a primary focus on serving walk-to or bike-to recreational needs and, where possible, locate the parks adjacent to other neighborhood services such as day care, schools or retail areas. Neighborhood parks are generally developed areas of lawns and trees, often providing minimal small park amenities such as individual picnic tables, small group picnic pavilions, and recreational facilities such as basketball courts. Service area is approximately one-fourth mile.

B. Construct and maintain pocket parks of less than one acre with the private sector while allowing public access. Pocket parks are small, locally-serving areas typically consisting of open grass areas, benches, a picnic area and limited recreational amenities. Pocket parks are typically owned and maintained by a homeowners association or equivalent group.

C. Provide a high quality park in Mountain Village Center that acts as the central town park, understanding land limitations will drive park size and amenities. Obtain perpetual public easements or conveyance of land wherever possible.

IMBA Trail Difficulty Rating System

Exhibit 5

	EASIEST WHITE CIRCLE	EASY GREEN CIRCLE	MORE DIFFICULT BLUE SQUARE	VERY DIFFICULT BLACK DIAMOND	EXTREMELY DIFFICULT DBL. BLACK DIAMOND
TRAIL WIDTH	72" (1,800 mm) or more	36" (900 mm) or more	24" (600 mm) or more	12" (300 mm) or more	6" (150 mm) or more
TREAD SURFACE	Hardened or surfaced	Firm and stable	Mostly stable with some variability	Widely variable	Widely variable and unpredictable
AVERAGE TRAIL GRADE	Less than 5%	5% or less	10% or less	15% or less	20% or more
MAXIMUM TRAIL GRADE	Max 10%	Max 15%	Max 15% or greater	Max 15% or greater	Max 15% or greater
NATURAL OBSTACLES AND TECHNICAL TRAIL FEATURES (TTF)	None	Unavoidable obstacles 2" (50 mm) tall or less Avoidable obstacles may be present Unavoidable bridges 36" (900 mm) or wider	Unavoidable obstacles 8" (200 mm) tall or less Avoidable obstacles may be present Unavoidable bridges 24" (600 mm) or wider TTF's 24" (600 mm) high or less, width of deck is greater than 1/2 the height	Unavoidable obstacles 15" (380 mm) tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24" (600 mm) or wider TTF's 48" (1,200 mm) high or less, width of deck is less than 1/2 the height Short sections may exceed criteria	Unavoidable obstacles 15" (380 mm) tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24" (600 mm) or narrower TTF's 48" (1,200 mm) high or greater, width of deck is unpredictable Many sections may exceed criteria

Exhibit 6

Pictometry

RESOLUTION OF THE TOWN COUNCIL
OF MOUNTAIN VILLAGE, RESOLUTION APPROVING A MINOR SUBDIVISION TO LOT 615-1CR TO VACATE PORTIONS OF THE TOWN GENERAL EASEMENT AND TO RELOCATE THE MEADOWS TRAIL INTO TOWN UNIMPROVED ROAD RIGHT OF WAY

RESOLUTION NO. 2021 -

A. Brown Dog Properties LLC is the owner ("Owner") of record for the real property described as Lot 615-1CR, Telluride Mountain Village, according to the replat filed June 6, 2020, in the office of the Clerk and Recorder in Plat Book 1 at page 2729 – 2731.

B. The Owner has authorized Chris Hawkins of Alpine Planning to pursue the approval of the minor subdivision application for Lot 615-1CR ("Application").

C. The Town Council considered this Application, along with evidence and testimony, at a public meeting held on July 15, 2021.

D. The Town Council approved the Minor Subdivision to vacate portions of the Town GE and relocate the Meadows Trail into Town Road Right of Way, along with evidence and testimony, at a public meeting on July 15, 2021.

E. The Owners have addressed or agreed to address, all conditions of approval of the Application imposed by the Town Council.

F. The Town Council finds that the minor subdivision meets the criteria for decision set forth in Section 17.4.13 of the CDC as follows:

1. The lots resulting from the adjustment or vacation complies with Town Zoning and Land Use Regulations and Subdivision Regulations found in the Town's Community Development Code ("CDC") because, without limitation, the subdivision area and zoning designations are not changing, open space is not being impacted, and the lot coverage will remain unchanged;

2. The proposed subdivision is in general conformance with the goals, policies and provisions of the Comprehensive Plan because the lots and the surrounding area will remain single-family in nature;

3. Subdivision access complies with Town standards and codes unless specific variations have been granted in accordance with the variance provisions of the CDC.

4. Easements are not affected, or have been relocated to the satisfaction of the utility companies and/or the benefited party under the easement or, in the case of vacated easements, the easement is no longer necessary due to changed conditions, and the easement vacation has been consented to by the benefited party under the easement; and

5. The proposed subdivision meets all applicable Town regulations and standards.

NOW, THEREFORE, BE IT RESOLVED THAT THE TOWN COUNCIL HEREBY APPROVES THE MINOR SUBDIVISION AND AUTHORIZES THE MAYOR TO SIGN THE RESOLUTION SUBJECT TO THE FOLLOWING CONDITIONS:

1. It is incumbent upon an owner to understand whether utilities and town infrastructure, whether placed in the right of way or general easement, are placed in an area that may encumber access to their lot. Relocation of such above-grade infrastructure appurtenances will occur at the owner's sole expense and in coordination with the appropriate entity (fire department, SMPA, Town of Mountain Village) so that the relocated position is satisfactory.
2. Prior to approval of any subsequent staff subdivision application, the Applicant shall provide the town with a draft version of the governing documents for the proposed condominiums demonstrating adequate provisions for the maintenance of common area elements, and adequate easements exist for utilities, access, emergency access, and drainage.
3. Prior to the recordation of the subdivision with the San Miguel County Clerk and Recorder's office, the Applicant shall provide written authorization from the Owners of Lot BC513E and OS21 granting access and permissions to modify the Meadows Trail outside of the boundaries of Lot 615-1CR.
4. Prior to the recordation of the subdivision with the San Miguel County Clerk and Recorder's office, the Applicant shall enter into a Subdivision Improvements Agreement and provide a financial guarantee to the Town for the amount of 125% of the current estimated cost for the required public improvements and facilities.
5. Prior to recordation of the subdivision with the San Miguel County Clerk and Recorder's office, the Applicant shall demonstrate that impacts to the wetland have been eliminated or otherwise addressed as part of a USACE 404 Permit, or appropriate permit as determined either by the Army Corps of Engineers or a suiteable wetland specialist.
6. Prior to the construction of any other subdivision improvements, the Meadows Trail shall obtain design review approval for relocation, such relocation shall be completed and shall be constructed so that traffic on the trail system is not disrupted during subdivision improvement construction.
7. The Applicant will submit appropriate fees to staff for recordation with the San Miguel County Assessor's office within six months of approval.
8. Staff will review the replat document to verify consistency with CDC Sections 17.4.13.N. Plat Standards, and CDC Section 3. Plat Notes and Certifications - and provide redline comments to the Applicant before the execution of the final mylar.
9. Staff has the authority to provide ministerial and conforming comments on the mylar before recordation.

Be It Further Resolved that Lots 615-1CR may be replatted into Lot 615-1CR2 as submitted in accordance with Resolution No. 2021-XXXX-XX.

Section 1. Resolution Effect

A. This Resolution shall have no effect on pending litigation, if any, and shall not operate as an abatement of any action or proceeding now pending under or by virtue of the resolutions repealed or amended as herein provided and the same shall be construed and concluded under such prior resolutions.

B. All resolutions, of the Town, or parts thereof, inconsistent or in conflict with this Resolution, are hereby repealed, replaced and superseded to the extent only of such inconsistency or conflict.

Section 2. Severability

The provisions of this Resolution are severable and the invalidity of any section, phrase, clause or portion of this Resolution as determined by a court of competent jurisdiction shall not affect the validity or effectiveness of the remainder of this Resolution.

Section 3. Effective Date

This Resolution shall become effective on July 15, 2021 (the "Effective Date"), as herein referenced throughout this Resolution.

Section 4. Public Meeting

A public meeting on this Resolution was held on the 15th day of July, 2021, in the Town Council Chambers, Town Hall, 455 Mountain Village Blvd, Mountain Village, Colorado 81435.

Approved by the Town Council at a public meeting held on July 15, 2021.

Town of Mountain Village, Town Council

By:_____
Laila Benitez, Mayor

Attest:

By:_____
Susan Johnston, Town Clerk

Approved as to Form:

_____
Paul Wisor, Town Attorney

Agenda Item 13

To: Mayor and Town Council

From: Jim Loebe

For: July 15th, 2021 Town Council Meeting

Date: July 8th, 2021

Re: Revised Trails Master Plan Discussion

The first draft of the Trails Master Plan was presented to council at the July 18th, 2019 council meeting. While generally well received, council directed staff to re-engage with Alta Planning + Design to incorporate several recommended changes. Council's main critique of the plan was that it lacked a clear connection between priority projects and community goals. Further, council commented that the implementation plan was both rigid and overly aggressive from a financial standpoint.

The revised plan being discussed during this work session has a completely retooled and refined prioritization process, which scores each project according to the goals set by the community. Project tables for each phase are followed by newly developed scoring tables. Language has also been added that encourages flexibility when considering projects for implementation and contemplates using the budget process to re-evaluate projects on an annual basis. The revisions to this section enhance the flow of the implementation plan and address the main concerns brought up by council when contemplating the plan's adoption in July of 2019. The substantive changes can be found on pages 5-31 through 5-45 of the included March 2020 revision.

Staff is seeking input on the changes as well as further direction from council in order to bring the plan up for adoption at the August 2021 regular meeting.

MOUNTAIN VILLAGE

TRAILS MASTER PLAN

MARCH 2020

TOWN OF MOUNTAIN VILLAGE

alta PLANNING + DESIGN

ACKNOWLEDGMENTS

STAKEHOLDER COMMITTEE

Jeff Proteau, Telluride Ski and Golf

Garrett Brafford, TMVOA

Patrick Berry, TMV Council

Bob Gleason, Paragon / Bootdoctors

Matt Zumstein, USFS

Heidi Lauterbach, Telluride Mountain Club / Resident

David Averill, SMART / Resident

Max Cooper, San Miguel Bike Alliance

Bill Kight, TMV

Finn Kjome, TMV Public Works

Michelle Haynes, TMV Planning and Development

Jon Tracy, TMV Parks and Recreation

Jim Loebe, TMV Parks and Recreation

CONSULTANT: ALTA PLANNING + DESIGN

Joe Gilpin

Dave Foster

Danielle Berger

Maggie Brown

Mack Drzayich

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

PLAN CONTEXT

The Town of Mountain Village is located in southwest Colorado, in the heart of the San Juan mountains at 9,545 feet above sea level. Once ranch land, the area first became part of the Telluride Ski Resort in 1972. In the early 1980s, new owners established a European-style resort community as a Planned Unit Development (PUD) on 3.5 square miles of land that today comprise the town. Infrastructure, services, and amenities were provided by the Mountain Village Metropolitan District (MVMD), which also collected property taxes. Single-family estates were distributed around a commercial center (today known as Mountain Village Center), with a golf course and trail system, all interwoven through the natural landscape.

Over time, Mountain Village has evolved into a vibrant community where people come to live, work, and play in the beautiful San Juan mountains year-round. The town was incorporated in 1995 and the new government took over the role previously held by the MVMD, which was formally dissolved in 2007. Today Mountain Village is home to 1,500 full-time residents and sees over 300,000 visitors each year.

Mountain Village's location in the San Juan mountains offers its residents and visitors unparalleled access to outdoor recreation

INTRODUCTION COMPONENTS

PLAN CONTEXT– Introduces the Town of Mountain Village and the context for the plan.

COMPREHENSIVE PLAN – Briefly describes relevant aspects of the Mountain Village Comprehensive Plan.

PLAN PURPOSE – States the intent of the plan.

COMPREHENSIVE PLAN

Originally adopted in 2011 and amended in 2017, the Mountain Village Comprehensive Plan summarizes the visions and goals for the community and is intended to guide development for the next 30 years. The vision, goals, and objectives of the Trails Master Plan are aligned with, and in support of those outlined in Comprehensive Plan.

Comprehensive Plan goals that are relevant to active transportation and recreation include:

- Mountain Village is walkable and pedestrian-friendly;
- The transportation system effectively connects neighborhoods and destinations;
- Open space conservation and recreation enhances quality of life and contributes to the Mountain Village economy;
- Residents and visitors have access to a year-round, well-connected trail system;
- Recreation in Mountain Village is a complementary and non-competitive part of the regional recreation system;
- The Mountain Village transportation system is multi-modal, low-impact, environmentally-friendly, safe, and convenient.

The Mountain Village Comprehensive Plan includes subarea plans for its three activity centers. Relevant proposals from each subarea plan include:

Mountain Village Center

- A roundabout at Mountain Village Boulevard and Country Club Drive;
- A new pedestrian connection between Sunset Plaza and Heritage Plaza;
- Development of an improved wayfinding program, with a focus on directing visitors to key destinations.

Market Plaza

- A roundabout at Elk Pond;
- A community park at Elk Pond connected to Market Plaza by new pedestrian paths and a pedestrian tunnel under Mountain Village Boulevard;
- Eliminate the existing split roadway and reconstruct Mountain Village Boulevard as a two-way road.

Meadows

- Construct a paved shared use path connecting the Meadows to Mountain Village Center.
- Improve safety and efficiency of road intersections for all users.

A conceptual rendering from the Town Hall Subarea Plan envisions paved sidepaths along Mountain Village Blvd and a new community park (Image credit: AECOM)

New paved sidepaths on the south side of Mountain Village Blvd would connect users from the proposed park to the Town Hall (Image credit: OZ Architecture)

PLAN PURPOSE

Throughout Mountain Village's development, trail integration, recreation, and open space preservation have been key guiding principles. Today, Mountain Village boasts more open space that the original PUD required; however, traveling between the residential areas and the community's activity hubs, including Mountain Village Center, Market Plaza, and the Meadows, has become increasingly difficult for non-vehicle journeys due to increased traffic volumes and a lack of connected non-motorized facilities. Trail usage has also increased in recent years due to higher numbers of visitors in the greater region who recreate on the regional trail system. As the Town seeks to become a more established, year-round community—an overarching goal formalized in the Town's Comprehensive Plan—addressing these challenges is key to its success. The purpose of the Trails Master Plan is to improve access and connectivity, for people walking and biking, both throughout the town and to the greater region.

By prioritizing the Trails Master Plan, Mountain Village is taking the first step needed to evaluate existing trail conditions and connections, and establish a prioritized plan to develop infrastructure that makes walking and bicycling feasible for both transportation and recreation. As the Plan is implemented, the expanded active transportation network will increase travel choice, and make Mountain Village a more attractive place to live, work and vacation. The Trails Master Plan has the potential to impact many important aspects of life in Mountain Village. Quality of life, tourism, transportation, recreation, and community health could all be improved by the continued development of a thoughtfully planned trail system. Specifically, these investments will also benefit the resident workforce population. Due to cost of living, resort communities are notoriously challenging to live in for the people needed to make them function. Walking and bicycling represent affordable transportation options, which could benefit the local workforce by reducing household expenses and freeing up parking and transportation capacity for visitors.

The Mountain Village Trails Master Plan consists of an existing trail system analysis and a robust public outreach process to determine the trail-related needs and desires of the community. This approach included an immersive, four-day "deep-dive" that combined focused participation by Town staff, the project team, and the public, and efficiently fostered a thorough understanding of trail planning issues in Mountain Village. In addition to the deep-dive public participation, the community was invited to participate via online engagement tools. This process resulted in recommendations that are tailored to the needs, goals, and objectives of the community. Recommendations include trail renovations, changes in trail management, policy proposals, and new trail construction. Ultimately, the Plan is a road map for implementation, providing the framework to build a world-class trail system in Mountain Village.

A paved shared use path leads to Heritage Plaza in the Mountain Village Center

CHAPTER 2

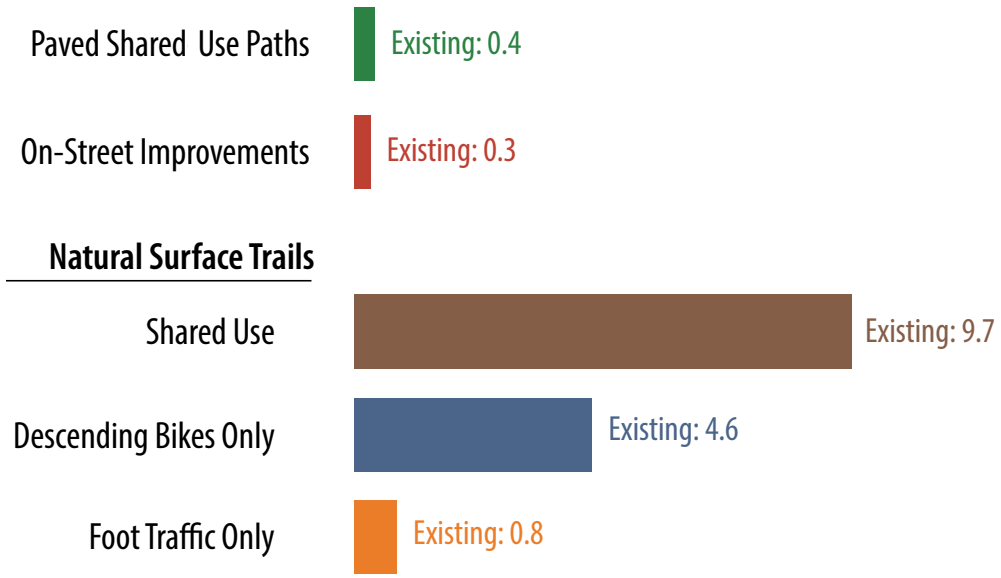
EXISTING TRAIL SYSTEM

OVERALL EXISTING TRAIL SYSTEM

As of Summer 2018, the Town of Mountain Village existing trail system includes approximately 15.8 miles of formal trails within the municipal boundaries. Nearly half a mile are paved trails and 4.6 miles are part of the existing bike park, which is restricted to bikes traveling downhill. A 0.8 mile portion of the Ridge Trail is the only existing trail that is restricted to foot traffic only. The remaining 9.7 miles of trail are natural surface trails that are open to all non-motorized users.

Figure 2.1 illustrates the existing trail mileage by type. The overall existing trail system is displayed in Map 2.1 on page 2-6. This map and other maps in this plan display trails outside of the municipal boundaries that are not included in the trail mileages presented in Figure 2.1.

FIGURE 2.1. EXISTING TRAIL MILEAGE BY TYPE



EXISTING SYSTEM COMPONENTS

OVERALL SYSTEM – Describes the existing overall trail system.

TRAIL DESCRIPTIONS – Includes information for existing major trails.

WINTER ACCESS – Summarizes existing winter trail use and access.

WAYFINDING – Describes existing wayfinding infrastructure.

TOWN OF MOUNTAIN VILLAGE
INCORP. 1995

TRAILS MASTER PLAN

MAP 2.1 EXISTING TRAIL NETWORK*

- Bus Stop
- Gondola Station
- Contour Line (100 feet)
- Forest Cover
- Town of Mountain Village

- Shared Use Path
- On-Street Improvements

NATURAL SURFACE TRAILS

- Shared Use
- Descending Bikes Only
- Foot Traffic Only

*Trails depicted in this map that are outside of the Mountain Village municipal boundary are not included in trail mileage mentioned elsewhere in this plan.

TRAIL DESCRIPTIONS

Boulevard East Trail

The Boulevard East Trail is a paved sidepath that runs for approximately 0.4 miles adjacent to Mountain Village Boulevard between Market Plaza and Lost Creek Lane. There is one at-grade crossing of Mountain Village Boulevard with a striped crosswalk. Crossings of minor streets use the same striping pattern. Though there are a number of paved paths within Mountain Village Center, and portions of Mountain Village Boulevard east of Lost Creek Lane have sidewalks, there is no clear and consistent connection for users from the trail's eastern terminus to other destinations.

Boulevard East Trail

Boulevard West Trail

The Boulevard West Trail is a nearly 2 mile natural surface (gravel) trail that begins at the west entrance to Mountain Village and connects to the paved Boulevard East Trail at Market Plaza. The trail generally follows Mountain Village Boulevard, at times deviating into the trees so that it is not visible from the road. There are two at-grade crossings of Mountain Village Boulevard with striped crosswalks. Crossings of minor streets also have striped crosswalks. The Boulevard West Trail is open to all non-motorized users and is one of the few trails suitable for novice bicyclists. There are no connections to other trails from the trail's western terminus at State Highway 145.

Boulevard West Trail

Big Billie's Trail

Big Billie's Trail is a 3/4-mile natural surface (compacted soil and gravel) trail that connects Adams Ranch Road to Country Club Drive. The trail includes two legs that begin at Adams Ranch Road and connect at a ridge line. Big Billie's is a commuter route for employees who live in the Meadows and work in Mountain Village Center. It is open to all users, though hikers tend to use the eastern spur more frequently, which is narrower and has more switch backs. Much of the trail is exposed and some portions are highly eroded (see image below).

Meadows Trail

The Meadows Trail is a nearly mile-long natural surface (compacted soil) trail that runs along the ridge above Adams Ranch Road and Lawson Overlook. It terminates at Adams Ranch Road at the western end of the Meadows, approximately 450 feet shy of the Adams Ranch Road on-street improvements. Its western terminus is State Highway 145. Meadows Trail, a popular recreational trail, also serves as a commuter route for employees who live in Lawson Hill on the other side of SH 145. The majority of the trail is under forest cover and it is open to all users.

Big Billie's Trail

Adams Ranch Road On-Street Improvements

The quarter-mile portion of Adams Ranch Road that runs through the Meadows has on-street improvements in the form of sidewalks and some bike lanes. The sidewalks provide dedicated space for pedestrians from the western end of the Meadows to the Meadows parking lot and the Chondola station (which provides access to Mountain Village Center during the winter). Signage directs bicyclists to use the bike lanes, where they exist, or use the vehicle travel lane.

Meadows Trail

Adams Ranch Road On-Street Improvements

Jurassic Trail

The Jurassic Trail is a natural surface (compacted soil) trail that runs for 0.7 miles between Big Billie's Trail to the west and Boomerang Trail and Country Club Drive to the east. It is open to all users, but is particularly popular with mountain bikers. It is less exposed than Big Billie's Trail and for this reason is sometimes used by commuters as an alternative to Big Billie's.

Boomerang Trail

Boomerang Trail is an old mining road, now open to all non-motorized users, that connects Country Club Drive and Jurassic Trail to the Valley Floor. As of 2018, it is the only formal trail to the Valley Floor and Telluride that does not cross the highway. However, due to steep terrain and high erosion, it is a challenging route for bicyclists and hikers alike.

Village Trail

Village Trail is a natural surface (compacted soil) trail open to all users, approximately 1.5 miles of which is within the boundaries of Mountain Village. It begins at the ski bridge across Mountain Village Boulevard near Prospect Creek, continues southeast, and eventually beyond Mountain Village onto land owned by the US Forest Service.

Prospect Trail

Prospect Trail is a natural surface (compacted soil) trail open to all users, approximately 1.5 miles of which is within the boundaries of Mountain Village. It connects to the Boulevard Trail at Market Plaza and continues south where it extends beyond Mountain Village onto US Forest Service land.

Ridge Trail

The Ridge Trail is a foot traffic-only trail that originates near the Mountain Village Center gondola station and continues to the San Sophia gondola station. Approximately 0.8 miles of the trail is within the Mountain Village municipal boundaries; the remainder of the trail is on US Forest Service land.

Boomerang Trail

Village Trail

Bike Park Trails

Approximately 4.6 miles of bike park trails are within Mountain Village. These trails are maintained and operated by Telluride Ski and Golf (TSG) and are open only to descending bikes, or those traveling in the downhill direction. Many of these trails terminate at the Mountain Village Center gondola station. As of 2019, TSG is expanding the bike park trails and will require users to purchase a park pass to access the park trails.

TSG Bike Park trail

Informal Trails (Social Trails/Desire Lines)

There are a number of informal trails throughout the Town of Mountain Village. Such trails typically form where people would like to walk or bicycle, but where no formal trail exists. Because informal trails are not designed or constructed using proper trail-constructing methods, they are often vulnerable to erosion and may traverse environmentally-sensitive areas. Building formalized trails that provide good connectivity to destinations can reduce the presence of and need for informal trails.

Roadways

The majority of the roads in Mountain Village lack dedicated space for pedestrians and bicyclists, yet there is a clear demand for walking and biking. Where no trail or on-street improvement exists (or where clear wayfinding to nearby trails is lacking), many people simply walk or bicycle on the road. This poses a safety issue, particularly on Mountain Village's curvilinear roads where visibility is often limited.

Pedestrians walking on Mountain Village Boulevard

Gravel shoulders on San Joaquin Rd

WINTER ACCESS

As of 2019, some winter trail opportunities do existin in Mountain Village. The paved Boulevard East Trail is plowed from Market Plaza to Village Center and the natural surface Boulevard West Trail is groomed for nordic skiing. Several nordic trails are also groomed on the golf course during the winter.

WAYFINDING

The Town of Mountain Village has some trail wayfinding in the form of trail signage and trail map pamphlets, but discussions with the general public and stakeholders revealed that it is generally insufficient for visitors to effectively navigate the system. Signage is also inconsistent in style and type, which can be confusing for users. A major trails wayfinding update consistent with the Town's current design guidelines is currently underway and is scheduled to be completed in 2020.

A map kiosk at the entrance to Mountain Village

Wayfinding sign on Meadows Trail with destination distances

Wayfinding sign with trail etiquette rules on Boulevard West Trail

Wayfinding sign with trail map on Boulevard West Trail

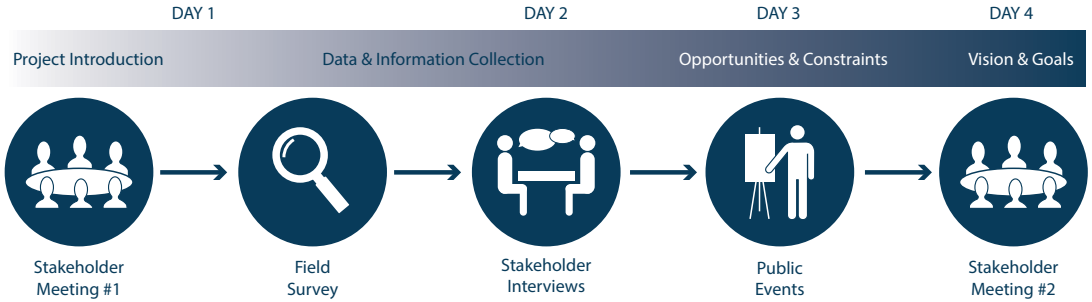
CHAPTER 3

PUBLIC OUTREACH, OPPORTUNITIES, AND CONSTRAINTS

IN-PERSON OUTREACH

Acquiring a thorough understanding of the Mountain Village community's needs and desires concerning trails is an integral component of the planning process. In-person engagement centered around an immersive four-day "deep dive" outreach session in which Alta staff surveyed the trails, met with stakeholders, and facilitated activities to gather public input. Figure 3.1 illustrates the structure of the deep dive and the purpose of each activity.

FIGURE 3.1 DEEP DIVE



Stakeholder Meeting #1

Alta met with the stakeholder group to introduce the project and planning process. The group was a broad coalition of representatives from organizations invested in Mountain Village trails. They provided initial information regarding context and trail issues in Mountain Village.

Field Survey

Alta surveyed Mountain Village trails with Town staff to obtain a detailed understanding of existing trail features, locations, usage, and conditions. This included walking and biking some of the trails and scouting potential alignments to gain a true impression of their characteristics.

OUTREACH, OPPORTUNITIES, AND CONSTRAINTS COMPONENTS

IN-PERSON OUTREACH– Describes the various in-person engagement methods and summarizes the results.

ONLINE OUTREACH– Summarizes the results of the online input map.

OPPORTUNITIES AND CONSTRAINTS – Identifies the opportunities and constraints that emerged from the public outreach process.

Stakeholder Interviews

Alta conducted interviews with individuals from the stakeholder group to gain an in-depth understanding of their various perspectives on trails in Mountain Village. Questions focused on the definition of "trail" and what it means for the Mountain Village community, the desired impact of the Trails Master Plan, and the opportunities and constraints facing trail development in Mountain Village. Interviewees included representatives of:

- Telluride Ski & Golf
- Town of Mountain Village Homeowners' Association
- Telluride Mountain Club
- San Miguel Authority for Regional Transportation (SMART)
- Town of Mountain Village Council
- US Forest Service
- San Miguel Bike Alliance
- Town of Mountain Village Planning Division
- Boot Doctors (Local Bike Rental Business/Outfitter)
- Telluride Sports (Local Bike Rental Business/Outfitter)

Public Events

Alta staffed an information booth with interactive activities at two public events on Wednesday, August 15. 2018: the Market on the Plaza and the Sunset Concert. Event attendees and passersby were invited to participate by adding notes to a large vinyl floor map of Mountain Village. Different colored post-it notes were used to denote trail, pedestrian, or bicycle-specific comments, and are recreated in Map 3.1 on page 3-16.

The booth also included boards with images of different trail types and trail amenities that allowed participants to "vote" for their preferred type using stickers. Alta staff were on hand to explain the activities, discuss the plan, and answer questions. They also distributed flyers with links to the project webpage, the online input map, and the online survey.

Field survey

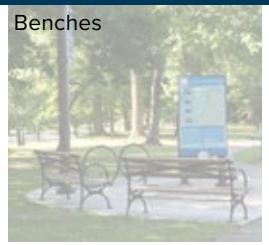

Information booth at the Sunset Concert

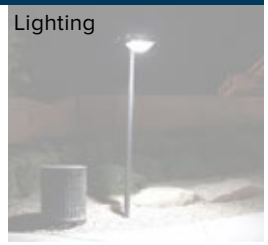
Figures 3.2 and 3.3 display the types of trails and trail amenities that the public event participants preferred. For trail amenities, people indicated that they prefer maps and map kiosks, standard bike racks, and wayfinding signs. For trail types, they selected asphalt trails, crushed stone trails, bike lanes, sidewalks, and pedestrian lanes.

FIGURE 3.2 PREFERRED TRAIL AMENITIES

TRAILHEADS

Public Priority





BIKE PARKING

Public Priority

TRAIL SIGNAGE

Public Priority

Public Priority

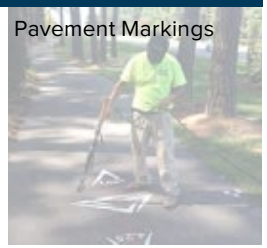


FIGURE 3.3 PREFERRED TRAIL TYPES

PAVED TRAILS

Public Priority

TRAILS

Public Priority

BIKEWAYS

Public Priority

PEDESTRIAN WAYS

Public Priority

Public Priority

ONLINE ENGAGEMENT

Online engagement was an important component of the Trails Master Plan outreach approach, as it allowed people who did not attend the in-person events to provide their input. Two online engagement tools were developed for the plan: an online input map and an online survey.

Online Survey

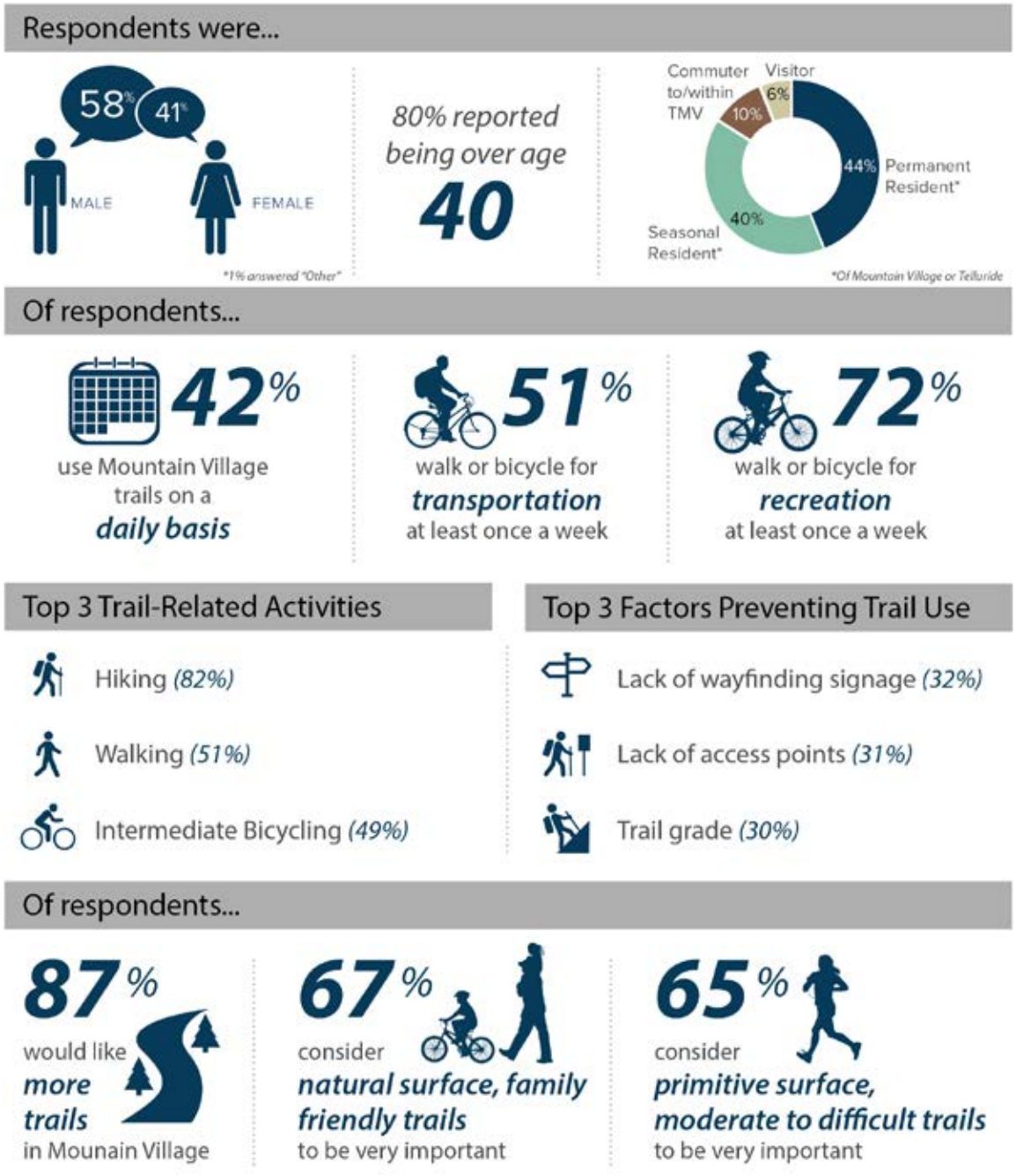
The online survey was available for approximately one month over August and September of 2018 and received 280 responses. The link to the survey was distributed at the public events and through email blasts and newsletters. Participants were asked a series of questions about how they use trails in Mountain Village, their opinions regarding trails, and the type of trail improvements they would like to see.

Figure 3.4 summarizes some of the survey results. Generally, survey respondents use Mountain Village trails frequently, especially for hiking. A large majority would like to see more trails in the community, particularly natural surface trails for all abilities.

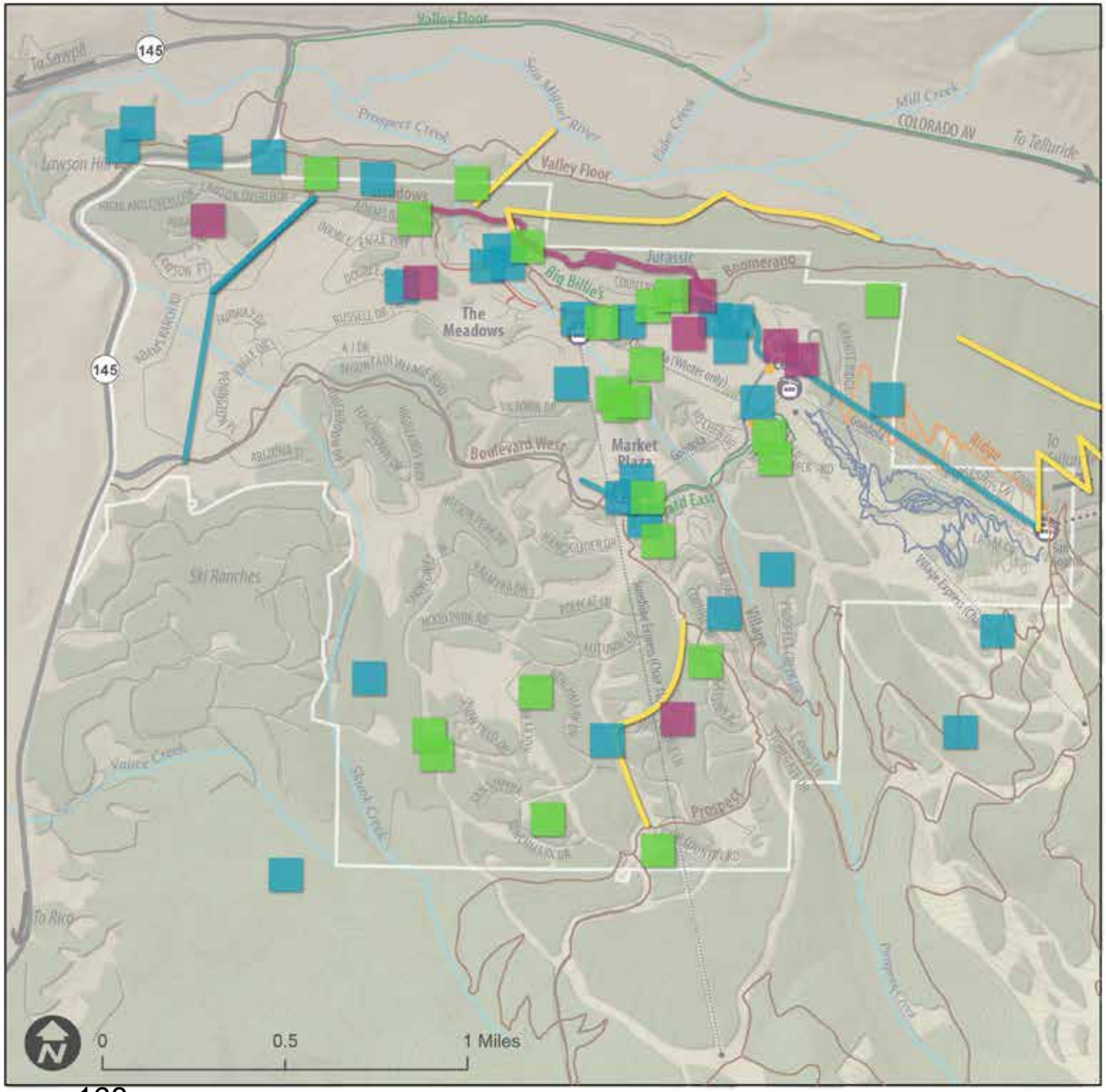
Online Input Map

The online input map was live concurrently with the survey and allowed users to draw lines and add comments relating to walking, bicycling, and trails on a map of Mountain Village. Comments were categorized depending on whether they pertained primarily to walking or bicycling issues. Users also had the ability to add comments with suggested improvements. The online input map comments are incorporated into Map 3.1 with the results of the in-person outreach events.

FIGURE 3.4 ONLINE SURVEY RESULTS SUMMARY*



*The survey allowed people to skip questions. Percentages refer to the percentage of people who answered that particular question rather than total survey participants.



TOWN OF MOUNTAIN VILLAGE 1995

TRAILS MASTER PLAN

MAP 3.1 PUBLIC INPUT*

- Bus Stop
- Gondola Station
- Contour Line (100 feet)
- Forest Cover
- Town of Mountain Village

- Shared Use Path
- On-Street Improvements

NATURAL SURFACE TRAILS

- Shared Use
- Descending Bikes Only
- Foot Traffic Only

COMMENT TYPE

- Trail Improvement
- Pedestrian Improvement
- Bicycle Improvement

ONLINE INPUT COMMENTS

- Walking
- Bicycling
- General Suggestion

*Trails depicted in this map that are outside of the Mountain Village municipal boundary are not included in trail mileage mentioned elsewhere in this plan.

Stakeholder Meeting #2

Culminating the deep dive, Alta met with the stakeholder group for a second time to review the information that had been gathered over the preceding days. Alta presented the findings of the field survey, stakeholder interviews, and public outreach events, and what they perceived to be the opportunities and constraints facing Mountain Village trails. A revised set of opportunities and constraints are presented in the following section and in Map 3.2.

Alta also led a visioning and goals exercise with the stakeholder group. Stakeholders were asked to write down their desired results for Trails Master Plan. The proposed goals were then discussed and organized. The activity provided Alta with the information necessary to develop a vision, goals, and objectives for the Plan, which ultimately guided development of the recommendations. The Plan vision and goals are presented in Chapter 4.

OPPORTUNITIES AND CONSTRAINTS

Opportunities are the existing assets that can be leveraged to improve the Mountain Village trails system. Constraints are the barriers that need to be addressed to achieve this goal. While there are significantly more constraints than opportunities listed on Map 3.2, this is not necessarily unfavorable, as many constraints can become assets with dedication and proper planning. In addition, a significant opportunity that is not depicted in the map, but was made clear during the outreach activities, was that the Mountain Village community is overwhelmingly supportive of trails and the idea of building more. With this mindset, Mountain Village is well-positioned to address the constraints identified here.

OPPORTUNITIES

1. A historic railroad bench above CO 145 may provide sufficient space for a new trail.
2. The Boulevard Trail is the spine of the community trail system that provides connections to other trails and activity centers and is a comfortable route for novice bicyclists.
3. The Ski Ranches trail network offers potential connections.
4. The informal Stegosaurus trail represents a potential solution to eliminate conflicts between bicyclists and hikers on Jurassic Trail.
5. Non-TSG privately owned space may afford additional local and regional trail connections

CONSTRAINTS

1. Boulevard Trail ends at CO 145 with no connections other than the highway.
2. Bicyclists trying to reach the Valley Floor and Telluride often travel along CO 145, a high-speed, heavily trafficked highway with multiple blind spots and narrow shoulders, creating potentially hazardous situations.
3. Trail users wishing to access Lawson Hill must cross high-speed highway traffic at a blind curve.
4. Adams Ranch Rd is used frequently by pedestrians and bicyclists but has no dedicated space for non-motorized users.
5. There are frequent user conflicts on Jurassic Trail between downhill bicyclists and other trail users.
6. Country Club Road and Mountain Village Boulevard lack comfortable bicycle and pedestrian accommodations connecting Village Center to Jurassic Trail, Big Billies , and The Meadows.
7. The golf course is an obstacle to connectivity between the Meadows and the Village Center and Town Hall/Market Plaza.
8. Boomerang is one of the few trail connections to Telluride, but is uncomfortable even for experienced mountain bikers due to steep and rocky terrain.
9. High volumes of mountain bikers entering the Heritage Plaza create conflicts with pedestrians.
10. San Joaquin and Benchmark have moderate levels of bikers and walkers but lack dedicated facilities.
11. High speed mountain bikers on Village Trail often conflict with hikers or uphill users.
12. No intuitive connection between Mountain Village Center and Boomerang / Meadows / Big Billies

TOWN OF MOUNTAIN VILLAGE

TRAILS MASTER PLAN

MAP 3.2 OPPORTUNITIES AND CONTRAINTS*

- Bus Stop
- Gondola Station
- Contour Line (100 feet)
- Forest Cover
- Town of Mountain Village

- Shared Use Path
- On-Street Improvements

NATURAL SURFACE TRAILS

- Shared Use
- Descending Bikes Only
- Foot Traffic Only

- Opportunity
- Constraint

CHAPTER 4

RECOMMENDATIONS

PLAN VISION AND GOALS

The Trails Master Plan vision and goals were developed with input from the general public and stakeholders collected during the deep dive, as described in Chapter 3. The Plan vision is an aspirational statement describing the future Mountain Village trails system. The Plan goals are steps that will help to achieve that vision. Each goal also includes objectives, that when implemented, will contribute to the goal. The vision and goals guided the development of the plan recommendations.

VISION: The Town of Mountain Village has a world-class trail system that is sustainable, safe, and accessible for all users. It is both a viable transportation system and an enjoyable recreational asset for those who live, work, and play in Mountain Village.

GOAL: Connectivity

Develop a thoroughly connected trail system that can be used for a variety of trips.

Objective 1.1
Connect the trail system to neighborhoods and major community nodes such as Market Plaza, Village Center, and the Meadows.

Objective 1.2
Integrate the trail system with the broader regional trail network.

Objective 1.3
Integrate the trail system with other transportation modes including local bus routes and the Gondola.

RECOMMENDATION COMPONENTS

VISION AND GOALS – Introduces the plan vision, as well as plan goals and objectives.

FACILITY TYPES – Describes and defines a variety of trail facility types that are included in the recommendations.

FACILITY RECOMMENDATIONS – Presents recommendations for new trail facilities and trail facility improvements.

POLICY RECOMMENDATIONS – Presents policy recommendations that will support the facility recommendations.

PUBLIC OUTREACH– Summarizes the public outreach for the proposed vision, goals, and recommendations.

GOAL: Safety

Ensure that trail users feel safe and protected when on Mountain Village Trails.

Objective 2.1

Manage and design trails to limit conflicts between non-motorized trail users.

Objective 2.2

Design trail and roadway intersections to maximize the safety of trail users.

GOAL: Navigation

Develop a system of trails and supporting infrastructure that promotes effortless navigation of the trail system.

Objective 4.1

Provide seamless connections to destinations with consistent and recognizable infrastructure.

Objective 4.2

Develop a comprehensive wayfinding signage system that guides bicyclists and pedestrians throughout Mountain Village.

GOAL: Recreation

Provide a variety of year-round trail experiences that server users of all ages and abilities.

Objective 3.1

Develop a system of trails that provides transportation and recreation opportunities for varying types of trail users (hikers, mountain bikers, Nordic skiers, etc.) and ability levels.

Objective 3.2

Develop a trail system that provides transportation and recreation opportunities through all seasons.

GOAL: Sustainability

Develop a sustainable trail system that respects and benefits Mountain Village's unique alpine environment.

Objective 5.1

Develop a trail system that encourages people to walk or bicycle for transportation instead of driving.

Objective 5.2

Construct and maintain trails according to sustainable trail planning and construction best practices to limit environmental impacts.

GOAL: Partnerships

Collaborate and maintain partnerships with neighboring jurisdictions, Telluride Ski and Golf, and federal agencies to realize shared interests regarding trails.

Objective 6.1

Pursue collaborative funding strategies to support implementation of the trail system.

Objective 6.2

Seek out collaborative solutions that protect the interests of all partners whenever possible.

Objective 6.3

Coordinate with partners to promote development of the regional trail network.

SHARED USE PATH/SIDEPATH

Boulevard Trail East is a shared use path that is also considered a sidepath because it is adjacent to Mountain Village Blvd.

NATURAL SURFACE TRAIL

Big Billie's Trail is a natural surface trail that is currently open to all non-motorized users.

FACILITY TYPES

Infrastructure improvements fall into one of two categories: linear facilities, which include paths, trails, and on-street improvements; and spot improvements, such as grade-separated crossings and crosswalks.

Linear Facilities

Shared Use Paths

Shared use paths are typically paved, eight- to twelve-foot wide facilities designed to accommodate people walking, bicycling, and using wheelchairs and other active transportation modes. Shared use paths are physically separated from roadways, in their own right-of-way. Shared use paths can serve both transportation and recreation purposes.

Sidepaths are shared use paths that run parallel to a road in shared right-of-way. Sidepaths are similar to shared use paths but present challenges at roadway intersections. The paved section of the Boulevard Trail is considered a sidepath due to its adjacency to Mountain Village Boulevard.

In areas where a shared use path is needed, but a concrete or asphalt surface is undesirable, crusher fine can be used instead of pavement.

Natural Surface Trails

Natural surface trails are pathways composed of compacted native soil or gravel. They can be designed and managed to service a wide variety of users or a select few. Different types of natural surface trails include:

Shared Use - Shared use natural surface trails are open to all non-motorized users, which typically includes mountain bikers and hikers or pedestrians.

Foot Traffic Only - "Foot traffic only" trails are open only to hikers or pedestrians. These trails can include characteristics not found on trails that allow bicyclists, such as narrow tread widths, stairs, and tight switchbacks.

Descending Bikes Only - Descending bike only trails are trails designated exclusively for bicyclists riding in the downhill direction. This management strategy may be employed to provide a better experience for bicyclists or to address safety concerns relating to differences in user speeds.

Uphill Bike/Multi-Directional Hike - These natural surface trails permit hikers to travel in either direction while bicyclists are only permitted to travel in the uphill direction. Due to the similar speeds of uphill bicyclists and hikers, this management strategy allows both users to occupy the same trail without compromising the experience or trail safety of the other.

On-Street Improvements

On-street improvements are facilities for bicyclists and pedestrians that are constructed as part of the roadway surface. For this plan, these improvements include wide shoulders and advisory shoulders.

Wide Shoulders - Wide shoulders provide usable space for pedestrians and bicyclists to travel on roads with a striped centerline. Shoulders can also be utilized by emergency and maintenance vehicles. The shoulder is designated by a solid white line. According to the *AASHTO Guide for the Development of Bicycle Facilities*, paved shoulders that are designed to accommodate bicyclists should be at least four feet wide. In many contexts, shoulders may also be utilized by pedestrians.

Advisory Shoulders - Advisory shoulders provide usable space for pedestrians and bicyclists to travel on two-way roads that lack a centerline and are otherwise too narrow to accommodate striped shoulders. Advisory shoulders are designated with dashed white lines to indicate the preferred travel space for non-motorized users. Motorists may move into the advisory shoulder when passing an on-coming vehicle, but only when no pedestrians or bicyclists are present.

WIDE SHOULDER

Wide paved shoulders provide pedestrians and bicyclists with usable space outside of the vehicle travel lane.

ADVISORY SHOULDER

Advisory shoulders prioritize shoulder space for pedestrians and bicyclists on narrow roads.

OVERCROSSING

Overcrossings are grade-separated trail crossings over obstacles such as roads, other paths, streams, or wetlands.

Spot Improvements

Grade-Separated Crossings

Overcrossing - An overcrossing is a crossing that passes over a roadway at an elevated grade, allowing for the uninterrupted movement of users in both directions.

Undercrossing - An undercrossing is a crossing that passes under a roadway at a submerged grade, allowing for the uninterrupted movement of users in both directions.

Crosswalk Improvements

Crosswalks are facilities that are designed to facilitate the crossing of pedestrians and bicyclists at-grade with existing roadways. Crosswalks typically include roadway striping and signage, but can be enhanced with traffic signals, flashing beacons, raised medians or refuge islands, and high-visibility pavement markings.

UNDERCROSSING

Undercrossings are grade separated trail crossings under obstacles such as roads and other paths.

CROSSWALK

Crosswalk improvements can include pavement striping, curb ramps, striping, signage, and flashing beacons, among others.

FACILITY RECOMMENDATIONS

Overall Trail System

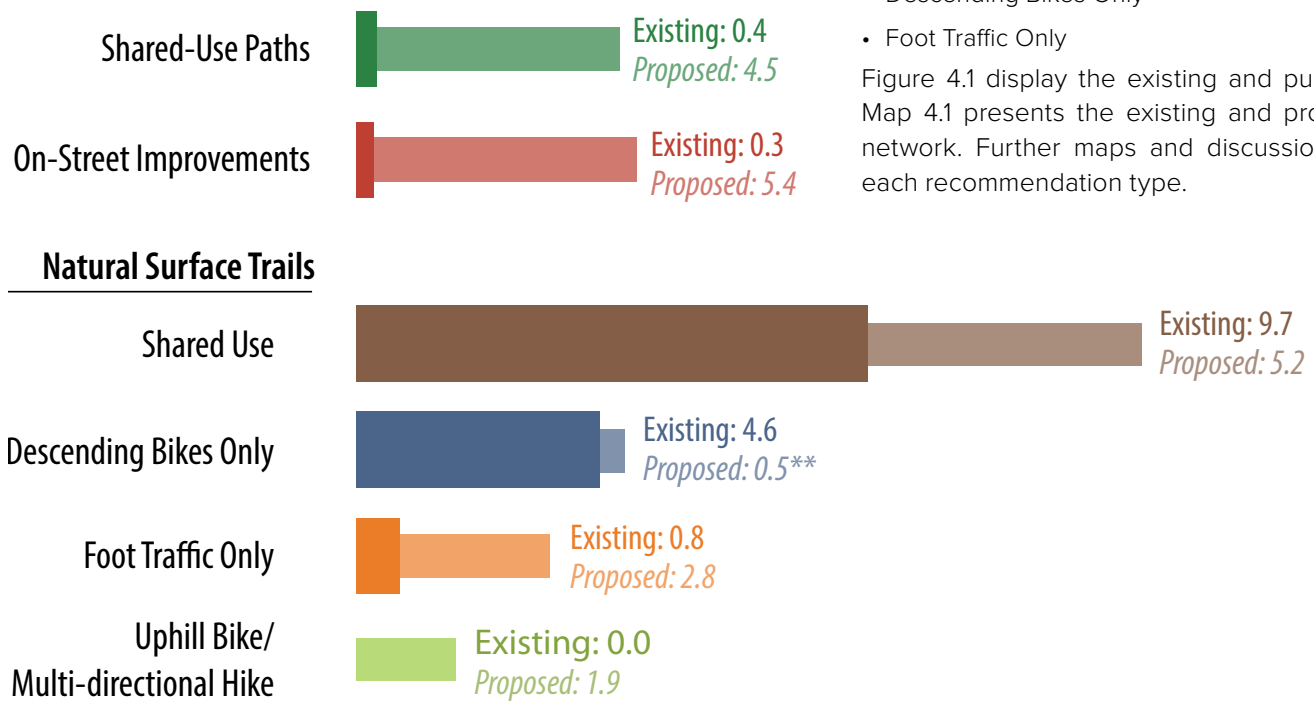
The plan proposes the addition or renovation of nearly 20 miles of trails in Mountain Village. The construction of new trails, in addition to improvements to existing trails and roadways, will enhance the comfort and safety of trail users.

Recommendations are separated into three categories: **Shared Use Paths (Paved)**, **On-Street Improvements,** and **Natural Surface Trails**. Natural Surface Trails are further categorized into the following sub-groups:

- Shared Use
- Open to Uphill Bike/Multi-Directional Hike
- Descending Bikes Only
- Foot Traffic Only

Figure 4.1 display the existing and purposed mileage by trail type. Map 4.1 presents the existing and proposed Mountain Village trail network. Further maps and discussion provide more detail about each recommendation type.

FIGURE 4.1. EXISTING AND PROPOSED TRAIL MILEAGE BY TYPE*



*Mileage is approximate and includes only trails or portions of trails within the Mountain Village municipal boundaries. Some proposed trails are modifications to existing trails either by routing or by type. Existing trails and proposed trails do not equal the trail system at full build-out.

** Does not include Telluride Ski and Golf proposed trails that will be accessible only with the purchase of bike park pass.

TOWN OF MOUNTAIN VILLAGE INCORP. 1995

TRAILS
MASTER PLAN

MAP 4.1 EXISTING AND PROPOSED TRAIL NETWORK*

- Bus Stop
- Gondola Station
- Contour Line (100 feet)
- Forest Cover
- Town of Mountain Village

RECOMMENDATIONS

Existing / Proposed

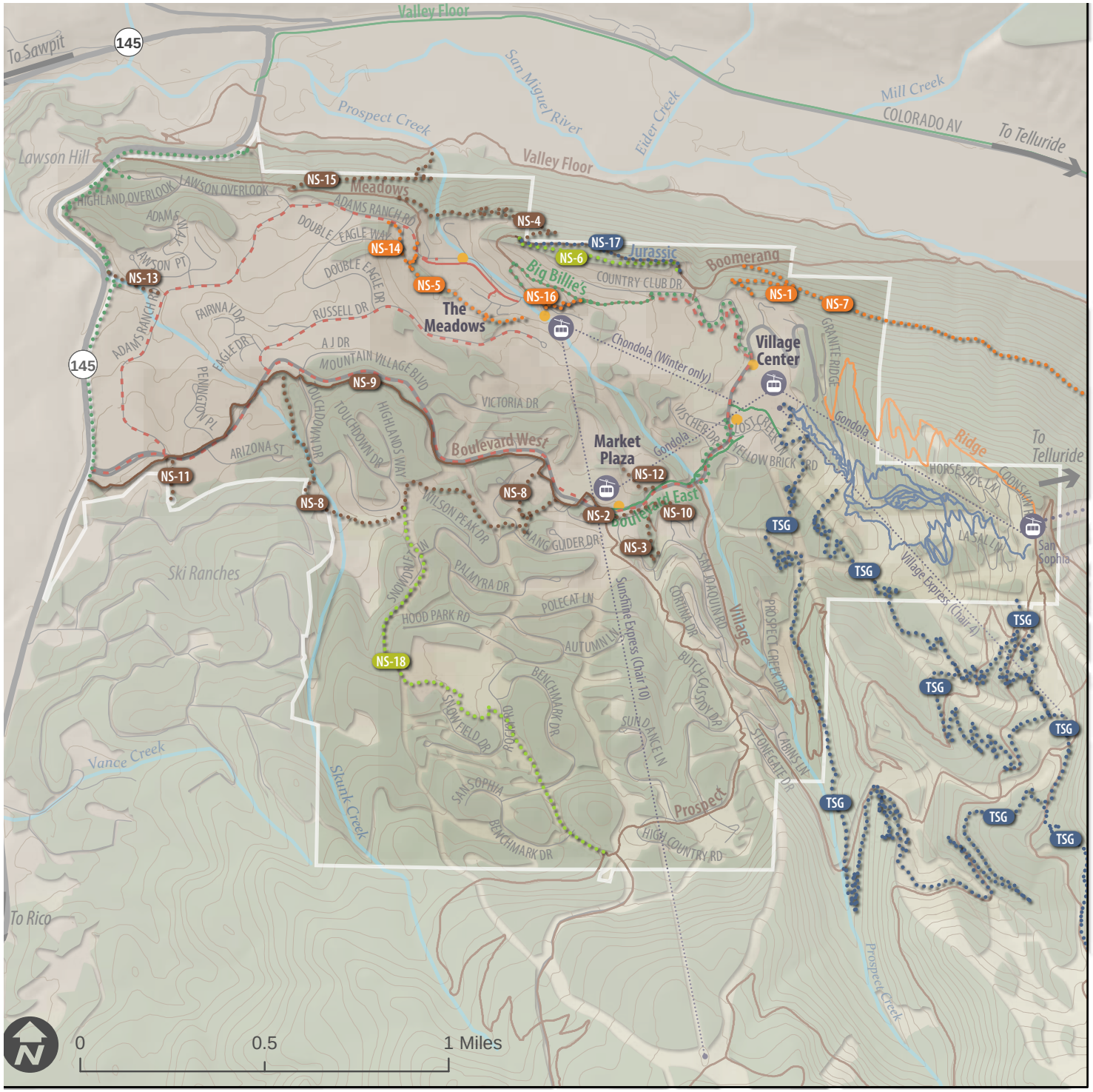
- Shared-Use Path
- On-Street Improvements

NATURAL SURFACE TRAILS

- Shared Use
- Uphill Bike/ Multi-Directional Hike
- Descending Bikes Only
- Foot Traffic Only

- Proposed Spot Improvement

*Trails depicted in this map that are outside of the Mountain Village municipal boundary are not included in trail mileage mentioned elsewhere in this plan.



TOWN OF MOUNTAIN VILLAGE INCORP. 1995

TRAILS MASTER PLAN

MAP 4.1 EXISTING AND PROPOSED TRAIL NETWORK*

- Bus Stop
- Gondola Station
- Contour Line (100 feet)
- Forest Cover
- Town of Mountain Village

RECOMMENDATIONS

Existing / Proposed

- Shared Use Path
- On-Street Improvements

NATURAL SURFACE TRAILS

- Shared Use
- Uphill Bike/ Multi-Directional Hike
- Descending Bikes Only
- Foot Traffic Only

- Proposed Spot Improvement

*Trails depicted in this map that are outside of the Mountain Village municipal boundary are not included in trail mileage mentioned elsewhere in this plan.

Natural Surface Trail Improvements

Natural surface trails comprise the majority of existing and proposed trail types in Mountain Village. These types of trails provide a naturalistic user experience and align with the town's rural resort character. Currently, most natural surface trails in Mountain Village are open to all non-motorized users and are multi-directional.

The natural surface trail recommendations in this plan include the construction of several new natural surface trails, as well as improvements and changes in management to existing facilities. To minimize ongoing maintenance and to maximize user experience and sustainability, new natural surface trails should be designed and constructed by experienced trail builders. Suggested trail improvements include user and directional management strategies to reduce conflicts, improve safety, and provide connections to key destinations in the area. Natural surface trail types include: Shared Use (open to all non-motorized users), Open to All Uphill Users/ Downhill Bikes Prohibited, Downhill Bikes Only, and Foot Traffic Only.

Table 4.1 includes each natural surface trail improvement with a description of the project, trail length, tread width, and potential stakeholders and partners. All natural surface trail improvements are also illustrated in Map 4.2 and labeled with their trail identification number. Proposed trails that are part of the Telluride Ski and Golf new bike park development are included in the map and are labeled "TSG". Such trails will be open to descending bikes only with the purchase of a bike park pass and are included in the map for reference purposes only.

TABLE 4.1 NATURAL SURFACE TRAIL IMPROVEMENTS

Trail ID	Trail Name	Trail Type	Description	Tread Width	Length (miles)	Stakeholders/ Partners
NS-1	See Forever Hiking Trail Connector	Natural Surface- Foot Traffic Only	Natural surface trail connecting See Forever Plaza to future O'Reilly Trail.	30"	0.3	Private landowners
NS-2	Bear Creek to Market Plaza	Natural Surface - Shared Use	Natural surface trail connecting the existing Beark Creek Lodge trail along the south side of Mountain Village Boulevard to the existing crosswalk at Market Plaza.	40"	0.1	TSG, USFS, TMVOA
NS-3	Bear Creek Extension	Natural Surface - Shared Use	Natural surface trail connecting the existing Beark Creek Lodge trail up to San Joaquin Rd to serve as a potential bypass for bicyclists and pedestrians walking along San Joaquin. This would allow bicyclists and pedestrians to by-pass the constrained S-curves on lower San Joaquin.	40"	0.1	TMVOA
NS-4	Meadows Express	Natured Surface- Shared Use	Natural surface trail connecting Jurassic to the Meadows trail via a shared use natural surface trail that runs along the top of the mesa. A bridge would be required to cross Prospect Creek. Coordination and approval from the USFS would also be required.	40"	0.7	USFS
NS-5	Meadows Perimeter Hiking Trail	Natural Surface- Foot Traffic Only	Natural surface hiking trail connecting Meadows Trail to Chondola via a hike-only trail through TMVOA, TMV, and TSG property. Trail is intended to serve as a short hike-only experience to take demand off of Jurassic.	30"	0.5	TSG, TMVOA, Fairway Four HOA
NS-6	Stegosaurus	Natural Surface- Open to All Uphill Users/ Downhill Bikes Prohibited	Natural surface trail open to uphill (eastbound) bicyclists and hikers in either direction. Separating downhill bikes from other users would reduce conflicts between trail users and improve safety. Stegosaurus trail alignment should be situated slightly upslope from Jurassic however unnecessary elevation gain should be kept to a minimum.	40"	0.5	TSG

TABLE 4.1 NATURAL SURFACE TRAIL IMPROVEMENTS, CONTINUED

Trail ID	Trail Name	Trail Type	Description	Tread Width	Length (miles)	Stakeholders/ Partners
NS-7	O'Reilly Trail	Natural Surface - Foot Traffic Only	A foot traffic-only, natural surface trail connecting Mountain Village to the Town of Telluride. Trail could follow the old mine access via the historic O'Reilly Trail alignment. Coordination required with the USFS, TSG, and Town of Telluride.	40"	1.6	TSG, USFS, TOT
NS-8	Elk Pond Loop	Natural Surface-Shared Use	Natural surface trail connecting Elk Pond and the future community park to Russel Dr. Low angle trail provides a beginner-level hiking and mountain biking experience on a trail that cannot be shuttled via the gondola. Boardwalks may be required in some instances due to wetlands.	40"	1.5	TSG
NS-9	Boulevard Trail (renovation project)	Natural Surface-Shared Use	Improve the existing Boulevard Trail to a consistent 8'-0" tread width throughout the entirety of the natural surface section from SR-145 to Market Plaza.	8'-0"	1.9	TSG
NS-10	Tristant Trail	Natural Surface - Shared Use	Natural surface trail from the existing Bear Creek Lodge trail to the Tristant development. Trail would serve as a short-cut to Mountain Village Boulevard and an alternative to walking along San Joaquin.	40"	<0.1	TMVOA
NS-11	Ski Ranches Connector	Natural Surface-Shared Use	Construct a shared use natural surface trail from the Boulevard Trail to the cul-de-sac at the end of Meadow Dr. in the Ski Ranches. Coordinate with Ski Ranches to determine if connection is desired and feasible.	40"	0.1	Ski Ranches
NS-12	Boulevard to VCA	Natural Surface-Shared Use	Construct a shared use natural surface trail between the VCA and the Boulevard Trail across the Double Cabin ski run. Trail should avoid or construct boardwalk over any wetlands present. Existing social trail between VCA / Station Village parking garage and Mountain Lodge should be decommissioned.	40"	0.1	TSG
NS-13	Emergency Access Trail	Natural Surface-Shared Use	Construct a shared use natural surface trail along the proposed emergency access road connecting Adams Ranch Road to SR-145.	~10'	0.2	CDOT
NS-14	Meadows Hiking Trail- Connector	Natural Surface-Foot Traffic Only	Natural surface foot traffic only trail connecting Adams Ranch Road and Meadows Trail. Trail should be routed through the trees to limit visibility and exposure to golf course operations	30"	0.2	TSG, Adjacent apartments
NS-15	Banner Trail	Natural Surface-Shared Use	Natural surface shared use trail connecting Meadows Trail to the Upper Valley Floor trail. Trail would formalize and improve existing social trail that exists. This "rogue" trail is currently located on privately held open space.	40"	0.5	SMVC, USFS, TOT
NS-16	Big Billies-Hiking Connector (renovation)	Natural Surface-Foot Traffic Only	Improve and rehabilitate the existing steep section of Big Billies. Change the trail management to Foot Traffic only. Add stairs and crusher fines gravel to improve the commuting function of the trail.	30"	0.2	TSG
NS-17	Jurassic (renovation project)	Natural Surface-Descending Bikes Only	Change the management of Jurassic to support downhill bikes only. Hikers and uphill bicyclists (eastbound) will be accommodated via a new trail (Stegosaurus, NS-6) slightly upslope from Jurassic.	40"	0.5	TSG

TABLE 4.1 NATURAL SURFACE TRAIL IMPROVEMENTS, CONTINUED

Trail ID	Trail Name	Trail Type	Description	Tread Width	Length (miles)	Stakeholders/ Partners
NS-18	Elk Pond to Prospect Trail	Natural Surface-Uphill Bike/ Multi-Directional Hike	Natural surface trail connecting from the proposed Elk Pond Loop to Prospect Trail. Upper half mile before connecting to Prospect is constrained fall-line trail. Prohibition on downhill bikes is intended to mitigate erosion and maintenance.	40”	1.4	TSG

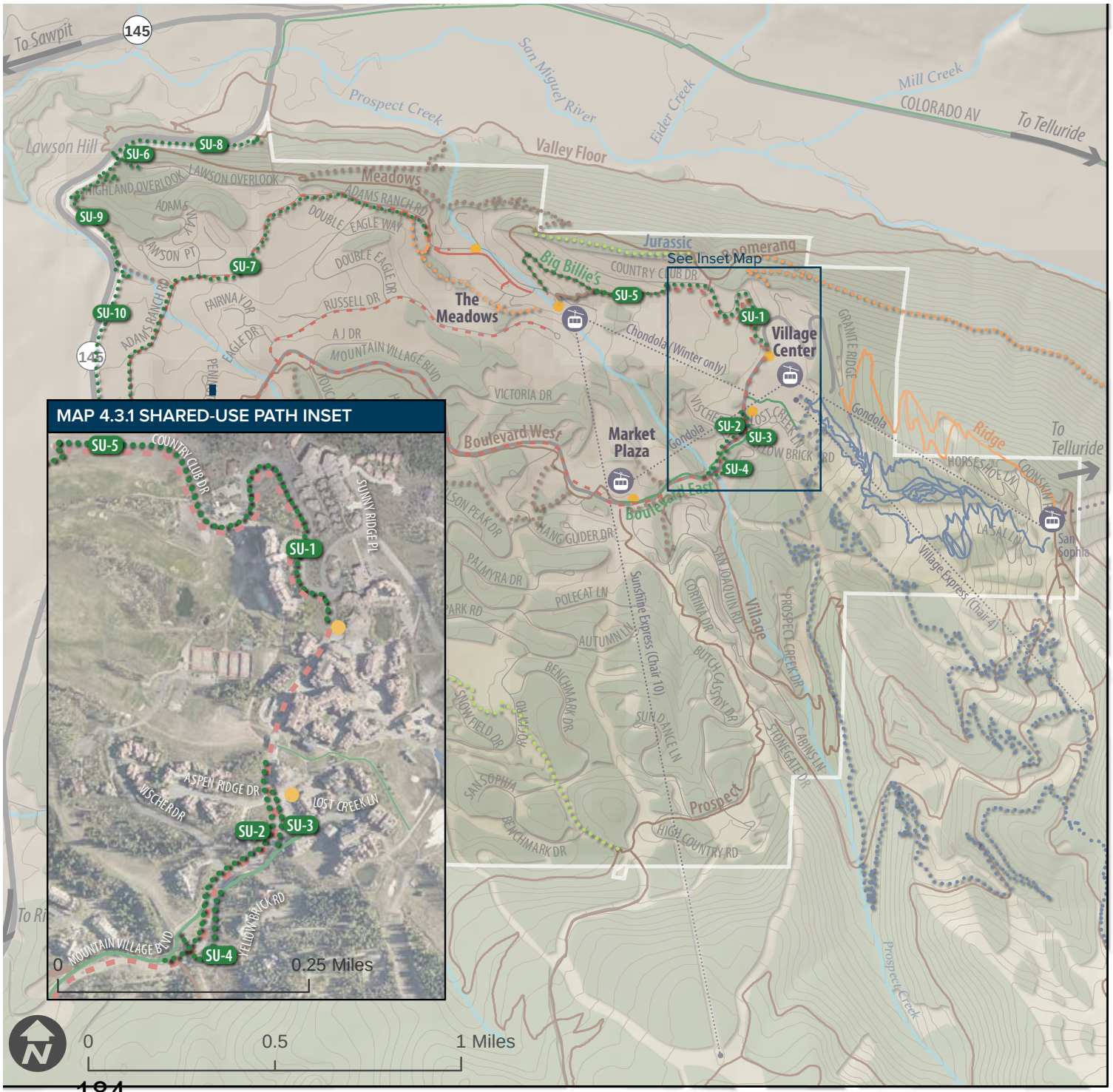
Shared Use Path Improvements

Currently, the only paved path in Mountain Village is the Boulevard East Trail. Paved shared use paths and sidepaths provide the highest level of accessibility and comfort for all users, including children, the elderly, and people using wheeled mobility devices. In areas with particularly high pedestrian and bicyclist traffic, paved shared use paths are the most suitable facilities to accommodate everyone.

The suggested improvements for shared use paths presented in this plan are focused on the primary activity areas, where there is significant existing pedestrian and bicyclist traffic, higher density, and demand for enhanced connections between destinations. Table 4.2 lists the shared use path improvements while Map 4.3 and Map 4.3.1 (inset) illustrates their locations within Mountain Village.

TABLE 4.2 SHARED USE PATH IMPROVEMENTS

Trail ID	Trail Name	Trail Type	Description	Tread Width	Length (miles)	Stakeholders/ Partners
SU-1	Upper Country Club Dr - Mountain Village Blvd to Big Billie's Trail	Sidepath / Sidewalk - foot traffic only (paved)	Develop a paved sidepath or sidewalk for foot traffic only that would extend along the west and south side of Country Club Dr. connecting to Big Billies. Note that this will separate bicycle and pedestrian traffic.	8'-0"	0.3	TSG/The Peaks
SU-2	Boulevard Trail Extension	Sidepath (paved)	Reroute the existing Boulevard Trail to travel underneath the existing Village Bypass ski bridge over Mountain Village Boulevard. Extend trail along the west side of Mountain Village Boulevard up to Aspen Ridge Dr.	8'-0"	0.3	TSG
SU-3	Boulevard Extension #2	Sidepath (paved)	Extend the end of the Boulevard Trail through the parking / bus stop area Village Center. Some impacts to the parking lot may be required.	8'-0"	0.1	TSG
SU-4	Boulevard Trail Re-route	Sidepath (paved)	Develop a new segment of Boulevard Trail that utilizes the existing ski bridge over Mountain Village Boulevard to cross the roadway rather than the existing crosswalk.	8'-0"	0.1	TSG
SU-5	Big Billie's	Shared Use Path (paved or crusher fines)	Harden and widen the existing Big Billie's Trail with asphalt or crusher fines from Country Club Road to Meadows Village to better support summertime commuting trips. Extend trail through planned affordable housing in Meadows Village. Plant additional trees on the fairway side of the trail to protect trail users and limit the visibility of the trail from golfers.	8-0"	0.6	TSG
SU-6	Lawson Hill Connector	Shared Use Path (paved)	Develop a paved shared use path from the end of Lawson Overlook to SR-145. Work with CDOT to construct a grade-separated bicycle-pedestrian crossing across SR-145 (See SI-1). Connection would facilitate a low-stress bicycling connection into Telluride via the Boulevard Trail, streets in Lawson, and the bike path on the Valley Floor.	8-0"	0.1	CDOT
SU-7	Adams Ranch Rd Sidepath	Sidepath (paved, alternative to OS-3)	Develop a sidepath along Adams Ranch Road from Mountain Village Boulevard to the Meadows. Project would impact landscaping and require grading within the 15' general easement. The proposed sidepath is intended as an alternative to shoulder improvements proposed in OS-3.	8'-0"	1.4	TSG, private landowners
SU-8	SR145- Meadows Trail to Valley Floor	Sidepath (paved)	Sidepath connecting the Meadows Trail to the Valley Floor. Trail alignment could follow historic railroad grade above SR-145.	8'-10'	0.6	TSG, CDOT, SMVC, private landowners
SU-9	SR145- Emergency Access Road to Meadow Trail	Shared Use Path (crusher fines)	Shared use path trail connecting the emergency access road to the Meadows Trail. Trail could be constructed potentially in CDOT ROW or TMV open space lands, however, minor encroachments onto adjacent property could improve the trail experience and facilitate easier construction.	8'-10'	0.6	TSG, SMVC, private landowners
SU-10	SR145- Meadow Village Blvd to Emergency Access Rd	Shared Use Path (crusher fines)	Shared use path running along the SR-145 ROW from the end of the Boulevard Trail to the emergency access road. Trail could be constructed in exclusively in CDOT ROW, however minor encroachments into adjacent TSG property could improve the trail experience and facilitate easier construction.	8'-10'	0.5	TSG, CDOT



MAP 4.3.1 SHARED-USE PATH INSET

TOWN OF MOUNTAIN VILLAGE INCORP. 1995

TRAILS
MASTER PLAN

MAP 4.3 SHARED-USE PATH RECOMMENDATIONS*

- Bus Stop
- Gondola Station
- Contour Line (100 feet)
- Forest Cover
- Town of Mountain Village

RECOMMENDATIONS

Existing / Proposed

- Shared Use Path
- On-Street Improvements

NATURAL SURFACE TRAILS

- Shared Use
- Uphill Bike/ Multi-directional Hike
- Descending Bikes Only
- Foot Traffic Only

*Trails depicted in this map that are outside of the Mountain Village municipal boundary are not included in trail mileage mentioned elsewhere in this plan.

On-Street Improvements

The majority of Mountain Village's existing roadways lack sidewalks or dedicated space for pedestrians and bicyclists. Roads are often narrow with equally narrow paved or unpaved shoulders. Despite the lack of dedicated space, many residents and visitors walk and bicycle on roadways, either on narrow gravel shoulders, or within the vehicle travel lane. For the majority of roadways this works well when motor vehicle volumes and speeds are low. A local culture of roadway courtesy can also have a significant impact on perceptions of safety and comfort. On some roads, particularly those with relatively heavy vehicle and non-motorized traffic and the presence of blind corners, this mixed traffic approach can pose a safety issue. This plan identifies key areas where the addition of on-street improvements, including wide shoulders and advisory shoulders will improve safety and comfort for all users.

On-street improvements are described in Table 4.3 and illustrated in Map 4.4.

TABLE 4.3 ON-STREET IMPROVEMENTS

Trail ID	Trail Name	Trail Type	Description	Length (miles)	Stakeholders/ Partners
OS-1	Mountain Village Boulevard - Lost Creek Lane to Market Plaza	Shoulder Improvements	Widen shoulders along Mountain Village Boulevard to accommodate a 4'-0" shoulder on downhill side / 6'-0" shoulder on uphill side. Upgrade to bike lanes if feasible.	0.4	Private landowners, TSG
OS-2	Russell Dr	Shoulders/Advisory Shoulders	Widen shoulders to 4'-0" on curves and areas requiring a solid centerline. In other locations, implement advisory shoulders and remove centerline striping.	0.9	Private landowners
OS-3	Adams Ranch Rd (alternative to project SU-7)	Shoulders/Advisory Shoulders	Widen shoulders to 4'-0" on curves and areas requiring a solid centerline. In other locations, implement advisory shoulders and remove centerline striping. Project is intended to serve as an alternative to a paved sidepath as proposed in SU-7.	1.5	Private landowners, TSG
OS-4	Mountain Village Blvd - Lost Creek Lane to Country Club Dr	Combination shoulder and sidewalk with ADA improvements	Construct shoulders from Blue Mesa to County Club Dr, fill in missing sidewalk sections for foot traffic only, and improve ADA accessibility on the east side of Mountain Village Boulevard through the Village Center.	0.2	Private landowners, TSG
OS-5	Benchmark Dr	Shoulders/Advisory Shoulders	See page 4-16 for options.	1.5	Private landowners, TSG
OS-6	San Joaquin Rd	Shoulders/Advisory Shoulders	See page 4-16 for options.	1.1	Private landowners, TSG
OS-7	Upper Country Club Dr - Mountain Village Boulevard to Big Billies	Shoulders/Advisory Shoulders	Pave 4' wide shoulders for bikes only on both sides of Country Club Dr. See page 4-16 for options. If not enough room for 4' shoulders on both sides of road, construct a shoulder on the south (uphill) of Country Club Dr for climbing bikes and paint sharrows in the lane for descending bikes.	0.5	Private landowners, TSG
OS-8	Mountain Village Boulevard - Market Plaza to Highway 145	Shoulder Improvements	Widen shoulders along Mountain Village Boulevard to accommodate a 4'-0" shoulder on downhill side / 6'-0" shoulder on uphill side. Upgrade to bike lanes if feasible.	1.8	TSG

TOWN OF MOUNTAIN VILLAGE INCORP. 1995

TRAILS MASTER PLAN

MAP 4.4 ON-STREET RECOMMENDATIONS*

- Bus Stop
- Gondola Station
- Contour Line (100 feet)
- Forest Cover
- Town of Mountain Village

RECOMMENDATIONS

Existing / Proposed

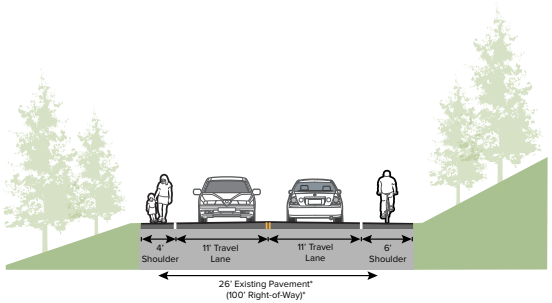
- Shared Use Path
- On-Street Improvements

NATURAL SURFACE TRAILS

- Shared Use
- Uphill Bike/ Multi-directional Hike
- Descending Bikes Only
- Foot Traffic Only

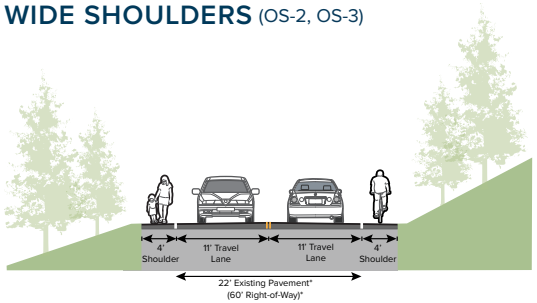
*Trails depicted in this map that are outside of the Mountain Village municipal boundary are not included in trail mileage mentioned elsewhere in this plan.

FIGURE 4.3 WIDE SHOULDERS (OS-1)



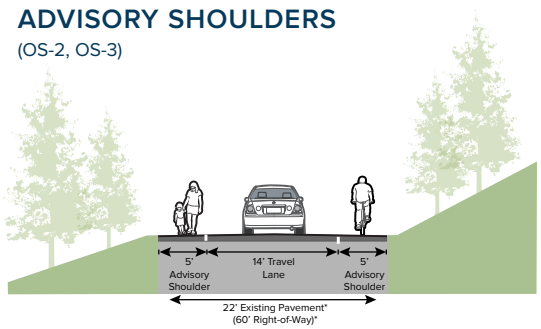
Advisory shoulders offer a cost-efficient and low-impact way to provide accommodations for bicyclists and pedestrians, and is achieved by striping that allows flexibility for two-way motor traffic while dedicating space for cyclists and pedestrians.

FIGURE 4.4 WIDE SHOULDERS (OS-2, OS-3)



In locations that are inappropriate for advisory shoulders, or in locations where there is higher demand for bicycle and pedestrian accommodations, wide paved shoulders offer safe, delineated space to bike and walk.

FIGURE 4.5 ADVISORY SHOULDERS (OS-2, OS-3, OS-4)



Paved advisory shoulders on one-way streets offer a cost-efficient and low-impact way to provide accommodations for bicyclists and pedestrians, and is achieved by striping that allows flexibility for one-way motor traffic while dedicating space on both sides of the road for cyclists and pedestrians.

On-Street Improvements Continued

Benchmark Drive and San Joaquin Road are the two primary roadways that connect a large portion of Mountain Village residents to the main thoroughfare, Mountain Village Boulevard. These roads in particular present challenges in creating safe and convenient access for pedestrians and cyclists with their steep profiles, sharp curves that decrease visibility, and narrow shoulders that are unpaved. The suggested improvements for Benchmark Drive and San Joaquin Road are focused on the three options described below, and should be implemented on a case-by-case basis, giving consideration to funding, visibility, physical constraints, and engineering judgement. Shoulder widening efforts should be completed in conjunction with roadway reconstruction or utility projects.

OPTION 1: ADVISORY SHOULDERS | $ $ $ $ $

Advisory shoulders offer a cost-efficient and low-impact way to provide accommodations for bicyclists and pedestrians, and is achieved by striping that allows flexibility for two-way motor traffic while dedicating space for cyclists and pedestrians. Due to complications with topography and sight lines around sharp curves along these two corridors, there may be limited application for advisory shoulders along Benchmark Drive and San Joaquin road. Additional study should be conducted to assess the feasibility of advisory shoulders on various segments of Benchmark and San Joaquin.

Advisory shoulder

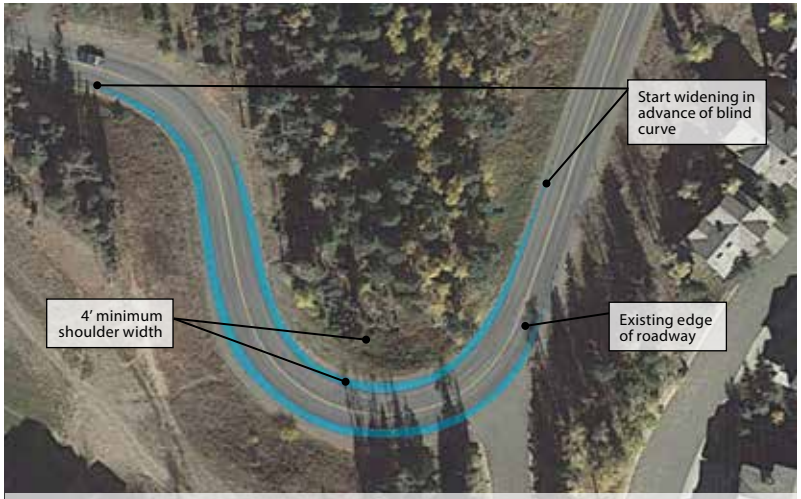
OPTION 2: SHOULDER WIDENING | $ $ $ $ $

In locations that are inappropriate for advisory shoulders, or in locations where there is higher demand for bicycle and pedestrian accommodations, paved shoulders offer safe, delineated space to bike and walk. If corridor constraints limit the construction of paved shoulders on both sides of the street, shoulder widening should be consolidated to the side of the street on which users travel uphill to provide a more comfortable experience. In this scenario, downhill bicyclists are likely to “take the lane” as they will be traveling at higher speeds and the need for vehicles to pass will be less likely. Lower sections of San Joaquin that serve higher density housing developments and more potential users are a logical place to consider shoulder widening.

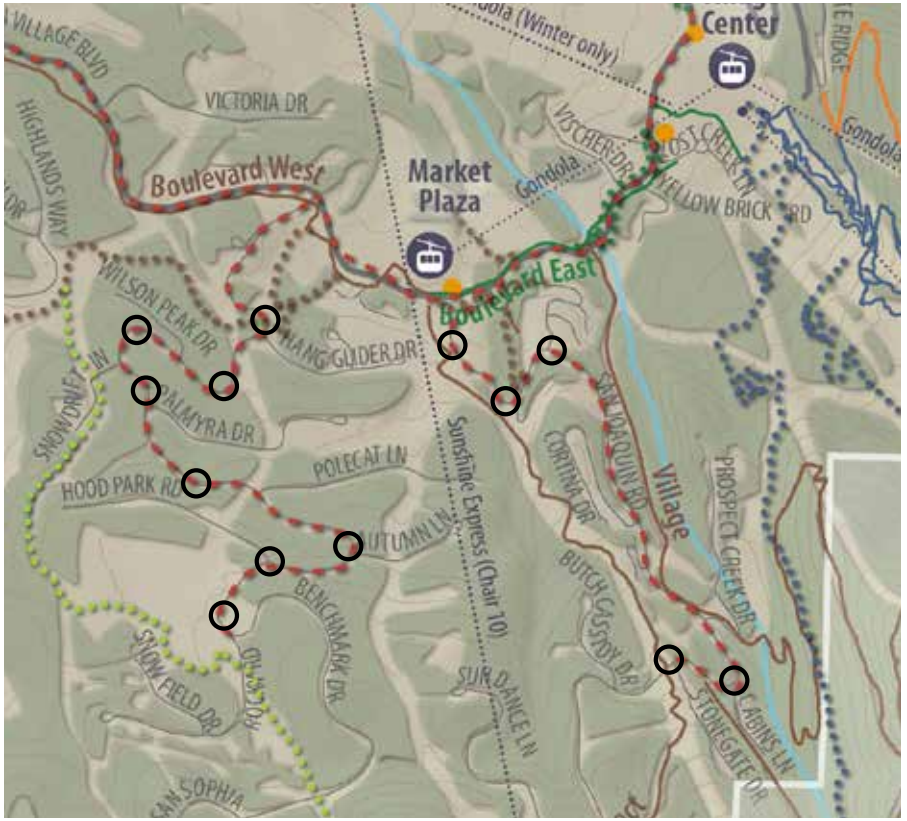
Shoulder widening

OPTION 2A: SELECTIVE SHOULDER WIDENING | $ $ $ $ $

If implementation funds are limited, or if impacts from wholesale shoulder widening are deemed undesirable, selective widening may provide an option to improve bicycle and pedestrian comfort and safety at key locations. Priority locations for selective widening would be those that present challenges with regards to sight lines and visibility, particularly around sharp curves with blind corners. The image below highlights in blue selective widening of paved shoulders around a sharp curve along San Joaquin Road.



Selective shoulder widening along San Joaquin Road



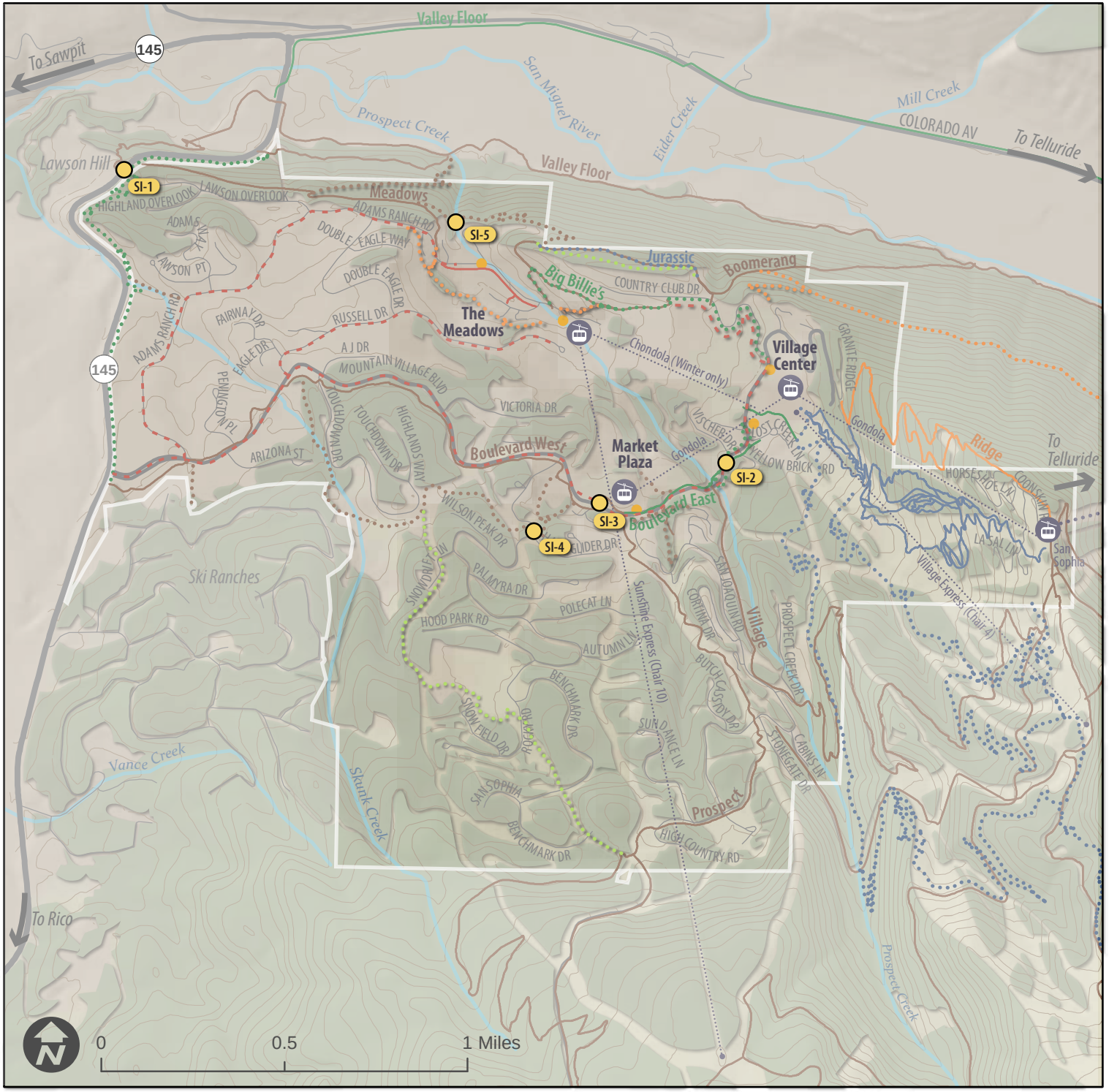
Potential locations for selective widening along Benchmark and San Joaquin

Spot Improvements

Proposed spot improvements are largely focused on improving bicycle and pedestrian connectivity across roads or natural features. Spot improvements are listed in Table 4.4 and displayed on Map 4.5.

TABLE 4.4 SPOT IMPROVEMENTS

Trail ID	Improvement Name	Improvement Type	Description	Stakeholders/ Partners
SI-1	SR-145 Grade-separated trail crossing	Grade-separated trail crossing	Construct a grade-separated trail crossing (overcrossing or undercrossing) across SR-145 to connect Mountain Village to Lawson Hill. Coordinate and explore funding options with CDOT.	CDOT
SI-2	Eliminate at-grade crossing/use ski bridge	Eliminate at-grade crosswalk	Remove the existing at-grade crosswalk on Mountain Village Boulevard which is currently sited at a skew angle and on a curve. Proposed trails on both sides of Mountain Village Boulevard and the use of the existing ski bridge as a trail crossing will eliminate the need for the at-grade crosswalk.	
SI-3	Boulevard Trail undercrossing	Trail undercrossing	Construct a new trail undercrossing from the proposed park at Elk Pond to Town Hall consistent with the Town Hall small area plan.	
SI-4	Elk Pond Trail Undercrossing	Trail undercrossing	Construct a trail undercrossing below Benchmark to facilitate the proposed Elk Pond Trail.	
SI-5	Meadows Express Bridge	Trail bridge	Construct a trail bridge over Prospect Creek to facilitate construction of the proposed Meadows Express trail.	TSG



TOWN OF MOUNTAIN VILLAGE INCORP. 1995

TRAILS MASTER PLAN

MAP 4.5 SPOT RECOMMENDATIONS*

- Bus Stop
- Gondola Station
- Contour Line (100 feet)
- Forest Cover
- Town of Mountain Village

RECOMMENDATIONS

Existing / Proposed

- Shared Use Path
- On-Street Improvements

NATURAL SURFACE TRAILS

- Shared Use
- Uphill Bike/ Multi-Directional Hike
- Descending Bikes Only
- Foot Traffic Only

- Proposed Spot Improvement

*Trails depicted in this map that are outside of the Mountain Village municipal boundary are not included in trail mileage mentioned elsewhere in this plan.

POLICY RECOMMENDATIONS

Implementing a world-class trail system takes more than simply building great trails; it requires policies be put in place to ensure efficient and effective system use and management. The following policy recommendations are intended to support the facility recommendations discussed in the previous section.

Create a dismount zone for bicyclists in Heritage Plaza

During peak season, there are high numbers of bicyclists exiting the mountain bike park at Heritage Plaza, which is often busy with pedestrians, including small children and the elderly. With the expansion of the Telluride Ski and Golf bike park and increasing numbers of visitors to Mountain Village, conflicts between pedestrians and mountain bikers in Heritage Plaza are expected to increase. Creating a dismount zone for bicyclists in Heritage Plaza is recommended to maintain a safe environment for everyone.

A dismount zone can be established with a municipal ordinance and promoted with signage. Enforcement of violators may be necessary, particularly during peak hours. To meet everyone's needs, delineating small zones where rental shops can allow customers to test ride bikes, should be considered as a potential component of the overall dismount zone.

A bicycle dismount zone would reduce conflicts between pedestrians and bicyclists.

For bicyclists wishing to avoid Heritage Plaza and connect to other trails, additional signage can direct them to the existing paved path that skirts the plaza to the south. This path will connect with the proposed Village Center to Big Billie's shared use path (SU-1), which will provide connections to other trails throughout the system.

Develop a comprehensive signage program for on-street, off-street, and natural surface trails

The Town of Mountain Village currently has some existing trail signage, but feedback from both stakeholders and the general public suggests that it is insufficient for most users to effectively navigate the system. Developing a comprehensive signage program for the entire trail system using current wayfinding best practices should be a priority for Mountain Village. A consistent and well-designed signage program will not only improve the user experience, it will provide an opportunity to promote the Mountain Village brand. Coordination with the Town of Telluride, the United States Forest Service, and Telluride Ski and Golf should be pursued, if possible, to facilitate connections to neighboring trail systems and destinations.

Develop a comprehensive and coordinated trail user etiquette campaign

With the large number of visitors coming to Mountain Village, and their varying levels of trail experience, conflicts between users on trails is not uncommon and poses a safety issue. Developing a comprehensive and coordinated trail user etiquette campaign across all trail-related organizations and businesses will help to ensure that people understand how to properly use the trail system. Such a campaign could include signage and educational materials to be distributed by the Town of Mountain Village, the Town of Telluride, Telluride Ski and Golf, and local bicycle shops.

Promote a trail system that is usable in all seasons

In recent years, winter bicycling has become increasingly popular in mountain resort communities, especially as weather patterns that ski destinations rely on become increasingly unpredictable. Winter bicycling presents an opportunity for such communities to provide outdoor recreation experiences year-round and to potentially attract new visitors.

Grooming trails after snowfalls is key to providing winter-time access. As the main trail corridor in Mountain Village, the Boulevard Trail should be prioritized for grooming. From a recreational perspective, grooming trails in open space and on the golf course presents an opportunity to provide additional fat biking opportunities, but will require coordination and approval from Telluride Ski and Golf. Trails maintained for fat biking should be kept separate from Nordic ski trails due to the differences in treads.

Improve trail-related amenities throughout the system

Trail-related amenities such as benches, lighting, map kiosks, and bicycle parking can improve user experience by increasing convenience and comfort. Benches provide opportunities to rest, lighting increases visibility and safety, and map kiosks help users orient themselves within the system.

People may ride more frequently if they know there are ample places to securely park their bikes. The Town of Mountain Village should assess bike parking needs at the Village Center, Town Hall/Market Plaza, and the Meadows and install bike racks in public locations as needed. Bike parking can be temporary in some locations to meet seasonal fluctuations in demand. Reference the Association of Pedestrian and Bicycle Professionals (APBP)'s *Essentials of Bike Parking: Selecting and Install Bike Parking That Works* (2015) for further information on bicycle parking best practices. Mountain Village should also consider accommodting charging infrastructure for e-bikes as they continue to increase in popularity.

Develop a shared mobility device ordinance

With a bike share program planned for launch by 2020, the Town of Mountain Village should take proactive steps to establish permitting and operational policies for other shared mobility providers. Since 2017, cities and towns have seen the rise of new direct-to-consumer business models for providing a range of shared mobility options, specifically dockless bike share, dockless e-bike share, and dockless e-scooter share. While these modes can, in some cases, coexist with established docked and hybrid systems and with other competing providers, municipalities have identified the value of closely managing the use of the public right-of-way and setting clear standards for entry to the local market and performance measures that align with city goals. This protects existing city investments and prioritizes the intended outcomes established by the city.

For examples of polices established in cities with existing public bike share programs, see: Denver, Colorado; Austin, Texas; and Charlotte, North Carolina.

Covered short-term bicycle parking provides weather protection.

PUBLIC OUTREACH

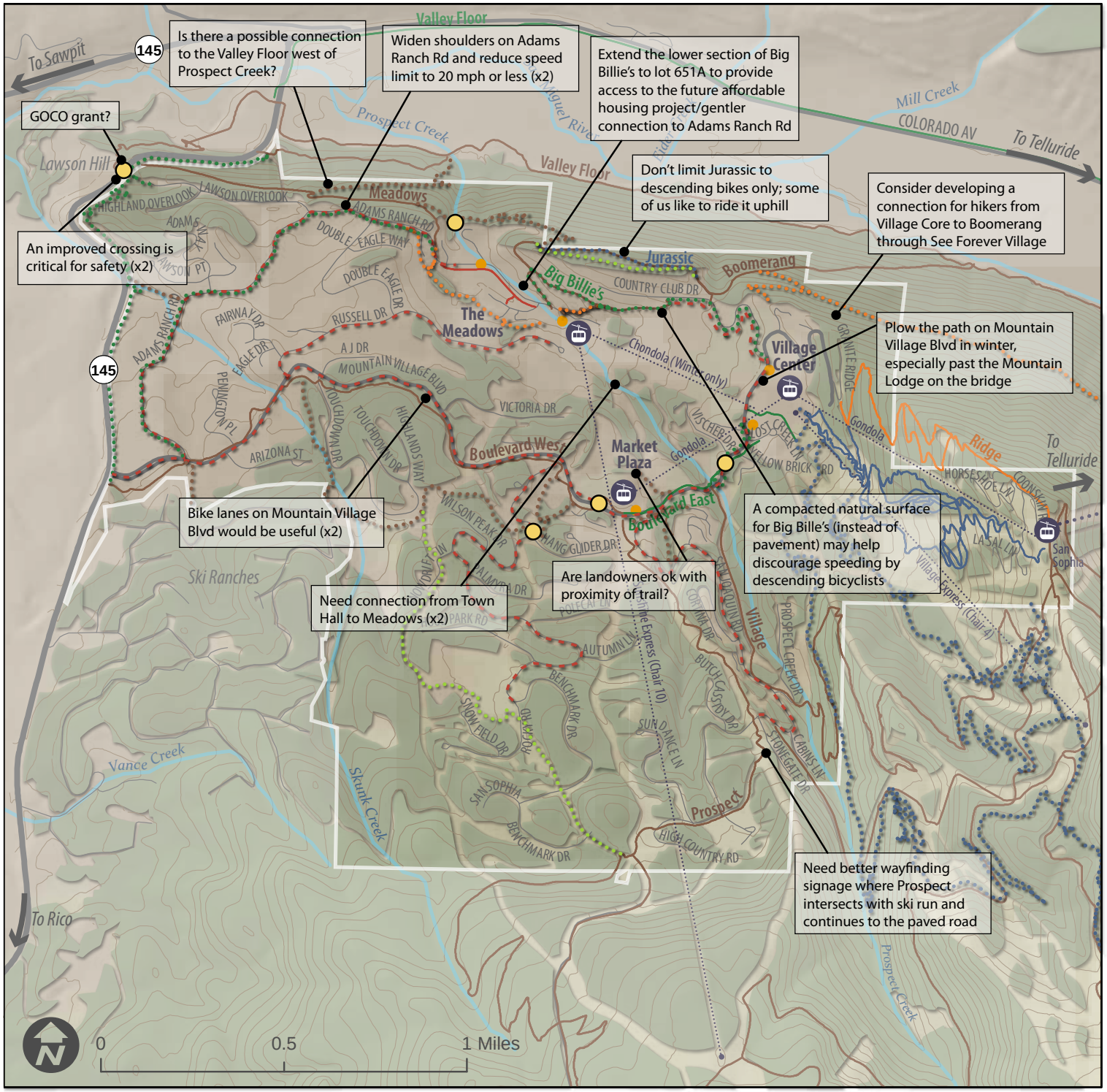
On Friday, September 28, 2018, the project team held a second public engagement session aimed at gathering feedback on the Mountain Village Trails Master Plan draft plan vision, goals, and recommendations. Six stations were assembled to present different information to event attendees. The stations included: 1)Vision and Goals, 2) Overall Trail System, 3) Natural Surface Recommendations, 4) Shared-Use Path Recommendations, 5) On-Street Recommendations, and 6) Spot Improvements. Each station included informational posters and/or maps and participants received forms to fill out with their feedback. Overall, the feedback was positive. A summary of general feedback is listed below. Location-specific comments are illustrated in Map 4.6.

- There is a general preference for multi-use trails, but there is also broad support for the separation of descending bikes and hikers
- There is broad support for hike-only trails
- People have concerns about the speeds of descending bikes
- Someone advocated that road shoulders be widened to 6 feet
- There is a general need for trail etiquette awareness and signage
- Providing wide, paved paths to better accommodate e-bikes would benefit more types of users
- There is interest in better accommodating e-bikes, both by increasing the amount of wide, paved paths, and by allowing e-bikes to access shared-use trails
- Someone expressed safety concerns about removing centerlines on roads, especially when the area experiencing increases in vehicular traffic
- Some people would like to preserve technical trail features in appropriate locations
- There is a desire to protect public access to trails on TSG property

Participants were also asked to list the proposed projects they would most like to see implemented. The O'Reilly Trail (NS-7), the Stegosaurus Trail (NS-6) and the SH 145 Crossing (SI-1) were the most popular projects among meeting attendees.

Attendees of the September event review the recommendations.

An advertisement for the public event held in September.



TOWN OF MOUNTAIN VILLAGE
TRAILS
MASTER PLAN

MAP 4.6 PUBLIC INPUT ON RECOMMENDATIONS*

- Bus Stop
- Gondola Station
- Contour Line (100 feet)
- Forest Cover
- Town of Mountain Village

RECOMMENDATIONS

Existing / Proposed

- Shared Use Path
- On-Street Improvements

NATURAL SURFACE TRAILS

- Shared Use
- Uphill Bike/ Multi-Directional Hike
- Descending Bikes Only
- Foot Traffic Only
- Proposed Spot Improvement

*Trails depicted in this map that are outside of the Mountain Village municipal boundary are not included in trail mileage mentioned elsewhere in this plan.

CHAPTER 5

IMPLEMENTATION

DESIGN GUIDELINES

Trails are one of the primary ways in which people experience the Town of Mountain Village. Natural surface trails that are carefully planned and sustainably constructed within Mountain Village will promote an enjoyable user experience and minimize future maintenance requirements. These design guidelines specify how trails and supporting facilities should be designed and constructed within the Town of Mountain Village. The following standards and guidelines are referred to in this guide:

- The Federal Highway Administration's (FHWA) ***Manual on Uniform Traffic Control Devices (MUTCD)*** defines the standards to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic.
- ***FHWA's Small Town and Rural Multimodal Networks (2016)*** document is a design resource and idea book to help small towns and rural communities support safe, accessible, comfortable, and active travel for people of all ages and abilities.
- US Forest Service Standard Trail Plans and Specifications
- IMBA Trail Solutions: IMBA's Guide to Building Sweet Singletrack
- Minnesota DNR Trail Planning, Design, and Development Guidelines

IMPLEMENTATION COMPONENTS

DESIGN GUIDELINES – Includes recommended design specifications for each facility type.

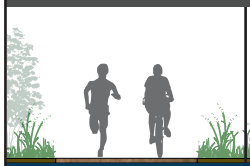
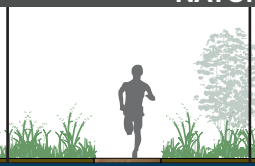
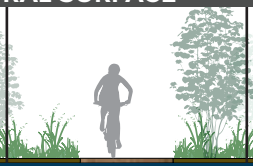
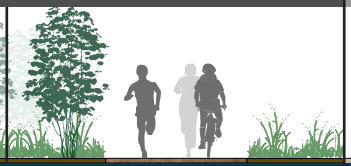
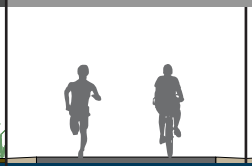
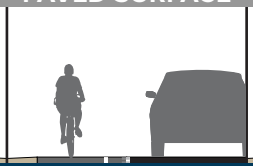
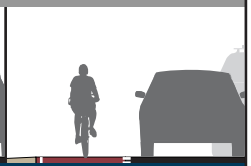
MAINTENANCE – Describes typical maintenance tasks for each trail type with some planning-level costs.

PRIORITIZATION/PHASING – Categorizes projects into three phases for implementation

PRIORITY PROJECTS – Highlights projects to be implemented first

Mountain Village Trail Types

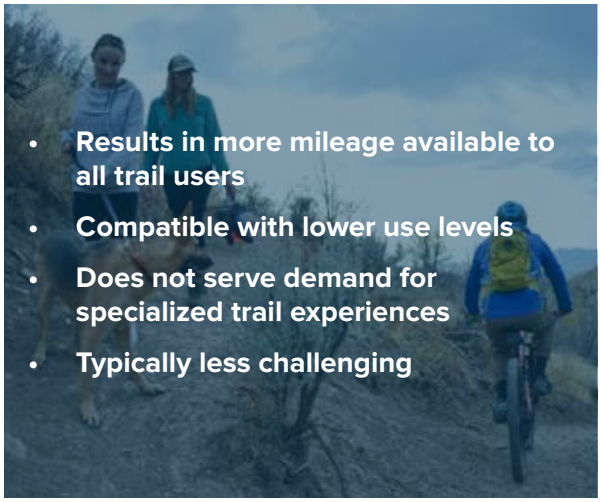
Natural surface trails can be designed to accommodate a broad or narrow range of users depending on the experience desired. Trails may also be required to serve other utilitarian access functions depending on the underlying property ownership or access agreement.

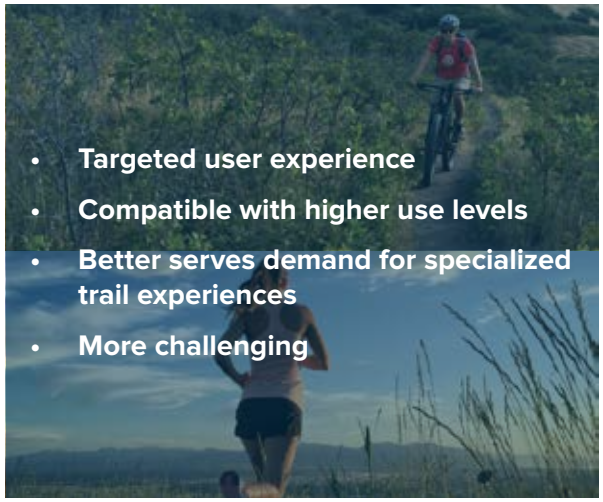
	NATURAL SURFACE				PAVED SURFACE		
							
	SHARED USE TRAILS	**HIKE ONLY TRAILS**	**DESCENDING BICYCLES ONLY**	**UPHILL BIKE / MULTI-DIRECTIONAL HIKE**	**SHARED USE PATH**	**SHOULDER WIDENING**	**ADVISORY SHOULDERS**
Description	Shared use trails accommodate all types of non-motorized trail users (most commonly hikers, bicyclists, and equestrians)	Hiking-only trails are constructed to facilitate access to hikers and trail runners	Descending bicycle-only trails are constructed to enhance the experience and efficiency of riding a bicycle downhill	Shared use trail used to facilitate multi-directional access to hikers and trail runners, in addition to providing adequate space and limited interference for bicyclists to ride uphill	Paved shared use trails accommodate all types of non-motorized trail users (most commonly pedestrians and bicyclists)	Paved shoulders along the edge of roadways serve as a functional space for bicyclists and pedestrians to travel	Advisory shoulders accommodate two-way vehicular traffic and prioritize space for bicyclists with little widening of the roadway surface
Typical Width	36"-72"	18"-60"	36"-72"	36”-72”	8‘ min. - 14’	4’ min. - 8’	4’ min. - 6’ (preferred)
Running Slope	Overall running slope of 10% or less (up to 15% for short segments)	Can be routed with steeper running slopes up to 15% (depending on local soil conditions)	Overall running slope of 6-8% or less to limit braking/skidding damage (up to 15% for short segments)	Overall running slope of 10% or less (up to 15% for short segments)	Running slope of 5% (any distance); 8.3% (max 200’); if path is within the road ROW it can match the road’s running slope	Match existing roadway	Match existing roadway
Cross Slope	5% max	8% max	5% max	5% max	2% max	2% max	2% max, or match existing
Appropriate Characteristics	Small berms, rollers, slow-speed technical features, clear sightlines on faster segments of trail	Narrow tread, steps (where needed), tight switchbacks	Larger berms and/or high speed features, jumps, drops, elevated structures, and other technical features suited to bicyclists	Small berms, rollers, slow-speed technical features, clear sightlines on faster segments of trail	Maintain during winter with plowing and sweeping	Implement on rural roads that may lack dedicated bicycle facilities	Implement on low-volume, low speed roads lacking dedicated bicycle and pedestrian facilities
Inappropriate characteristics	Large berms, jumps, drops, high-speed features	Large berms, jumps, drops, high-speed features	Mandatory advanced features without "ride-arounds"	Large berms, jumps, drops, high-speed features	Any characteristics that compromise the accessible requirements noted above	Inadequate width along highly trafficked roadway with high speeds	Roadway segments with poor visibility; roads with speeds in excess of 35 mph and 3000 ADT
Management Considerations	Managed as shared use	Managed as single use; requires clear and repeated notices specifying use type; hike only trails may be used in conjunction with descending bicycle trails to provide equal access for all trail users	Managed as single use; requires clear and repeated notices specifying use type; descending bike trails may be used to provide a specific trail experience or to separate trail users for safety reasons	Managed as shared use; requires clear and repeated notices disallowing downhill bicycle travel; Uphill bike/ multi-directional hike trails can be used to allow trail users operating at similar speeds to share the same trail while prohibiting higher speed descending bicyclists	Managed as shared use; consider allowing e-bikes on paved shared use paths throughout Mountain Village	Direction of travel is commonly specified; may also be preferred-use or single use; clear shoulders of snow in winter	Launch an educational campaign with implementation to teach people how to drive, walk, and bike on roads with advisory shoulders

Natural Surface Trails

Trail Management Considerations

Natural surface trails can be managed and designed as shared use (allowing all types of non-motorized trail users) or single use (allowing a single type of trail user).





Shared Use ⟷ **Single Use**

SHARED USE DESIGNATION CONSIDERATIONS

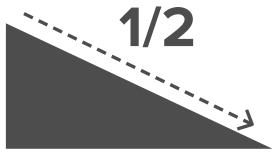
- Shared use trails accommodate the broadest range of users and provide the most mileage available to all user groups.
- Promotes shared stewardship of the trails.
- Cost- and resource-efficient, taking advantage of available space and trail mileage. This results in fewer miles than would be necessary to accommodate trails for individual user groups.
- Support the most visitors. Trails that lead to specific major destinations, such as historic features and scenic vistas, should be considered for shared use, since most visitors will be drawn to the point of interest regardless of the mode they'll use to get there.

SINGLE USE DESIGNATION CONSIDERATIONS

- Single use trails can alleviate congestion and conflicts among user groups when used in conjunction with shared use trails.
- Single use trails can be more technical or rugged, or provide higher quality trail experiences catered to a single trail user group.
- Single use trails can accommodate narrower tread widths without compromising the safety or enjoyment of other trail users.
- Single use trails can also help to mitigate site-specific constraints such as poor sightlines, steep terrain (by allowing construction of stairs), or sensitive environmental areas.

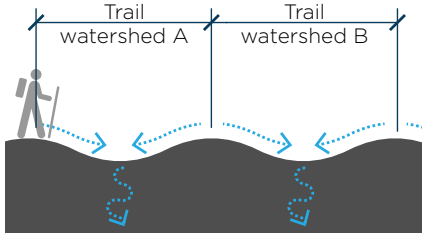
IDENTIFY CONTROL POINTS

Positive control points are places that people want to go. These points might include scenic overlooks, trail access points, interesting landforms, water, or historic sites. Negative control points are places that the trail system should avoid. These could include places like private property, sensitive environmental resources, or safety hazards. By routing trail users to places they instinctively want to go and avoiding potential liabilities, trail planners can mitigate the potential for unauthorized social trails while limiting trail user exposure to unsafe or undesirable places.



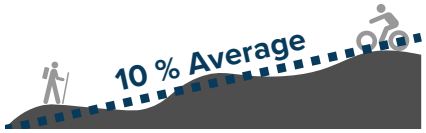
ADHERE TO THE HALF RULE

Trails whose running slope generally exceeds more than half the grade of the sideslope it's crossing are considered "fall line" trails. Drainage crossing a fall-line trail will follow the trail rather than crossing it creating a high probability for erosion.



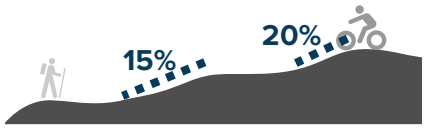
ROLLING CONTOUR TRAILS

Rolling contour trails gently undulate while traversing side slopes to divide trails into distinct trail watersheds. Trail watersheds limit the amount of drainage flowing across a trail by combining an out-sloped trail tread with frequent high and low points (grade reversals) along the trail profile.



10 % MAX. AVERAGE GRADE

An overall trail grade of less than or equal to 10% provides a general framework for a sustainable trail profile. An overall trail grade of 5-7% allows for some undulation and for short sections approaching 10%. Overall trail grades below 10% are also suitable for most soil types and minimizes erosion.



MAXIMUM SUSTAINABLE TRAIL GRADES

Maximum sustainable trail grades relate to short segments (10' or more) that may exceed the recommended overall average grade of 10%. Typically maximum sustainable trail grades vary between 15% and 20% depending on soil type, rock, annual rainfall, direction of travel or many other factors.

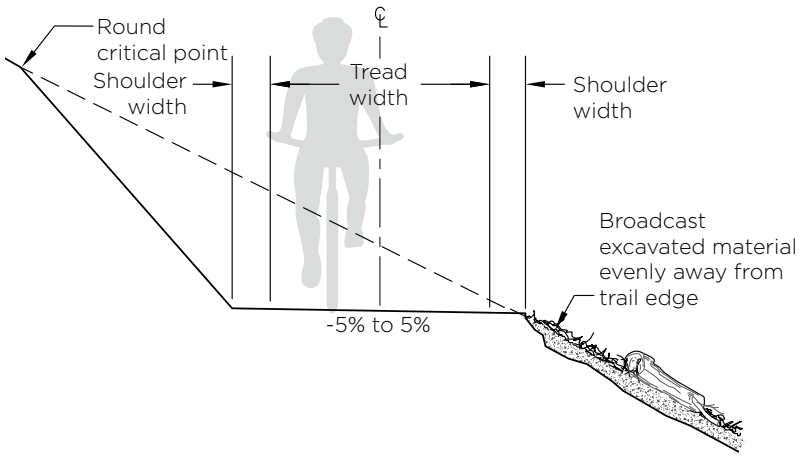
CREATE LOOPS

Routing trails as loops where feasible provides a more interesting trail experience. "Out and back", or dead-end trails sometimes promote the development of social trails when trail users are temped to create their own loops.

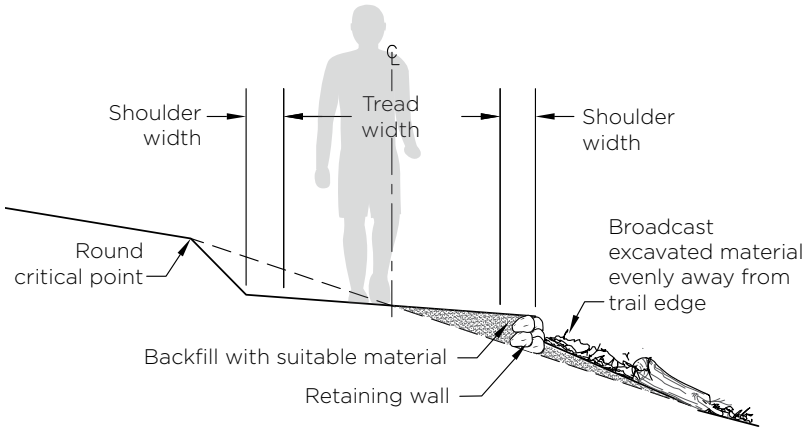
* Application of trail alignment principles may not be possible on existing trails but should always be applied on new trails.

Natural surface trails meet the recreational demands of hikers, mountain bikers, and other non-motorized recreational trail users. Proper trail construction is important to reduce ongoing maintenance costs as well as to ensure that the trail is both usable and enjoyable for intended user groups.

FULL BENCH CONSTRUCTION TRAILS



PARTIAL BENCH CONSTRUCTION TRAILS



DESIGN STANDARDS

- **Tread:** Trail surface should be compacted native material soil.
- **Trail Benching:** Full bench trails provide the most durable trail construction however partial bench trails can provide an adequate trail surface where full bench trails are not possible or “singletrack” is desired without waiting for vegetation to re-naturalize adjacent to the trail. Partial bench trails are only allowed with retaining walls on the downhill side.
- **Trail Texture:** Trail texture should vary based on intended user skill level, with smoother trails for less-skilled users and rugged trails for more-skilled users
- **Tread Width:** Varies by anticipated use levels, skill levels, and types of users (24” - 8’-0”).
- **Horizontal Clearance:** A 1 ft. shoulder maintained with minimum vegetation should be provided free of obstacles.
- **Vertical Clearance:** 8 ft. min., 10’ where equestrian use is anticipated
- **Cross Slope** May vary from -5% to 5%, but always sloped counter to user forces.
- **Running Slope:** Varies by intended trail type, see guidelines on p. 42.
- **Drainage:** Provide regular grade reversals (approximately every 25’) and exits for trail drainage.
- **Erosion Control:** Spread approved native seed mix throughout disturbed soil areas along all new trails.
- **Additional Resources:** US Forest Service Standard Trail Plans and Specifications, IMBA Trail Solutions: IMBA’s Guide to Building Sweet Singletrack (2004)

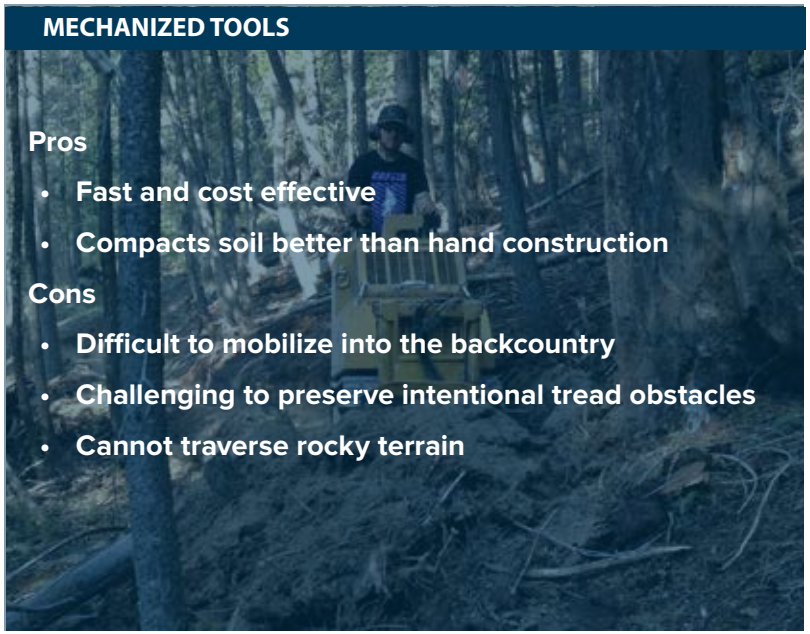
Construction Methods

The manner by which a trail is constructed (mechanized or by hand) influences the finished product. However, the two methods should not be conflated with a desired end result. Rather than rely on an implementation method, a proposed trail should be described using the following performance/design standards:

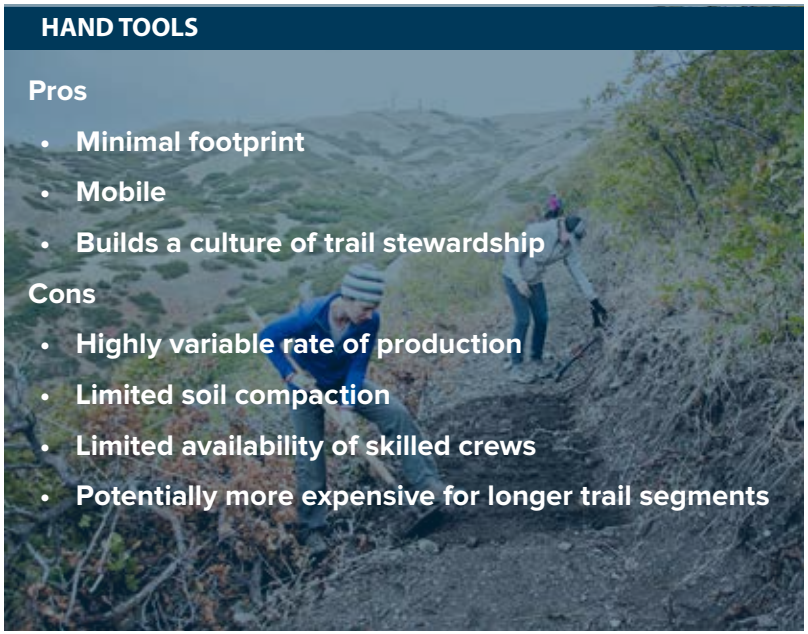
- Impacts (visual, soil and plant disturbance)
- Tread width
- Tread texture
- Tread shaping (in/out-slope, berms, lips/landings)
- Clearing limits
- Sinuosity/meander
- Drainage features (spacing and amplitude of grade reversals)
- Angle of repose of the back-slope
- Maximum height of tread obstacles

It is then up to the contractor to select the most cost-effective method to build the trail in conformance with the performance standards. For example, a narrow, rugged trail in the backcountry will likely be built by hand whereas a 48”-wide, smooth trail in the front-country will likely be built using mechanized equipment. Even with performance standards it is good practice to mandate maximum equipment size so that unqualified contractors don’t bid on a project expecting to use equipment that is better suited for road building than trail construction.

Other factors besides access and physical characteristics may influence the chosen trail construction method. Schedule and availability of volunteers may also impact trail construction methods.



(Photo Credit: Sagebrush Construction)



(Photo Credit: Bingham Cyclery)

Shared Use Path

A shared use path provides a travel area separate from motorized traffic for bicyclists, pedestrians, skaters, wheelchair users, joggers, and other users. Shared use paths are desirable for bicyclists of all skill levels preferring separation from traffic. Shared use paths should generally provide directional travel opportunities not provided by existing roadways. Most shared use paths are designed for two-way travel. Shared use paths along roadways are called "sidepaths".

Shared use paths provide trail users with the most comfortable and scenic experience as there is limited points of conflict with cars and access to local natural features.

Typical Application

- Shared use paths are typically located in independent rights of way, separate from roadways.
- In utility corridors, such as powerline and sewer corridors.
- In waterway corridors such as along ditches, drains, streams, and rivers.

Design Features

- Recommended minimum 10' width to accommodate moderate usage (14' preferred for heavy use). Minimum 8' width for low volume situations only.
- A 2 ft or greater shoulder on both sides of the path should be provided free of obstacles. An additional foot of lateral clearance, for a total of 3 ft, is required by the MUTCD for the installation of signage or other furnishings.
- Standard clearance to overhead obstructions should be 10 ft.

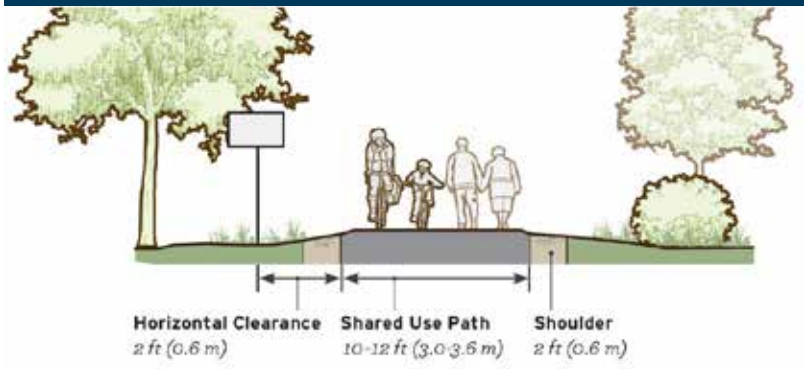
Further Considerations

- Under most conditions, centerline markings are not necessary. Centerline markings should only be used for clarifying user positioning or preferred operating procedure: Solid line = No Passing

Further Considerations (cont.)

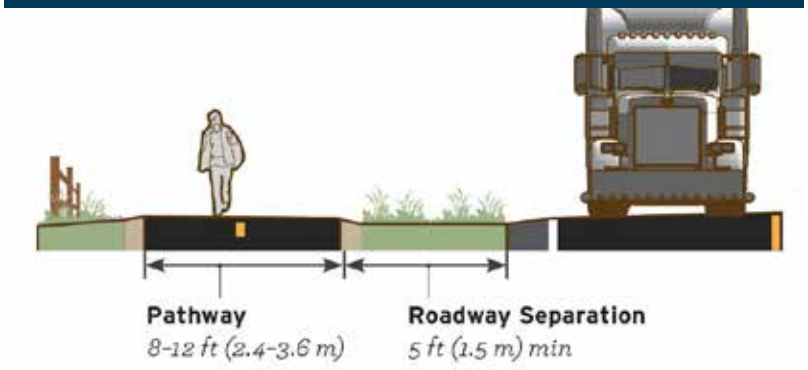
- Where there is a sharp blind curve, painting a solid yellow line with directional arrows reduces the risk of head-on collisions.
- Short sections of centerline are recommended upon the approach to street crossings to channelize path users.
- Small scale signs should be used in path environments (MUTCD 9B.02).
- Terminate the path where it is easily accessible to and from the street system, preferably at a trailhead, controlled intersection or at the beginning of a dead-end street.
- Use of bollards should be avoided as standard practice and only used if a history of motorized access violations is present. If bollards are used at intersections and access points, they should be colored brightly and/or supplemented with reflective materials to be visible at night.

SHARED USE PATH DIMENSIONS

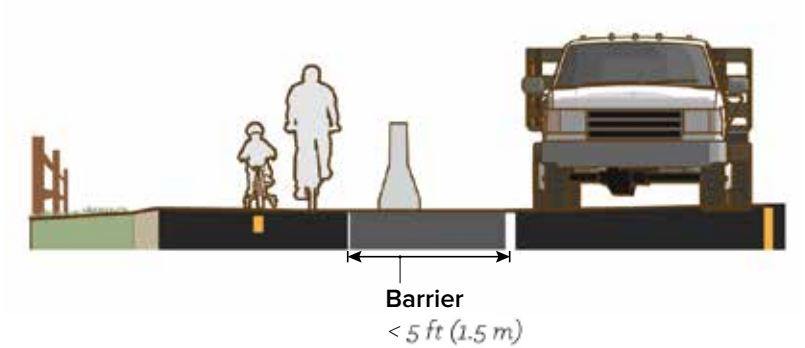


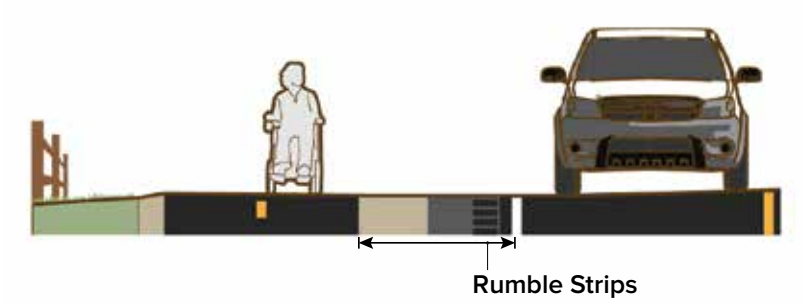
SHARED USE PATH ROADWAY INTERSECTION

SIDEPATH DIMENSIONS



ROADWAY SEPARATION





Sidepath Design Standards

- The preferred minimum roadway separation width is 6.5 - 16.5 ft. Minimum separation width is 5 ft.
- Separation narrower than 5 ft is not recommended, though it may be accommodated in constrained circumstances with the use of a physical barrier between the sidepath and the roadway. Barriers should prevent path users from moving into the roadway. Refer to the AASHTO Roadside Design Guide (2011) for additional guidance.
- In extremely constrained situations, rumble strips may be used as separation for short distances.
- It is important to keep approaches to intersections and major driveways clear of obstructions due to parked vehicles, shrubs, and signs on public or private property.
- Maximum cross slope of 2%. Design for a 1.5% cross slope to account for tolerance in construction.
- Running slopes should be below 5%. However, because sidepaths are located within a roadway right of way, the running slope may match the general grade established for the adjacent roadway.

References

- AASHTO. Guide for the Development of Bicycle Facilities. Chapter 5. 2012.
- FHWA. Manual on Uniform Traffic Control Devices. Chapter 9. 2009.

Sidepath Crossings

Sidepaths provide a high degree of comfort on long uninterrupted roadway segments, but have operational and safety concerns at driveways and intersections with secondary streets. Crossings should be designed to promote awareness, lower speeds, and facilitate proper yielding of motorists to bicyclists and pedestrians.

Typical Application

- At controlled and uncontrolled sidepath crossings of driveways or minor streets.
- Used to provide for visibility and awareness of the crossing by motorist in advance of the crossing.
- Increases the predictability of sidepath and road user behavior through clear, unambiguous right of way priority.

Design Features

- The sidepath should be given the same priority as the parallel roadway at all crossings.
- Provide clear sight triangles for all approaches of the crossing.
- Maintain physical separation to the crossing of 6.5 to 20 ft. As speeds on the parallel roadway increase, so does the preference for wider separation distance. Set back crossings of at least 15 feet allow for a vehicle to cross the path in a separate decision process from the merging maneuver with vehicle traffic.
- Use high visibility crosswalk markings to indicate the through area of the crosswalk.

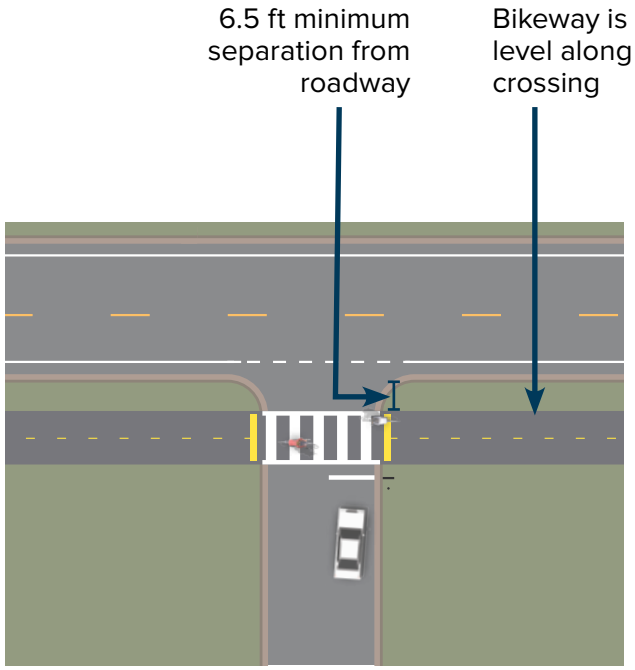
Further Considerations

- Sidepaths running for long distances with many driveways or street crossings can create operational concerns. Attempt to limit or consolidate driveways along sidepaths.
- Along roadways, these facilities create a situation where a portion of the bicycle traffic rides against the normal flow of motor vehicle traffic and can result in wrong-way riding where bicyclists enter or leave the path.

References

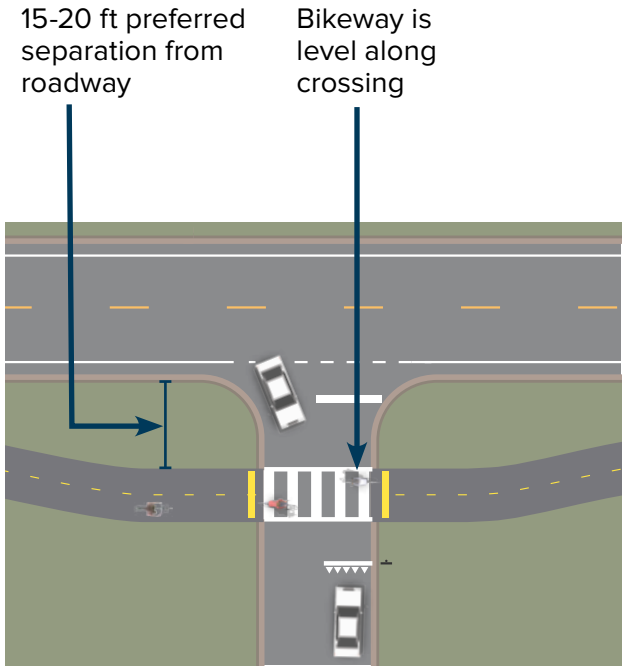
- AASHTO. Guide for the Development of Bicycle Facilities. 2012.
- FHWA. Incorporating On-road Bicycle Networks into Resurfacing Projects. 2015.
- FHWA. Separated Bike Lane Planning and Design Guide. 2015.

ADJACENT SIDEPATH CROSSING



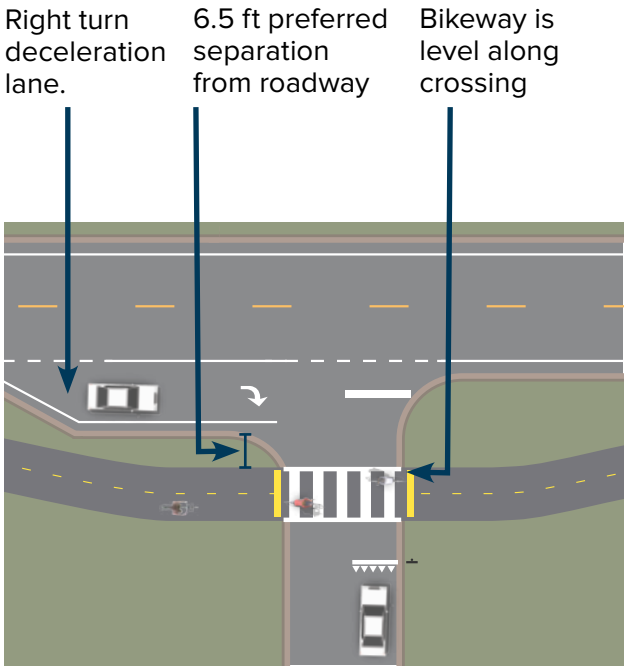
Where space is constrained or sight distance is limited, an adjacent crossing can promote visibility of path users.

SEPARATED SIDEPATH CROSSING



Where space is available, a separated crossing provides room for most motorists to yield to path users outside of the flow of through traffic.

WITH DECELERATION LANE



On high-speed roadways, a deceleration lane is recommended to allow motorists to slow down as needed to yield to path users.

Shoulder Widening

Where separated facilities for non-motorized users do not exist, paved shoulders can be widened and enhanced to become a functional space for bicyclists and pedestrians.

Wide paved shoulders provide pedestrians and bicyclists with usable space outside of the vehicle travel lane.

Typical Application

- Located in more rural environments where there are no curbs or gutters.
- Suitable for roadways with moderate to high speeds.

Design Features

- Any amount of paved shoulder can be beneficial for pedestrians and bicyclists, but a minimum 4 ft minimum rideable surface (exclusive of any buffer or rumble strip), is necessary to be fully functional.
- Provide additional width when possible to increase user comfort and safety. Higher vehicle speeds and volumes should correspond with greater shoulder widths. (See FHWA's *Small Town and Rural Multimodal Networks* for more information).
- The shoulder edge should be clearly delineated using a solid white line. A striped buffer space provides additional separation.
- Rumble strips can improve bicyclist safety as long as they do not infringe on the minimum rideable surface. If used, locate rumble strips on the edge line or within a buffer area. 12 foot gaps every 40-60 feet should be provided to allow access as needed. For further information on rumble strips, consult FHWA Technical Advisory 5040.39 and the FHWA Rumble Strips and Rumble Stripes Website.
- Shoulders that are intended for pedestrian use are required to meet accessibility standards.

At Intersections and Added Right Turn Lanes

- Discontinue solid shoulder edge lines at intersections and major driveways. The shoulder area can be defined through the intersection using a dotted white line. A second dotted white line can be added to the outside edge of the shoulder to provide further definition.
- Paved shoulders typically stay to the right of right turn lanes. This may lead to right-hook conflicts between through-bicyclists and turning vehicles.
- To mitigate conflicts with right turn lanes, bike lanes may be added at intersections to serve through-bicyclists. In this scenario, the right turn lane is introduced to the right of the bicycle lane, and drivers must yield to through-bicyclists before moving into the right-turn lane.

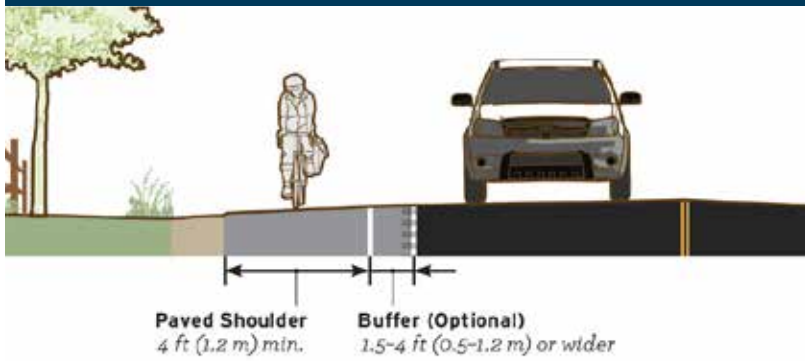
Further Considerations

- Use signage to indicate that motorists should yield to bicyclists and pedestrians through conflict areas.
- Contrasting or colored pavement in the shoulder area can provide greater differentiation between it and vehicle travel lanes.
- MUTCD D11-1 “Bike Route” wayfinding signage is not required but may be used to identify the road as a bicycle route and enhance motorist awareness of the presence of bicyclists.

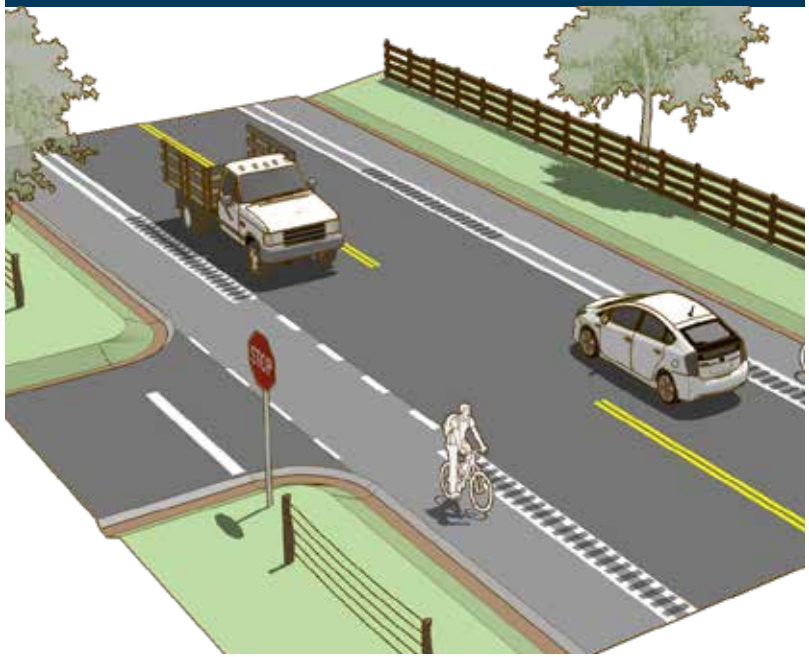
References

- AASHTO. Guide for the Development of Bicycle Facilities. Chapter 5.2.2. 2012.
- FHWA. Manual on Uniform Traffic Control Devices. Chapter 9. 2009.
- FHWA. Small Town and Rural Multimodal Networks. Chapter 3. 2016.

PAVED SHOULDER DIMENSIONS



TYPICAL PAVED SHOULDER LAYOUT



Advisory Shoulders

Roads with advisory shoulders accommodate low to moderate volumes of two-way motor vehicle traffic and provide a prioritized space for bicyclists and pedestrians with little or no widening of the paved roadway surface.

Advisory shoulders prioritize shoulder space for pedestrians and bicyclists on narrow roads. Image credit: Michael David.

Typical Application

- Most appropriate on streets where motor vehicle traffic volumes are low-moderate (3,000-4,500 ADT), and where there is insufficient room for conventional bicycle lanes.
- Advisory shoulders are a type of shared roadway that clarify operating positions for bicyclists, occasional pedestrians, and motorists to minimize conflicts and increase comfort. Similar in appearance to bike lanes, advisory shoulders are distinct in that they are temporarily shared with motor vehicles during turning, approaching and passing.
- Advisory shoulders are delineated by dotted white lines, separated from a narrow two-way automobile travel area. The automobile zone should be configured narrowly enough so that two cars cannot pass each other in both directions without crossing the advisory lane line. Motorists may only enter the bicycle zone when no bicycles are present. Motorists must overtake bicyclists with caution due to potential oncoming traffic.

Design Features

- Advisory shoulder width of 5 ft (minimum)-6 ft (preferred).
- The automobile zone should be configured narrowly enough so that two cars cannot pass each other in both directions without crossing the advisory lane line. Minimum 2-way motor vehicle travel lane width of 16 ft.
- No centerline on roadway.
- Signage should be used to increase the conspicuity and intent of the treatment.

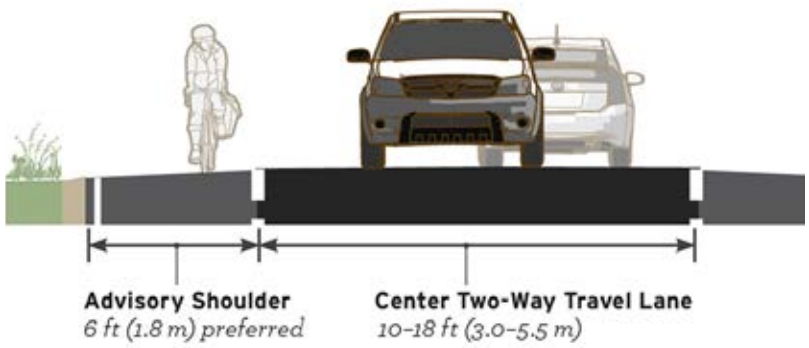
Further Considerations

- This treatment is under experimentation with FHWA, called “dashed bicycle lanes” (FHWA 2016). On federally funded projects, new designs, devices, or applications not covered in or not in compliance with the MUTCD should seek approval for experimentation and study. Section 1A.10 of the MUTCD describes the process of submitting a Request to Experiment. This involves approval by FHWA and follow-up evaluation and communication as to a treatment’s effectiveness.
- Consider the use of colored pavement within the advisory lane area to discourage unnecessary encroachment by motorists or parked vehicles.
- It is important to consider the needs of various road users when implementing an advisory shoulder. Required passing widths for truck or emergency vehicles should be considered on routes where such vehicles are anticipated.

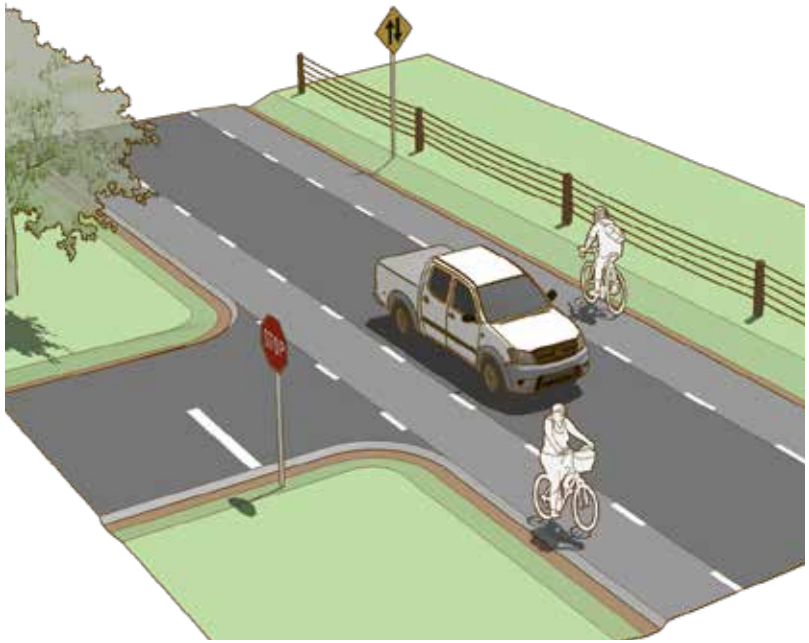
References

- FHWA. Small Town and Rural Multimodal Networks. Chapter 2. 2016.
- American Association of State Highway and Transportation Officials. Guide for the Planning, Design, and Operation of Pedestrian Facilities. 2004.
- Federal Highway Administration. Manual on Uniform Traffic Control Devices. 2009.

ADVISORY SHOULDER DIMENSIONS



TYPICAL ADVISORY SHOULDER LAYOUT



Grade-Separated Crossings

Overcrossings

Bicycle/pedestrian overcrossings provide critical non-motorized system links by joining areas separated by barriers such as roads, waterways, and ski runs. In most cases, these structures are built in response to user demand for safe crossings where they did not previously exist.

Overcrossings provide connections over barriers where at-grade crossings are infeasible or undesired.

Typical Application

- Where shared use paths cross high-speed and high-volume roadways where an at-grade signalized crossing is not feasible or desired, or where crossing waterways, ski runs, or other barriers.
- Depending on the type of facility or desired user group, overcrossings may be considered in many types of projects.
- Overcrossings work best when existing topography allows for smooth transitions.
- Specific design and construction specifications will vary for each overcrossing and can be determined only after all site-specific criteria are known.

Design Features

- The preferred path width is 14 feet. If the overcrossing has scenic vistas, provide additional width to allow for stopping.
- Provide a minimum 10-feet clearance for headroom on the overcrossing . Vertical clearance below the overcrossing depends on the feature being crossed. A roadway needs at least a 17-foot clearance.
- The overcrossing should have a centerline striping regardless of whether the rest of the path has one.

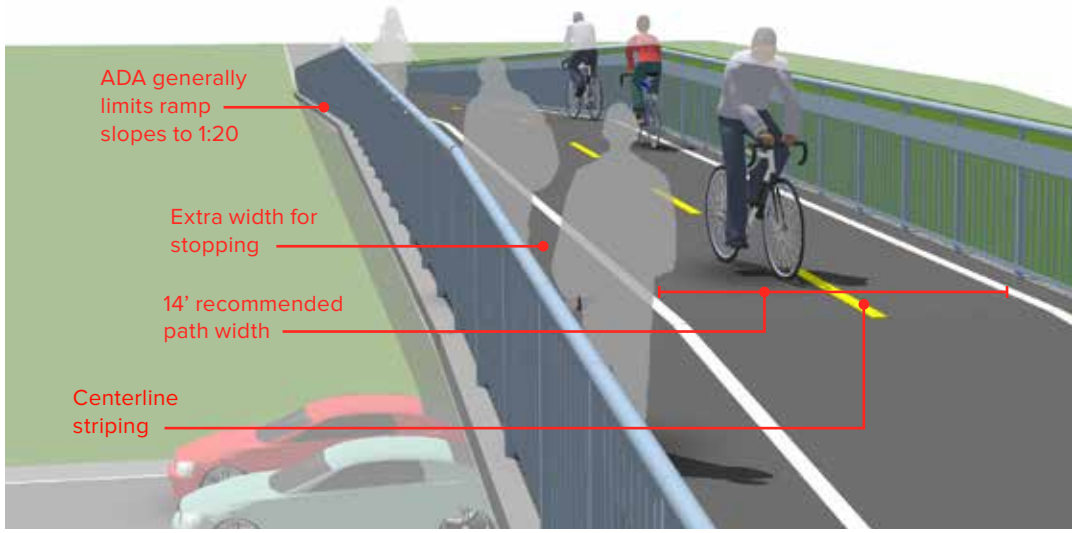
Further Considerations

- Always consult a structural engineer before completing overcrossing design plans before making alterations or additions to an existing overcrossing, and prior to installing a new overcrossing.
- The United States Access Board's ADA Accessibility Guidelines (ADAAG) strictly limits ramp slopes to 5% (1:20) with landings at 400 foot intervals, or 8.33% (1:12) with landings every 30 ft.
- Handrails must be of uniform height, no less than 34 in. and no more than 38 in. high from the finish surface of the ramp slope. Refer to local or state jurisdiction for guardrail specifications.

References

- AASHTO. Guide for the Development of Bicycle Facilities. Chapter 5. 2012.
- United States Access Board. Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way. 2011

OVERCROSSING DIMENSIONS



Grade-Separated Crossings

Undercrossings

Bicycle/pedestrian undercrossings provide critical non-motorized system links by joining areas separated by barriers such as roads, waterways, and ski runs. Undercrossings are potential alternatives when overcrossings are not desired or feasible.

Undercrossings provide connections over barriers where at-grade crossings are infeasible or undesired.

Typical Application

- Locations where shared use paths or natural surface trails cross high-speed and high-volume roadways where an at-grade signalized crossing is not feasible or desired, or where crossing waterways, ski runs, or other barriers.
- Depending on the type of facility or desired user group, undercrossings may be considered in many types of projects.
- Undercrossings work best when existing topography allows for smooth transitions.

Design Features

- The preferred width is 14 feet
- Undercrossings should provide a minimum of 10 feet of vertical clearance..
- To mitigate safety concerns, an undercrossing should be designed to be spacious, well-lit, and completely visible for its entire length from each end.

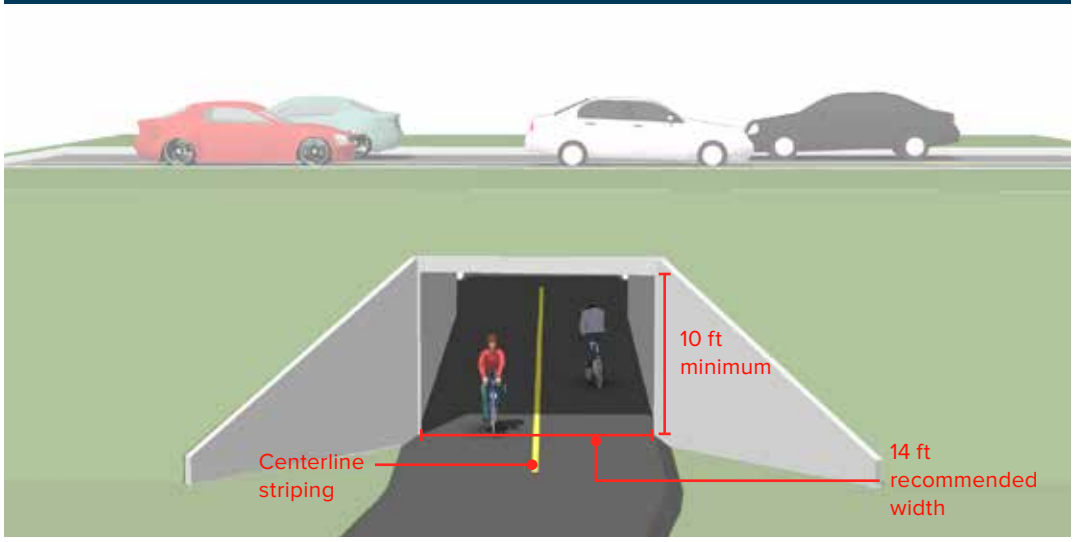
Further Considerations

- Compared to overcrossings, undercrossings of roadways typically have a smaller elevation differential, which requires shorter ramps for bicycles and pedestrians to navigate.

References

- AASHTO. Guide for the Development of Bicycle Facilities. Chapter 5. 2012.
- United States Access Board. Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way. 2011

UNDERCROSSING DIMENSIONS



MAINTENANCE

Regular maintenance is a critical component of a high-quality trail system. Without proper and timely maintenance, trails are at risk of erosion, overgrowth, and general degradation, which can pose risks to user safety and can have a negative impact on the user experience. People are more likely to walk or bicycle for transportation and recreation when they have access to well-maintained trails.

Trail maintenance is also crucial for minimizing impact on the natural environment, and wildlife; it also preserves the aesthetic beauty of the landscape. Ultimately, maintenance protects the investments made in building trails, and ensures that trails will continue to be assets to their community long into the future.

During the winter months, regular plowing and/or grooming of certain trails and paths is necessary to provide access, protect user safety, and reduce liability. Trail grooming can also increase opportunities for wintertime use such as cross-country skiing and fat biking.

The following recommendations provide a menu of options that address the three primary trail improvements proposed in this plan: **shared use paths, natural surface trails, and on-street improvements.**

Types Of Maintenance

This section provides a brief overview of typical trail maintenance tasks. It includes some general best practices.

Tree and Brush Trimming

Tree branches should be trimmed in a manner that leaves a one- to five-foot minimum horizontal clearance from the shoulder of the path and an eight- to twelve-foot vertical clearance. Any branches that appear to be dying, broken, or loose should be removed. Larger trees can be trimmed beyond the recommended clearance and trimmed less often. Trees should not be trimmed or pruned in a manner that thins out the branch cover and eliminates the shade it produces. Because natural surface trails are often less accessible than other types of trails and on-street facilities, a popular strategy is to trim trees and brush beyond the minimum clearances to reduce maintenance frequency.

Mowing and Landscaping

Maintaining vegetation on path shoulders (in open space) and in sidepath buffers is important for preserving the integrity of the soil, preventing encroachment, and enhancing the character of the trails. The frequency of mowing and other landscaping activities will depend on the time of year and weather conditions. Grass or vegetation patches that wither or die should be replaced by seeding the patches, placing mulch, and watering them. If erosion occurs in the patch before the new grass is grown, grading the area may be necessary.

Weed Abatement

In the case of landscaped buffers adjacent to sidepaths or other planted areas near trails, weeds should be removed regularly to preserve the setting's aesthetic features. Native vegetation along trails in open space and wooded areas can typically be left untended (with the exception of trimming), and will contribute to the natural aesthetic. However, invasive plant species should be removed.

Debris Removal

Debris on paved paths can range from natural tree and plant droppings, such as leaves and twigs, to human-produced garbage and litter. Debris should be swept or blown off of the path to prevent tripping hazards and to preserve the paths' aesthetic features. Debris removal may be required more frequently at different times of year.

Snow Removal

For trails where snow removal is desirable, removal should occur immediately following winter weather events. On-street pedestrian and bicycle facilities can be plowed and/or de-iced concurrently with travel lanes. Paved paths can be cleared of snow using plows, shovels, snow blowers, or mechanical snowbrushes.

Gravel Replacement
Paths laid with gravel, crusher fines, or any other surface treatment other than pavement need to be inspected regularly for deterioration. Any deficiencies found in the trail, such as ruts, upheavals, potholes, or erosion, should be mitigated through grading and the reapplication of the surface material. Always compact the surface after reapplication to avoid additional deterioration. Wet spots can accelerate the degradation of gravel and crusher fine trails, and proper drainage strategies should be employed to ensure the mitigation of wet soil conditions.

Sign Repair and Replacement
Trail signage is not only critical for navigation and orientation, but also serves as a "brand" for the trail system. Keeping signage in good condition is therefore vital for maintaining a usable and appealing trail system. Trail signage should be inspected annually and replaced or repaired if damaged or defaced.

Regrading
Occasionally, portions of trails will need to be regraded to maintain a sufficiently even surface for users and to efficiently manage drainage. Natural surface trails will typically need spot regrading every couple of years to "deberm" the trail and promote drainage.

Restriping
Striping on paved paths should be inspected annually. Spring is typically the best time to inspect and restripe paths, as salt and winter weather can remove it. Restripe any areas where the striping has faded or been removed. Restriping on-street facilities such as shoulder lines or advisory shoulders should be done annually given Mountain Village's climate and snowplowing frequency.

Crack Sealing and Repair
Sealing cracks in asphalt pavement is a cost-effective technique for extending the life of the asphalt surface. Crack sealing uses a flexible material that adheres to the crack edges but moves with the asphalt as it contracts and expands with changes in temperature. Identifying and sealing cracks as soon as possible can reduce the rate at which potholes form. Seal cracks that are 1/8 of an inch or greater to prevent further deterioration.[1]

Sealcoating
Exposure to water, sunshine, and other elements degrades the binder that holds the aggregate in asphalt together over time. Sealcoat is a material that provides protection from this type of damage. Regular sealcoating will extend the life of asphalt, and will also replenish the color and appearance of the pavement.

Pavement Overlay
An overlay consists of adding new asphalt material over the existing surface assuming the base services is still sound enough. Overlay is distinct from total replacement, less expensive and extends the life of the pathway. Asphalt overlays are required around 20 - 30 years after the initial installation if sealcoating is done periodically.

Crack sealing operations help to extend that lifespan of asphalt trails.

Natural Surface Trail Maintenance Resources

- **USFS Trail Construction and Maintenance Notebook**
- **IMBA Trail Solutions: Chapter 7 Maintenance**
- **Minnesota DNR Trail Planning, Design, and Development Guidelines**

Natural Surface Trails

Natural surface trail maintenance varies widely based upon the original trail design and routing, soils, surrounding environment, drainage, user types, user volumes, and a number of other features. The following general maintenance activities should be conducted on trails that the Town of Mountain Village will maintain.

Inspections

Inspections on natural surface trails should be conducted at least twice yearly in spring and fall. A trail assessment form should be completed by Town of Mountain Village staff that identifies and locates all trail maintenance issues in need of attention. IMBA and the USFS have sample forms that could be used for this purpose.

Drainage and Tread Repair

Periodically, due to user traffic or drainage, trail treads will require maintenance. Trail tread should be restored to its original design condition. Restoration of the tread should include removal of slough or organic material, loose rocks, stumps, or roots that exceed the original specifications of the trail. Drainage repairs can vary widely from construction of drainage dips and knicks to culverts.

Pruning and Vegetation Removal

Pruning of vegetation and trees is a critical maintenance activity. Trails should typically be cleared four feet on the uphill side and a minimum of eight-feet overhead. Trees and shrubs should be cut as close to the ground as possible to prevent protruding stumps.

Sign Repair or Replacement

Proper maintenance and replacement of signs helps provide a good user experience and can prevent unauthorized social trails. Signs should be checked for fading or vandalism twice yearly, or as part of monthly visual inspections.

Structure Maintenance

Structures such as trail bridges, culverts, and retaining walls should be checked yearly for failure or risk of failure. If any structures pose a safety risk to trail users, the trail should be closed and repaired as soon as possible. If closure is anticipated for more than a couple of days, an alternate route should be provided as a bypass. Trail bridges should be checked to make sure abutments and support members are structurally sound. Culverts should be checked for blockages. Retaining walls should be checked for proper batter and loose stones.

Trail Decommissioning

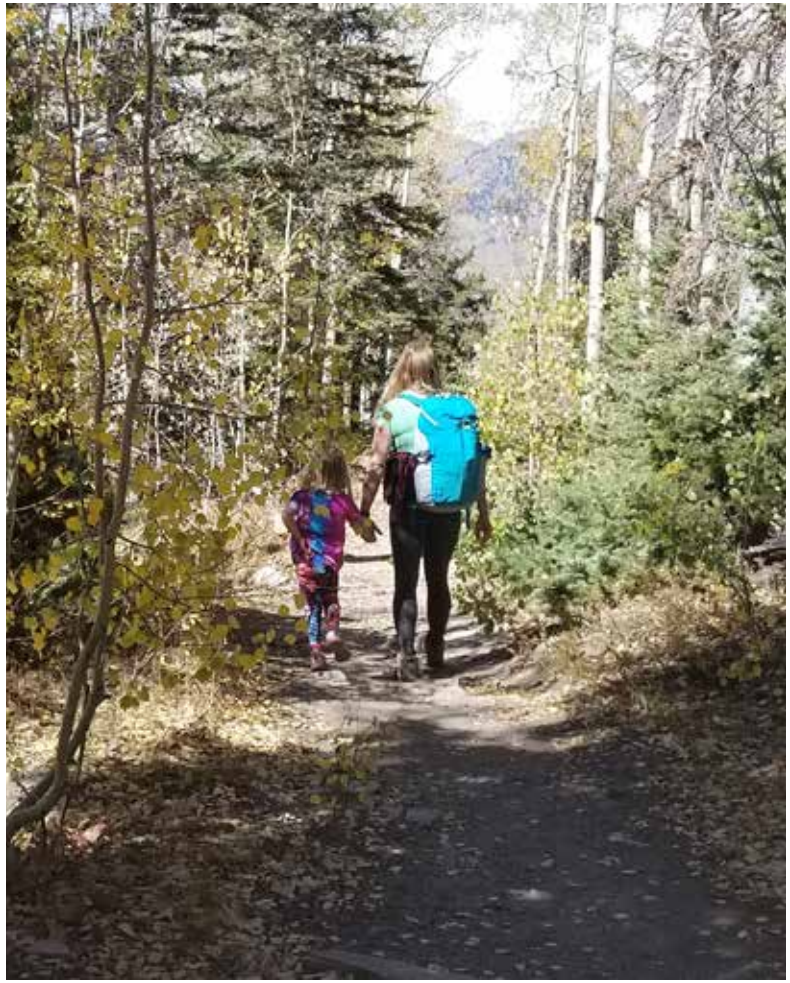
Decommissioning, or removal, of undesirable social trails is an important component of a comprehensive natural surface maintenance strategy. Social trails can confuse users, increase the trail system's impact on the landscape. Decommissioning of unwanted socials trails can vary widely from simple closure signage to complete obliteration and naturalization of the trail. Mountain Village should coordinate with the USFS on specific decommissioning strategies and treatments for trails on USFS lands.

Winter Grooming

Winter maintenance for Mountain Village natural surface trails includes grooming of the Boulevard West Trail (from Town Hall to SR 145) and grooming of the Boomerang Trail. These trails provide a pleasant Nordic skiing, snowshoeing, or fatbiking option for Mountain Village residents and a viable downhill connection into Telluride. The Town of Mountain Village should also consider grooming single track fatbike trails in conjunction with Nordic trails on the golf course. These wintertime activities provide year-round value to the trail system and can generate tourism opportunities for visitors who don't ski or are in search of a variety of activities.

Typical Planning Level Trail Maintenance Costs

Trail maintenance costs can vary widely on natural surface trails due to a number of variables such as use levels, exposure, soils, and sustainability of the initial trail construction. As a rule of thumb, land managers should budget approximately 5% of the initial construction cost of a natural surface trail for annual maintenance activities, such as those described above. This estimated maintenance cost should only be applied to sustainably constructed trails. Social trails, fall-line trails, or other trails not constructed to sustainable trail standards may require significantly more maintenance depending on local conditions.



Shared Use Paths And Sidepaths

Like natural surface trails, shared use paths and sidepaths require regular routine and capital maintenance to provide a quality experience to users. Maintenance activities will vary depending on the surface material (asphalt, concrete, or crusher fines).

Routine Maintenance

Maintenance needs will vary depending on the unique context and needs of each path. However, general routine maintenance includes sweeping, snow removal or grooming, landscaping and vegetation control, and repairs to the path surface. Table 5.1 lists typical shared use path and sidepath routine maintenance tasks, including frequency and estimated annual costs. Overall, routine maintenance for paved paths can range between $500 and $1,500 a year.

Winter Maintenance

Winter maintenance of shared use paths in Mountain Village is an important consideration for both winter tourists and residents. Winter maintenance consists of two primary activities: snow removal or grooming. This planning document recommends snow removal on the Boulevard Trail between Town Hall and the Village Core to support winter walking and biking to these important community destinations. Recommended rerouting of the Boulevard Trail would remove the trail from active ski runs and allow winter snow removal to be considered.

Grooming of shared use paths is recommended on other shared use paths not identified for snow removal. This would include trails such as the proposed Big Billies Trail, Adams Ranch Road sidepath, and SR 145 trail. Grooming of these trails would support recreation and transportation uses during winter months.

Capital Maintenance

Major or capital maintenance activities typically involve more intensive maintenance repairs such as pavement seal coating, pavement overlays, pavement reconstruction, or other structural rehabilitations. Needs can vary widely based upon environmental factors, such as soil conditions, drainage and the quality of initial construction. Any paved path surface will deteriorate over time with asphalt surfaces dropping in quality rapidly after 10 years. Preservation efforts such as

TABLE 5.1 SHARED USE PATH AND SIDEPATH ROUTINE MAINTENANCE

Maintenance Activity	Function	Frequency	Est. Annual Cost (per mi.)
Path sweeping	Keep paved surfaces debris free	Twice annually (once in spring and once in fall)	$140 (x2)
Litter and trash removal	Keep path clean and maintain consistent quality of experience for users	Annually, or as needed	$70
Mowing path shoulders (native opens space areas)	Increases the effective width of the path corridor and helps prevent encroachment	Twice annually, in late spring and mid-to late-spring	$100 (x2)
Tree and brush trimming	Eliminate encroachments into path corridor and open up sight lines	Annually, or less frequently as needed	$100
Weed abatement	Manage existence and/or spread of noxious weeds, if present	Twice annually, in late spring and mid to late summer	$140 (x2)
Safety Inspections	Inspect path tread, slope stability, and bridges or other structures	Annually	$20
Snow removal/grooming	Limited to sections of the path where year-round access is desired	As needed (assume 20 events)	$480
Sign and other amenity inspection/replacement	Identify and replace damaged infrastructure	Annually (assume 2 sign replacements)	$100
Crack sealing and repair	Seal cracks in asphalt to reduce long term damage	Annually	$250

seal coating extend the life of asphalt efficiently and at a lower cost than waiting for the surface to require reconstruction. Overlays may be needed after multiple seal coats or at approximately 30 years of service. A full reconstruction is typically needed after 50 years if the seal coat and overlay have been provided. Table 5.2 describes a typical 10-year capital maintenance scenario for paved paths.

Concrete paths will require significantly less capital maintenance than asphalt paths. Although they may require isolated jacking or replacement, limited capital maintenance expenditures can generally be expected for upwards of 50 years.

Shared use paths constructed out of crusher fines provide a stable ADA compliant surface. Like asphalt or concrete paths, these trails require periodic maintenance to provide a high quality experience. Minor re-grading should be done every two years to eliminate any ruts and add gravel to low spots. Table 6.5 illustrates typical costs associated with surface maintenance of crusher fines paths.

Financial planning for major or capital maintenance can be challenging. Typically asphalt shared use paths require greater capital maintenance activities with age and ultimately require full reconstruction at some point. Some jurisdictions stay focused on eventual reconstruction and treat this as a maintenance item to be budgeted for, whereas some treat this as a separate capital project to be considered at a later date.

TABLE 5.2 PAVED SHARED USE PATH AND SIDEPATH CAPITAL MAINTENANCE

Maintenance Activity	Time	Long Term Capital Costs		
Sealcoat	Year 10	$0.19/SF	$1.90/LF	$10,000/mi
Sealcoat	Year 20	$0.19/SF	$1.90/LF	$10,000/mi
Overlay	Year 30	$2.00/SF	$20.00/LF	$105,000/mi
Sealcoat	Year 40	$0.19/SF	$1.90/LF	$10,000/mi
Reconstruction	Year 50	$6.50/SF	$65.00/LF	$343,000/mi

TABLE 6.5 UNPAVED SHARED USE PATH CAPITAL MAINTENANCE

Maintenance Activity	Time	Long Term Capital Costs		
Regrade	Every other year	$0.05/SF	$0.40/LF	$2,112/mi

Capital Maintenance Guidance

- **Seal cracks as soon as possible to stop pot holes from forming.**
- **Sealcoat the asphalt path surfaces on a regular basis to provide protection from the elements and extend the pavement's usable life.**
- **When minor to modest damage is present, overlays can sufficiently repair the surface without having to complete a total reconstruction.**

A bobcat with a plow can be used to plow shared use paths and sidepaths.

Sweeping Guidance

- **Establish a seasonal sweeping schedule that prioritizes roadways with on-street bicycle and pedestrian facilities.**
- **Sweep on-street facilities whenever there is an accumulation of debris.**
- **Perform additional sweeping in the spring and fall**
- **In curbed sections, sweepers should pick up debris; on open shoulders, debris can be swept onto gravel shoulders.**
- **Pave gravel driveway approaches to minimize loose gravel on paved roadway shoulders.**

Pavement Surface Guidance

- **Ensure that on new roadway construction, the finished surface on shoulders does not vary more than ¼ inch.**
- **Maintain pavement so ridge buildup does not occur at the gutter-to-pavement transition.**
- **Inspect the pavement 2 to 4 months after trenching construction activities are completed to ensure that excessive settlement has not occurred.**
- **During chip seal maintenance projects, if the pavement condition of the shoulder is satisfactory, it may be appropriate to chip seal the travel lanes only. However, use caution when doing this so as not to create an unacceptable ridge between the shoulder and travel lane.**
- **Maintain a smooth pothole-free surface.**

On-Street Facilities

On-street pedestrian and bicycle facilities, including shoulders and advisory shoulders, are typically maintained as part of standard roadway maintenance programs, and extra emphasis should be put on keeping roadway shoulders clear of debris and snow, as well as keeping vegetation overgrowth from blocking visibility or creeping into the roadway. Maintenance activities could be driven by a regular schedule or by maintenance requests from the public. Typical maintenance costs for on-street facilities are shown in Table 5.3 on the following page.

Sweeping

When an on-street bicycle or pedestrian facility becomes filled with debris, users are forced into the motor vehicle lane. Poor facility maintenance can contribute to crashes and deter potential bicyclists and walkers.

Periodic checks should be made of the on-street bicycle and pedestrian network with the majority of work being confined to spot fixes and damage response. Street sweeping of on-street facilities will need to be coordinated with the management agency's roadway maintenance program to ensure that the roadway is cleared curb to curb.

Pavement Surface

Bicyclists are more sensitive to pavement quality than motorists because of reduced speeds, narrower tire widths, and, typically, lack of suspension or dampening systems. A chip size of ¼ inch or 3/8 inch is recommended to provide comfortable riding surfaces for bicyclists. A seal coat, which is applied after the chip, also contributes to a smooth roadway surface.

Compaction, which occurs after trenches and other construction holes in roadways are filled, is another important pavement surface issue to consider. Uneven settlement after trenching can affect the roadway surface nearest the edge or curb where bicycles and pedestrians travel. Sometimes compaction is not achieved to a satisfactory level, and an uneven pavement surface can result due to settling over the course of days or weeks.

Pavement Overlay

Pavement overlays represent good opportunities to improve conditions for on-street bicycle and pedestrian facilities if done carefully. A ridge should not be left in the area where users travel (this occurs where an overlay extends part-way into a shoulder). Overlay projects also offer opportunities to widen shoulders or to re-stripe a roadway with advisory shoulders.

Winter Maintenance

Winter maintenance of bicycle and pedestrian facilities is an important consideration for a town like Mountain Village that receives significant amounts of snowfall. The Town should expect bicyclists and pedestrians to use the road and trail network year-round, even in inclement conditions, and providing safe conditions for trail users should be a top priority. Facilities that connect key destinations such as Mountain Village Center, Town Hall, and the Meadows should be prioritized for snow removal. Some communities plow streets with bicycle and pedestrian facilities by 7:00 am (starting at 4:00 am), Monday through Friday, to facilitate users' commute to school and work. On-street facilities should be plowed at the same time as the rest of the street and should not require additional cost or effort. Figure 5.1 displays recommended trail grooming and plowing for Mountain Village.

TABLE 5.3 ON-STREET FACILITIES MAINTENANCE

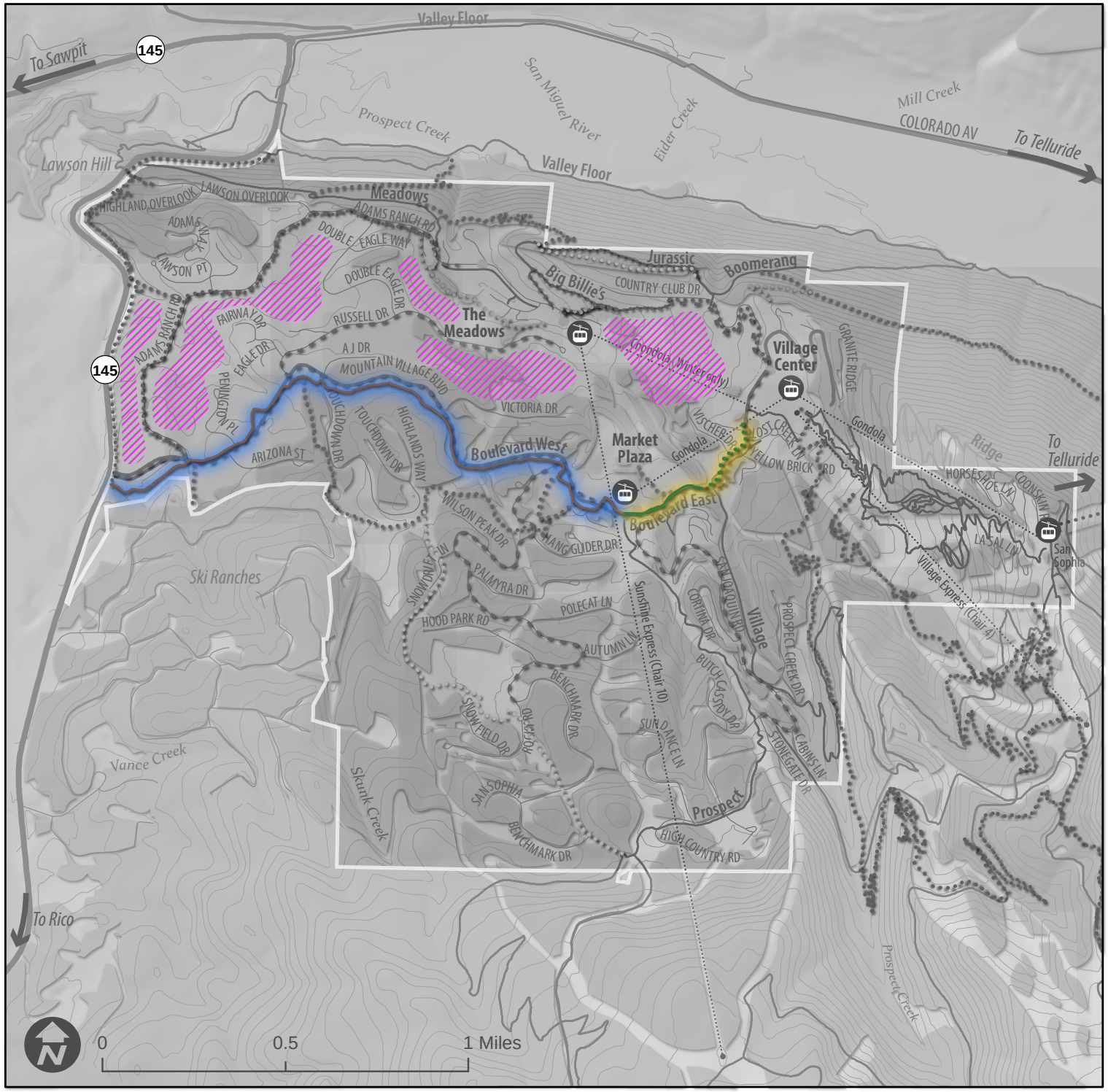
Maintenance Activity	Material	Frequency	Estimated Cost
Pavement sweeping	All	Weekly or monthly as needed	Part of regular street sweeping activities and costs
Snow removal	All	Simultaneous with regular roadway snow removal; otherwise, as needed	Depends on conditions; approx $150/mile
Tree and shrub trimming	All	5 months to 1 year	Part of regular street sweeping activities and costs
Sign repair and replacement	Signs and poles	Every 10 years	$300/sign
Shoulder striping	Paint	Yearly	$1,230/mile

Pavement Overlay Guidance

- **Extend the overlay over the entire roadway surface to avoid leaving an abrupt edge.**
- **If the shoulder pavement is of good quality, it may be appropriate to end the overlay at the shoulder provided no abrupt ridge remains.**
- **Ensure that inlet grates, and manhole and valve covers are within ¼ inch of the finished pavement surface and are made or treated with slip-resistant materials.**
- **Pave gravel driveways to property lines to prevent gravel from being tracked onto shoulders.**

Snow Removal Guidance

- **Mountain Village should employ a proactive or anti-icing strategy, and have a plan for the removal of de-icing surface material debris that accumulates in and around on-street bicycle and pedestrian facilities.**
- **A prioritization schedule for snow removal is necessary and should focus on primary routes and destinations that impact the highest volume of bicyclists and pedestrians immediately following snow events.**
- **Plow all the way to the curb or road edge to clear shoulders.**



TOWN OF MOUNTAIN VILLAGE INCORP. 1995

TRAILS MASTER PLAN

MAP 5.1 WINTER MAINTENANCE*

- Gondola Station
- Contour Line (100 feet)
- Forest Cover
- Town of Mountain Village

RECOMMENDATIONS

Existing
Proposed

- Shared-Use Path
- Natural Surface Shared Use

WINTER MAINTENANCE

- Plow
- Groom
- Nordic Skiing & Fat Biking Grooming

*Trails depicted in this map that are outside of the Mountain Village municipal boundary are not included in trail mileage mentioned elsewhere in this plan.

PRIORITIZATION / PHASING

Implementation of the proposed Mountain Village trail system will require a phased approach that accounts for both capital construction and ongoing maintenance. The following pages specify a general phasing framework for the implementation of the Mountain Village Trail system. Each proposed project in the plan was scored on its ability to advance this plan's goals, as identified in Chapter 4. Projects were then distributed into three phases: Phase 1- Near term, Phase II- Medium term, and Phase III- Long Term. A recommended approach for project selection would be for Mountain Village's council to select projects during the annual budgeting process using the proposed phasing plan as a general guide.

Although this plan recommends phasing for specific projects, flexible and opportunistic implementation is encouraged. Deviation from the proposed implementation schedule may be warranted if opportunities exist to construct projects more economically, partner with other agencies, partner with other planned projects (such as utility work), respond to specific grant funding, or address a pressing public need.

PLANNING-LEVEL COSTS

Table 5.4 includes planning-level cost estimates per unit for the different types of facility and spot improvements that are recommended in this plan. Estimates are based on typical unit costs with similar projects. Detailed estimates from engineers and contracters should be obtained prior to construction.

Tables 5.5 to 5.7 list the improvements recommended for three distinct phases. Planning-level cost estimates are provided for each project based on the per unit cost in Table 5.4 and the length of the project.

TABLE 5.4 PLANNING-LEVEL COST ESTIMATES BY IMPROVEMENT TYPE

Facility Types	Unit	Unit Cost	Notes
Advisory Shoulders	LF	$0.70	x2
4" skipped white stripe - paint	LF	$0.25	
Symbol - paint	EACH	$30.00	spaced every 300'
Sign	EACH	$300.00	spaced every 600'
Natural Surface Trail			
12' path, 1' shoulders, native soil	LF	$8.00	
Shared-Use Path, Sidepath			
12' path, 1' shoulders - asphalt	LF	$200.00	
12' path, 1' shoulders - crusher fine	LF	$100.00	
Shoulder Widening (approx. 4')	LF	$215.00	x2
Standard Bike Lane	LF	$0.85	x2
4" white stripe - paint	LF	$0.25	
Bike Lane Symbol - paint	EACH	$30.00	spaced every 300'
Bike Lane sign	EACH	$300.00	spaced every 600'
Trail Overcrossing/Bridge	LF	$3,500.00	
Trail Undercrossing	n/a	Varies	

*Planning Level Costs do not account for permitting, land acquisition, or design. Site-specific issues or constraints may result in higher costs.

PRIORITIZATION PROCESS

The following project prioritization methodology should serve as a general guide for prioritizing invesment in the trail system; however, flexibility in implementation is highly encouraged when opportunities arise to share resources, achieve costs savings, or partner with other agencies. For each project identified as part of the proposed system, scoring was established based on the following criteria:

Goal	Criteria	Scoring Methodology
Safety	Improves or supports user safety	0- Project does not contribute to improved user safety
		1- Project provides moderate improvements to user safety
		2- Project provides substantial improvements to user safety
Connectivity	Connects to key community destinations	0- Project does not connect to any key destinations
		1- Project connects to one or more secondary community destinations
		2- Project connects to one or more primary community destinations
Recreation	Broadens or improves recreation opportunities for Mountain Village residents or visitors	0- Project does not broaden or improve recreation opportunities
		1- Project provides moderate improvements to recreation opportunities
		2- Project provides significant improvements to recreation opportunities
Sustainability	Improves the ability to walk or bike for transportation in Mountain Village	0- Project is not likely to be used for transportation or commuting purposes
		1- Project provides moderate improvements for commuters walking and biking in and around Mountain Cillage
		2- Project provides significant improvements for commuters walking and biking in and around Mountain Village
Partnerships	Project supports the interests of multiple stakeholders such as the Town of Mountain Village, Town of Telluride, Telluride Ski & Golf, or the USFS	0- Project has limited to no potential to form or leverage partnerships
		1- Project offers moderate potential to develop or leverage partnerships
		2- Project offers significant potential to form robust partnerships

PHASE I

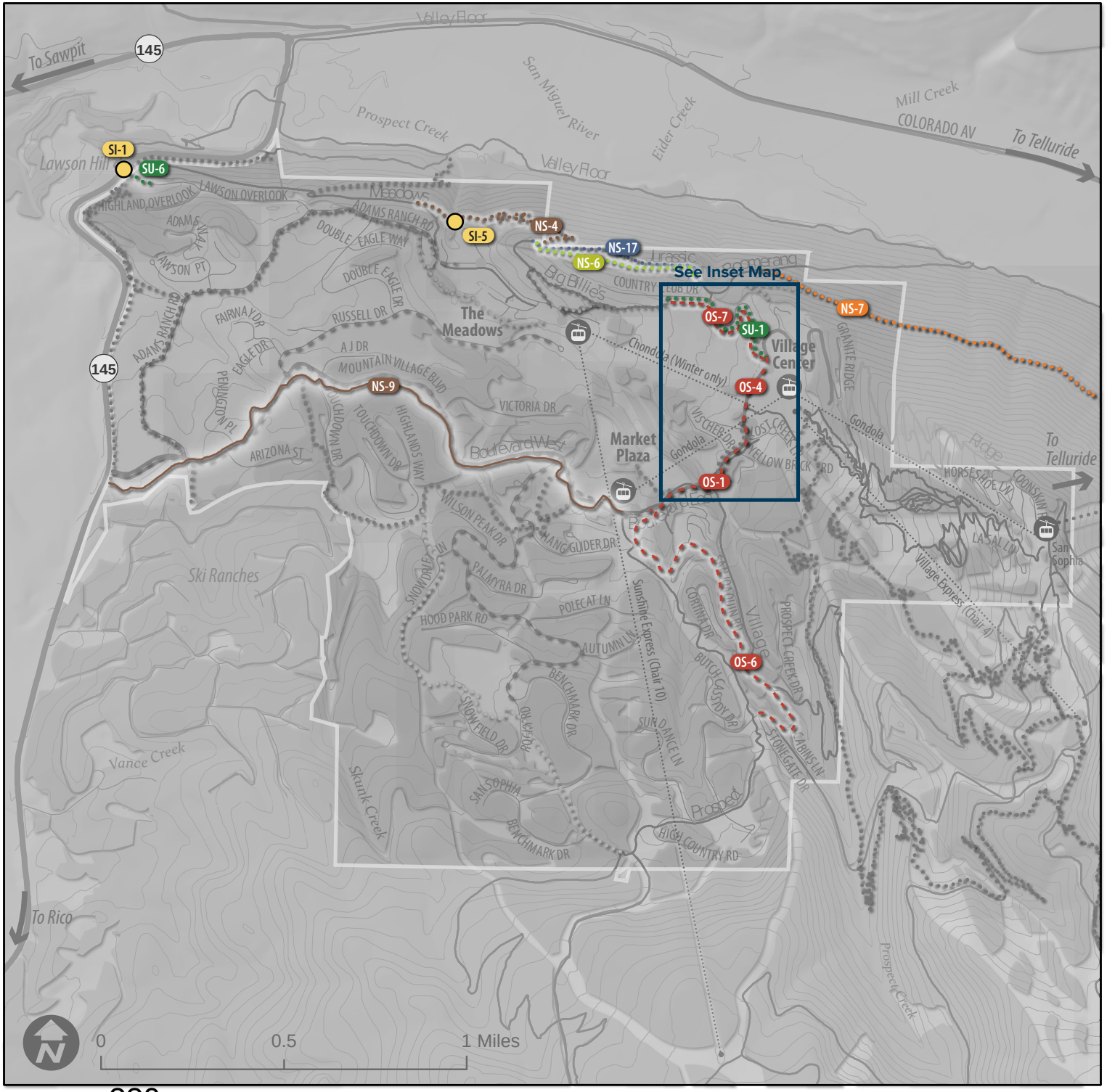
The projects identified for Phase I are those which are considered to be most critical to meet immediate needs. Ideally, Phase I will be completed in one to three years.

TABLE 5.5 PHASE I IMPROVEMENTS

Trail ID	Trail Name	Improvement Type	Length (miles)	Planning-Level Cost
SI-1	SR-145 Grade- separated trail crossing	Grade-separated trail crossing	n/a	$2,000,000
S1-5	Meadows Express Bridge	Trail Bridge	130’	$455,000
NS-6	Stegosaurus	Natural Surface- Open to All Uphill Users/Downhill Bikes Prohibited	0.5	$21,120
NS-17	Jurassic (renovation project)	Natural Surface- Descending Bikes Only	0.5	$0**
SU-1	Upper Country Club Dr - Mountain Village Blvd to Big Billie’s Trail	Sidepath/Sidewalk - foot traffic only (paved)	0.3	$300,000
OS-4	Mountain Village Blvd - Lost Creek Lane to Country Club Dr	Combination shoulder and sidewalk with ADA improvements	0.2	$340,000
NS-4	Meadows Express	Natural Surface - Shared Use	0.7	$29,568
NS-7	O’Reilly Trail	Natural Surface- Foot Traffic Only	1.6	$67,584
SU-6	Lawson Hill Connector	Shared Use Path (paved)	0.1	$105,600
NS-9	Boulevard Trail (renovation project)	Natural Surface-Shared Use	1.9	$40,128
OS-6	San Joaquin Rd	Shoulders/Advisory Shoulders†	1.1	$460,000
OS-1	Mountain Village Boulevard - Lost Creek Lane to Market Plaza	Shoulder WIdening	0.4	$454,080
OS-7	Upper Country Club Dr - Mountain Village Blvd. to Big Billies	Shoulders	0.5	$400,000
Phase I Total				**$4,673,080**

*Reconstruction assumed to be $4.00/LF
**Management change only
†One-third of project assumed to require shoulder widening

MAP 5.2.1 PHASE I IMPROVEMENTS



TOWN OF MOUNTAIN VILLAGE INCORP. 1995

TRAILS
MASTER PLAN

MAP 5.2 PHASE I IMPROVEMENTS*

- Bus Stop
- Gondola Station
- Contour Line (100 feet)
- Forest Cover
- Town of Mountain Village

RECOMMENDATIONS

Existing / Proposed

- Shared-Use Path
- On-Street Improvements

NATURAL SURFACE TRAILS

- Shared Use
- Uphill Bike/ Multi-Directional Hike
- Descending Bikes Only
- Foot Traffic Only

- Proposed Spot Improvement

*Trails depicted in this map that are outside of the Mountain Village municipal boundary are not included in trail mileage mentioned elsewhere in this plan.

TABLE 5.5.1 PHASE I SCORING

Trail Name		Safety		Connectivity		Recreation		Sustainability		Partnerships		Total
SI-1	SR 145 Grade-Separated Trail Crossing	2	Solves serious safety issue at SR-145	2	Vital connection to the valley floor and Lawson Hill	2	Supports the Meadows Trail	2	Important commuting opportunity for Lawson Hill	0	Opportunity to partner with SMART and CDOT	**10**
SI-5	Meadows Express Bridge	1	Eliminates the need for on-street connection from Jurassic Trail to Meadows Trail	2	Assists in linking Lawson Hill to Village Center via Meadows Trail and Jurassic	2	Improves trail experience on Jurassic and Meadows Trails	2	Supports important commuting route	2	Possible parternships with TSG or USFS	**9**
NS-6	Stegosaurus	2	Alleviates bike-hike conflicts	2	Important connection between Lawson Hill and Village Center	2	Improves recreation function of Jurassic	2	Improves commuting function of Jurrasic	0	None	**8**
NS-17	Jurassic (renovation project)	2	Alleviates bike-hike conflicts	2	Important connection between Lawson Hill and Village Center	2	Improved recreation functionality in conjunction with Stegosaurus trail	2	Improved commuting functionality in conjunction with Stegosaurus trail	0	None	**8**
SU-1	Village Center to Big Billie's	2	Important connection to get bicyclists off of Country Club	2	Assists in connecting Meadows Village to Village Center	2	Provides connectivity from Village Center to Jurassic / Boomerang	2	Offers good commuting route from Village Center to Lawson Hill or Telluride via Banner Trail	0	Connectivity to USFS Land or Town of Telluride	**8**
OS-7	Upper Country Club Dr - Mountain Village Blvd. to Big Billies	2	Important connection to create safe area for bicyclists on Country Club Dr	2	Assists in connecting Meadows Village to Village Center	2	Provides connectivity from Village Center to Jurassic / Boomerang	2	Offers good commuting route from Village Center to Lawson Hill or Telluride via Banner Trail	0	Connectivity to USFS Land or Town of Telluride	**8**
OS-4	Mountain Village Blvd to Country Club Dr	2	Important, highly used connection with no sidewalks or bicycle facilities	2	Important connection for pedestrians and bicyclists to Jurassic / Boomerang	1	Supports connection to highly used recreational trails from Village Center	2	Links residences and businesses along this segment of Mountain Village Blvd.	1	Potential partnership with TSG	**8**

TABLE 5.5.1 PHASE I SCORING (CONTINUED)

Trail Name		Safety		Connectivity		Recreation		Sustainability		Partnerships		Total
NS-4	Meadows Express	1	Removes need to make on-street connection through Meadows	2	Part of important connection linking Village Center to Lawson Hill	2	Creates off-street connection between Jurassic and Meadows Trails	2	Improves commuting functions of Jurassic and Meadows Trails	0	None	**7**
NS-7	O'Reilly Trail	0	Limited safety value2	2	Major regional connection	2	Important and sizable new recreational trail	1	Some potential for commuting	2	Opportunity to partner with Town of Telluride / TSG / USFS	**7**
SU-6	Lawson Hill Connector	2	In conjunction with SI-1, provides safe on-street bicycle connection to Lawson Hill and potentially Valley Floor	1	Connects to Lawson Hill	0	Limited recreational value	2	Important potential commuting route to Lawson Hill and Valley Floor	2	Possible partnerships in conjunction with SI-1 (grade separated crossing of SR-145)	**7**
NS-9	Boulevard Trail (renovation project)	1	Should lessen conflicts on Boulevard Trail	1	Connects to Market Plaza	1	Improves all-season recreation and capacity on Boulevard Trail	2	Improves commuting functions for winter and summer	1	Opportunity to partner with TSG	**6**
OS-6	San Joaquin Rd	2	Provides improved accommodation for bicyclists and pedestrians along San Joaquin Rd	2	Connects Market Plaza and numerous developments along San Joaquin Rd	0	Limited recreational value	2	Good commuting opportunity, particularly for higher-density developments on lower San Joaquin Rd	0	No partnerships	**6**
OS-1	Mountain Village Boulevard	1	Some value to improving shoulders, though Boulevard Trail provides good alternative	2	Connects SR-145 to Market Plaza and Village Center	0	Limited recreational value	1	Some commuting value. Boulevard Trail provides good alternative.	0	No partnerships	**4**

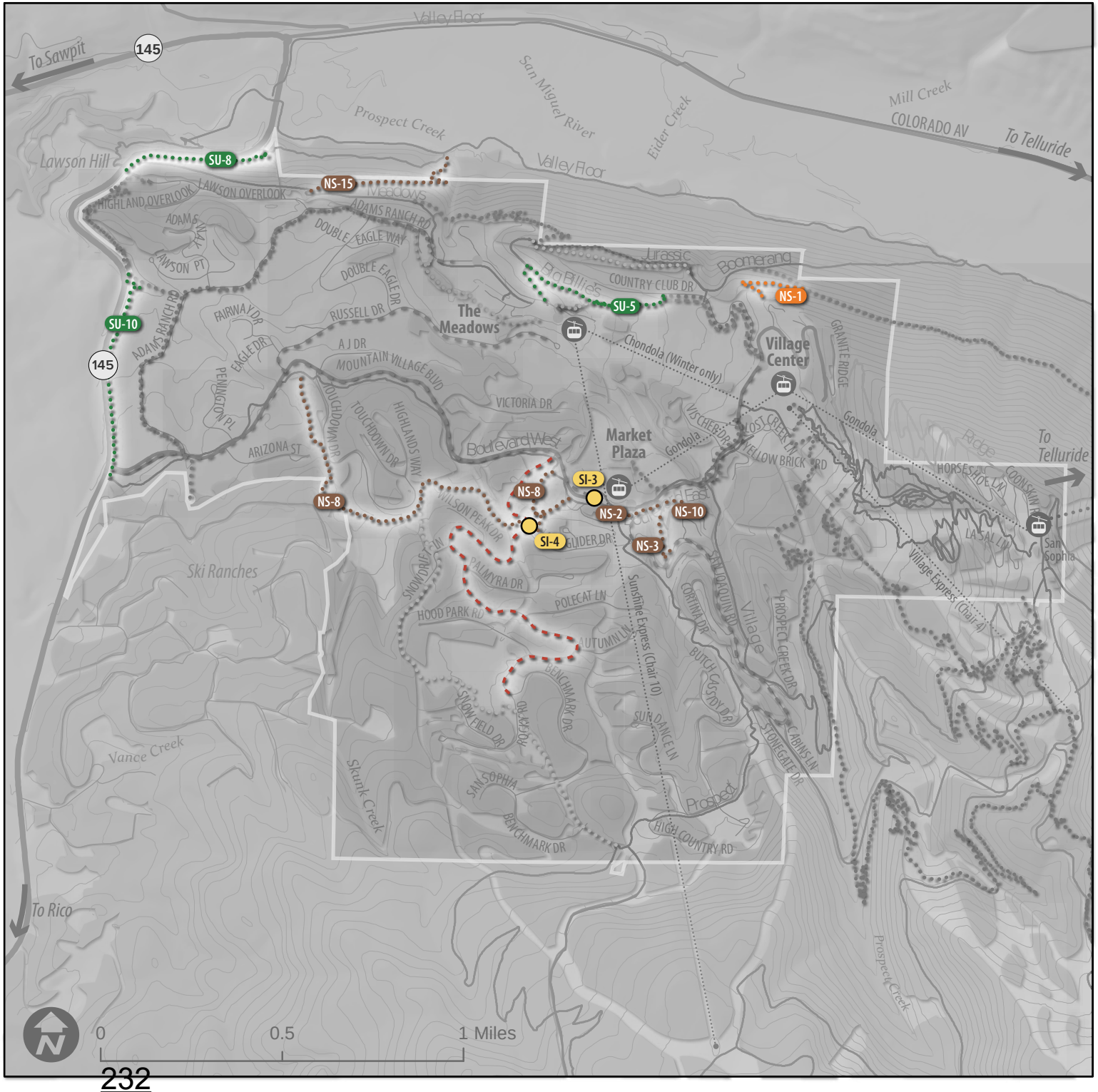
PHASE II

Phase II projects are mid-term projects to be completed in potentially three to six years. These projects are less critical than Phase I projects, but are still important to improve non-motorized access and connectivity in Mountain Village.

TABLE 5.6 PHASE II IMPROVEMENTS

Trail ID	Trail Name	Improvement Type	Length (miles)	Planning-Level Cost
SU-8	SR145 - Meadows Trail to Valley Floor	Sidepath (paved)	0.6	$1,000,000
SU-10	SR145- Mountain Village Blvd to Emergency Access Road	Shared Use Path (crusher fines)	0.5	$264,000
SU-5	Big Billie's	Shared Use Path (paved)**	0.6	$633,600
NS-8	Elk Pond Loop	Natural Surface - Shared Use	1.5	$63,360
SI-3	Boulevard Trail Undercrossing	Construct a new trail undercrossing from the proposed park at Elk Pond to Town Hall consistent with the Town Hall small area plan.	n/a	$2,000,000
NS-15	Banner Trail	Natural Surface- Shared Use	0.5	$21,120
OS-5	Benchmark Dr	Shoulder WIdening/Advisory Shoulders*	1.5	$571,296
NS-1	See Forever Hiking Trail Connector	Natural Surface-Foot Traffic Only	0.3	$12,672
NS-2	Bear Creek to Market Plaza	Natural Surface - Shared Use	0.1	$4,224
NS-3	Bear Creek Extension	Natural Surface - Shared Use	0.1	$4,224
NS-10	Tristant Trail	Natural Surface - Shared Use	<0.1	$4,224
SI-4	Elk Pond Trail Undercrossing	Construct a trail undercrossing below Benchmark to facilitate the proposed Elk Pond Trail.	n/a	$800,000
Phase II Total:				**$5,378,720**

*Renovation assumed to be $8.00/LF
**Crusher fines would be approximately 50% the cost of paving



TRAILS MASTER PLAN

MAP 5.3 PHASE II IMPROVEMENTS*

- Bus Stop
- Gondola Station
- Contour Line (100 feet)
- Forest Cover
- Town of Mountain Village

RECOMMENDATIONS

Existing / Proposed

- Shared-Use Path
- On-Street Improvements

NATURAL SURFACE TRAILS

- Shared Use
- Uphill Bike/ Multi-Directional Hike
- Descending Bikes Only
- Foot Traffic Only

- Proposed Spot Improvement

*Trails depicted in this map that are outside of the Mountain Village municipal boundary are not included in trail mileage mentioned elsewhere in this plan.

TABLE 5.6.1 PHASE II SCORING

Trail Name		Safety		Connectivity		Recreation		Sustainability		Partnerships		Total
SU-8	SR-145 Meadow Trail to Valley Floor	2	High quality alternative to SR-145	2	Connection to valley floor	1	Connects Meadows Trail to valley floor trails	1	Some commuting potential for valley to Valley Floor and Lawson Hill	2	Potential partnerships with CDOT	**8**
SU-10	Mountain Village Blvd to emergency access road	2	High quality alternative to SR-145	1	-	0	Limited recreational value	2	Limited commuting value	2	Possible parternships with CDOT	**7**
SU-5	Big Billie's	2	Improves Big Billie's connection	2	Assists in connecting Meadows Village to Village Center	0	Limited recreational value	2	Offers good commuting potential from the Meadows to the Village Center	0	No partnerships	**6**
NS-8	Elk Pond Loop	0	Limited safety value	1	Provides connection to Market Plaza	2	New low-elevation trail opportunity	1	Some opportunity to commute to Market Plaza	1	Ability to partner with TSG	**5**
SI-3	Boulevard Trail undercrossing	2	Offers safe connection between future Elk Pond Park improvements and Market Plaza	1	Connects to Market Plaza	1	Some recreational value from proposed Elk Pond trails to Market Plaza	1	Some commuting value linking Benchmark Drive residents to Market Plaza	0	No partnerships	**5**
NS-15	Banner Trail	1	Provides connection to valley floor without crossing SR-145	1	Connection to valley floor	1	New connection to valley floor trails	0	Not a likely commuting route	1	Partnerships with the Town of Telluride / USFS	**4**
OS-5	Benchmark Dr	2	Provides improved accommodation for bicyclists and pedestrians along Benchmark Dr	1	-	0	-	1	Some commuting opportunity, particularly for developments on lower San Joaquin	0	-	**4**
NS-1	See Forever Hiking Trail Connector	0	-	1	Provides connection to Town of Telluride via O'Reilly Trail	1	Some recreation potential to link to Town of Telluride trails	1	Some commuting potential to Town of Telluride	0	No partnerships	**3**

TABLE 5.6.1 PHASE II SCORING (CONTINUED)

Trail Name		Safety		Connectivity		Recreation		Sustainability		Partnerships		Total
NS-2	Bear Creek to Market Plaza	1	Provides safe access to Market Plaza for lower San Joaquin residents	1	Assists in providing connectivitiy to Market Plaza	0	Short trail, limited recreation potential	1	Offers some commuting potential	0	No partnerships	**3**
NS-3	Bear Creek Extension	1	Provides safe access to Market Plaza for lower San Joaquin residents	1	Assists in providing connectivitiy to Market Plaza	0	Short trail, limited recreation potential	1	Offers some commuting potential	0	No partnerships	**3**
NS-10	Tristant Trail	1	Provides safe access to Market Plaza for lower San Joaquin residents	1	Assists in providing connectivity to Market Plaza	0	Short trail, limited recreation potential	1	Offers some commuting potential	0	No partnerships	**3**
SI-4	Elk Pond Trail undercrossing	1	Undercrossing improves safety issues related to the proposed Elk Pond Trail crossing Benchmark	0	Limited connectivity improvement	1	Supports Elk Pond Trail development	1	Some commuting opportunity to connect Benchmark residents to planned Elk Pond Park and Market Plaza	0	No partnerships	**3**

PHASE III

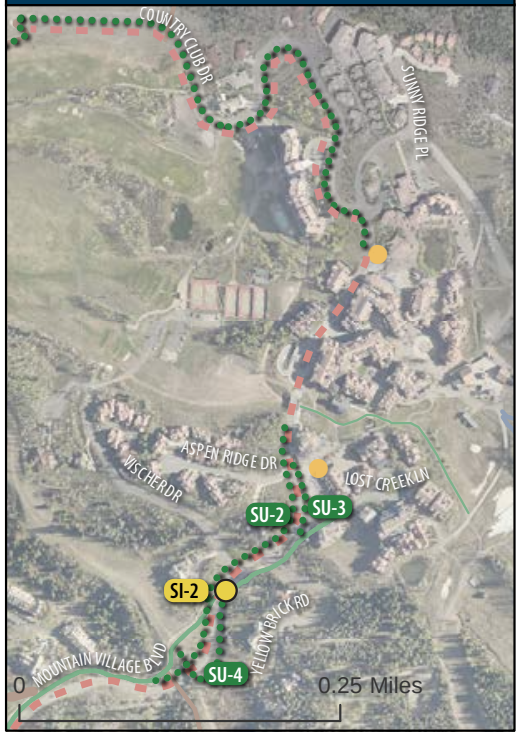
Phase III represents long-term projects that should be implemented after Phase I and II are complete. They will further improve the trail user experience and will help to meet future trail demand. Prior to implementation, Phase III projects should be reevaluated to determine whether they are still relevant to the conditions or if they need to be adjusted.

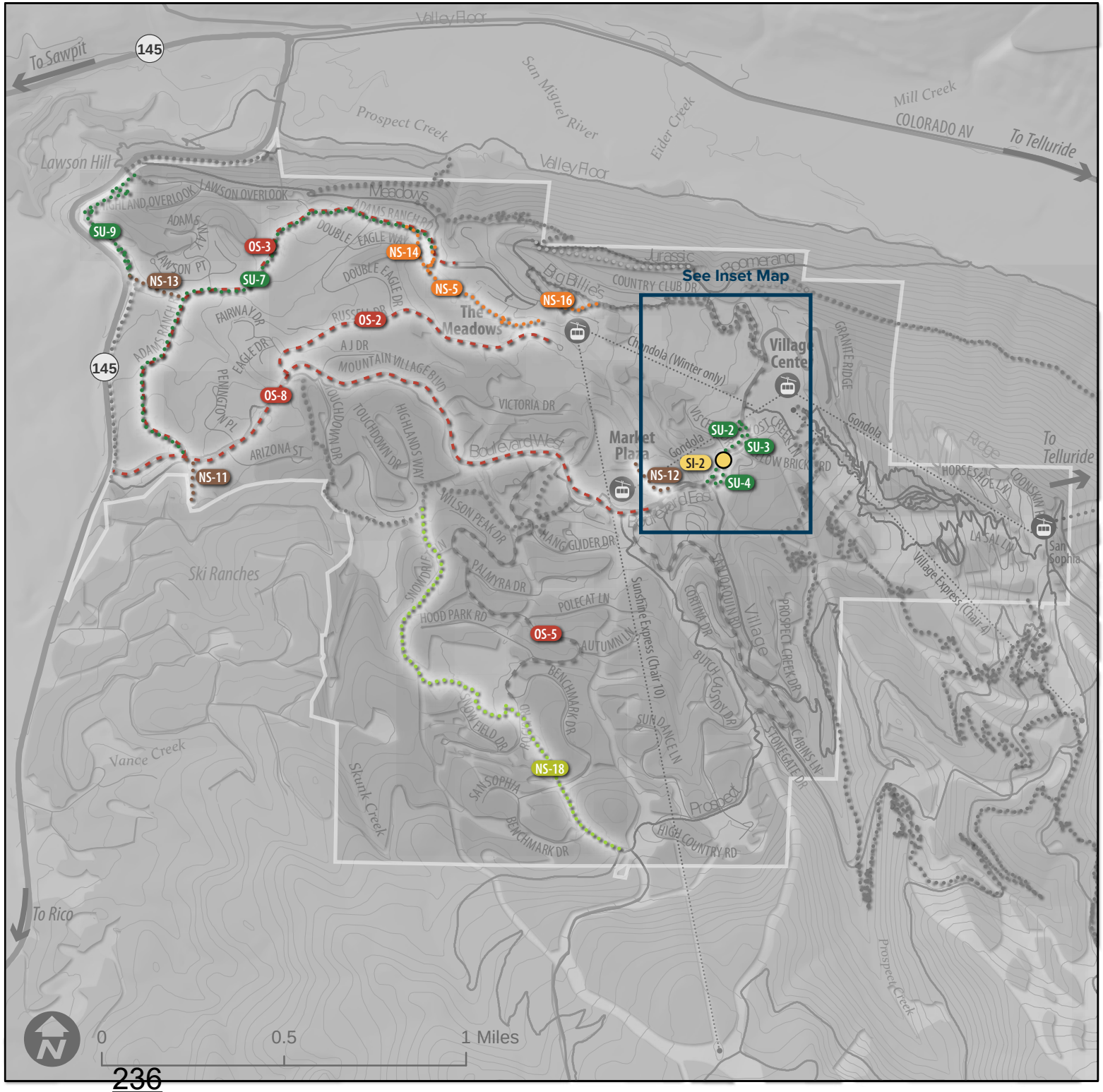
TABLE 5.7 PHASE III IMPROVEMENTS

Trail ID	Trail Name	Improvement Type	Length (miles)	Planning-Level Cost
SU-9	SR145- Emergency Access Road to Meadow Trail	Shared Use Path (crusher fines)	0.6	$316,800
SU-2	Boulevard Trail Extension	Sidepath (paved)	0.3	$316,800
SU-4	Boulevard Trail Re-Route	Sidepath (paved)	0.1	$105,600
SU-7	Adams Ranch Rd Sidepath	Sidepath	1.4	$1,478,400
NS-18	Elk Pond to Prospect Trail	Natural Surface - Uphill Bike/Multi-Directional Hike	1.4	$59,136
SU-3	Boulevard Extension #2	Sidepath (paved)	0.1	$105,600
OS-2	Russell Dr	Shoulder WIdening/Advisory Shoulders*	0.9	$685,555
OS-3	Adams Ranch Rd (alternative to project SU-7)	Shoulder Widening/Advisory Shoulders*	1.5	$571,296**
NS-5	Meadows Perimeter Hiking Trail	Natural Surface - Foot Traffic Only	0.5	$21,120
NS-11	Ski Ranches Connector	Natural Surface - Shared Use	0.1	$4,224
NS-12	Boulevard to VCA	Natural Surface - Shared Use	0.1	$4,224
NS-14	Meadows Hiking Trail - Connector	Natural Surface - Foot Traffic Only	0.2	$8,448
NS-16	Big Billies - Hiking Connector (renovation)	Natural Surface - Foot Traffic Only	0.2	$8,448
SI-2	Eliminate at-grade crossing/use ski bridge	Eliminate at-grade crosswalk	n/a	$1,500
NS-13	Emergency Access Trail	Natural Surface - Shared Use	0.2	$8,448
OS-8	Mountain Village Blvd. - Market Plaza to Highway 145	Shoulder Improvements	1.7	$1,929,840
Phase III Total:				**$5,054,143**

*One-third of project assumed to require shoulder widening; additional study needed to determine precise limits of advisory shoulders and areas requiring shoulder widening
**Not included in Phase III total

MAP 5.4.1 PHASE III IMPROVEMENTS





TOWN OF MOUNTAIN VILLAGE INCORP. 1995

TRAILS MASTER PLAN

MAP 5.4 PHASE III IMPROVEMENTS*

- Bus Stop
- Gondola Station
- Contour Line (100 feet)
- Forest Cover
- Town of Mountain Village

RECOMMENDATIONS

Existing / Proposed

- Shared-Use Path
- On-Street Improvements

NATURAL SURFACE TRAILS

- Shared Use
- Uphill Bike/ Multi-Directional Hike
- Descending Bikes Only
- Foot Traffic Only

- Proposed Spot Improvement

*Trails depicted in this map that are outside of the Mountain Village municipal boundary are not included in trail mileage mentioned elsewhere in this plan.

TABLE 5.7.1 PHASE III SCORING

Trail Name		Safety		Connectivity		Recreation		Sustainability		Partnerships		Total
OS-8	Mountain Village Blvd. - Market Plaza to Highway 145	2	Important, highly used connection with no existing bicycle or pedestrian facilities	2	Important connectino for bicyclists and pedestrians to SR-145	1	Supports connection to highly used recreational trails	2	Links residences and businesses along Mountain Village Blvd.	1	Potential partnership with TSG	**8**
SU-9	SR-145 - Emergency Access Road to Meadow Trail	2	High quality alternative to SR-145	1	-	0	Limited recreational value	0	Limited commuting value	2	Potential partnerships with CDOT	**5**
SU-2	Boulevard Trail Extension	1	Eliminates at-grade crossing at a dangerous location on Mountain Village Boulevard	2	Offers connectivity from Market Plaza to Village Center	0	Limited recreational value	1	Offers some commuting potential to Village Center	0	No partnerships	**4**
SU-4	Boulevard Trail Re-Route	2	Eliminates at-grade crossing at a dangerous location on Mountain Village Boulevard	1	Assists in connecting Market Plaza to Village Center	0	Limited recreational value	1	Offers some commuting potential to Village Center	0	No partnerships	**4**
SU-7	Adams Ranch Road Sidepath	2	Could provide safer, off-street option for bicyclists and pedestrians along Adams Ranch Road	1	Connects to the Meadows and the Boulevard Trail	1	Could offer nice off-street path options around Mountain Village in conjunction with Big Billie's and Boulevard Trails	0	Limited commuting value	0	No partnerships	**4**
NS-18	Elk Pond to Prospect Trail	0	Limited safety value	1	Provides connection to desirable Prospect Trail	2	Provides good cross-country trail alternative for Mountain Village residents	0	Limited commuting potential	0	No partnerships	**3**
SU-3	Boulevard Extension #2	1	Provides improved connection to Sunset Plaza and transit stop	1	Assists in connecting Market Plaza to Village Center	0	Limited recreational value	1	Offers some commuting value for Yellow Brick Road Place and lower San Joaquin developments	0	No partnerships	**3**

TABLE 5.7.1 PHASE III SCORING (CONTINUED)

Trail Name		Safety		Connectivity		Recreation		Sustainability		Partnerships		Total
OS-2	Russell Dr	1	Provides better accommodation for bicyclists and pedestrians along Russell Dr	1	Provides connectivity to the Meadows	0	Limited recreational value	1	Some commuting potential via Big Billie's and proposed Country Club sidepath	0	No partnerships	**3**
OS-3	Adams Ranch Road (alternative to project SU-7)	1	Provides for improved accommodation for bicyclists and pedestrians along Adams Ranch Rd	1	Connects to the Meadows and the Boulevard Trail	1	Could offer nice biking and walking loop options around Mountain Village in conjunction with Big Billie's and the Boulevard Trail.	0	Limited commuting value	0	No partnerships	**3**
NS-5	Meadows Perimeter Hiking Trail	0	Limited safety value	1	Provides connection to the Chondola	1	Good hike only, 20-minute option for Meadows residents	0	Limited commuting potential	0	No partnerships	**2**
NS-11	Ski Ranches Connector	0	Limited safety value	1	Connectivity to Ski Ranches	0	Short trail, limited recreation potential	0	Limited commuting potential	1	Partnerships with Ski Ranches	**2**
NS-12	Boulevard to VCA	0	Limited safety value	1	Provides connection from VCA towards Village Center	0	Limited recreational value	1	Moderate commuting value	0	No partnerships	**2**
NS-14	Meadows Hiking Trail- Connector	0	Limited safety value	1	Provides connection to the Chondola in conjunction with Meadows Perimeter Hiking Trail	1	Good hike-only, 20-minute option for Meadows residents	0	Limited commuting potential	0	No partnerships	**2**
NS-16	Big Billie's-Hiking Connector (renovation)	0	Limited safety value	1	Provides connectivity to the Meadows	0	Limited recreational value	1	Moderate commuting value	0	No partnerships	**2**
SI-1	Eliminate at-grade crossing/use ski bridge	1	Removes a challenging at-grade crossing of Mountain Village Boulevard	0	Offers same access as existing	0	Limited recreational value	0	Limited commuting value	1	Partner with TSG	**2**

PRIORITY PROJECT- JURASSIC RENOVATION / STEGOSAURUS CONSTRUCTION

Trail user conflicts on Jurassic were one of the most commonly cited issues identified through the public outreach process. In particular, conflicts between high-speed descending bicyclists and other trail users including hikers, dog-walkers, and uphill bicyclists was routinely brought up. Jurassic serves as an important recreational amenity for Meadows Village residents and as an important commuter corridor in warmer months by linking the Village Plaza to the Meadows Trail and destinations beyond such as Lawson Hill and the Valley Floor.

Given the high volume of users, descending nature of the trail corridor, and constrained topography, the Planning Team determined that trail user conflicts likely could not be mitigated entirely by simply redesigning or widening the trail. A trail management strategy of separating trail users was proposed to address the speed differential , and associated safety concerns, between descending bicyclists and all other trail users.

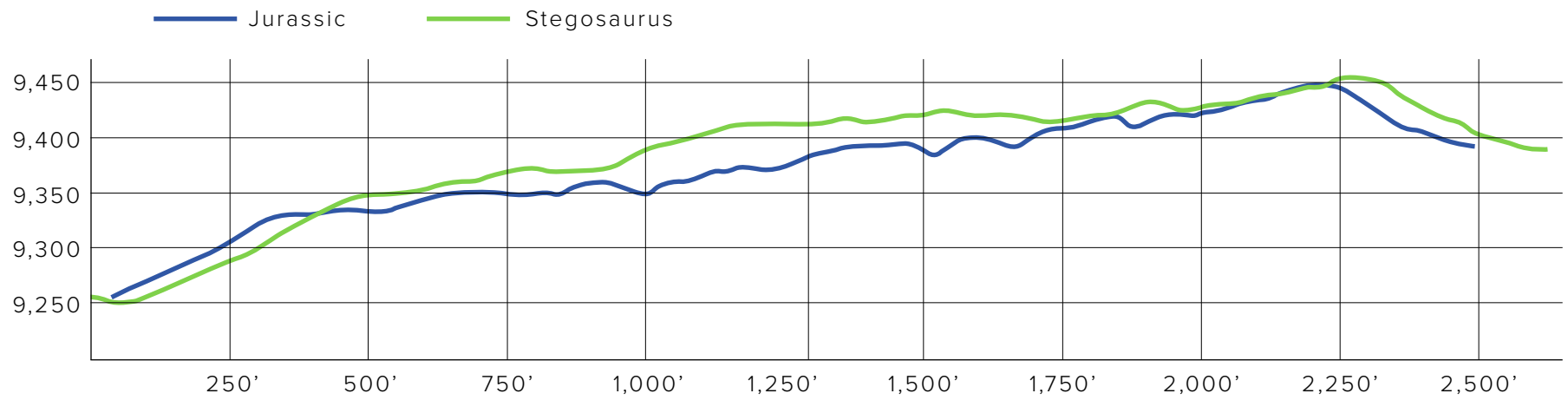
In the proposed configuration, Jurassic should serve as a one-way (westbound) descending bicycle-only trail. Hikers and up-hill bicyclists would be routed on a newly constructed trail (Stegosaurus) that would run roughly parallel and slightly uphill from Jurassic. S

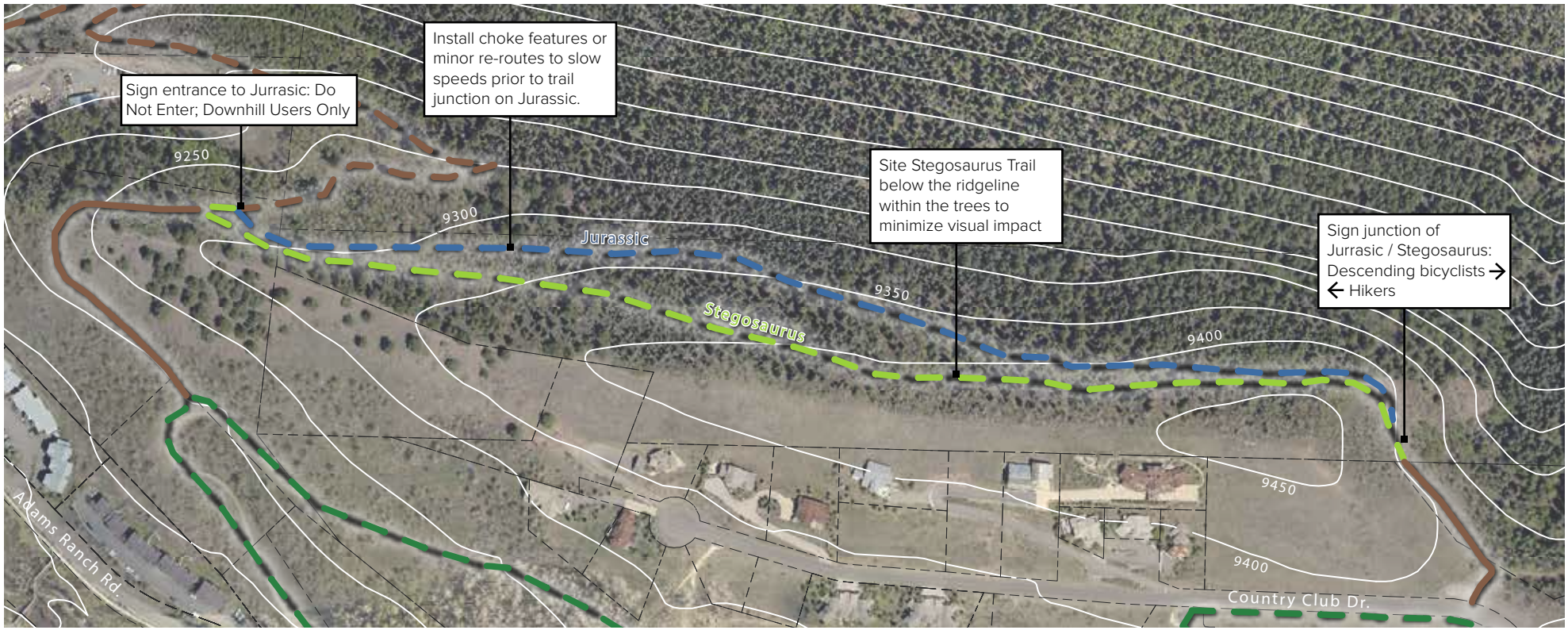
Jurassic Trail Renovation Specifications

- Trail Management: Descending bicyclists only
- Tread widening to 30” - 36”
- Vertical clearance: 8’ min.
- Minor reroutes to maintain momentum but keep speeds under control
- Addition of knicks or rolling grade dips where needed to improve drainage
- Mitigate blind corners through earthwork and vegetation removal
- Include small berms in corners to maintain momentum but do not encourage excessive speeds
- Trail Narrative: Provide a bicycle-optimized descending trail connecting Country Club Drive to the proposed Meadows Connector. Trail should allow bicyclists to maintain momentum but not encourage excessive speeding. Trail tread should be widened and blind corners should be rerouted or modified to improve visibility.

Stegosaurus Trail Construction Specifications

- Trail Management: Open to uphill bicyclists and multi-directional hiking traffic
- Tread width 42”
- Provide regular grade reversals to encourage positive drainage.
- Vertical clearance: 8’ min.
- Trail Narrative: Provide a mellow, sustainable hiking and climbing bicycle trail to separate conflicting trail users from Jurassic. Seek to create an equally appealing trail experience so that hikers or climbing bicyclists would choose to use Stegosaurus over Jurassic. Trail should be situated below the ridge in the trees to minimize the visual impact. A separation of at least 20’ should be maintained from Jurassic to discourage unauthorized access by descending bicyclists. In addition, design trail turns and features to be ridden at low speeds and discourage downhill bicycle use.


Jurassic
Stegosaurus
9,450
9,400
9,350
9,300
9,250
250’
500’
750’
1,000’
1,250’
1,500’
1,750’
2,000’
2,250’
2,500’


Sign entrance to Jurrasic: Do Not Enter; Downhill Users Only
Install choke features or minor re-routes to slow speeds prior to trail junction on Jurassic.
Site Stegosaurus Trail below the ridgeline within the trees to minimize visual impact
Sign junction of Jurrasic / Stegosaurus: Descending bicyclists → ← Hikers
9250
9300
9350
9400
9450
Jurassic
Stegosaurus
Adams Ranch Rd.
Country Club Dr.
SCALE: 1” = 300’

alta
PLANNING + DESIGN