

MEMORANDUM

EAGLE COUNTY ENGINEERING

TO: Dominic Mauriello
Mauriello Planning Group

FROM: Ben Gerdes, Senior Project Engineer
Engineering Department

DATE: September 13, 2013

FILE: Eagle County File No. VIS-4398

RE: Berlaimont Estates Variance to Improvement Standards Engineering Review

The Eagle County Engineering Department has reviewed the above referenced application received on August 23, 2013 and offers the following comments:

1. Please show the property line for property owned by Berry Creek Metro District in relation to the proposed improvements.
2. Eagle County Engineering will rely on the Eagle River Fire Protection District for guidance on the acceptability of the proposed Emergency Vehicle Turn-around variance request and their ability to provide service to the development.
3. This application only includes the access roadway up to a point approximately 475-ft from the property line with USFS. This variance would not apply to the road extension to the home sites. We would encourage the applicant to include the complete development road design to avoid the need for an additional Variance application.
4. Please confirm that the roadway design uses 6% maximum superelevation and AASHTO standard superelevation transitions.

This review is limited to the requested variances to improvement standards and does not relieve the applicant of other applicable permitting that may be required.

The Eagle County Engineering Department reserves the right to offer additional comments as more information is provided. Please feel free to contact us at (970) 328-3560 if you have any questions or comments.

cc: Eva Wilson, County Engineer



Ben Gerdes <ben.gerdes@eaglecounty.us>

Berry Creek Metro

1 message

Dominic Mauriello <dominic@mpgvail.com>

Mon, Sep 23, 2013 at 8:53 AM

To: Ben Gerdes <ben.gerdes@eaglecounty.us>

Cc: Allison Kent <allison@mpgvail.com>, Vaclav Vochoska <vaclav.vochoska@cimex.cz>

Hi Ben:

The attached sheets show the property that is owned by Berry Creek Metro and the property line based on the plat for Berry Creek Ranch (also attached). No new improvements are proposed on Berry Creek Metro land.

Also, the roadway design uses 6% maximum superelevation and exceeds AASHTO standard superelevation transitions.

Can you tell me what time we are proposed on the agenda for October 1?

Dominic F. Mauriello, AICP

Mauriello Planning Group, LLC

PO Box 4777

2205 Eagle Ranch Road

Eagle, Colorado 81631

970-376-3318 cell

www.mpgvail.com

3 attachments



Berry Creek Ranch Final Plat 174609.pdf

980K



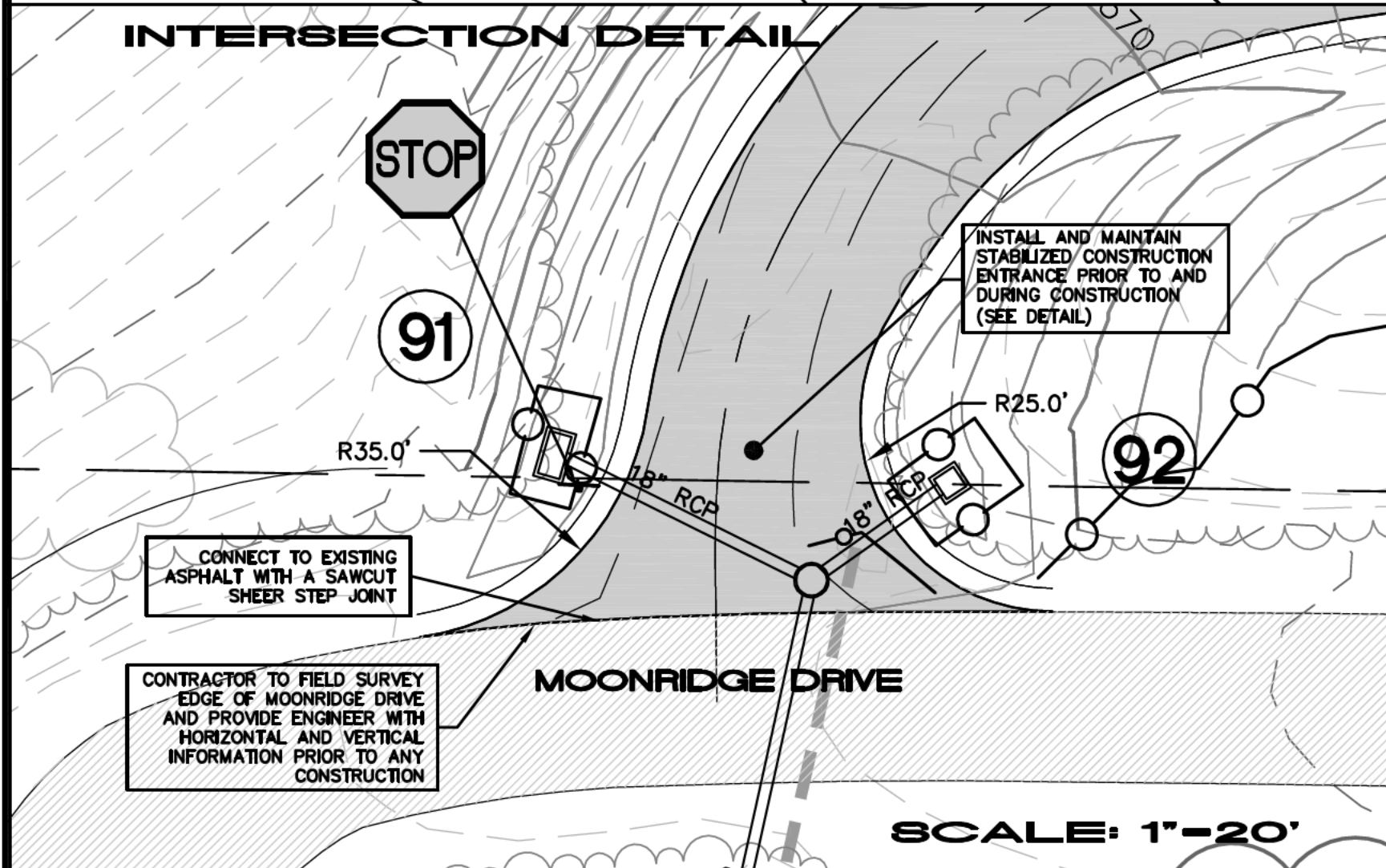
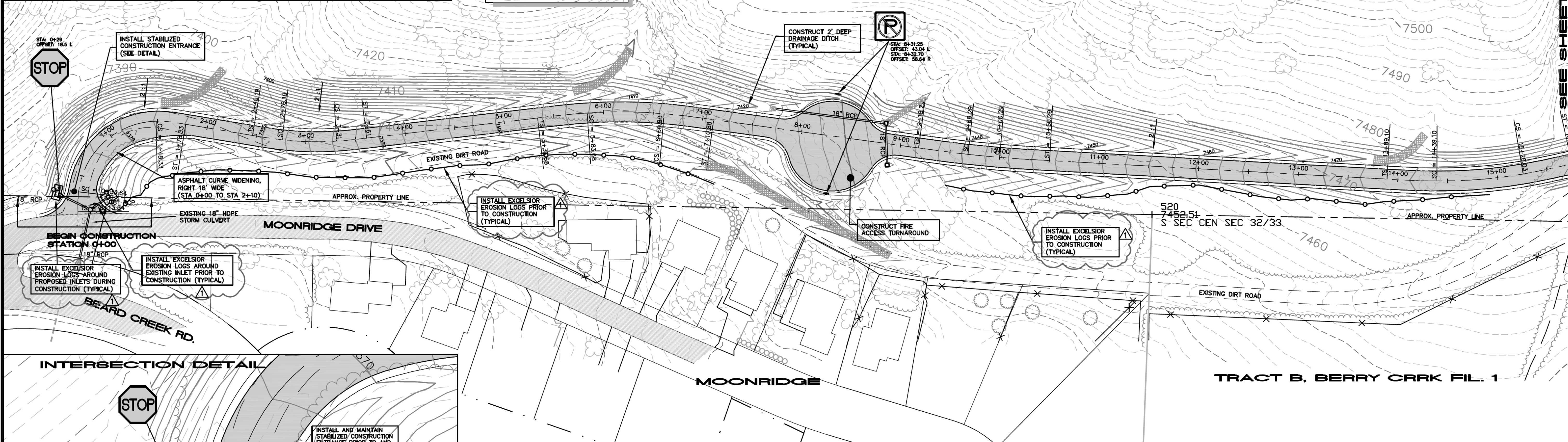
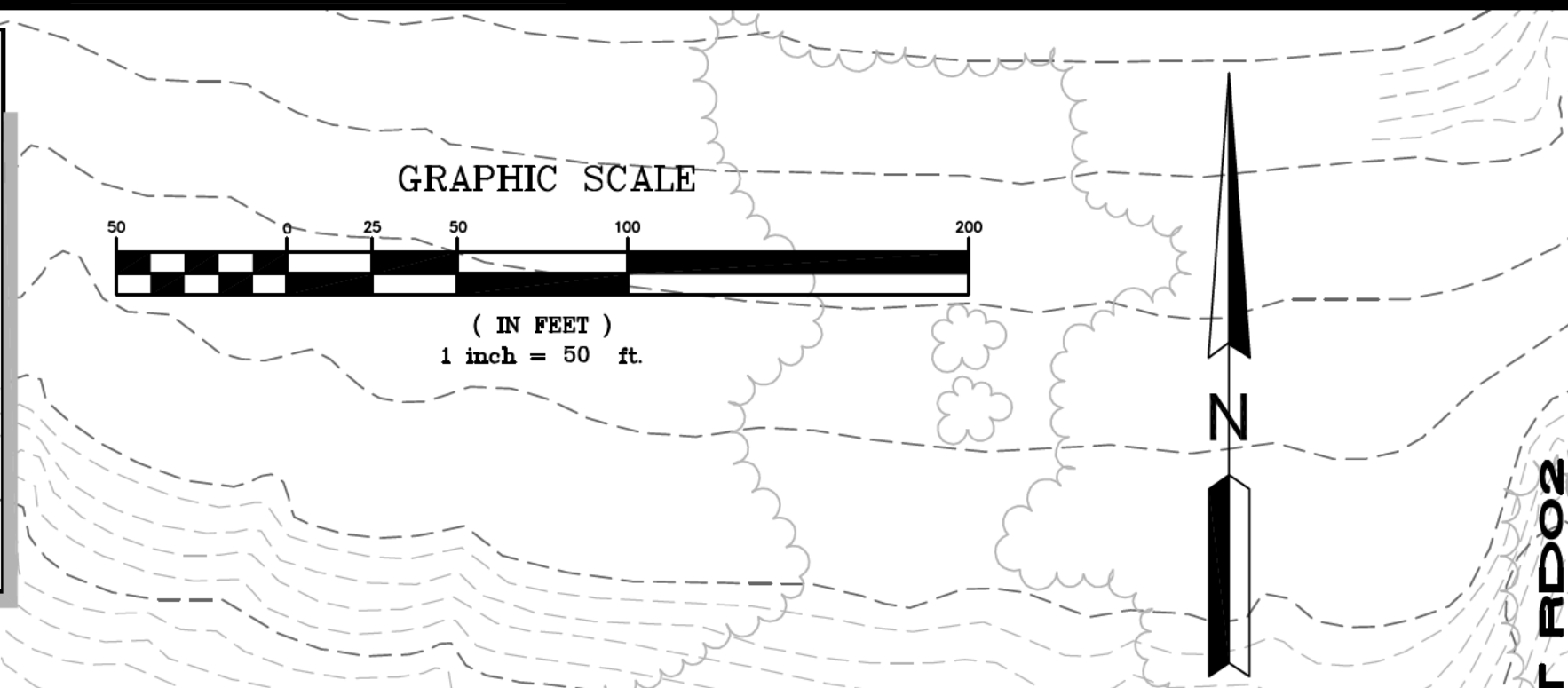
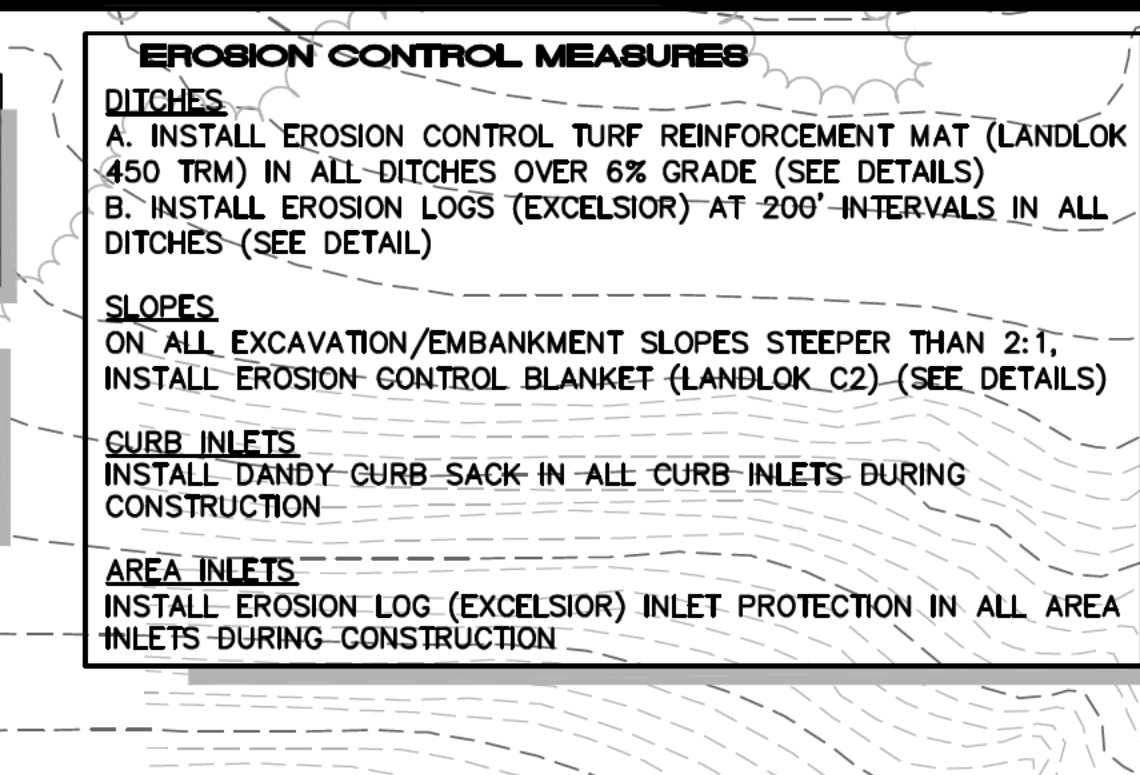
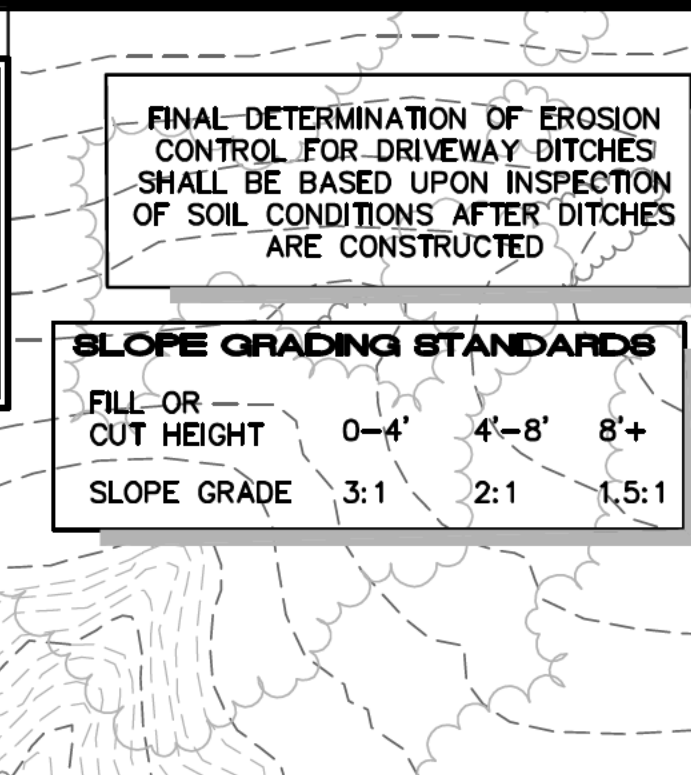
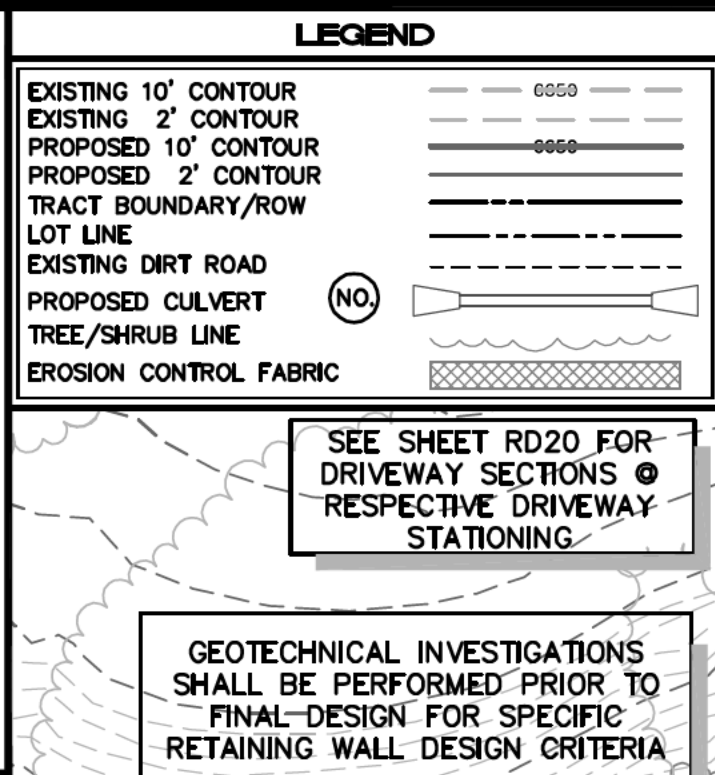
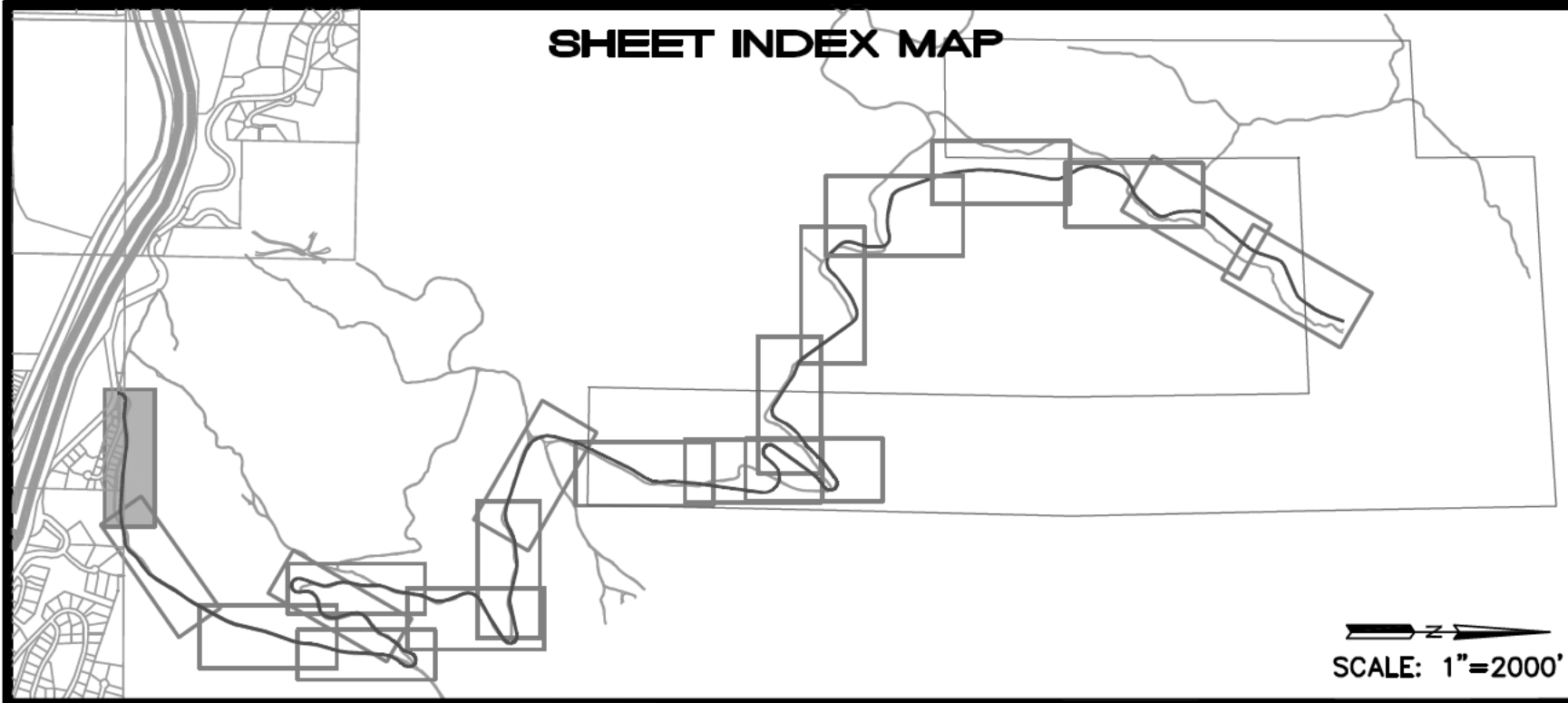
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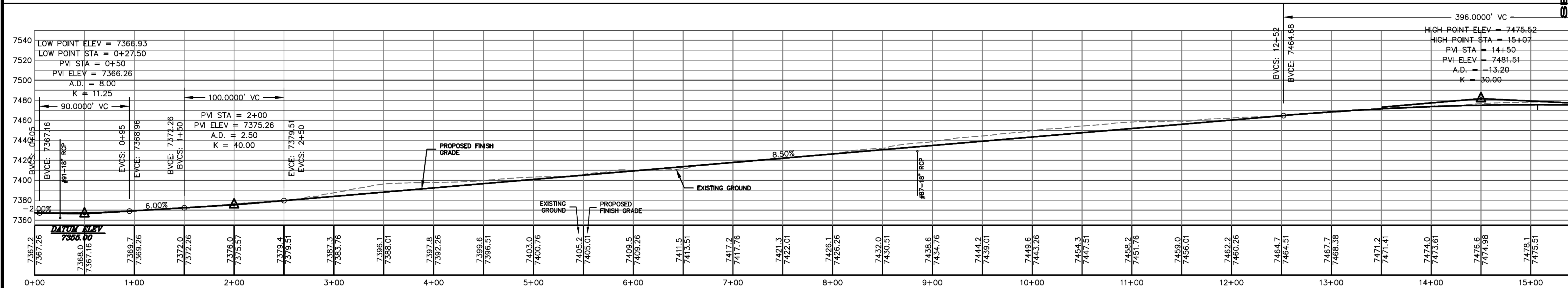
rd-01.pdf

523K



LOWER BERLAIMONT ROAD
STATION: 0+00 TO 15+00

ALL DRIVE PROFILES
HORIZONTAL: 1 inch = 50 feet
VERTICAL: 1 inch = 50 feet



ALPINE ENGINEERING INC.

EDWARDS, CALIFORNIA • P.O. BOX 97
• 970 926-3373 • FAX 926-3390

BERLAIMONT ESTATES
ROADWAY PLAN
EAGLE COUNTY, CO
ROADWAY PLAN & PROFILE

SEE SHEET RD02

NO.	DATE	REVISIONS	BY
1	10/06/2011	ADDED EROSION LOGS STA 0+25-74-20 AND 9+50-14+90 AND AT 3 ENTRANCE INLETS	HM
2	09/17/2013	ADDED TRACT B PROPERTY LINE	RL

DESIGNED RSL
DRAWN RSL
CHECKED KAK
JOB NO. 18820.1
DATE 9/23/2013

SHEET RD01



Ben Gerdes <ben.gerdes@eaglecounty.us>

Berlaimont Estates

1 message

Todd Williams <toddriverwalk@yahoo.com>

Mon, Sep 16, 2013 at 8:54 AM

To: ben.gerdes@eaglecounty.us

To Whom it May Concern,

I can not support the variance applied for regarding the need for dual access. I am an adjacent property owner in the Moonridge subdivision. Although I understand the difficulty of achieving dual access, the danger that a single access poses in the ability to fight a fire in this area, or evacuate the residents of this area in the case of a fire, can not be over looked. Not only does it present a danger to the future residents of this development, it also presents a potential danger to many of the existing homes and developments, from the Valley Club to Wildridge. For this reason I can not support the granting of a variance for dual access to this development.

Thanks,
Todd

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Todd Williams

COLORADO GEOLOGICAL SURVEY

1500 Illinois St.
Golden, Colorado 80401
Phone 303.866.2611
Fax 303.866.2461



September 13, 2013

Karen Berry
Acting State Geologist

Ben Gerdes
Eagle County Engineering Development
P.O. Box 179
Eagle, CO 81631

Location:
Sections 20 and 29,
T4S, R82W
of the 6th P.M.

Subject: Berlaimont Estates Road – Variance from Improvement Standards Application
File Number VIS-4398; Eagle County, CO; CGS Unique No. EA-14-0002

Dear Mr. Gerdes:

Colorado Geological Survey has completed its review of the above-referenced application. I understand the applicant is resubmitting an application for variances from dual access, emergency turnaround, and road design standards in developing access to a 19-lot subdivision on 680 acres within the White River National Forest.

With this referral, I received a Berlaimont Estates Variance from Improvement Standards document (Mauriello Planning Group, July 15, 2013) and documents that CGS previously reviewed, including a "Phase I Report," previously referred to as a Literature Survey and Photogeologic Map report by GEO-HAZ Consulting, Inc., September 4, 2009; a "Phase II Report," previously referred to as a Geologic Reconnaissance report by GEO-HAZ Consulting, Inc., October 5, 2009; and a Preliminary Geotechnical Engineering Study by HP Geotech, September 17, 2009.

The proposed road alignment contains mapped landslides and anomalous topography. Since the applicant is requesting a variance to avoid providing a secondary access/egress route, the applicant must demonstrate that the proposed road is not exposed to (nor does its construction exacerbate) potential hazards that could render it impassable. The currently proposed road alignment appears to be similar to the alignment we reviewed in our August 31, 2010 letter. CGS does not have any objections to the proposed road alignment.

Note 15 on Alpine Engineering, Inc.'s Preliminary Road Plans (March 2010) states, "This preliminary road design was prepared without the benefit of a geologic hazard study or a debris flow/flood study. The road design should be modified to adhere to recommendations to be provided in these reports when they are made available." It is not clear how the RCP culverts at locations where the proposed road crosses drainages were sized. **CGS strongly encourages the county to consider requiring oversized drainage culverts to accommodate bulk debris and mudslides that could be mobilized in a large storm event, especially post-wildfire.** Blocked drainages could result in road washouts through overtopping and erosion, and loss of road sections as a result of slope instability caused by excessive and/or prolonged water infiltration and loss of strength.

Thank you for the opportunity to review and comment on this project. If you have questions, need clarification of issues identified during this review, or require further review, please call me at (303) 866-2611 ext. 8316 (303-384-2643 after September 18, 2013), or e-mail jill.carlson@state.co.us.

Ben Gerdes
September 13, 2013
Page 2 of 2

Sincerely,

A handwritten signature in black ink, appearing to read "Jill Carlson". The signature is fluid and cursive, with a large initial "J" and a long, sweeping underline.

Jill Carlson, C.E.G.
Engineering Geologist



September 9, 2013

To:
Ben Gerdes, P.E. - Senior Staff Engineer
Eagle County Engineering Department

Dominic Mauriello, AICP - Principal
Mauriello Planning Group

cc:
Karl Bauer - Fire Chief
Eagle River Fire Protection District

Chris White – Chief Operations Officer
Anchor Point Group

RE: VIS-4398 - Variance from Dual Access, Emergency Turnaround and Road Design Standards; Berlaimont Estates – Berlaimont Road

Greetings,

Thank you for the opportunity to comment on this request for a variance from Eagle County's road standards as they relate to dual access. I have taken the time to review the documents submitted by the applicant, including *The Berlaimont Estates Wildfire Mitigation Plan* prepared by Anchor Point Group. For their part, the applicant has made considerable efforts to address wildfire related concerns expressed by myself and others while developing this plan. To that end, I will tailor my comments to reflect how they have addressed these issues in order to determine if adequate wildfire mitigation strategies have been developed to compensate for a lack of dual access.

Wildfire Hazard

The overall Wildfire Hazard Rating for the proposed building envelopes in Berlaimont Estates is *Moderate*. This rating is based on fuel type(s) present, topography, access, water supply, and other factors such as existing and proposed site improvements (*see attached Eagle County Wildfire Hazard Rating*). Vegetative fuel types range from aspen and tall mtn. shrub, to native grass and sage interspersed with pockets of pinon/juniper woodlands.

The Berlaimont Estates Wildfire Mitigation Plan does an excellent job of describing potential fire behavior in the area. The modeling completed by Anchor Point provides additional insight into what can be expected during a wildfire near this proposed development. The important take away from their analysis is that even though the predominant weather patterns and fuel conditions in the area only lend themselves to a small percentage of days that will support large fire growth; **the possibility for catastrophic fire loss does exist under certain conditions**. This independent analysis by Anchor Point confirms the need for mitigation action at some level in Berlaimont Estates.

Road Improvement and Development

I am in agreement that from a wildfire safety perspective, the primary areas of concern along the 5.3 miles of roadway leading to Berlaimont exist where the road abuts heavy fuels. **I support the idea of fuel break construction below the roadway in these areas to mitigate the chance of fire overtaking the road. It is important to note that since this road will be traveling through national forest lands, it may not always be possible for the applicant to complete roadway fuel reduction**

without permission from the White River National Forest. In the absence of meaningful fuel reduction work in these areas, emergency turn-outs will be needed to allow for first responders and evacuating residents to simultaneously use the road during a wildfire event.

The *Time Until Fire Arrival* (TUFA) modeling provided by Anchor Point shows that under most conditions, fires within 0.5 miles of the proposed road will take nearly an hour to reach the roadway. However, there are a few sections of roadway that abut fuels with the potential for rapid rates of spread. In these areas, it will be important to conform to existing standards of one emergency turn-out for every one thousand feet of roadway.

Improvements to the existing secondary roads traveling through the Berlaimont property (FSR 780 and others) should be completed to provide multiple points of access to home sites within the development. This should give emergency responders a second option of travel through the area, providing for better fire suppression and structure protection opportunities. Should a variance be granted, improvements to FSR 780 and the creation of other fire roads within Berlaimont should be a condition of approval. The applicant has already spent time with me and Eagle River FPD staff to identify where these roads will need to be. Should a variance be granted, they should be clearly identified and approved by the fire district during final plat of the area

Construction Guidelines

The applicant has pledged to build all homes in Berlaimont Estates to an Ignition Resistant Level 2 (IR-2) standard as outlined in the International Wildland Urban Interface Code. This level of fire resistant construction meets, and in regards to roofing and siding, exceeds Eagle County's construction requirement for Moderate Hazard Areas.

Here is a comparison of Eagle County's construction requirements for Moderate Hazard Areas vs. IR-2 construction:

Eagle County:

Roofing

- Roof assembly - must have a Class B fire rating at minimum.
- Roof venting – any roof venting in the soffit shall be in the outer 1/3, with non-combustible vent covers and metal screening with openings less than 1/4".

Decking

- Decks > 30" above finished grade shall use fire-resistive or heavy timber construction for beams, posts, joists, and decking (trim, fascia, guards and handrails are exempt).

Soffits/Eaves

- Any soffit, eave, or roof-extension projecting over 48" from the structure shall be of 1-hour fire resistance rated construction.

Exterior Siding

- No limitations, any material allowed by the Building Code.

IR-2 Construction:

Roofing

- Roof assembly - must have a Class A fire rating at minimum.
- Roof venting – vents or other ventilation in vertical exterior walls and vents through roofs shall not exceed 144 square inches. Such vents will be covered with noncombustible mesh with openings not to exceed ¼ inch, and will not be located in the soffit or other overhangs.

Decking

- Decks shall be a minimum of 1-hour fire resistive construction, heavy timber construction or other noncombustible or fire-retardant-treated wood.

Soffits/Eaves

- The space at the eave ends shall be fire stopped to preclude entry of flames or embers, or will have one layer of 72-pound mineral-surfaced, non-perforated cap sheet

Exterior Siding

- Materials shall be approved for a minimum of 1-hour fire resistance rated construction

IR-2 construction is in-line with Eagle County's requirements for High Hazard areas. The applicant's willingness to apply this higher level of fire resistant construction to all structures in Berlaimont, in combination with 1.5 to 2 times the recommended defensible for each property, offers a level of wildfire protection that would not otherwise be required for a moderate hazard area with dual access. It is my opinion that IR-2 construction, and 2 times the required defensible space for each structure in Berlaimont be a condition of approval should this variance be granted.

Water Availability and Infrastructure

Ignition resistant construction, on-site water storage, and defensible space are vital to protecting homes during a wildfire. In addition to the above mentioned mitigation strategies, the applicant has also pledged to install a 270,000 gallon water tank that is fitted for fire suppression use as well as to create/improve 2 ponds with dry-hydrants and depths great enough to sustain helicopter dips during a fire. The dry-hydrants will need to be tested annually, and it is my opinion that these items also be added to conditions of approval should the variance be granted.

Conclusion

The steps outlined in the *Berlaimont Estates Wildfire Mitigation Plan* represent a collaborative effort to give the proposed development as much wildfire protection as possible. The intent of the plan is to provide for "stand alone" structures that need minimal protection by fire department personnel, while giving fire fighters the water and infrastructure they need to safely defend the neighborhood from wildfire. The combination of ignition resistant construction, robust defensible space, community water storage, interior fire road construction, community staging areas, and residential fire-sprinklers represent very pro-active steps in community wildfire preparedness.

The steps outlined in the plan, if made conditions of approval for a variance from road improvement standards, should offer adequate protection from wildfire for values at risk in Berlaimont Estates. Concerns over a single-point of access for this particular proposed

development have been adequately addressed in this regard. Since no two wildfires are the same, it is difficult to say whether these steps completely excuse a lack of dual access. There is always the possibility of the unknown, and a wildfire mitigation plan does little to address concerns related to emergency medical response to the area.

Thank you for the opportunity to comment on this variance request. Feel free to contact me with any further questions.

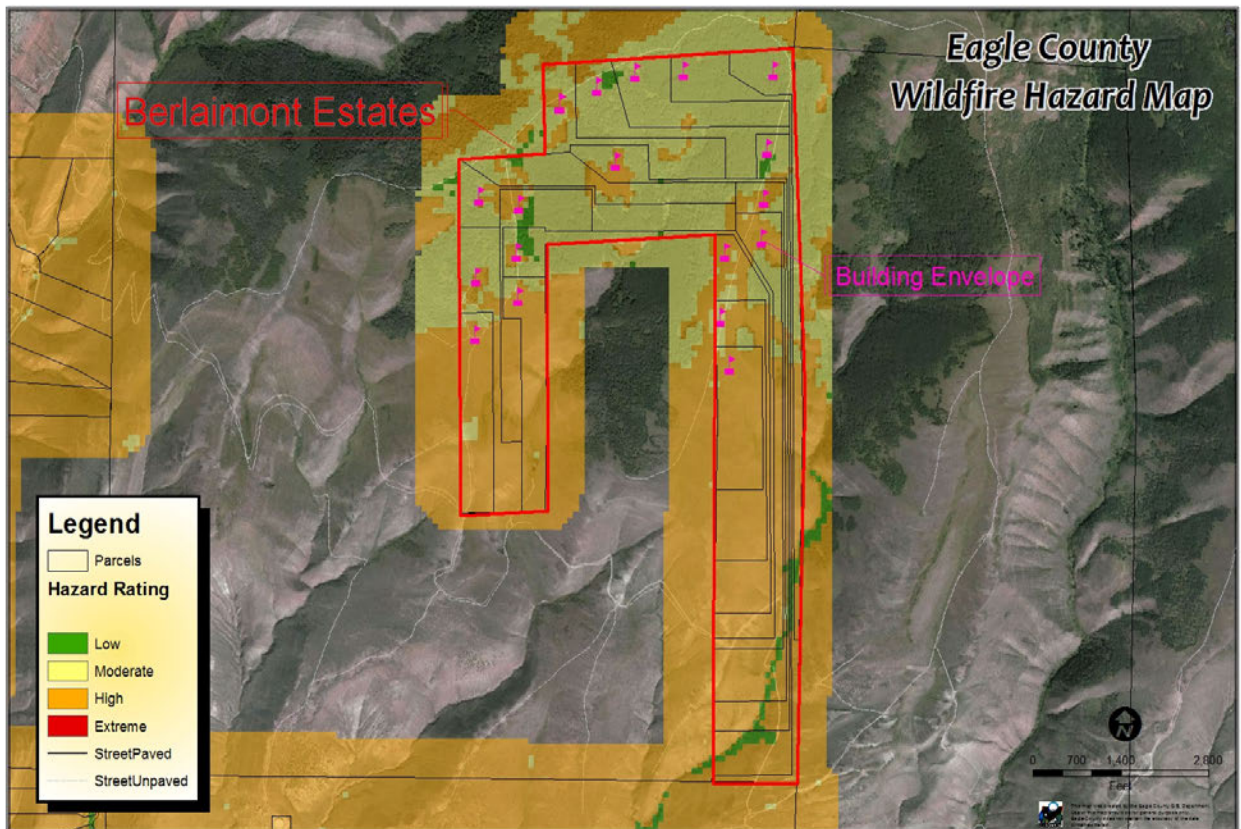
Sincerely,

Eric Lovgren
Wildfire Mitigation Manager
Eagle County Community Development
office: 970-328-8742
fax: 970-328-7185
Eric.Lovgren@eaglecounty.us



Wildfire Hazard Rating

Wildfire Hazard Map (parcel specific):



Parcel #: Berlaimont Estates Parcel 1-19

ADDRESS: TBD

DATE: 9/11/13 **OBSERVER:** Lovgren



Representative Photos:

1. WILDFIRE HAZARDS

(Slope and Fuel Type) Add points for categories A and B

A. Predominant Vegetation Type (on lot, or within 200 foot radius of proposed structure)

Low Density Fuels or Low Combustion Potential

- 0 L1 no vegetative cover
- 0 L2 irrigated pasture, manicured lawn, golf course
- 5 L3 riparian zone/wetland grasses, shrubs, trees (willow, alder, dogwood, aspen cottonwood, etc), no coniferous trees
- 10 L4 dryland native grasses and forbs < 2 feet, no shrubs or trees
- 15 L5 dryland native grasses, forbs < 2 feet + dispersed shrubs < 4 feet w/ crown spacing >2x ht., no trees
- 20 L6 dryland native grasses, forbs <2 feet + dispersed shrubs <4 feet and isolated coniferous trees, crown spacing > 3x ht.
- 10 L7 native grasses, forbs <2 feet + isolated healthy aspen, little dead wood, no shrubs or widely dispersed deciduous shrubs.
- 15 L8 native grasses, forbs <2 feet + clustered or dispersed healthy aspen, little dead wood, no shrubs or widely dispersed deciduous shrubs.
- 20 L9 native grasses, forbs <2 feet + continuous healthy aspen, little dead wood, no shrubs or widely dispersed deciduous shrubs
- 25 L10 native grasses, forbs <2 feet under continuous healthy aspen stand, little dead wood, no shrubs or widely dispersed understory deciduous shrubs, with widely dispersed single coniferous trees, crowns spaced > 3x ht.

Additional Hazard

- 20 L11 homesite/structure within 200 feet of medium density fuel zone, add points to above.
- 40 L12 homesite/structure within 200 feet of heavy density fuel zone, add points to above.

Medium Density Fuels

- 30 M1 sage / desert shrub, < 4 feet, dispersed or clustered with native grasses.
- 35 M2 sage / desert shrub, < 4 feet, discontinuous with native grasses.
- 40 M3 sage / desert shrub, < 4 feet, uniform/continuous (many branches touching).
- 40 M4 continuous sage / desert shrub, < 4 feet, with isolated tall shrub (>4 feet).
- 45 M5 continuous sage / desert shrub with isolated tall shrub + isolated coniferous.
- 30 M6 isolated tall shrub, crown spacing > 3x ht, with native grass/forb understory.
- 35 M7 mixed tall shrub / aspen, with native grass.
- 35 M8 continuous aspen stand, dense, poor condition, dead branches, dead fall, few shrubs.
- 35 M9 continuous healthy aspen stand with spreading juniper understory.
- 45 M10 mixed coniferous / deciduous stand.
- 45 M11 uniformly dispersed pinion/juniper.
- 45 M12 uniformly dispersed spruce/fir.

Additional Hazard

- 20 M13 homesite, structure within 200 feet of heavy density fuel zone, add points to above.

Heavy Fuels

- 50 H1 mixed desert/tall shrub, continuous.
50 H2 mixed desert/tall shrub, continuous, with isolated coniferous.
60 H3 continuous dense tall shrub.
60 H4 continuous dense tall shrub with isolated coniferous.
70 H5 mixed tall shrub / coniferous.
70 H6 pinion/juniper, continuous.
70 H7 spruce/fir, continuous.
60 H8 lodgepole with deadfall, little or no ladder fuels.
70 H9 lodgepole with significant ladder fuels.
70 H10 mixed coniferous stand, continuous.

B. Average Slope (of lot, 1 acre or less in size or, on larger lots, slope of area defined as within 200 foot radius of proposed structure)

- 5 less than 8%.
15 8% to 20%.
30 21% to 30%.
40 31% or greater.

Additional Topographic Hazards (pre-determined by GIS and/or site visit, add points to above)

- 20 Lot/homesite is within 50 feet of chimney feature, v-canyon or ridge top.

Total Points, Wildfire Hazards (A+B) 50

Additional Comments / Hazards:

Type of Residence: _____

Bridge Present: _____ **Capacity:** _____

Evacuation Concerns: _____

Responder Risks: _____

Safety Zone Present: _____ **Distance:** _____

2. IMPROVEMENTS/MITIGATIONS

Add points for categories C, D, E, F and G

C. Access

- 5 A1 two or more primary roads, in and out, 20 foot + width.
- 4 A2 two or more primary roads, in and out, <20 foot width.
- 3 A3 one primary road, one emergency access (limited capacity).
- 2 A4 one primary road, 20 foot + width.
- 1 A5 one primary road, <20 foot width.

D. Access Surface

- 5 AS1 paved.
- 3 AS2 maintained road base, gravel.
- 2 AS3 poorly maintained, weathered surface.
- 0 AS4 primitive, 4 wheel drive.

E. Access Grade

- 5 AG1 0% to 5%.
- 4 AG2 6% to 8%.
- 2 AG3 9% to 12%.
- 0 AG4 over 12%.

F. Electric Service Lines

- 3 ES1 all underground.
- 2 ES2 mixed above/below (may be below within subdivision, but above along primary access).
- 0 ES3 all above ground.

G. Water supply

- 5 WS1 250 gpm - 31 + minutes.
- 4 WS2 250 gpm - 21 to 30 minutes.
- 3 WS3 250 gpm - 10 to 20 minutes.
- 0 WS4 < 250 gpm or 250 gpm for less than 10 minutes.

Total Points, Improvements/Mitigations (Add C, D, E, F, G) 20*

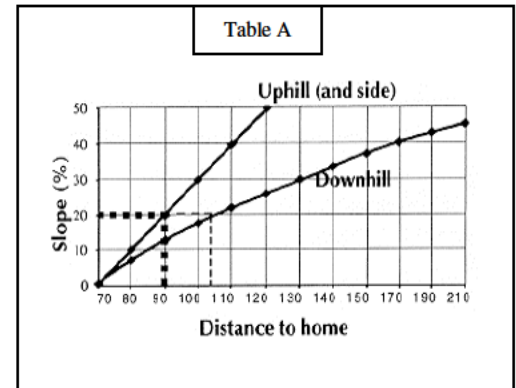
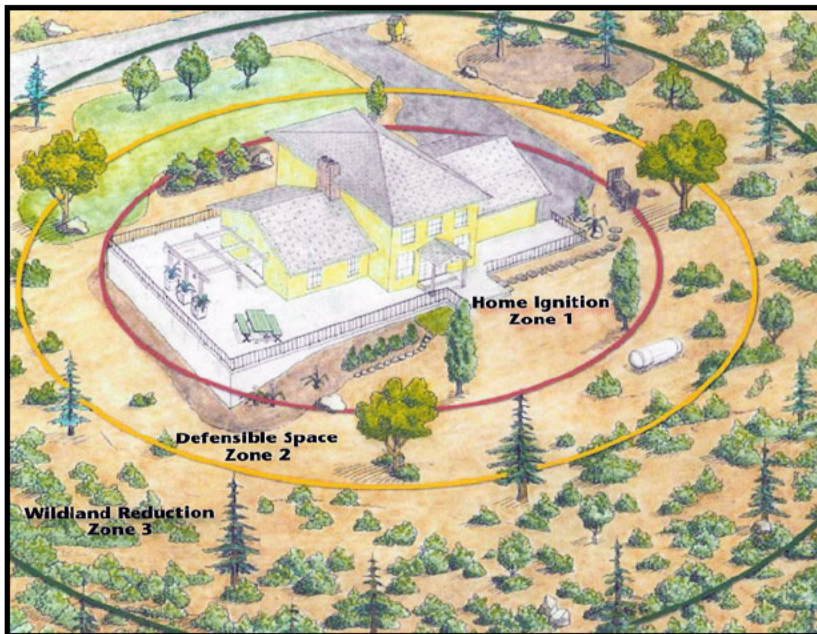
**Based on proposed improvements to community, not currently in place*

Overall Hazard Rating Points: *subtract 2. IMPROVEMENTS/MITIGATIONS from 1. WILDFIRE HAZARDS =* 30

Hazard Rating

- < 20 points LOW
- 21 to 40 points MODERATE
- 41 to 60 points HIGH
- > 60 points EXTREME

Defensible Space Zones (not to scale)



Defensible Space Requirements: *A pre-construction meeting to outline boundaries may be required, contact Eagle County Wildfire Mitigation upon issuance of building permit: (970) 328-8742*

Zone 1: Is the area of maximum modification and treatment. The intent of Zone 1 is to reduce fuels that are immediately adjacent to flammable elements of the structure and to provide a clear access area for fire fighting operations. Zone 1 is an area measured 15-30 feet from the edges of the structure. Ideally, all trees within Zone 1 should be removed to reduce the fire hazard. If a tree or cluster of trees must remain, it will be considered as an integral part of the structure and Defensible Space pursuant to Table A will be measured from the drip line of the tree or tree cluster. This is particularly important if the building is sided with wood or other flammable materials. Decorative rock or irrigated, mowed grass creates an attractive, easily maintained nonflammable ground cover. If the house has noncombustible siding, widely spaced foundation plantings of low growing shrubs or other fire resistant plants are acceptable (Reference CSFS Publication 6.305, *Firewise Plant Materials*) Frequent pruning and maintenance of plants in this zone is necessary. All dead branches, stems and leaves must be regularly removed. All trees within Zone 1 must be pruned to at least 10 feet above the ground, but no more than 1/3 the overall height of the tree (Aspen trees, individual spruce, fir and pine specimens are exempt). All branches that interfere with the structure's roof or chimney must be removed. All ladder fuels (small shrubs, trees, tree limbs and other materials that allow fire to climb into the tree crown) must be removed from beneath the tree or tree cluster.

Zone 2: Is an area of fuel reduction. It is a transitional area between Zones 1 and 3. The size of Zone 2 depends on the slope of the ground where the structure is built (Reference Table A). Within this zone, the continuity and arrangement of vegetation is modified to reduce the intensity of any fire approaching the structure. Trees and shrubs must be thinned so that there is a minimum of 10 feet between crowns. Crown separation is measured from the furthest branch of one tree to the nearest branch on the next tree. All ladder fuels from under these trees must be removed. All trees must be pruned to at least 10 feet above the ground, but no more than 1/3 the overall height of the tree (Aspen trees, individual spruce, fir and pine specimens are exempt).

Zone 2 forms an aesthetic buffer and provides a transition between zones; therefore, it is necessary to blend the requirements for Zones 1 and 3. The inner portions of Zone 2 must be more heavily thinned than the outer portions. Tree density may increase as Zone 2 approaches Zone 3. Isolated shrubs may remain provided they are not under tree crowns. These shrubs must be pruned and maintained for vigorous growth. Dead stems and shrubs must be removed. No more than 2 dead trees per acre should remain for wildlife habitat. Dead trees, which can fall onto a structure or block an access, must be removed.

Zone 3: Is an area of traditional forest management and is of no particular size. Typical management objectives for Zone 3 are: enhance aesthetics; maintain tree health and vigor; provide barriers for wind, noise, dust and visual intrusions. Specific thinning requirements are dictated by the property owner's objectives, however, most thinning will be done leaving the biggest and best trees and on an individual tree basis. Thinning sanitizes and improves the forest stand by removing trees that are damaged, attacked by insects, infected by disease or are of poor form or low vigor.

Definitions

- Forbs -** herbaceous perennial plants other than grasses (wildflowers).
- Crown -** the edge of a tree or shrub=s outer most growth, a tree or shrub=s "drip line"
- "x ht" -** indicates a spacing between shrubs and trees based on the average anticipated mature height of the specific plant. "3x ht" for a shrub with average anticipated mature height of 4 feet indicates a crown spacing of $3 \times 4 = 12$ feet.
- Ladder Fuel -** live or dead plant material that facilitates or supports the movement of fire from the surface of the ground into the canopy or crown of larger shrubs or trees.
- Isolated -** a single plant with significant spacing ($> 4x$ ht) from other similar plants. Very low density.
- Dispersed -** widely spaced individual shrub or trees (crowns spaced $> 2x$ ht) or widely spaced small clusters of plants, evenly distributed across the site. Low to medium density.
- Clustered -** two or more plants (maximum number allowed per cluster would be relative to the size of the site) growing in close proximity to one another, but significantly spaced from other similar plants or clusters of plants. Low to medium density.
- Discontinuous -** Plants touching but in "bands" separated by significant spaces, resulting in a "patterned" rather than uniform coverage on the site. Medium density.
- Continuous -** plants touching or in very close proximity to one another, resulting in uniform coverage of the site. High density.
- Understory -** plants or mix of plants growing below a stand of taller plant species.
- Desert shrub -** rabbit brush and other woody xeric species commonly found with sage, < 4 feet tall.
- Tall shrubs -** sage (>4 feet), oak, service berry, choke cherry, mountain mahogany, skunk bush (sumac),bitter brush, etc.
- Mixed shrub -** sage, desert shrubs within and beneath tall shrub species, 50/50.
- Mixed coniferous stand -** lodgepole with spruce/fir understory.



Ben Gerdes <ben.gerdes@eaglecounty.us>

Berlaimont Estates

karl bauer <kbauer@eagleriverfire.org>

Fri, Sep 13, 2013 at 10:09 AM

To: Eric Lovgren <eric.lovgren@eaglecounty.us>, Dominic Mauriello <dominic@mpgvail.com>

Cc: Ben Gerdes <ben.gerdes@eaglecounty.us>, Allison Kent <allison@mpgvail.com>, Vaclav Vochoska <vaclav.vochoska@cimex.cz>, Chris White <cwhite@anchorpointgroup.com>, Gail Mcfarland <gmcfarland@eagleriverfire.org>

Thank you, Eric for your comprehensive letter, which describes the mitigation strategies one which we had agreed regarding Berlaimont Estates. Your letter appropriately and adequately addresses ERFPD's concerns with regard to access and wildfire mitigation.

Dominic, we have nothing to add to Eric's letter. Please let me know if I can be of further assistance.



Eagle River Fire Protection District

Ready to Serve

Karl Bauer, Fire Chief

[970 748-4765](tel:9707484765)kbauer@eagleriverfire.org

Eagle River Fire Protection District is a professional fire service agency and proudly serves Camp Hale, Tennessee Pass, Redcliff, Minturn, EagleVail, Avon, Mountain Star, Wildridge, Beaver Creek (Contractual agreement), Bachelor Gulch, Arrowhead, Homestead, Edwards, Lake Creek, Singletree, Pilgrim Downs, Cordillera, Bellyache Ridge, Red Sky Ranch and portions of I-70, Hwy 6 &

18-CV-887-09552



MEMORANDUM

To: Ben Gerdes, Senior Project Engineer

From: Scot Hunn, Senior Planner

Date: September 23, 2013

RE: Berlaimont Estates Access / Eagle County File No. VIS-4398

Please accept the following comments on behalf of the Eagle County Planning Department relative to the variance request associated with the Berlaimont Estates residential development proposal. The following comments generally reflect comments provided by the Planning Department in 2010 with regard to a similar request:

1. Construction of the new access road, both on and off of the Proponent's property, as well as construction of each new structure, will necessitate compliance with the county's Hillside Development Regulations (*Chapter II, Article 4, Section 4-425 Hillside Development, of the Eagle County Land Use Regulations*). The Hillside Development Regulations are intended to minimize site disturbance on steep slopes, protect the integrity and aesthetic of the hillside by limiting alteration to topography and natural drainage ways and to recognize community concerns related to development and its impact on visually significant hillsides such as the subject property.
2. Pursuant to Chapter VI, Matters of State Interest of the Eagle County Land Use Regulations, any new water distribution system or common sewerage disposal system that will provide water and/or sewer service to ten (10) or more single family residences will necessitate 1041 Permit review and approval by the Eagle County Permit Authority.

3. Given the location of the subject property on steep highly-visible terrain north of Edwards, it is not situated within a desirable growth boundary. The Community Vision Statement set forth in the Edwards Area Community Plan states that, "Further development should be limited north of I-70 as the area is a winter range for deer".
4. The subject property and surrounding lands are located within mapped Deer and Elk Winter Range habitat; every effort should be made to protect this valuable wildlife habitat and minimize the impacts upon wildlife that will be realized by the proposed development and access road.
5. As an alternative to this variance request, the applicant may construct a driveway versus a county standard road and receive building permits for up to a maximum of three residences. Prior to construction of a driveway the applicant must receive a Grading Permit from the Eagle County Engineering Department. The Eagle River Fire Protection District must also approve the driveway access, emergency vehicle passing and turn around areas as well as a water supply for fire fighting purposes. Construction of a driveway must comply with the Hillside Development regulations but will not require a Variance from Improvement Standards.
6. Considering the applicable variance standards (Section 5-260.G.2, Eagle County Land Use Regulations), staff questions the establishment of "hardship" in this case and whether any such hardship 1) has been, or would be, caused by the actions of the applicant, and; 2) whether strict application of the regulation or standard in question would result in an "exceptional and undue" hardship on the owner of the property. As noted above (No. 5), alternatives for development and beneficial use of the property exist using the County's driveway standards.



COLORADO PARKS & WILDLIFE

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wildlife.state.co.us • parks.state.co.us

September 11, 2013

Eagle County Community Development
Attn: Ben Gerdes
Box 179
Eagle, CO 81631

RE: VIS-4398 Berlaimont Estates Variance from Improvement Standards

Dear Mr. Gerdes,

The Colorado Parks and Wildlife (CPW) has reviewed this project and we offer the following comments for your consideration.

General comments:

The traffic study refers to 19 single family homes (19 lots) with a limit of 9 accessory dwelling units for a total of 28 units. However the mechanism to limit the number of accessory unit is not fully detailed. There is no discussion on whether this restriction would include mother in law units within the primary residence. The traffic study seems to be in conflict with the NW CCOG study on trips generated by second homes where second homes are referred to as mini factories.

The traffic study does not seem to factor in the number of trips generated by the extended period of home construction. The study does not provide or discuss how the number of recreation trip was determined or when they would occur.

The proposal does not address the public's ability to pull off the road to recreate without creating a safety hazard.

The proposal does not address the impacts from increased recreation activity (year round) both on and off the paved road and the surrounding USFS lands. Nor does the proposal discuss the impact from current recreation users being displaced to other location and the impact to wildlife from this change in use patterns.

The project does not appear to meet the intent of Eagle County's Comprehensive Plan:
3.7.3 Development Impacts

Policies:

- a. Development in areas critical to the continued well being of Eagle County's wildlife populations should not be allowed.

STATE OF COLORADO
John W. Hickenlooper, Governor • Mike King, Executive Director, Department of Natural Resources
Steven M. Yamashita, Acting Director, Colorado Parks and Wildlife
Parks and Wildlife Commission: Robert W. Bray • Chris Castilian • Jeanne Home
Bill Kane, Vice-Chair • Gaspar Perricone • James Pribyl • John Singletary, Chair
Mark Smith, Secretary • James Vigil • Dean Wingfield • Michelle Zimmerman
Ex Officio Members: Mike King and John Salazar

18-CV-887-09555

- b. Where disturbances to wildlife habitat cannot be avoided, development should be required to fully mitigate potential negative impacts.

Finally, this Comprehensive Plan recognizes that impacts to wildlife from development and human activity cannot always be fully mitigated. Existing critical wildlife habitats in Eagle County should be identified and preserved, and residential, commercial and recreational development that removes critical habitat, or diminishes the use by wildlife of these habitats, should not be allowed.

Wildlife Comments.

The EIR was written to meet requirements for the USFS review, which has significantly different guidelines and requirements for assessing wildlife impacts and mitigation than the county. Environmental assessments for the USFS are done looking at a Region wide level (including other states). Environmental reports for a county project focus on the local resources and impacts within the county boundaries. The EIR is the same one submitted in 2010, the EIR in 2010 contained inaccurate and outdated information and has not be updated or corrected for this application.

Overall the EIR section is lacking in addressing the impacts of increased use from all forms of recreation (motorized and non-motorized) on all wildlife species. There are numerous studies that have documented wildlife impacts from increased human disturbance. With the road paralleling a riparian area the impact to nesting birds and small mammals is overlooked. There is no discussion on the possible impacts to the aquatic habitat from increased runoff due to the impervious surface of the road or from the oil and gas residue on the road. The road construction is stated to take more than one year but there are no discussion on restricting the construction time periods to avoid critical wildlife periods such as winter and nesting.

Mule Deer: The following mule deer habitats are within the project area; migration corridor, winter range, severe winter range, winter concentration area. These habitats are listed as Critical Habitats in Eagle County. The loss of these habitats would result in a reduction in population levels. The CPW updated the Data Analysis Unit (DAU) for the Upper Eagle River Valley deer herd (DAU D8) 2009. The population objective was lowered due to loss of winter range from the impacts of development and recreation. The Commissioners and public all voiced a concern about a reduction in the population objective for this deer herd. This proposed project could result in a further reduction in the population levels.

Elk: The following elk habitats are within the project area; winter range, severe winter range, winter concentration area. Severe winter range, winter concentration areas are listed as Critical Habitats in Eagle County. The Data Analysis Unit (DAU) for the

Upper Eagle Valley (E12) was updated this year. The loss of these habitats could result in a reduction in population levels.

Sage Grouse: The 2010 Biotic Assessment incorrectly states there has been no sage grouse activity in the project area for at least 20 years. Sage grouse use of the Red Canyon to June Creek drainages have been document in the past but only from spring surveys that found sage grouse fecal droppings but no birds were observed. During the winter of 2009-2010 the CDOW documented sage grouse use of this area with a radio tagged sage grouse. The radio locations placed the sage grouse on both private land and USFS lands within the area impacted by the proposed road. On the ground surveys confirmed that there was more than one sage grouse in the area during the winter of 2009-2010. In June 2012 sage grouse (one adult female and 3 chicks) were observed in the same general area as the radio locations for the winter of 2009-2010. There have been petitions filed to list Greater Sage Grouse on the threatened and endangered list. Both CPW and USFS have funded a project in the area to remove Pinyon and Juniper trees to improve sage grouse habitat along with projects to improve sagebrush and increase desirable grasses and forbes. Recent studies are verifying that sage grouse require sagebrush-dominated landscapes with minimal levels of anthropogenic disturbance. Reducing human disturbance along with protecting and improving isolated pieces of intact sagebrush ecosystems could contribute to improving habitat conditions and population trends. This would include preventing further fragmentation of sagebrush habitats. Construction of a paved road along with the increase in human activities though sagebrush habitat would have a negative impact on the habitat values for sage grouse.

Wildlife impacts:

The Biotic Report downplays the significant impacts from the development of this road and project on wildlife. The road will bisect what is generally considered the second largest migratory mule deer herd in Colorado. Yet there are no discussions on how to minimize this impact other than road cuts should be minimized. In order to accurate assess road kills on a road would require a valid survey and associated field survey to determine the number of animals struck but not killed on the roadway. The road to Mountain Star was used as an example of a road that crosses the migration corridor but Mountain Star Road does not provide a comparable example.

- The Mountain Star Road was required to install spanning bridges sufficient to allow big game migration.
- The Mountain Star road does not cross or have mule deer severe winter range, winter concentration areas nor does it have elk severe winter range and winter concentration areas.

The EIR also attempts to treat the different levels of winter range as being the same quality and value. This proposal would have the single largest impact to winter concentration areas and severe winter range for deer and elk of any recent project in the Upper Eagle River Valley.

The EIR does correctly point out the negative impacts to wildlife from guard rail and snowplowing on the ability of wildlife to safely traverse the roadway. However the EIR only speaks to big game and not the impacts on all wildlife. Further the EIR does not address the impacts from sanding and deicer materials used to maintain the road way in the winter. The impacts on wildlife from roadway areas melting out earlier in the spring and the attraction of wildlife to the green grass adjacent to the roadway are not assessed or addressed.

There is no discussion on the cumulative impacts to wildlife from road development and associated recreation impacts in the project area or surrounding area.

Because of the high level of winter wildlife use the proposed road would have a significant impact on wildlife and the potential for wildlife/vehicles accidents would require additional measures to improve both road safety and reduce the impacts on wildlife. The road design should include spanning bridges over streams and gullies and areas requiring cuts should be designed with wildlife overpasses (putting the vehicle traffic in tunnels). These measures would reduce road kill and improve the safety of the road while helping to maintain wildlife connectivity. The road design should be based on a 20mph speed limit and the plan should include funding to provide routine law enforcement of the 20 mph speed limit.

Mitigation:

The proposal does not address any wildlife mitigation as is required by the Eagle County Comprehensive Plan.

- Road design should maximize the use of spanning bridges and wildlife over passes to prevent and reduces wildlife/vehicle accidents and maintain habitat connectivity for wildlife. This may include placing the road in a tunnel to provide safe passage for wildlife over the top of the road.
- Road speeds should not exceed 20 mph. Fines and points for speeding should be doubled due to the heavy level of wildlife use on the proposed road. The development should fund the cost of providing law enforcement personnel for speed control.
- The project should fund a person to remove any road kills to prevent additional road kills of raptors or other predator from feeding on the carcasses.
- Mitigation for acres of deer and elk winter concentration area impacted at a rate of 10 acres to 1 acre. Winter range for mule deer at a rate of 1.5 acres to 1 acre. Winter concentration areas for both deer and elk at a rate of 5 acres to 1 acre.
- Pull outs need to be of sufficiently size and number to provide for public parking for recreation needs along the road.
- No road construction from January 1 to May 1.
- No blasting during nesting periods generally May 1 to June 15.

- All mitigation should be for the life of the project and should treat sufficient acres every three years to offset the impact to wildlife.
- Finding locations to complete the mitigation can be difficult. As such the development should fund all the necessary environmental studies and reviews required by the USFS to complete the necessary mitigation adjacent to the project area.
- Mitigation should be done within a 4 mile radius of the project but not directly adjacent to the road to prevent mitigation projects from attracting wildlife to the roads.

Thank you for the opportunity to provide these comments. The CPW looks forward to providing additional comments if this project proceeds. If you have questions please contact DWM Bill Andree at 970- 328-6563.

Sincerely,

Perry Will
Area Wildlife Manager

cc: DOW – R.Velarde, B.Andree, file