

WILDFIRE MITIGATION PLAN

For James E. & Sharon Clement
11935 Peak to Peak Hwy, Allenspark, CO
Docket: 06-109
Inspection date: 2/7/2007



Knowledge to Go Places

Prepared for:
James E. & Sharon Clement
3100 Grist Mill Ct.
Kettering, Ohio 45409-1109
Phone: (937) 299-6336

Prepared by:
Nicole Palestro
Boulder District
Phone: (303) 823-5774
E-mail: Palestro@lamar.colostate.edu

Boulder District
5625 Ute Highway
Longmont, Colorado 80503-9130
(303) 823-5774

PURPOSE OF A WILDFIRE MITIGATION PLAN

The purpose of a Wildfire Mitigation plan is to give guidelines to reduce wildfire hazards around a home or other structures through fuels reduction. It is a document to inform urban interface home owners of the dangers and responsibilities of living in the interface. This plan will help outline the initial and ongoing fuels reduction needed to create and maintain an effective wildfire defensible space. However, having a wildfire mitigation plan, implementation of a defensible space thinning, and following all the recommendations as outlined in this plan **does not guarantee that your home will survive a wildland fire; however, in combination they will give your home the best potential probability to survive a wildland fire.**

SITE LOCATION AND PROPERTY DESCRIPTION

The property is located at Section 14, Township 3N, and Range 73W, Allenspark, CO. The fire protection district is the Allenspark Fire Protection District (303-747-2586). There will be new residence with a detached garage built on the site. The lot is 2.02 acres in size and has a 3-5% percent slope with an eastern aspect. The residence is at 8,435 feet in elevation, and has total of 3,593 square feet. The proposed building site is in a valley and it is a relatively dry site. The main highway to the west of the residence will create a small natural barrier that may help stop or slow the spread of a surface/crown fire on the site.

CONSTRUCTION DESIGN AND MATERIALS

The proposed house has a relatively simple design with a moderately complex roofline and is oriented with a southern aspect. **The overall design to the structure greatly influences how it will withstand a wildfire. Complex building forms create heat traps, areas where the walls and roof members intersect one another where eddies form and hot air and embers from a fire can collect. It is important to keep these areas clear of combustibles such as needles and brush.**

The roofing material will consist of asphalt shingles. **Falling embers and fire brands from a wildfire can land on a roof and ignite the roof, either by directly heating the roofing material, or by igniting light fuels (pine needles) that have collected on the roof. It is recommended to place screening over gutters and/or make a yearly check to keep them clear of leaves and needles.**

The exterior wall material is to be log siding. Soffits are to be 3/8" thick fir plywood.

The structure has 21 medium sized windows with the primary viewing direction being toward the north. Windows will be double glazed with low e-coating and tempered glass where required by building code. Frames will be made of aluminum clad/wood. Exterior doors are to be 1-3/4", fire-rated, and made of aluminum clad/wood. **All operable windows must be provided with screening that is constructed of either aluminum, galvanized steel, stainless steel, copper or of an approved material that, when exposed to flame for 15 seconds, will not burn through or melt, and remains intact. Windows are one of the weakest parts of a structure with regards to wildfire. They often crack and fail before the structure itself ignites, providing a direct path for embers and radiant heat to reach the interior. It is best to minimize the number if windows, especially on the downhill side of the structure.**

A deck will be constructed of cedar materials and supported by log posts. The deck will be open underneath and covered overhead. It will be isolated from the surrounding landscape with crushed rock over a fiberglass mesh weed barrier. This material will be spread underneath the entire deck surface and to 2' past the drip-lines of the deck.

UTLITES

The propane tank is set on a pad of crushed rock overlaying a fiberglass weedbarrier located ~20 feet east of the residence. Utilities for the property will be buried from a pole located ~60 feet to the northeast of the residence. A well will be located ~63 feet to the southwest of the residence. The septic field will be located ~ 37.5 feet to the northeast of the residence.

DRIVEWAY ACCESS FOR EMERGENCY VEHICLES

To access to the property from Lyons take South Saint Vrain west to Lane Guest ranch Road then go east. The proposed driveway will create additional site disturbance and soil compaction and will require the removal of a few trees. The driveway is 41 feet long therefore no turn-arounds will be required or present. The driveway is less than 400 feet and will have a pull-out located near the entrance of the property. **The driveway will be 12 feet wide with a vertical clearance of 13'6" and have a grade that is less than 12%.**

EMERGENCY WATER SUPPLY FOR FIRE FIGHTING

The water source will be from a 2,500 gallon fire cistern located ~60 feet to the south of the residence. **All water sources should be clearly marked and clear of brush. The cistern will be located a minimum of 50 feet from the front of the house and no further than 150 feet from the rear of the structure. The cistern will have a dry hydrant connection with a 6 inch NH threaded connection and cap.** Contact the Allenspark Fire Protection District (303-747-2586) for more information and specific details.

FUELS REDUCTION

All trees to be removed are marked with blue spray paint. All trees that are to remain within zones 1 and 2 will be unmarked. If the property is less than 1 acre it may not have zones marked due to boundary interference. Harvested wood that remains on site will be stacked at least 30 feet from the house and at the same elevation when possible. Slash from the harvest will be hauled off site. Note that if you decide to burn piles, you must obtain a valid Open Burning Permit from the Boulder County Environmental Health Department (303-441-1180) and notify your local fire protection district (Allenspark Fire Protection District (303-747-2586)).

FOREST COMPONENT AND HEALTH

The site has a dominate overstory consisting of lodgepole pine (*Pinus contorta*) with a lodgepole pine, ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsuga menziesii*), subalpine fir (*Abies bifolia*), and trembling aspen (*Populus tremuloides*) component. The understory component consists of a sparse cover of grasses, shrubs and forbs. The area is predominantly fuel model 9. Fuel model 9 is represented by closed canopy stands of ponderosa pine and mixed conifer. Understory may consist of small trees and shrubs, grasses and moderate concentrations of down woody litter. High amounts of needle litter may be present. This model can exist from the foothills to subalpine. There is a moderate infestation of mountain pine beetle and dwarf mistletoe present at the time of inspection.

DEFENSIBLE SPACE MANAGEMENT

There are three defensible space zones to be created around the structure(s) on the site. Please note that it is possible that one or more of these zones will cross over the subject property onto adjacent properties. Property boundaries must be respected; mitigation work is not required beyond immediate boundaries. However, landowners are encouraged to contact and work with neighbors if property lines limit the ability to mitigate within the prescribed area. **Defensible space is a benefit, not only to the individual but also to the community as a whole.**

Zone 1 - Starts at the foundation and extends out 15 feet in all directions from the outside edge of the structure(s). Zone 1 is broken down into three segments:

Zone 1A - Consists of the structure(s) themselves and the area immediately adjacent to and surrounding the structure(s) on all sides. A three-foot wide, non-flammable strip will be created using crushed rock over a fiberglass weed barrier material. This strip will also extend back under, and out to, two feet past the drip line of any decks.

Zone 1B - Extends out from Zone 1A. In this zone, all highly flammable vegetation is to be removed. Any large dead woody material on the ground will also be removed. Firewise plants will be used for landscaping and re-vegetation. Grasses will be irrigated when possible and mowed to a maximum height of 6 to 8 inches twice per growing season to a distance of 30 feet from the structure.

Zone 1C - This zone extends out from Zone 1B to 15 feet from the house. All understory trees (ladder fuels) will be removed as marked. These are small seedling and sapling size trees that can be ladders for fire to get in the crowns of the larger trees. A few of the larger, healthy trees are to be retained for screening. All remaining trees in this zone will be pruned to a height of 10 feet. They must be well spaced so that the crowns are not touching (10 foot minimum crown spacing). **No trees will overhang the house or decks, unless approved by Boulder County or CSFS as "part of the structure" with additional fuels reduction around those trees to insure the defensible space integrity.** Trees should be at least 15 feet away from the house on all sides, and a minimum of 10 feet from chimneys.

Zone 2 - This zone extends out from Zone 1C, and acts as a transition zone between the heavily thinned areas near the house to the existing forest setting. It extends down slope between 100-170 feet depending upon slope steepness. Zone 2 also extends on either side of the structure a minimum of 100 feet and behind the house between 70-100 feet assuming no boundary restrictions. Tree spacing begins as in Zone 1C and gradually decreases as you approach the outer edge of the zone. Thinning and crown spacing becomes greater in areas of steep slopes. Ladder fuels and poor quality, suppressed and/or diseased trees, 6 to 8 inches in diameter, make up the majority of the removals. **The remaining mature trees will be pruned to a height of 10 feet at the intersection of Zones 1 and 2 with limbing reduced in height to 6 feet as you approach Zone 3.** If there are any questions pertaining to slope and the changes in thinning spacing and distance regulations please refer to www.colostate.edu/Depts/CSFS/ and find the *Quick Facts 6.302 Creating Wildfire Defensible Space*.

Zone 3 - This zone extends out from Zone 2 to the edge of the property. It may extend out to areas that are not part of the immediate mitigation efforts. In this zone, a few thicker clumps of trees are acceptable, as well as some unpruned trees near the outer edge. Thinning in this zone adds some protection, but is aimed more at forest health. Trees that are of poor quality or form, or have insect or disease infestations, should be removed. Slash in this zone can be lopped and scattered and/or piled for wildlife use.

- Thin suppressed trees and trees with disease and insect infestations and retain the larger, healthier trees.
- Snags should be retained for wildlife.
- Some slash in this zone can be lopped and scattered and/or piled for wildlife enhancement and shelter.
- Large amounts of slash should be disposed of by chipping, hauling to an approved site, or burning.
- For burning permits, check with your local fire protection district.

MAINTENANCE AND RECOMMENDATIONS

As detailed in fact sheet 6.302, *Creating Wildfire Defensible Zones*, an important factor that determines a structure's ability to survive wildfire is defensible space. Defensible space is a maintained area around a structure where fuels (flammable materials) are modified to slow the possible spread of wildfire to the structure, as well as from the structure to the surrounding areas. Defensible space provides a place where structure protection and fire suppression operations may occur. Wildfire hazard mitigation work breaks up fuel continuity, potentially decreasing a wildfire's intensity, and for more effectiveness should be completed beyond a home's defensible space, zone 1 and 2, area into zone 3.

In addition to the above recommendations, several other measures can be taken to make your home more fire safe and add an additional measure of safety for your family. While not required through site plan review, the following measures should be undertaken to maintain the home and defensible space in the future.

- Maintain your defensible space yearly; contact your local forester for a 5-year maintenance inspection
- Establish an escape route and safety zone with the aid of your local fire protection district
- Keep firewood at least 30 feet away from buildings; clear weeds and grass from around pile
- Do not stack fresh cut wood against live trees – this could invite unwanted insects
- When possible, maintain an irrigated green space; mow grasses 6" to 8" high
- Connect, and have available, a minimum of 50 feet of garden hose with an adjustable nozzle
- Have an emergency evacuation plan in place (included in wildfire mitigation plan)
- Be aware of fire danger; check the Boulder Fire Weather website at www.crh.noaa.gov/bou/awebphp/fireindx.php.html
- Keep driveways and property address marked with reflective easy to see signs
- Maintain screens on foundations, soffit vents, roof vents, and attic openings
- Get rid of unnecessary accumulations of debris and trash from yards
- Keep tools such as shovels, rakes, ladders, and axes available and ready for use
- Clean debris from the roof and gutters at least two times annually
- Check screens and maintain spark arresters on chimneys annually
- Avoid storing combustibles under decks such as wood piles, scrap lumber, and fuels

DEFINITIONS

Aspect – Exposure. The direction a slope faces.

Canopy – The cover of branches and foliage formed collectively by crowns of adjacent trees.

Crown – Branches and foliage of a tree.

Dominant fuel type – Matter that would carry a fire, found on the ground.

Fuel Model – A number system that identifies the types of fuels found on the property that will directly influence fire behavior

Fire danger - An assessment of both fixed and variable factors of the fire environment, which determine the ease of ignition, rate of spread, difficulty of control, and the fire impact.

Fire hazard - The potential fire behavior for a fuel type, regardless of the fuel type's weather-influenced fuel moisture content or its resistance to fireguard construction. Assessment is based on physical fuel characteristics, such as fuel arrangement, fuel load, condition of herbaceous vegetation, and presence of elevated fuels.

Fire management - The activities concerned with the protection of people, property and forest areas from wildfire and the use of prescribed burning for the attainment of forest management and other land use objectives, all conducted in a manner that considers environmental, social and economic criteria.

Fire risk - The probability or chance of fire starting determined by the presence and activities of causative agents.

Fire season - The period(s) of the year during which fires are likely to start, spread and do damage to values-at-risk sufficient to warrant organized fire suppression; a period of the year set out and commonly referred to in fire prevention legislation. In B.C. the fire season is considered to extend from April 1 to October 31.

Fuel continuity – The proximity of fuels to each other. Helps determine if a fire can sustain itself.

Forest ecology - The relationships between forest organisms and their environment.

Forest health - A forest condition that is naturally resilient to damage; characterized by biodiversity, it contains sustained habitat for timber, fish, wildlife, and humans, and meets present and future resource management objectives.

Ladder fuels - Fuels that provide vertical continuity between the surface fuels and crown fuels in a forest stand, thus contributing to the ease of torching and crowning.

Limb (verb) –To remove the branches from a tree.

New forestry - A philosophy or approach to forest management that has as its basic premise the protection and maintenance of ecological systems. In new forestry the ecological processes of natural forests are used as a model to guide the design of the managed forest.

Noxious weeds - Any weed so designated by the Weed Control Regulations and identified on a regional district noxious weed control list.

Overstory – The tree species that forms the uppermost forest layer (dominant and co-dominant).

Snag – Standing dead tree, often used by wildlife such as woodpeckers, owls, and other various mammals.

Wildfire Mitigation Plan – A plan to reduce wildfire hazards around homes or properties.



Annual fire safety checklist

- Thin trees and brush properly within defensible space.
- Remove trash and debris from defensible space.
- Remove needles and pine cones from window wells.
- Remove trees growing through a porch or other portions of a structure.
- Clear leaves and debris from the roof and gutters of structures.
- Remove branches that overhang a chimney or roof.
- Stack firewood uphill from a home or on a contour away from the home.
- Use noncombustible roof materials.
- Place shutters, fire curtains or heavy drapes on windows.
- Place screens on foundation and eave vents.
- Enclose sides of stilt foundations and decks.
- Remove any combustibles from under decks, porches or entrances ways.
- Use a chimney screen or spark arrester in fireplaces.
- Clear vegetation from around fire hydrants, cisterns, propane tanks, etc.
- Place placards on garages if storing flammable materials inside.
- Make sure that an outdoor water supply is available with a hose, nozzle and pump.
- Post address signs that are clearly visible from the street or road.
- Make sure that driveways are wide enough for fire trucks and equipment.
- Check with appropriate highway agencies to make sure load limits are posted on bridges and for the appropriate protocol for posting load limits for bridges on private property.
- Install and test smoke detectors.
- Practice a family fire drill and evacuation plan.

Evacuation tips

- If a wildfire is threatening your area, listen to the radio for updated reports and evacuation information.
- Confine pets to one room and make plans to take care of them in the event of evacuation.
- Arrange for temporary housing with a friend or relative whose home is outside the threatened area. Leave a note in a prominent place in your home that says where and how you can be contacted.
- If your home is threatened by wildfire, you will be contacted and advised by law enforcement officers to evacuate. If you are not contacted or you decide to stay and help defend your home, evacuate pets and family members who are not needed to protect your home.
- Remove important documents, mementos, etc. from the possible fire area.
- Choose an evacuation route away from the fire if possible. Watch for changes in the speed and direction of the fire and smoke.

- Take a disaster supply kit containing:

- Drinking water.
- A change of clothing and footwear for each family member.
- Blanket or sleeping bag for each person.
- First-aid kit and prescription medications.
- Emergency tools including a battery-powered radio, flashlight and extra batteries.
- Extra set of car keys and credit cards, cash or traveler's checks.
- Extra pairs of eyeglasses or other special items for infants, elderly or disabled family members.

Defending your home

Whether you choose to stay to defend your home or to evacuate, complete as many of the following preparations as possible.

- DO NOT JEOPARDIZE YOUR LIFE. NO MATERIAL ITEM IS WORTH A LIFE.
- Wear fire-resistant clothing and protective gear.
- Remove combustible materials from around structures.
- Close or cover outside vents and shutters.
- Position garden hoses to reach the entire house, but do not turn the water on until it is needed. Hoses should have an adjustable nozzle.
- Place large, full water containers around the house. Soak burlap sacks, small rugs or large rags in the containers.
- Place a ladder against the roof of the house on the opposite side of the approaching wildfire. Place a garden hose near the ladder, prepared as described previously.
- Place portable pumps near available water supplies, such as pools, hot tubs, creeks, etc.
- Close all windows and doors. Do not lock them.
- Close all inside doors.
- Turn on a light in each room and all outside lights. Leave them on even during daylight hours.
- Fill tubs, sinks and similar containers with water.
- Shut off gas supplies to structures at outside meters. Shut off propane supplies at the outside meter of the tank.
- Remove curtains made of lace, nylon or other light materials. Close blinds, heavy drapes and fire resistant window covers.
- Move overstuffed furniture into the center of the house, away from windows and sliding doors.
- Cars should be parked in the garage, facing out. Close the windows of the vehicle but do not lock the doors. Leave the keys in the ignition.
- Close the garage door but leave it unlocked. Disconnect automatic garage door openers.

For additional copies of these checklists, visit www.colostate.edu and search for wildfire, view the Colorado State Cooperative Extension fact sheet on [Forest Home Fire Safety](#), or contact the local Cooperative Extension office usually listed under the county government section of your local phone book.

(Information provided by Colorado State University Cooperative Extension and the Colorado State Forest Service.)

Safety Zone Guidelines

A Safety Zone is an area that in the event of a wildland fire you could survive the passing fire without the aid of a fire shelter. A natural safety zone could be an area already burned clean by the fire (in the black), rock areas where flashy fuels are absent, or large bodies of water. A manmade safety zones could be pre-constructed sites such as clear cuts. It should be close enough to your home to consider escape time to reach the safety zone. They should not be located upslope or downwind of the fire or in heavy fuels.

1. Avoid locations that are downwind from the fire.
2. Avoid locations that are in chimneys, saddles, or narrow canyons.
3. Avoid locations that require a steep uphill escape route.
4. Take advantage of heat barriers such as lee side of ridges, large rocks, or solid structures.
5. Burn out safety zones prior to flame front approach.
6. For radiant heat only, the distance separation between you and the flames must be at least four times the maximum flame height. This distance must be maintained on all sides, if the fire has ability to burn completely around the safety zone. Convective heat from wind and/or terrain influences will increase this distance requirement.

Calculations Assuming No Slope and No Wind

<u>Flame Heights</u>	<u>Distance separation</u>	<u>Area in Acres</u>
10 feet	40 feet	1/10 acre
20 feet	80 feet	1/2 acre
50 feet	200 feet	3 acres
75 feet	300 feet	7 acres
100 feet	400 feet	12 acres
200 feet	800 feet	50 acres

Note: Distance separation is the radius from the center of the safety zone to the nearest fuels. When fuels are present that will allow the fire to burn on all sides of the safety zone this distance must be doubled in order to maintain effective separation in front, to the sides, and behind the person.

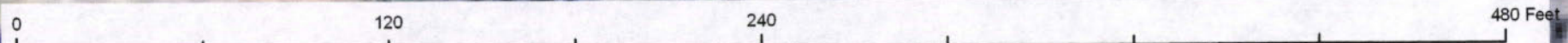
Area in Acres is calculated to allow for distance separation on all sides for a three person family and a vehicle. One acre is approximately the size of a football field or exactly 208 feet x 208 feet.

Example: Given a fire with 10 foot flame heights (no wind or slope). You would need a minimum of 40 feet between you and the flames. So your total safety zone should be 80 feet x 80 feet. If you are settled into the middle of the safety zone you will have a minimum distance of 40 feet to each edge of the zone.

Property of James and Sharon Clement
11935 Peak to Peak Hwy., Allenspark, CO
SPR - 06 - 109

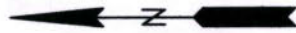


- Legend
- Zone 1
 - Zone 2
 - Cistern
 - Well
 - Propane
 - Driveway
 - Large leaf trees



CLEMENT SITE PLAN

FOR A TRACT OF LAND LOCATED IN THE NW 1/4 OF THE NE 1/4 OF SEC.
14, T3N, R73W OF THE 6TH P.M., BOULDER COUNTY, COLORADO
(N00°00'00"E) (209.00') 208.99'



SCALE
1" = 60'

LEGEND

- TREES LOCATED IN CRITICAL AREAS
- WELL
- PERC HOLE
- 00.00 MEASURED OR CALCULATED DIMENSIONS
- (00.00) PLATTED OR DEEDED DIMENSIONS

LEGAL DESCRIPTION

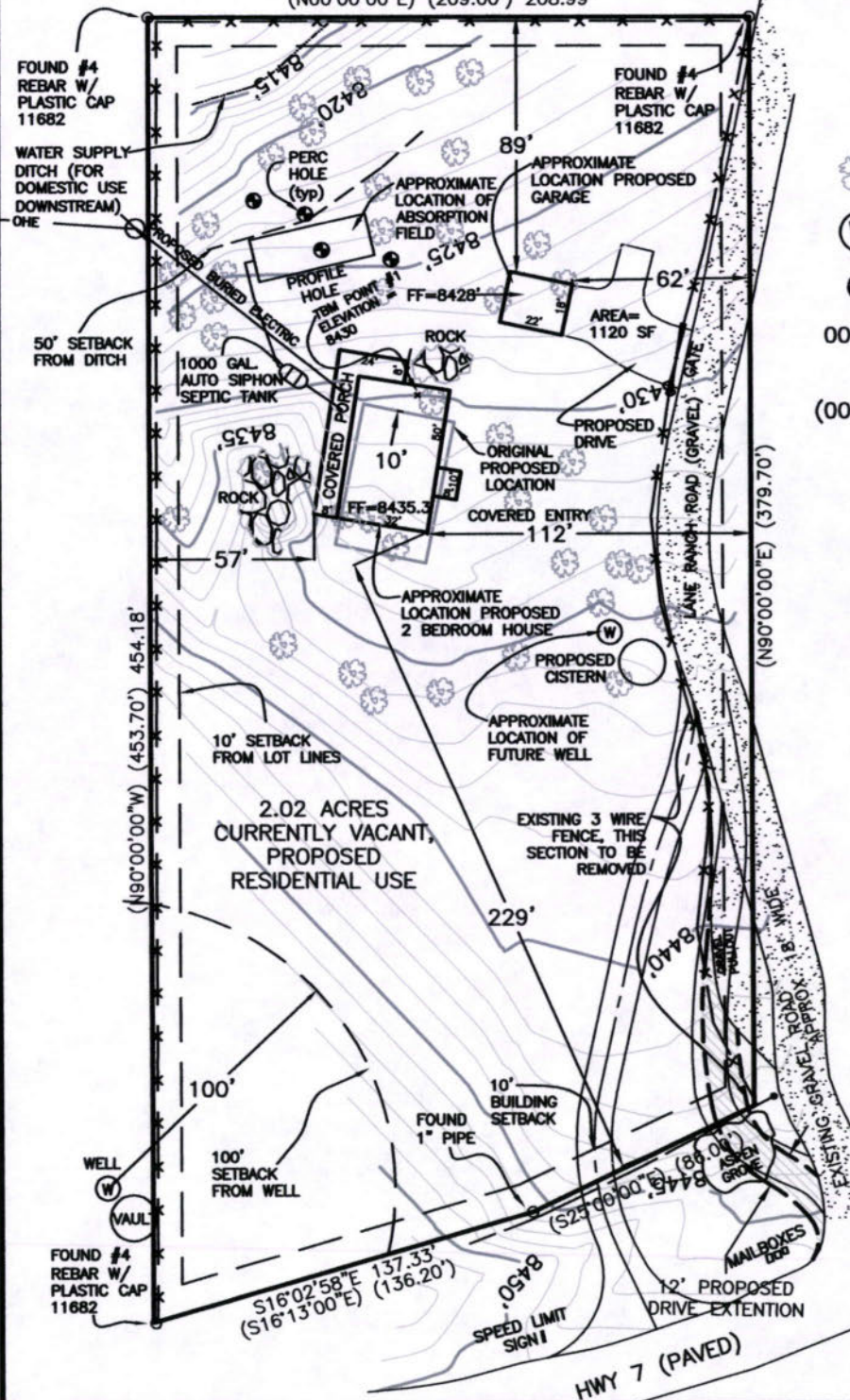
SEE ATTACHED

NOTES

1. THIS SITE PLAN IS REPRESENTATIONAL ONLY AND NOT TO BE INTERPRETTED AS A BOUNDARY SURVEY.
2. MAINTAIN A MINIMUM OF THE FOLLOWING DISTANCES TO THE ISDS: 10' TO PROPERTY LINES, 20' TO DWELLINGS, 50' TO WATER COURSE, 100' TO WELLS.
3. TWO SURVEY MONUMENTS (ONE INCH PIPE) WERE FOUND AT BOTH THE NORTHEAST AND THE NORTHWEST CORNERS OF THE SUBJECT PROPERTY (WITHIN ONE FOOT OF CORNERS SHOWN HEREIN)
4. THE ELEVATION OF THE TEMPORARY BENCHMARK WAS APPROXIMATED FROM THE USGS MAP.

PROPERTY ADDRESS

11935 PEAK TO PEAK DR.,
ALLENSPARK, CO



DRAWN	DATE	VAN HORN ENGINEERING	SCALE	PROJ. NO.
DSF/alp	12-13-06	1043 Fish Creek Road - Estes Park, CO 80517 Phone: (970) 586-9388 - Fax: (970) 586-8101	1" = 60'	05-07-13

DIRECTIONS FOR FILLING OUT FORM:

Please fill out as complete as possible and fax to Nicole Palestro at 303-823-5768 or mail to 5625 Ute Highway, Longmont CO 80503-9130, or bring to scheduled marking appointment.

Any **Bolded** categories will be filled in by the CSFS representative at the time of initial site visit and tree marking for the defensible space. If you have any questions about this form please contact Nicole Palestro at 303-823-5774.

Wildfire Mitigation Plan
FIELD DATA FORM

Inspection Date: 2-7-07

Landowner name: James E. & Sharon L. Clement

Mailing address: 3100 Grist Mill Ct.

City, State. Zip: Kettering, Ohio 45409-1109

Site address: 11935 Peak to Peak Dr., Allenspark Co.

Phone number: 937 299 - 6336

Road access: Direct access from Hwy 7 via Lane Guest Ranch Rd (Directions from main access road)

Docket Number: SPR-06-109 (SPR, LU, Etc.)

Section: 14

Township: 3N

Range: 73W

Legal Description: TRACT 4157 14-3N-73 2 AC M/L PER DEED 832264 03/09/87 BCR PROPERTY ADDRESS: 011935 PEAK TO PEAK ** MOUNTAINS

720-5642625

FPD: ALLENS PARK

Dominant fuel type: Grasses, Forbs, Shrubs (Grass/forbs/shrubs/slash/etc)

Dominant overstory: Lodgepole pine

Ground juniper

Co-dominant overstory: Ponderosa, Aspen

Fuel model type: 9

Slash disposal: To be hauled (Chipped/hailed/burned/lop-scatter)

Aspect: _____ (Direction of slope)

Slope: _____

Elevation: 8,435.3 (feet)

Building site: _____ (Chimney/saddle/valley/ridge/mid-slope)

Site moisture: DRY

Natural fire barrier: _____

Insect & Disease Diagnosis: _____

Lot size (acres): 2.02 (Acres)

Number of Structures: 2 (All structures to be present)

Existing Structures: 0 (House/barn/garage/etc.)

New Structure: House and Garage (House/Barn/new addition/etc..) *Detached*

Driveway length: 41' (Actual length in feet from road to home)

Driveway trees removed: few (few/many/none)

Home buffer material: crushed gravel (Stone/crushed gravel/decorative stone)

House design: simple (simple/complex)

Roof Design: simple (simple/complex)

Roof material: Asphalt shingles (Asphalt shingles/concrete tiles/metal)

Soffits type: 3/8" fir plywood (Plywood/hardboard/cement board)

Siding material: log siding (Cement/hardboard/log/stucco/stone/wood)

Windows (#): 21 (approximate number of windows)

Windows Size: medium (On average: small/medium/large)

Windows Frames: aluminum clad/wood (Wood/aluminum/aluminum clad)

Windows Aspect: North (Dominant viewing direction)

Window Construction: e-coating (Tempered glass/e-coating/etc.)

Door Material: aluminum clad/wood (Wood/steel/fiberglass/composite)

Deck material: cedar (Wood/composite materials)

Deck Description: covered porch (Enclosed/open)

Deck support type: log post (Timber posts/logs/steel/concrete/stone)

Deck buffer material: crushed gravel (Crushed rock/gravel)

Deck weed barrier: fiberglass mesh (Fiberglass/polyester)

Structure SQR. FT.: 3,593 (house, garage, covered porch) (Total square feet of structure)

Utility Location: Pole/buried (Pole/buried: Direction from structure)

Structure aspect: South (Dominant facing direction/view)

Leach field: 37.5' Northeast (Distance from house, and direction)

Cistern: 60'/South (Distance from house, and direction)

Cistern Type: Fire Cistern (Domestic Cistern or Fire Cistern)

Cistern size: 2,500 (gallons)

Well (if applicable): 63'/South West (Distance form house, and direction)

Propane Tank location: 20'/East (Distance from house and direction)

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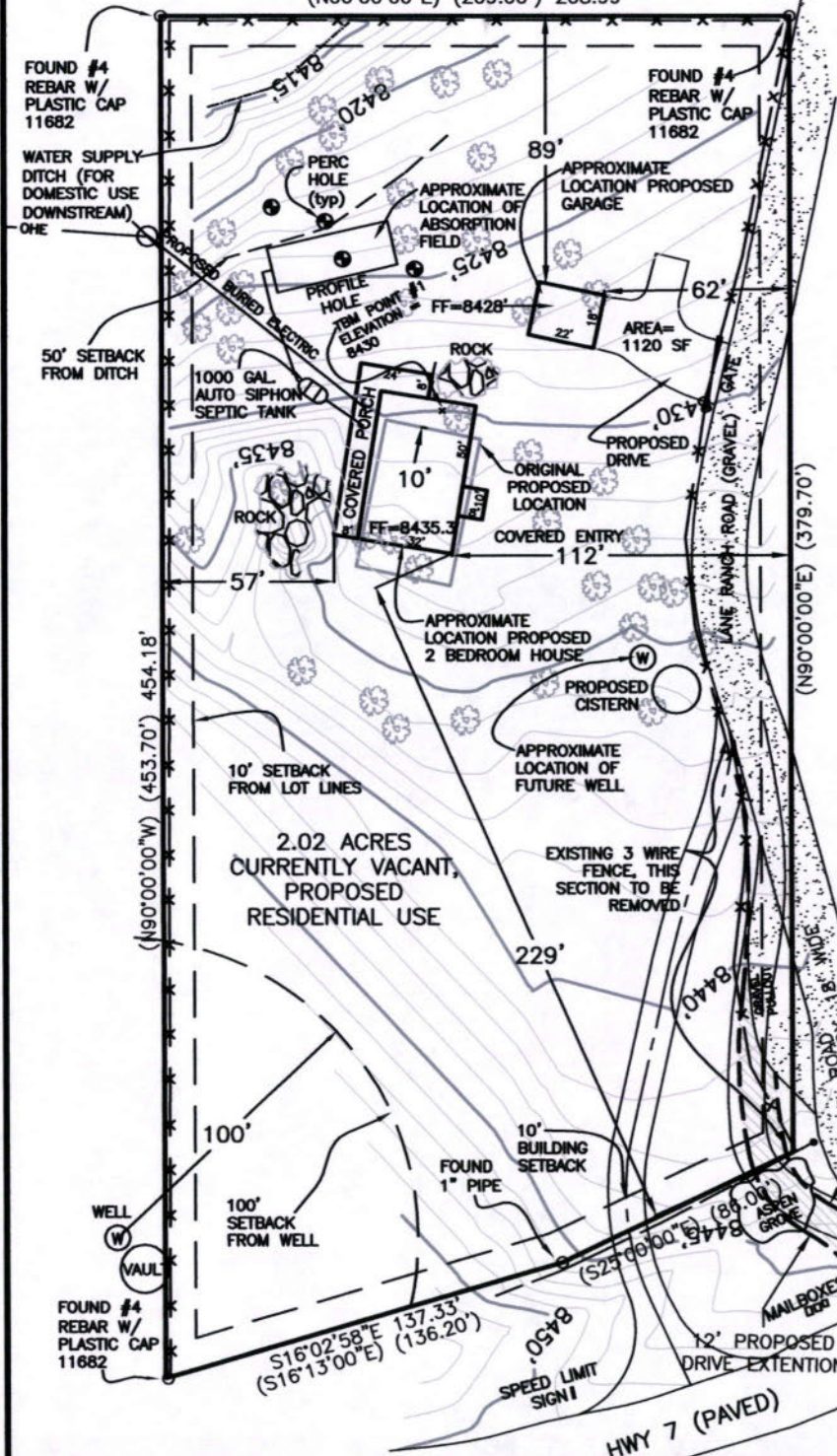
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11935 PEAK TO PEAK DR.,
ALLENSPARK, CO



DRAWN	DATE
DSF/alp	12-13-06

VAN HORN ENGINEERING
1043 Fish Creek Road - Estes Park, CO 80517
Phone: (970) 586-9388 - Fax: (970) 586-8101

SCALE	PROJ. NO.
1" = 60'	05-07-13

Wildfire Mitigation Plan

Owner: James E. & Sharon L. Clement
Address: 11935 Peak to Peak Highway, Allenspark, CO 80510
For Docket: SPR-00-000 & Permit BP-00-00

Prepared By: Jim & Sharon Clement
Address: 3100 Grist Mill Court, Kettering Ohio 45409
Phone: Work: 937.415.0368 Home: 937.299.6336
Email: j.e.clement@att.net or sharon.clement@att.net

Site Location and Property Description

Legal Description: TRACT 4157 14-3N-73 2 AC M/L PER DEED 832264 03/09/87
BCR PROPERTY ADDRESS: 011935 PEAK TO PEAK **
MOUNTAINS

The lot is approximately 2 acres in size. The northwest corner of the lot is 8,452 feet in elevation. This is the highest point in the lot.

There are currently no existing structures on site.

The proposed building site has a 0% slope with a northwest to southeast aspect. It is located on a level plain next to two rock outcroppings. It is a relatively mesic site.

Natural barriers to prevent the spread of a surface fire on the site include rock outcroppings (that will be located to the northeast of the structure) and an aspen stand on the east side of the proposed residence. A major dirt road (20 feet in width) is located on the southern portion of the property and also provides a barrier to surface fire spread.

Because of the topography and availability of water, the site has a low wildfire hazard (the Doud ditch runs through the eastern edge of the property and Horse Creek is located approximately 150 yards from the eastern property line).

Construction Design and Materials

As a result of the potential wildfire concern for the site, the proposed structures will be constructed to meet Ignition-Resistant (IR) requirements. The main structure (residence) is to be oriented to the northwest and runs southeast along its major axis. It will have a relatively simple design and a simple roofline.

All roofing material will be Class A asphalt shingles. Aluminum gutters with screen will be used to collect runoff water from the roof. The finished exterior wall surface material will be hardboard log siding. All trim will utilize weather treated hard wood. Soffits and fascia will be ½" thick hardboard.

There are many large windows on the northwest side of the proposed structure. Windows will be aluminum-clad wood framed units with double pane (low-e coated) glass.

Wildfire Mitigation Plan

Tempered glass will be used when required by building code. Exterior doors are to be fire-rated, 1 ¾" thick and made of steel with a tempered glass insert.

The covered porches will be made of hardwood and supported by log post support columns. The porches will be open and isolated from the surrounding landscape. Beneath the porches, the exposed landscape will be covered with crushed gravel over a polyester weed barrier material.

Electric Power will be accessed (see Power Line Easement Agreement for access point) from a pole that is approximately 70 feet from the house via a power cable that will be buried in a trench for that distance. Telephone utilities will come from an existing trench that is currently in the center of Lane Guest Ranch Road and be buried in a trench from that roadway to the proposed residence.

The propane tank will be at least 50 feet from the fire cistern and at least 25 feet (or more) from the house. The tank will be buried below ground with the appropriate environmental safeguards. The area above the tank will be kept clear of all vegetation and overhanging branches.

Defensible Space and Forest Management

The site is best represented by Fuel Model 2. The property is covered with a semi-dense open canopy stand of ponderosa pine with scattered Douglas fir and lodgepole pine trees with quaking aspen and a Rocky Mountain Juniper component. The understory consists of a dense cover of native grasses and pine needles where the ponderosa pines predominate. In the open areas, rock outcroppings and quaking aspen predominate. There is a minimal indication of the presence of mountain pine beetle.

There will be three defensible space zones created around the proposed structures.

Zone 1 – Will start at the foundations and extend out 15 feet in all directions from the outside of each structure. This zone will be broken down into three segments.

Zone 1A – Will consist of the immediate structures and the area immediately adjacent to and surrounding the structures on all sides. A three-foot wide, non-flammable strip will be created using crush gravel over a polyester weed barrier material. This strip will also extend back under all covered porch areas, and out two feet past the drip line of porch-deck surfaces. No flammable materials will be stored in this area.

Zone 1B – Will extend out from Zone 1A. In this zone, all highly flammable vegetation will be removed. Firewise plants will be used for landscaping. Grasses planted for re-vegetation will be kept mowed to a maximum height of 6 to 8 inches twice per growing season to a distance of 15 feet from the structures.

Wildfire Mitigation Plan

Zone 1C – This zone will extend out from Zone 1B to 15 feet from the house and the garage. Some overlap may occur due to the proximity of the structures. All understory trees will be removed as is designated. A few of the larger healthier trees will be retained for screening. Any remaining trees will be pruned to a height of 10 feet with a 10 foot crowning distance. On the northwest side of the residence the clearing distance will be 20 feet due to the chimney location. No trees will overhang either structure.

Zone 2 – This zone will extend from Zone 1C, and will act as a transition zone between the heavily thinned area adjacent to the house and garage. On the north facing side of the residence and the south facing side of the garage, it will extend to the property boundary line. All other directions should be within the property boundaries. The distance covered by this zone will be 125 feet without boundary restrictions. All ladder fuels and poor quality shrubs and trees will be removed. The remaining mature trees will be pruned to a height of 8 feet at the intersection of Zone 1 and 2, with limbing reduced in height to 6 feet as one approaches Zone 3.

Zone 3 – This zone will extend from Zone 2 to the edge of property. Tree thinning and pruning will be done with the attention focused on maintaining a healthy forest. Trees that are of poor quality or form, or with disease infestations, will be removed. Slash will be maintained at proper and appropriate levels for proper wildlife use.

Driveway Access for Emergency Vehicles

This property will be directly accessed from Highway 7. The first section of driveway will be 12 feet wide leading to an access roadway that will be 20 feet in width which in turn will lead to the residence access off Lane Guest Ranch road. The main residence access will be approximately 15 feet in width. Each proposed driveway section will create some additional site disturbance and soil compaction. The driveway sections will be designed to meet Boulder County Private Access standards. As stated above, the new driveway sections will be 12 and 15 feet in width with a clearance of 13' 6". The new driveway sections will be at a 0% grade. Since the first section of driveway is less than 50 feet in distance, no pull-out or turn around will be created. Lane Guest Ranch road does have a pull-out currently available directly across from the current gate to the property, which is within our property boundary. A turn around will be made available in front of the proposed garage.

Emergency Water Supply for Firefighting

- A 2,500 gallon individual fire protection cistern will be installed. The cistern will be located approximately 75 feet from the rear of residence. The cistern will have

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a Schedule 40 PVC dry hydrant connection with a 6" NH threaded connection and cap.

- A dry hydrant will be located to utilize water from a creek bed that is directly east of the property.

Maintenance

- Maintain the defensible space zones yearly.
- Keep firewood at least 30 feet from structures.
- Connect, and have available at least 50 feet of garden hose with adjustable nozzle.
- Keep up to date on fire danger.
- Check all ventilation openings regularly.
- Dispose all yard waste in a proper time frame.
- Keep appropriate tools available at all times.
- Check debris on roofs and gutters twice yearly
- Check screens and spark arresters on chimneys.
- Display residence address markers in a highly visible manner.
- Avoid storing anything under cover porch decks.

