



*Knowledge to Go Places*

April 29, 2004

Susan Holley  
57 Betasso Road  
Boulder, CO 80302

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

Dear Susan Holley,

Upon your request the Colorado State Forest Service has completed your Wildfire Mitigation Plan per Boulder County Land Use regulations for your property located at 57 Betasso Road, Boulder CO 80302. We have submitted a copy of this plan to the Land Use Department, Mr. Eric Philips.

The next step in this process is to have all trees marked by the State Forest Service with blue spray paint removed from your building site. Trees that do not have blue marking on them should be pruned 6-10 feet from base of tree. Once trees have been removed and pruned please call for an appointment of inspection. Either Boulder County Land Use or the Colorado State Forest Service must inspect all Site Plan Review properties before final plan approval is granted.

We have enclosed an invoice for our services and would like payment within one month of the date it was written.

We thank you for your compliance and look forward to assisting you in the future. If you have any questions regarding the Site Plan Review process please contact Eric Philips at 303-441-3930 or if you have question regarding the Wildfire Mitigation plan or forest health please call Cory Secher at 303-823-5774.

Sincerely,

A handwritten signature in black ink, appearing to read "Cory Secher".

Cory Secher  
Forester

## **WILDFIRE MITIGATION PLAN**

Docket SPR- # 03-071

Inspection date: 4/27/2004

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

### **Prepared for:**

Susan Holley  
57 Betasso Road  
Boulder, CO 80302  
Phone: 303-449-6742

### **Prepared by:**

Cory Secher - Forester  
Boulder District  
Phone: (303) 823-5774  
E-mail: csecher@lamar.colostate.edu

### **SITE LOCATION AND PROPERTY DESCRIPTION**

The property is located at 57 Betasso Road, Boulder CO 80302. Access to the property from Boulder Canyon go west to Four-mile Canyon and continue about 3 miles and turn right on Betasso Road. The legal description is Section 36, Township 1N, and Range 71W Lot 76A, 3rd Addition to Tall Timbers. The fire protection district is the Four-Mile fire protection district (303-444-0882). There will be 1 structure located on site, including a Residence with attached garage and a new addition being added to existing structure. The lot is 1 acre in size and has a ~20% percent slope with a southern aspect. It is at 6,400 feet in elevation. The proposed building site is mid-slope and it is a relatively fairly moist site. Betasso road to the south creates a small natural barrier that may help stop or slow the spread of a surface/crown fire on the site.

The site has a dominant overstory consisting of Ponderosa pine (*Pinus ponderosa*) with a Ponderosa pine (*Pinus ponderosa*) understory component. The area is predominantly fuel model 2 with an understory consisting of grasses. Fuel model 2 is represented by open grown pine stand. Trees are widely spaced with few understory shrubs or regeneration. Ground cover consists of mountain grasses, and or needle and small woody litter. This model occurs in open grown and mature ponderosa pine stands. There is no sign of any current insect and disease problems on the property at the time of inspection.

### **CONSTRUCTION DESIGN AND MATERIALS**

The proposed house has a relatively complex design with a complex roofline and is oriented with a southeast and southwest aspect.

The roofing material will consist of asphalt shingles. The exterior wall material is to be wood siding (Cedar). Soffits are to be ¾" thick plywood.

There are ~40 medium/small windows with the primary viewing direction being toward the North side of the structure. Windows will be double glazed with double pane low e-coated and frames made of wood and aluminum clad. Exterior doors are to be 1-3/4", fire-rated, and made of wood and steel.

The one deck will be constructed of composite and wood materials and supported by timber posts with concrete footers. The deck will be open and isolated from the surrounding landscape with gravel over a fiberglass weed barrier.

The propane tank will be set on a pad of crushed rock overlaying a fiberglass weedbarrier and buried half deep located approximately 20 feet to the south of the residence, and be at lower elevation than the house.

### **EMERGENCY ACCESS**

The existing driveway will not create additional site disturbance or soil compaction and will require the removal of only a few trees. The driveway is 12 feet wide with a vertical clearance of 13'6" and a grade that is less than 12%. The driveway is 150 feet therefore a hammerhead turn-around will be present (see plan for details). The driveway is less than 400 feet therefore no pull-outs will be required

### **WATER SUPPLY / UTILITIES / SEPTIC FIELD**

The water source will be from a domestic cistern with a 1,500 gallon capacity that is located 10 feet northwest of structure and from a well that is located 40 feet south of the structure. The propane tank is set on a pad of crushed rock overlaying a fiberglass weedbarrier and buried half deep located approximately 20 feet to the south of the residence. Vegetation within 10 feet of the cistern, well, and propane tank will be kept cleared. Utilities for the property will be buried in a trench about 100 feet east of residence. The septic field is located 50 feet to the northeast of residence.

## 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. Slash from the harvest will be hauled. Note that before burning piles, you must obtain a valid Open Burning Permit from the Boulder County Environmental Health Department and notify your local fire protection district (Four-Mile fire protection district (303-444-0882)).

## DEFENSIBLE SPACE ZONES

There are three defensible space zones to be created around the structure(s) on the site.

**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 gravel 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 crown spacing). No trees will overhang the house or decks. Trees should be at least 15 feet away from the house on all sides.

**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/](http://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
- Keep firewood at least 30 feet away from buildings; clear weeds and grass from around pile
- 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
- Be aware of fire danger; fire danger signs are posted at the entrance of most major canyons
- Keep driveways and property address marked with visible signage
- Check the 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 and axes, available and ready for use
- Clean debris from the roof and gutters at least two times a year
- Check screens and maintain spark arresters on chimneys
- Check to make sure address markers are clearly visible
- Avoid storing combustibles under decks

### **INSPECTION**

Inspection was conducted on 4/27/2004.

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

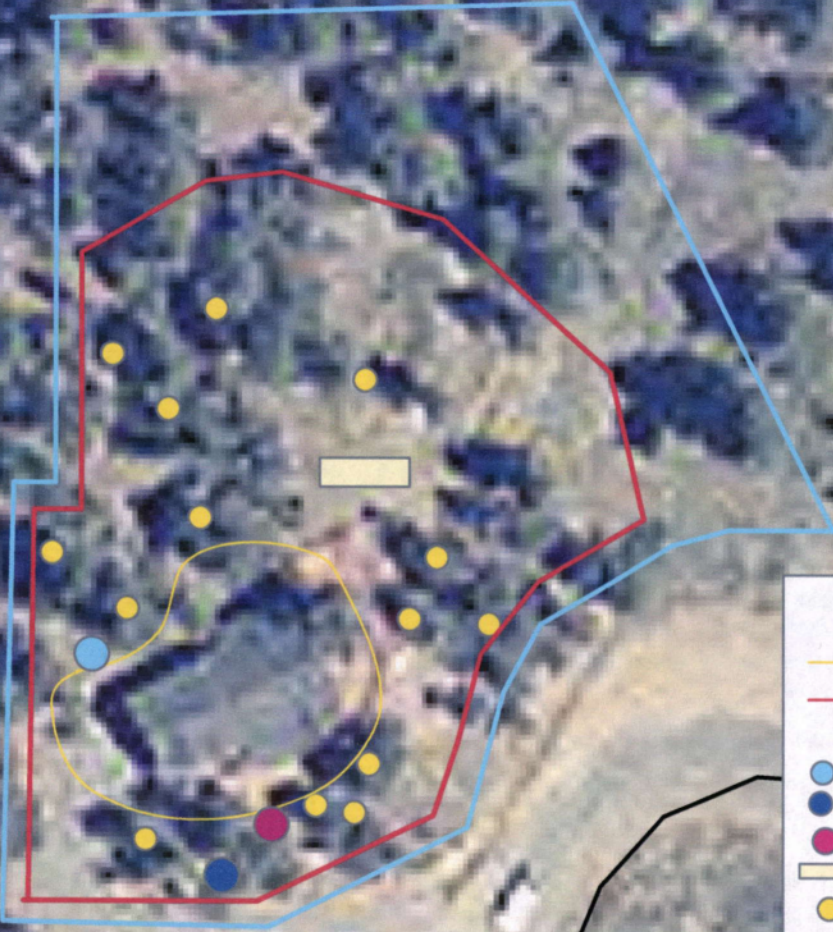
Limb (verb) –To remove the branches from a tree.

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 sometimes squirrels.

Wildfire mitigation plan – A plan to reduce wildfire hazards around a home or other structure through fuels reduction and landowner awareness.

Property of Susan Holley and Ellen Kirschenbaum  
57 Betasso Road, Boulder CO 80302  
SPR #03-071



**LEGEND**

- Zone 1 (0-15 ft from structure)
- Zone 2 (0-100 ft from structure)
- Cistern
- Well
- Propane tank
- ▭ Leach Field
- Large leaf trees

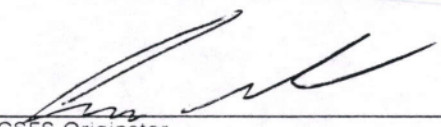
To: Susan Holley  
57 Betasso Road.  
Boulder CO 80302

Invoice No. 64733



Date: 4-29-04

Item	Unit Cost	Total
1 Marked Wildfire Defensible Space	\$250	\$250.00
2 Wrote Wildfire Mitigation Plan - SPR# 03-071		
3		
4		
5		
6		
7		
8		
9		
Tax Exempt No. _____	Sales Tax	

  
 CSFS Originator  
 Payment Due By 5-29-04

Total		\$250.00
CK-CA-MO Amount Paid:		
Amount Due		\$250.00
Ck#	Dated	
Rcv'd By	F.Y.	
Funding		Amount
194030	0615	\$250.00

Remit to:  
 COLORADO STATE FOREST SERVICE  
 BOULDER DISTRICT  
 5625 UTE HIGHWAY  
 LONGMONT, CO 80503-9130

Deposit No. \_\_\_\_\_ Date \_\_\_\_\_

ATTN: CORY SECHER  
303 823 5768



Knowledge to Go Places

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

**Wildfire Mitigation Plan  
FIELD DATA FORM**

- \* Inspection Date: \_\_\_\_\_
- Landowner name: SUSAN HOLLEY/ELLEN KIRSCHENBAUM
- Mailing address: 57 BETASSO ROAD
- City, State, Zip: BOULDER, CO 80302
- Site address: SAME
- Phone number: 303.449.6742
- Road access: BETASSO ROAD (Name of access road)
- Docket Number: SPRW-03-071 (SPR, LU, Etc.)
- Section: S28
- Township: T1N
- Range: R71
- Legal Description: LOT 76A, 3rd ADDITION TO TALL TIMBERS, BOULDER CO., STATE OF COLORADO
- \* FPD: Sugarloaf
- \* Dominant fuel type: Grasses (Grass/forbs/shrubs/slash/etc)
- \* Dominant overstory: Ponderosa Pine
- \* Co-dominant overstory: "
- \* Fuel model type: 9
- Slash disposal: HAULED (Chipped/hauled/burned/lop-scatter)
- \* Aspect: Southern (Direction of slope)
- \* Slope: ~20%

Elevation: 6400 (feet)

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

\* Site moisture: fairly moist

\* Natural fire barrier: Betasso Rd.

\* Insect & Disease Diagnosis: \_\_\_\_\_

Lot size (acres): 1.02 (Acres)

Number of Structures: 1

Type of Structures: HOUSE W/ ATTACHED GARAGE (House/barn/garage)

Driveway length: 150' (<> 150 ft. OR <> 400 ft)

Driveway trees removed: FEW <sup>to NONE</sup> (few/many)

Home buffer material: Crushed Stone

House design: COMPLEX (simple/complex)

Roof Design: COMPLEX (simple/complex)

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

Soffit type: PLYWOOD (Plywood/hardboard/cement board)

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

Windows (#): x 40 *Cedar*

Windows Size: VARIES (small/medium/large)

Windows Frames: WOOD / ALUM. CLAD (Wood/aluminum/aluminum clad)

Windows Aspect: SOUTH (Viewing direction)

Window Construction: DOUBLE PANE LOW-E (Tempered glass/e-coating)

Door Material: WOOD OR STEEL (Wood/steel/fiberglass/composit)

Deck material: COMPOSITE/WOOD (Wood/composite materials)  
 Deck Description: OPEN (Enclosed/open)  
 Deck support type: TIMBER POSTS (Timber posts/logs/steel/concrete/stone)  
 Deck buffer material: GRAVEL (Crushed rock/gravel)  
 Deck weed barrier: - (Fiberglass/polyester)  
 Structure SQR. FT.: 4166 ft<sup>2</sup>  
 Utility Location: UNDERGROUND <sup>~100' cut</sup> (Pole Xft from house/buried in trench)  
 Structure aspect: SE-SW (Predominant facing direction - view)  
 LEACH  
 Leach field: 50' NE (Distance from house, propane, septic NSEW)  
 Cistern or Well: WELL - 40'S  
CISTERN - 10' NW (Distance from house, propane, septic NSEW)  
 Cistern size: 1500 (gallons)  
 Propane Tank location: 20' LOWER, S (Level w/house & >50ft from cistern)  
 ↳ 1/2 buried.

### ARCHITECT/CONTRACTOR:

**GETTLIFFE  
ARCHITECTURE**



Environmental Design  
Construction,  
& Planning

~~Dominique Gettliffe, A.I.A.~~

**MATT CHESAUX**

2570 Washington Street  
Boulder, Colorado 80304  
Tel. 303 449-9155  
Fax 303 402-9007