

SPR → 00-

Joe Williams

139 Pine Cone Dr.

Hidden Lakes Sub.

- 1st Lot on Left. -

old Barn/Corral

Just past that

906 E. Brittany Way
Highland Ranch

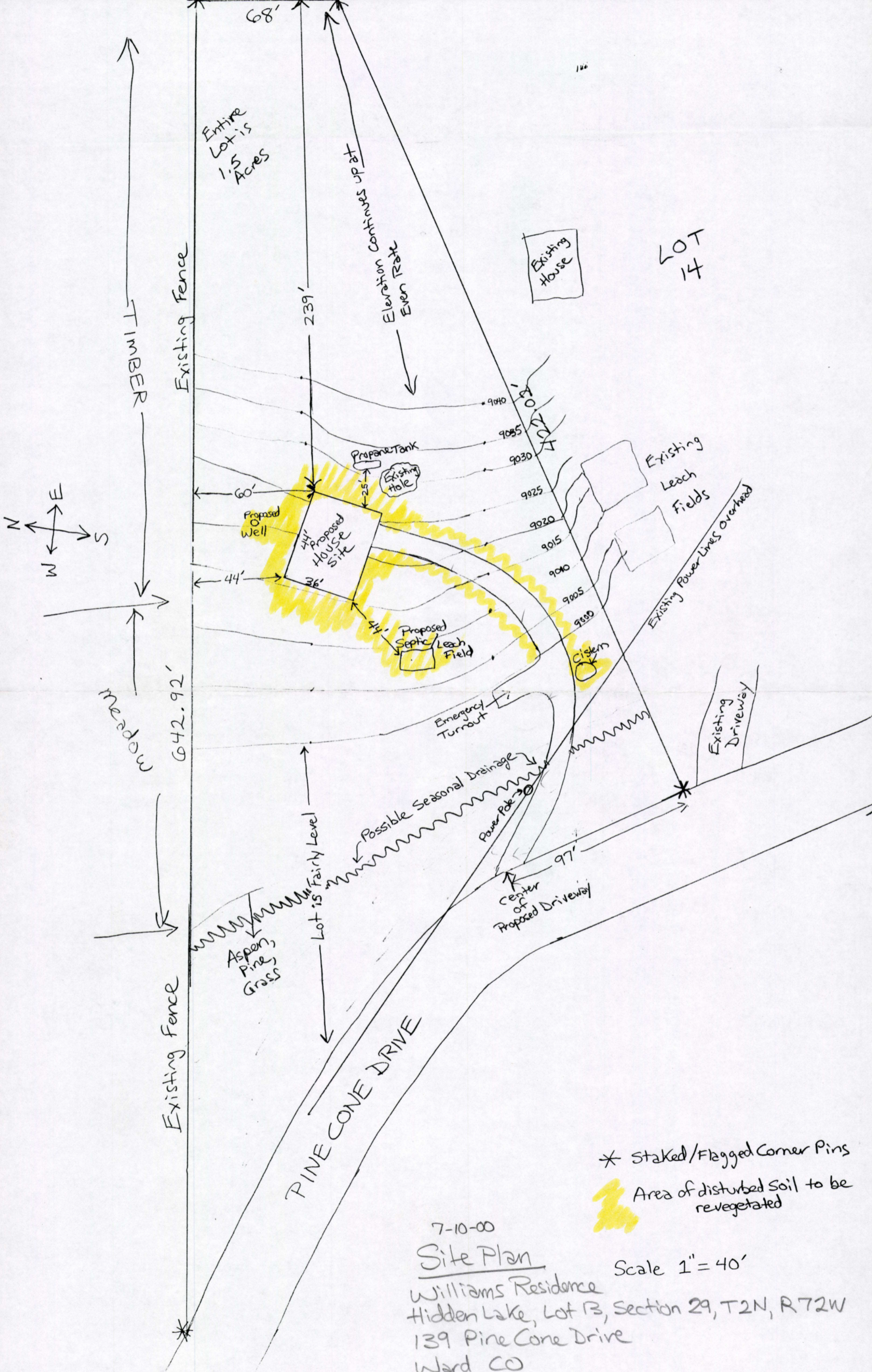
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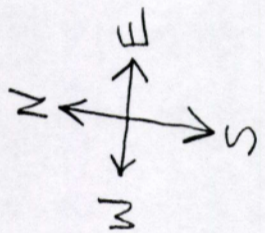
195

8/1/00 for 8/9
4:00



Entire Lot is 1.5 Acres

LOT 14



TIMBER

Meadow

Existing Fence

642.92'

Existing Fence

PINE CONE DRIVE

Existing House

Existing Leach Fields

Existing Power Lines overhead

Existing Driveway

Elevation Contours Start Even Rate

Propane Tank

Existing Hole

Proposed Well

44' Proposed House Site

Proposed Septic Leach Field

Cistern

Emergency Turnout

Possible Seasonal Drainage

Power Pole

Center of Proposed Driveway

* Staked/Flagged Corner Pins

Area of disturbed soil to be revegetated

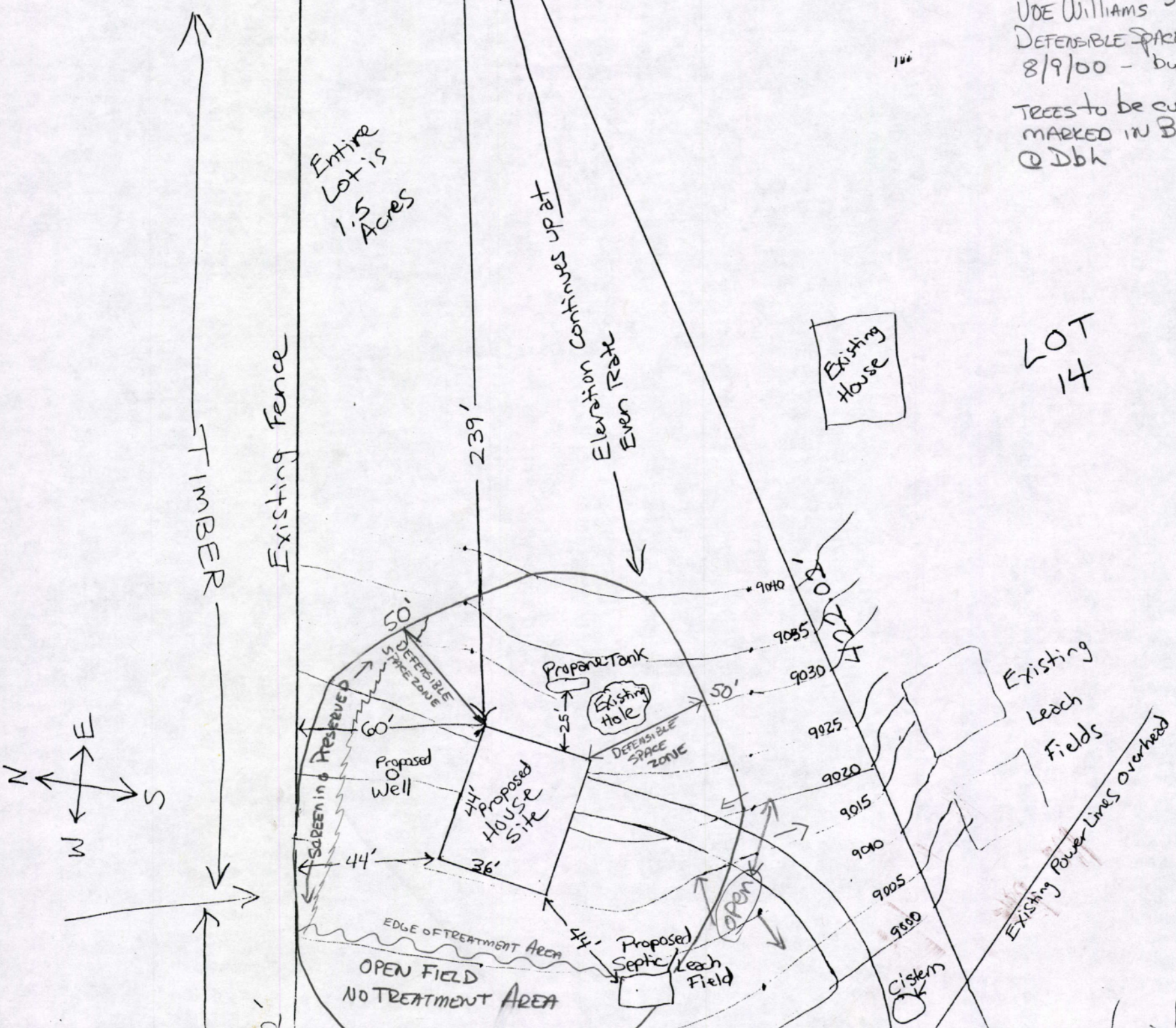
7-10-00

Site Plan

Scale 1" = 40'

Williams Residence
 Hidden Lake, Lot 13, Section 29, T2N, R72W
 139 Pine Cone Drive
 Ward, CO

JOE Williams SPR#00-131
 DEFENSIBLE SPACE SITE PLAN
 8/9/00 - by CSFS
 TREES to be cut/REMOVED
 MARKED IN BLUE PAINT
 @ Dbh



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CONDITIONS OF APPROVAL

Article 4-806 states that no Site Plan Review can be approved without compliance with the following standards. A site plan shall be approved if the Director finds that the site plan is in accordance with the following standards, or parts thereof, which the Director has determined to be applicable based on the nature and extent of the proposed development. Only those standards applicable to this project are included in this list.

1. The location of existing or proposed buildings, structures, equipment, or uses on the lot will not impose an undue burden on public services and infrastructure.

A. SITE ACCESS

The site plan indicates that the access drive will be cut to 15 feet in width. For your information, Boulder County requires access drives to be a minimum of 12 feet in width. The additional three feet of width, as proposed, is unnecessary and may trigger Limited Impact review as a result of excessive earthwork. Reduce the width of the proposed access drive to 12 feet to limit the amount of site disturbance and related earthwork.

In effort to minimize the potential for vehicular conflict, as a result of disbursed points of entry and angled access, the entry drive must be moved to intersect perpendicular to Pine Cone Drive and aligned with the access drive for 120 Pine Cone Drive. In addition, the entry drive must comply with Boulder County's Private Access Standards (see attached "County Road Standards and Specifications Article II, 2.3.9"). Details regarding these requirements must be resolved with the Transportation Department (441-3900) prior to the issuance of permits.

Prior to the issuance of permits, submit for review and approval a new site plan demonstrating compliance with access requirements detailed above.

2. The height, size, location, exterior materials, color, and lighting of proposed structures must be compatible with the topography, vegetation, and general character of the surrounding area.

A. SIZE, LOCATION, EXTERIOR MATERIALS, COLOR, LIGHTING

The proposed size (4,195 sq. ft. residence), location (as shown), exterior materials (log walls and metal roof), color (Silkens #072 Butternut for the walls and Berridge Hartford Green roof), and lighting (as shown in the application and on the elevation drawings) are approved as proposed in the application documents dated 7/12/2000.

B. HEIGHT

The proposed height is indicated as 33 feet above existing grade. **Be advised that the height of the proposed structure cannot exceed 35 feet as measured from existing grade for this zone (see land use code 4-101.E.3).** Since the proposed height of your structure is within 2 feet, or less, from the maximum allowed 35 feet, a *Height Survey Verification* Form must be completed by a licensed surveyor to verify the height of the rough frame prior to the Building Inspector's approval. This form will be provided at the time a building permit is processed. Please note that existing grade must be established, prior to excavation, by a licensed surveyor as

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To	Allen	From	Joe Williams		
Co./Dept.	Co, St. Forest Serv				
Phone #	442-0428	Phone #	443-2505X118		
Fax #	448-1283	Fax #	443-2151		

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a reference for the height measurement before a building permit can be issued. All roof frame must be in place when the measurement for this verification is made.

4. *The site plan shall satisfactorily mitigate the risk of wildfire both to the subject property and properties in the surrounding area, including with respect to the location of structures, fuel reduction, incorporation of a defensible space around structures, and the use of ignition (fire) resistant building materials. Safe access shall be provided, including a second emergency access where the local fire district finds the primary access to a public road is insufficient and the second access does not create significant environmental impacts. In assessing the applicable wildfire risk and appropriate mitigation measures, the Director shall consider the referral comments of the County Wildfire Mitigation Coordinator and the applicable fire district, and may also consult accepted national standards as amended, such as the 1997 Urban-Wildland Interface Code; NFPA / 80A, 299, 1231; 1997 Uniform Fire Code; and the 1997 Uniform Building Code.*

A. WILDFIRE MITIGATION

The applicant shall submit to the Land Use Department, for review and approval, a wildfire mitigation plan, *prior to the issuance of building and grading permit. Preservation of the existing stand of pines to the north and northwest the proposed structure is critical for view shed mitigation. These trees shall be preserved for visual screening while incorporating wildfire safety requirements (see Item 10A Tree preservation and screening).* At minimum the Wildfire Mitigation plan will demonstrate the following:

- a. A wildfire mitigation plan must be developed and implemented for the property prior to legal occupancy. Please see the enclosed handout for further information.
- b. Ground surfaces within three feet of the structure and below all roof line projections (bay windows, decks, etc.) must be covered with crushed rock or other nonflammable ground cover, and kept free of vegetation by utilizing a weed barrier.
- c. To assist in firefighting, a cistern must be provided, and approval for location, access, and hookup should be obtained from the local Fire Protection District. Capacity of the cistern is to be a minimum of 1,800 gallons. Be sure to resolve details with the Fire Protection District prior to installation and submit plans (approved by your FPD) for installation (location, access, required grading) to the Land Use Department for review and approval. **If a community cistern is available in this area; we encourage your participation as an option to the on site cistern.**
- d. Roofing material must be UL listed and labeled Class A (fire resistive).
- e. The emergency turn around is approved as proposed and must comply with the design criteria detailed in the attached handout.

Note: Be sure the removal of all cuttings, debris, and scrap lumber is complete before calling for final inspection.

6. *The development will not have a significant adverse impact on plant communities or wildlife habitat, migration corridors, or sensitive and unique plant or wildlife ecosystems.*

A. WILDLIFE SAFE FENCE

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If a fence is to be constructed and since this area serves as a mountain wildlife movement corridor, the following shall apply. Fencing is to be kept as close to the developed site as possible, and is to be wildlife-safe fencing as recommended by the Colorado Division of Wildlife (Contact CDOW at (303)-291-7227). Specifications for wildlife-safe fence are as follows:

- Smooth top & bottom wires, with wire spacing at 16-22-28-40 inches from ground (please note that fences over 42 inches create serious negotiation problems for deer, and that fences between 42 inches and 8 feet can function as a death trap)
- Bottom wire at least 16 inches off ground for passing of fawns
- 12-inch gap between top two wires to reduce entanglement and wire twisting
- Materials like woven wire or single strand wire (tightly strung) are to be used
- No chain-link fences except for small isolated pens or kennels (wildlife are easily entangled in mesh fences and impaled on wrought iron pickets)

10. *The development will not have a significant negative visual impact on the natural features or neighborhood character of the surrounding area. Development should avoid prominent, steep, or visually exposed portions of the property and minimize the area of site disturbance. Particular consideration should be given to protecting views from public lands and rights-of-way.*

A. TREE PRESERVATION

The preservation of existing trees and ground vegetation will provide visual screening from nearby areas including public openspace and rights-of-way. *The existing stand of pines to the north and northwest of the proposed residence are critical for visual screening and view shed mitigation and must be preserved while providing for fire safe defensible space requirements.*

Prior to the issuance of building and grading permits, the tree preservation and screening site plan must be incorporated into the wildfire mitigation plan and submitted for review and approval by the Land Use Department. The plan must demonstrate which stands of trees are to be removed and limbed for wild fire mitigation, and which stands of trees are to be preserved for screening. (See item 4.A. Wildfire mitigation)

12. *Runoff, erosion, and/or sedimentation from the development will not have a significant adverse impact on the surrounding area.*

A. REVEGETATION

The revegetation plan is approved as submitted in the application documents. Prior to occupancy, the full installation of the approved revegetation plan must be inspected and approved by the Land Use Department. If weather is not conducive to seeding and/or planting or if adequate revegetation efforts have not occurred, an irrevocable letter of credit must be provided to assure completion of revegetation. In addition, you should consider the following well in advance of your revegetation inspection:

- Whether you are applying for legal occupancy, Final Inspection, or the :

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return of funds held for completion of revegetation, some level of germination and growth of grass seed is required before sign-off.

- Keep in mind that the steeper your slopes and dryer the soil, the greater the attention needed to establish a level of germination adequate to obtain final approval.
- Areas of disturbance found at inspection not included on the revegetation plan are still subject to reseeding and matting.

Incomplete revegetation is the leading cause for delays in obtaining legal occupancy.

Additional Requirements - For your information:

Please be advised that this structure must comply with Chapter 9 (FIRE PROTECTION SYSTEMS) of the Boulder County Building Code, which may include the installation of a sprinkler system in the structure. Contact the Building Division at 441-3925 for more information. For your information, a sprinkler system may require an additional dedicated cistern.

A permit for an Individual Sewage Disposal System must be obtained from the Boulder County Health Department (441-1190) prior to septic system installation and the issuance of a building permit.

Sanitary facilities must be provided during construction and shall consist of a portable chemical toilet fabricated from steel, fiberglass or wood, meeting the following minimum requirements: Each facility shall be well ventilated, shall conform to State law, shall have a vented chemical tank and a separate urinal.

WILDFIRE MITIGATION PLAN - SPR # 99-131

Prepared for:

Joe Williams
906 E. Brittany Way
Highlands Ranch, CO 80126

Prepared by:

Allen Owen
Colorado State Forest Service
936 Lefthand Canyon Dr.
Boulder, CO 80302

August 10, 2000

(Definitions are included on page 3.)

DESCRIPTION OF PROPERTY

The property is located at **139 Pine Cone Drive**, S29, T2N, R72W, Boulder County. The overstory consists of lodgepole pine, scattered aspen and occasional limber pine. The building site is situated on a west aspect, with a 10-12 percent slope. Access to the property is via a (yet to be constructed) 200-foot (+/-) drive on Pine Cone Dr. near the intersection of the Peak-to-Peak Highway. A meadow to the west and large clearing to the south serve to enhance the defensible space perimeter. The defensible space perimeter extends to the property line (fence) on the north and well into the meadow on the west side (refer to map). The lodgepole pine is insect and disease free, showing only signs of wind stress on the larger trees. Fuel loading of the site is light; the combined downed and dead woody fuels are less than 3.5 tons per acre. The primary carrier of fire is grass/duff. Fire Behavior Fuel Model 8. Pruning residual trees within the defensible space zone is an important factor in mitigating the wildfire hazard.

RECOMMENDATIONS

As detailed in the enclosed fact sheet no. 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.

There are three zones of protection to be created around the homesite for defensible space. Zone 1 is the most critical and affords the most protection to the site. Zones 2 and 3 are extensions of this protection.

ZONE 1

Zone 1 is the area of maximum modification and starts at the foundation of the structure and extends out 15 feet in all directions. Most flammable vegetation should be removed in this zone. As per Boulder County Land Use Department code, create a 3-foot wide strip of nonflammable groundcover immediately adjacent to the structure. This can be accomplished by using decorative rock or gravel. This strip should surround the house and extend under any decks to 2 feet out past the drip line of the decks.

Thinning and pruning are necessary to create defensible space at the site. **All trees marked in blue should be cut and removed.** Trees for removal were selected because of their poor form and/or lack of vigor in addition to their close spacing. Tree removal will improve the health of the remaining trees in addition to mitigating wildfire hazards.

Prune and remove "ladder fuels" on vegetation in zone 1. Ladder fuels are small shrubs, trees, tree branches (live and dead) that allow a fire to climb from the ground into a tree's crown. Limb trees to a height of ten feet on the remaining trees in this zone. For young, small trees in this zone, prune the lower third of the tree's height.

ZONE 2

Zone 2 extends out from zone 1; it is a transition zone between the heavily thinned area near the structure to a more traditional forest setting. In this zone, some clusters of trees are acceptable if there is adequate spacing between clusters.

At your site, zone 2 extends from the outer edge of zone 1 for a total distance of 50 feet. In this zone, limb remaining trees to a height of eight feet. As you approach the outer edge of zone 2, reduce limbing height to six feet. Lower branches of young, small trees in this zone should be limbed to one third of the tree's height.

ZONE 3

Zone 3 extends out from zone 2, and is of no set shape or size. Forested land in this zone could be thinned for increased overall forest health and wildfire hazard reduction. The following guidelines would apply if you decide to work in these areas.

- Thin suppressed trees and trees with disease and insect infestations and retain the larger, healthier trees.
- Retain snags for wildlife habitat, when applicable.
- Slash in zone 3 can be lopped and scattered, piled for wildlife habitat or, piled for burning under certain conditions.
- For burning permits, check with your local fire protection district.

All cutting, limbing and slash treatments must be completed prior to scheduling a wildfire hazard re-inspection. Contact this office to set up an inspection date at least two weeks before you need the approval.

Implementing this wildfire mitigation plan and maintaining your defensible space will help reduce the threat of wildfire to your home, but does not guarantee its safety.

In addition to the above recommendations, several other measures can be taken to make your home and family more prepared for and adapted to life in a fire prone ecosystem. While not required through the Boulder County Site Plan Review, those who live in the wildland-urban interface should practice other wildfire mitigation measures. These include:

1. Be aware of the local fire danger. Signs are usually posted at the entrances of most major canyons and oftentimes subdivisions entrances.
2. Clean roof and gutters of pine needles and debris at least twice a year.
3. Stack firewood uphill or on the contour at least 15 feet from buildings.
4. Do not store combustibles under decks.
5. Screen off foundations, roof and attic openings.
6. Screen and maintain spark arresters on chimneys.
7. When possible, maintain an irrigated greenbelt around the home.
8. Connect and have available at least 50 feet of garden hose during fire season.
9. Post lot and house numbers so that they are clearly visible to emergency service personnel.
10. Maintain the site's defensible space annually. Contact the Colorado State Forest Service for a 5-year maintenance inspection.

DEFINITIONS

Aspect – 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 – Material 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.

Snag – Standing dead tree, often used by wildlife such as cavity nesting birds, woodpeckers, owls, and sometimes squirrels.

Wildfire mitigation plan – A written document designed to guide a homeowner in reducing the wildfire hazard threat around a home or other structure through fuels reduction and landowner awareness.

MAP PAGE