

Knowledge to Go Places

Boulder District 5625 Ute Highway Longmont. Colorado 80503-9130

(303) 823-5774

WILDFIRE MITIGATION PLAN

Docket SPR-# SPR - 01-157

Inspection date: 11/18/2004

Prepared for:

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SITE LOCATION AND PROPERTY DESCRIPTION

The property is located at 14092 Lefthand Canyon Drive, Jamestown CO 80455. Access to the property from Boulder go north on Highway 36 and turn west onto Lefthand Canyon Drive and continue toward the town of Ward and property will be on the north side of Lefthand Canyon Drive just before the 14 mile marker. The legal description is Section 8, Township 1N, and Range 72W, NW 1/4 NW 1/4 Lot 11. The fire protection district is the Indian Peaks fire protection district (303-459-3452). There are 3 existing structures located on site, including a yurt, cabin, and small shed. There will be one new residence built on site, and the yurt will be removed. The lot is 38.87 acres in size and has a ~20% percent slope with a southern aspect. It is at 8,600 feet in elevation. The proposed building site is mid-sope and it is a relatively fair to dry site. Large openings to the northwest and west of new structure will create natural barriers 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) and Douglas-fir (Pseudotsuga menziesii) and Aspen (Populus tremuloides) understory component. The area is predominantly fuel model 9 with ground fuels consisting of grasses and forbs. 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, dead woody litter. 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 simple roofline and is oriented with a southwest aspect. The roofing material will be metallic. The exterior wall material is to be concrete and cement board with wood trim. Soffits are to be cement board and wood. The structure has 32 large and 16 medium to small sized windows with the primary viewing direction being toward the south and southwest side of the structure. The large and medium windows will alternate between Polycarbonate class A, low-e glass, and tempered where needed, with frames made of metal or wood. Exterior doors are to be 1-3/4", and made of wood or metal. The new structure will have a concrete and stone terrace located on the western side of the structure. The terrace will be open with trellises and isolated from the surrounding landscape with stone and crushed gravel over a fiberglass weed barrier.

The propane tank will be buried, labeled, and located under the terrace approximately 15 feet to the west of the residence.

EMERGENCY ACCESS

The existing driveway will not create additional site disturbance or soil compaction and will require the removal of no trees. The driveway is 12 feet wide with a vertical clearance of 13'6" and the proposed hammerhead nearest the new structure is on a grade less than 12%. The driveway is 1,849 feet long therefore there will be a turn around required (see plan for details). The driveway is greater than 400 feet therefore pull-outs will be required.

WATER SUPPLY / UTILITIES / SEPTIC FIELD

The water source will be from two 2,400 gallon cisterns. There will be a domestic cistern that is located 60 feet to the west of structure and a fire cistern that is located 130 feet southwest of structure. A well is located approximately 34 feet to the northwest of residence. The new residence will be equipped with a full indoor sprinkler system.

The propane tank will be set on a pad of crushed rock overlaying a fiberglass weedbarrier approximately 15 feet to the west of the residence. Vegetation within 10 feet of the cistern/well and propane tank will be kept cleared. The property will be off grid except for an underground telephone line that runs adjacent to driveway. The septic field is located 150 feet to the southwest 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 when possible. Slash from the harvest will be lop and scatter. 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 (Indian Peaks fire protection district (303-459-3452)).

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 stone and 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 revegetation. 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 Questions please refer to www.colostate.edu/Depts/CSFS/ and find the Questions please refer to www.colostate.edu/Depts/CSFS/ and find the Questions please refer to www.colostate.edu/Depts/CSFS/ and find the Questions please refer to www.colostate.edu/Depts/CSFS/ and find the Questions please refer to www.colostate.edu/Depts/CSFS/ and find the Questions please refer to www.colost
- **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 un-pruned 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 RECCOMMENDATIONS

As detailed in fact sheet 6.302, <u>Creating Wildfire Defensible Zones</u>, 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
- 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.hoaa.gov/den/fireindx.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

<u>Wildfire mitigation plan</u> – A plan to reduce wildfire hazards around a home or other structure through fuels reduction. A document to inform urban interface home owners of the dangers and responsibilities of living in the interface. A plan to help outline the initial and ongoing fuels reduction needed to maintain an effective and healthy wildfire defensible space.

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

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.

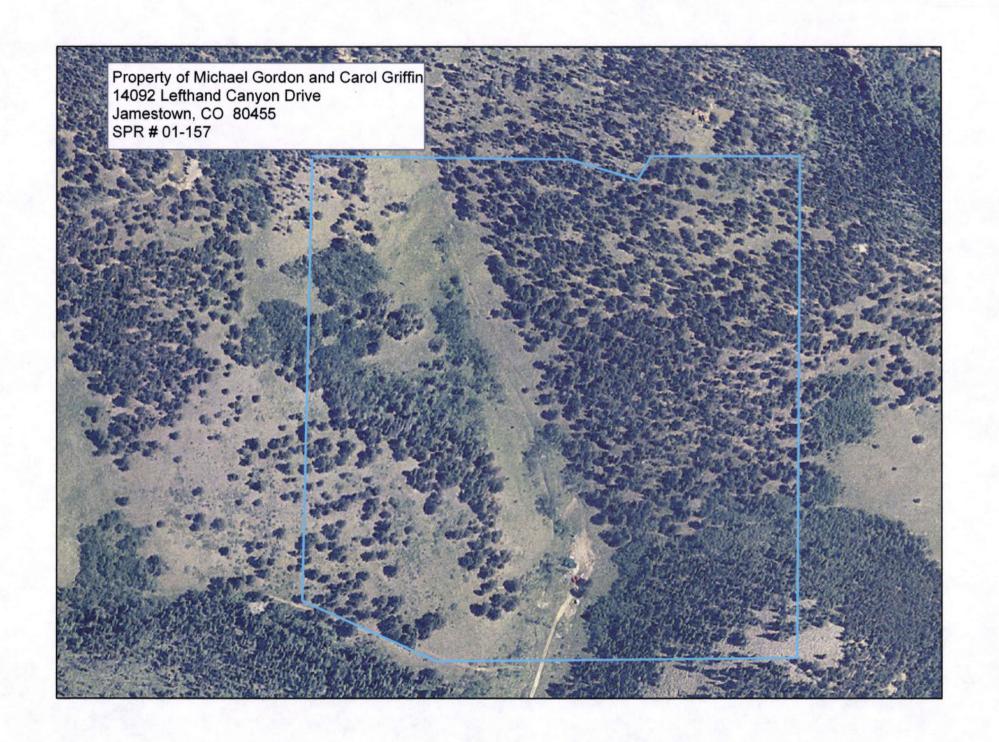
Dominant fuel type - Matter that would carry a fire, found on the ground.

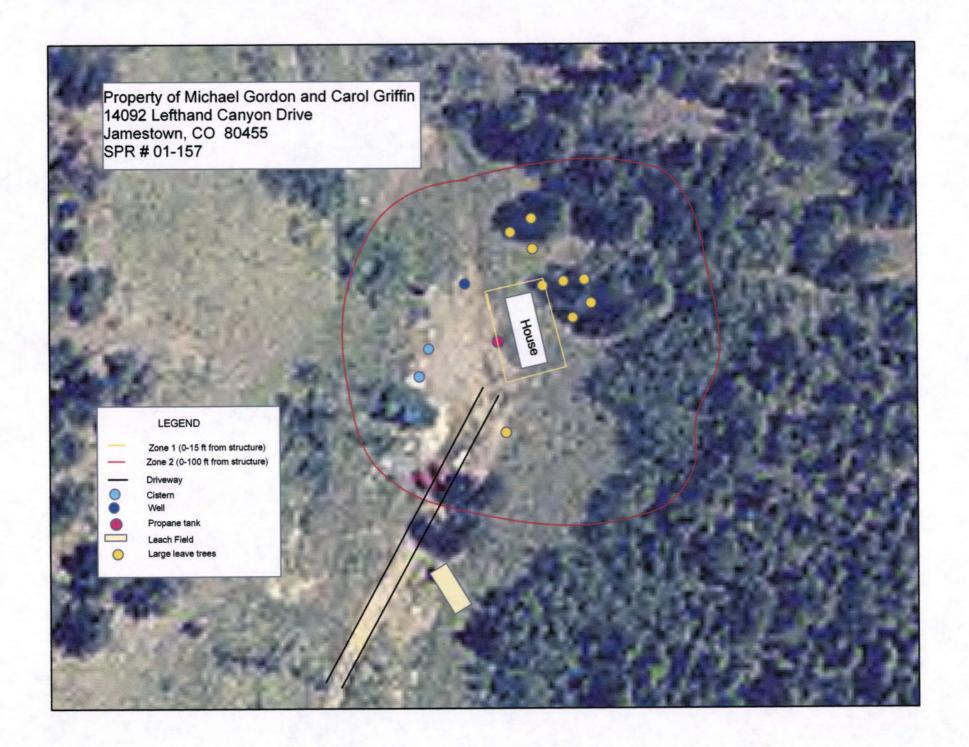
Fuel continuity - The proximity of fuels to each other. Helps determine if a fire can sustain itself.

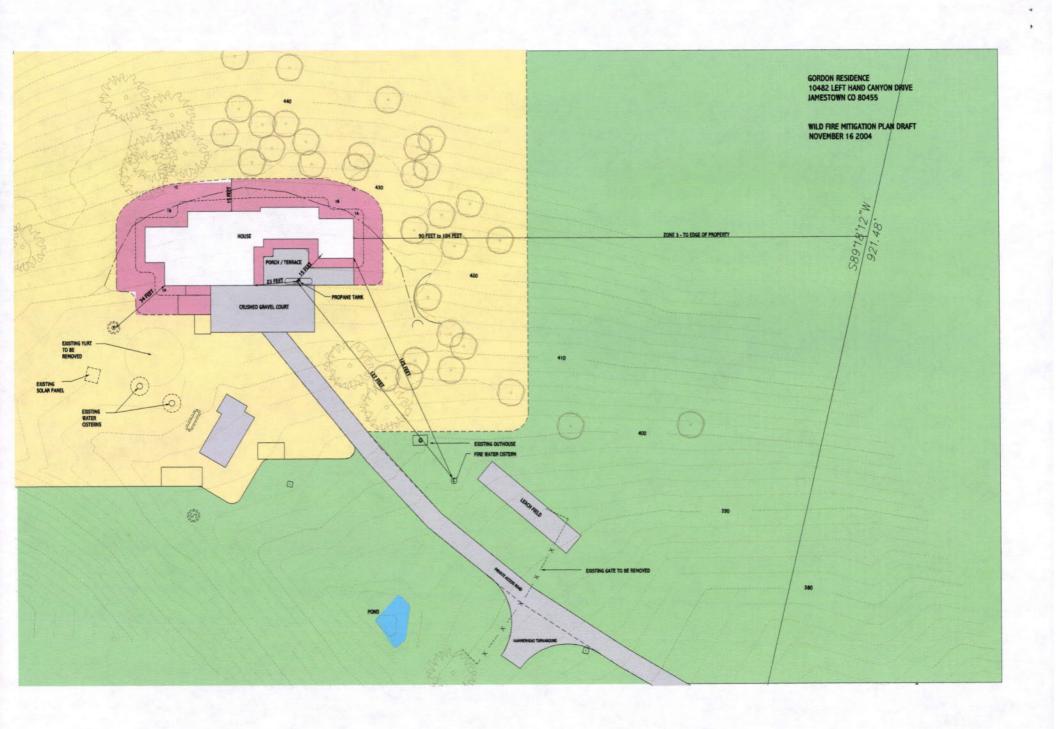
Limb (verb) -To remove the branches from a tree.

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 other various mammals.





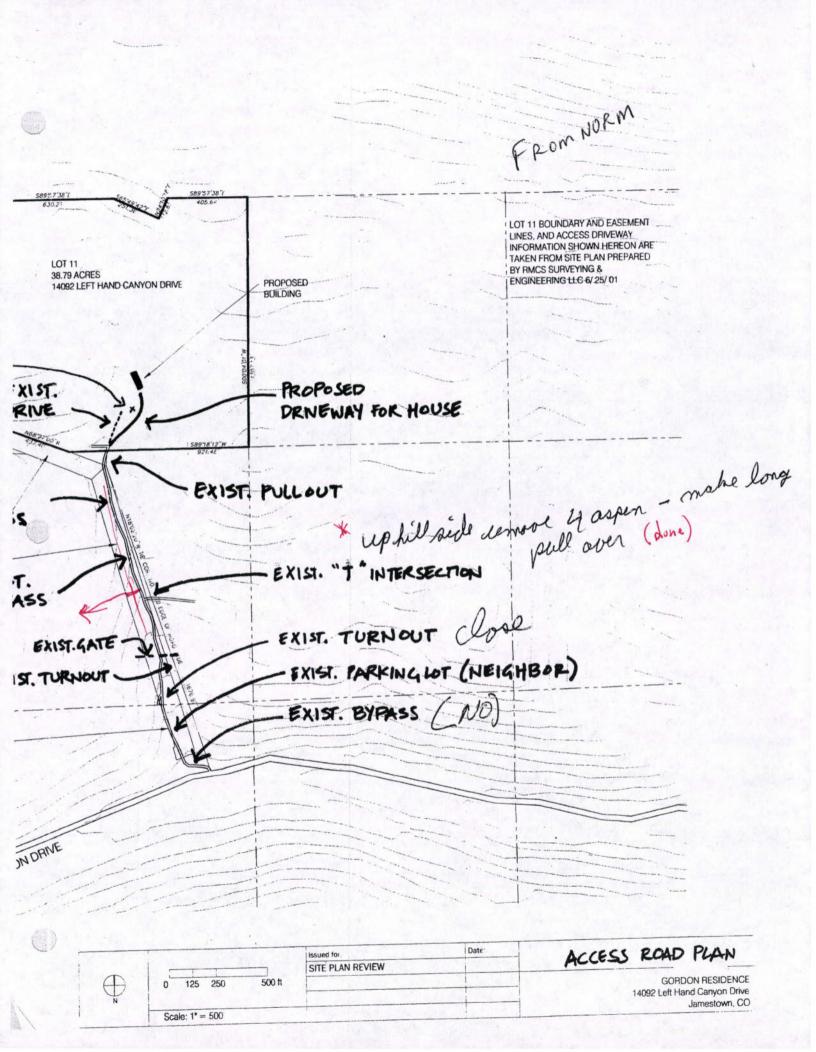


GIR From MORM

FROM MORM PROPOSED HAMMERHEAL TURN-AROUND TUSCARORA PLACER MS #9081 TUSCARORA PLA
MS #9081

NO
Way

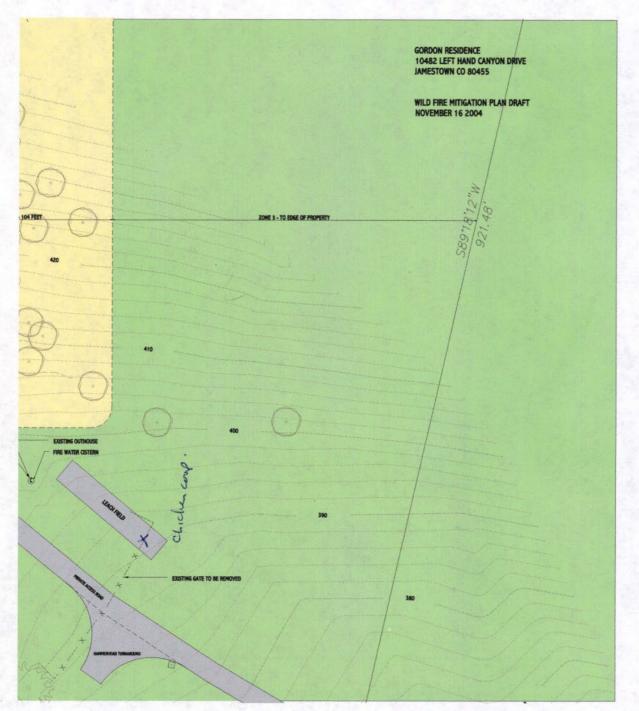
almost TUSCARORA PLACER Weeds to be widerly tothe upfill side ROAD EASEMENT. -REC. NO. 01367756 12.02.93



FPD:	took (Indian P	eall) FP)				
Dominant fuel type:		(Grass/forbs/shrubs/slash/etc)				
Dominant overstory	1					
Co-dominant overst	ory: Pondo, OF	Aspen.				
Fuel model type:	#9					
Slash disposal:	BURN/LOP-SCATTER	(Chipped/hauled/burned/lop-scatter)				
Aspect:	Souly.	(Direction of slope)				
Slope:	~20%					
Elevation:	8600	_ (feet)				
Building site:		(Chimney/saddle/valley/ridge/mid-slope)				
Site moisture:	Dry-moust					
Site moisture: Dry - weist Natural fire barrier: Openny NW of Redena / W.						
Insect & Disease Dia						
Lot size (acres):	38.87 (Acres)		CORY			
Number of Structures	: 3 (All struc	etures to be present				
Existing Structures:	yest; cabin cons	(House/barn/garage/etc.)	?			
New Structure:	house	(House/Barn/new addition/	etc)			
Driveway length:	1849.54 1.4	(Actual length in feet from road to home)	sce site ma			
Driveway trees remov	ved: Few (few/many/n					
Home buffer material	: stone/crushed gra	(Stone/crushed gravel/decorative stone)				
House design:	roderale (simplexon	omplex	7			
Roof Design:	simple (simple/co	omplex)				
Roof material:	metallic	(Asphalt shingles/concrete tiles/metal)				

	Soffits type:	cement board/wood	(Plywood/hardboard/cement board)	
		1/ 11 00		rood)
2		restories + many windows (approximate	number of windows)	X/Long
>-	Windows Size:	large (On average:	small/medium/large)	×
-	Windows Frames:	wood Ametal	(Wood/aluminum/aluminum clad)	
	Windows Aspect:	south, southwest	(Dominant viewing direction)	
	Window Construction	n: some tempered, some	(Tow E and/or polycarbonake (Tempered glass/e-coating/etc.)	4
-	Door Material:	good and metal)	(Wood/steel/fiberglass/composite)	
	Deck material: ter	rrace of concrete or stone	(Wood/composite materials)	
	Deck Description: o	pen and part trellised	(Enclosed/open)	
	Deck support type:	concrete	(Timber posts/logs/steel/concrete/stone)
	Deck buffer material:	stone/crushed gravel	(Crushed rock/gravel)	a water but
	Deck weed barrier:	NA	(Fiberglass/polyester)	Signing
	Structure SQR. FT.:	3500	(Total square feet of structure)	6° Can
8	Mtility Location:	no town utilities	(Pole/buried: Direction from structure)	
	Structure aspect:	south west	(Dominant facing direction/view)	
and the second	Leach field:	150' SOUTH/ONE	(Distance from house, and direction)	
	Cistern: dome		(Distance from house, and direction)	
	Cistern Type: Fire	130 / southwest	(Domestic Cistern or Fire Cistern)	
ecle	Cistern size:	6 2400 each.	(gallons)	Var.15 ?
i.m.	Well (if applicable):	34 northwest	(Distance form house, and direction)	
	Propane Tank location	n: 15' west	(Distance from house and direction)	
	Other: 1	ause is fully spi	rinklered.	

berned at east side?



Ask Cory re. locale of hammerhand from

lead field follows certar lines

door material: wood and/or metal

deck material: terrace of concrete or stone deck description: open and part trellised

deck support type: concrete

deck buffer material: stone/crushed gravel

utility location: no town utilities

cistern: water cistern is 60 feet from house; fire cistern is 130 feet

from house

cistern size: water cistern is xx; fire cistern is 2400 gallons

well: well is 35' from house propane tank is 15 feet from house other: HOUSE IS FULLY SPRINKLERED

the intention with the propane tank is to have it be below the level of the terrace and accessible from the parking court (which is lower than the terrace).

have you confirmed with a concrete company that they can access the site? this is key.

i will be unreachable at an all day workshop tomorrow and so if you have any questions or problems with the file you'll have to call sean: 617 519 5581. or, you can leave me a message on my cell and i will try to return your call.

ly

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