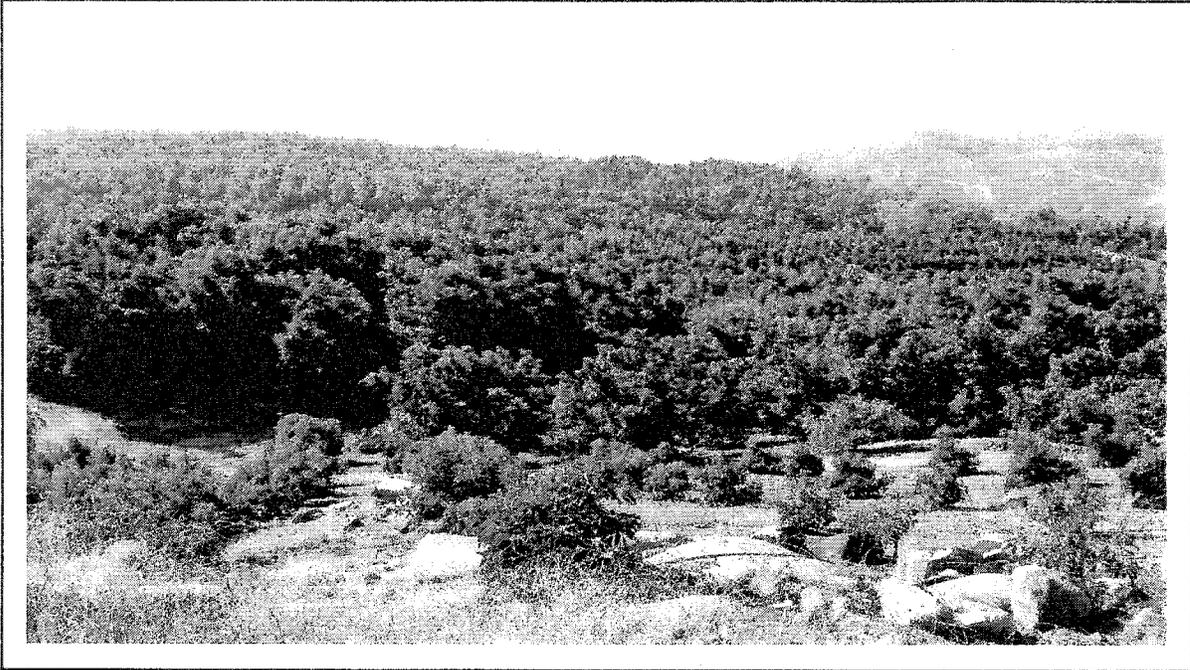


**FIRE PROTECTION PLAN**  
**For The Fitzpatrick Development**  
**Valley Center Fire Protection District**

**TPM 20842 LOG NO. ER 04-02-026**



**January 11, 2006**

(Revised September 1, 2006)

**Prepared For:**

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Tel. (310) 378-5511

**Prepared &  
Certified By:**

*David C. Bacon*

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**SDC DPLU RCVD 12/19/07**

**TPM 20842**

**FIRE PROTECTION PLAN  
For  
Fitzpatrick Development,  
Valley Center Fire Protection District**

**1.0 GENERAL DESCRIPTION**

The Fitzpatrick Development, APN 129-291-05, is located within a declared High Fire Severity Zone in the Community of Valley Center, County of San Diego, California. The Valley Center Fire Protection District will provide fire protection for this development. The proposed development is to be a four-unit addition to an adjacent rural community in an unincorporated area of San Diego County. The general area is occupied with irrigated, maintained avocado and citrus groves with scattered single family homes along Castlecrest Drive.

Fitzpatrick Development Parcels 1 and 2 are located in the northern subdivision boundary and abut undeveloped open space. Parcels 3 and 4 are located along the southern boundary and abut irrigated, maintained avocado groves. The western boundary lines of parcels 1 and 4 abut irrigated, maintained avocado groves. The eastern boundary line of Parcels 2 and 3 abut an existing single family home site. All parcels are a minimum of two (2) acres in size.

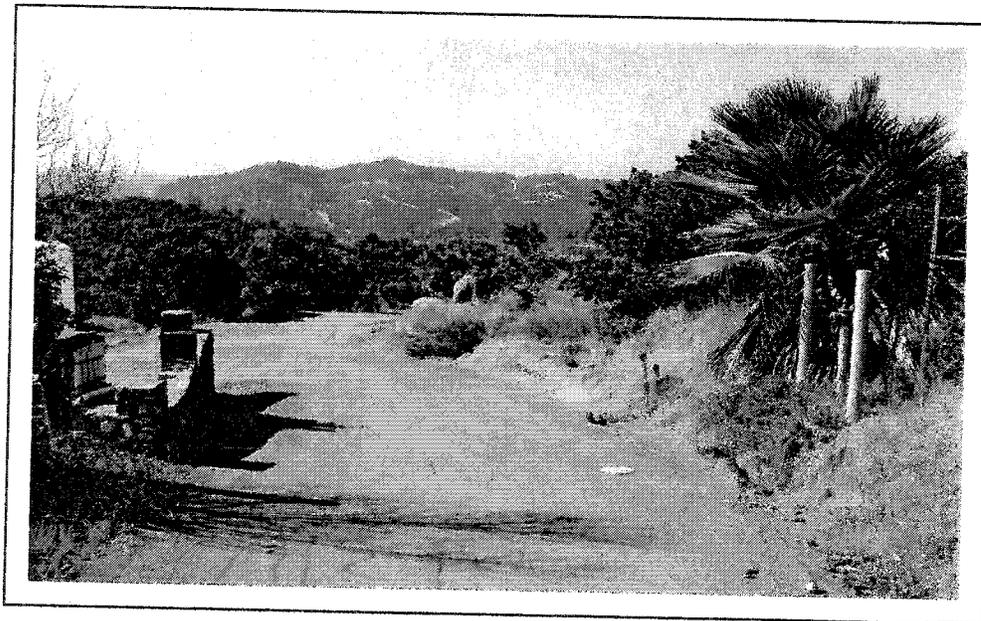


Photo 1: View looking west from the private road easement into the Fitzpatrick Development

Primary access to the development is via a private road easement, a 20' wide road which generally runs east and west. The primary access to the project is at the northeast corner of the development from an existing paved private road access. This private road access connects to Castlecrest Drive, a 24' paved two lane private road. An existing emergency access road will enter the development from the northeast boundary via a paved 20' wide road which runs south to north along Paymaster Road. The proposed 40' ingress/egress access road (Street "A") enters the project at the northeast corner of Parcel 2.

The area adjacent to the northern boundary along Paymaster Road is located in an unincorporated area of San Diego County, which is in high hazard native vegetation with scattered development of homes. The adjacent area west of the western boundary is developed with avocado and citrus agricultural lands. The eastern boundary is in an unincorporated area of San Diego County with high fire hazard native vegetation that abuts a single family home on Castlecrest Drive. The area adjacent to the southern boundary is developed with avocado and citrus agricultural lands.

A Fire Protection Plan (FPP) must be submitted to and approved by the Valley Center Fire Protection District. The FPP assesses the overall (on-site and off-site) wildland fire hazards and risks that may threaten life and property associated with the four proposed homes in the Fitzpatrick Development. In addition, the FPP establishes both the short-term and long-term fuel modification actions required to minimize any projected fire hazards, and assigns annual maintenance responsibilities for each of the required fuel modification actions.

### 1.1 General Information

Developer:	Thomas K. Fitzpatrick 4111 Paseo De Las Tortugas Torrance, CA 90505
Approving City Departments:	
Fire Authority:	Valley Center Fire Protection District
Planning:	San Diego County Planning Department
Water & Sewer:	Valley Center Municipal Water District

### 1.2 Coordination Between Supporting Plans

The purpose of this FPP is to provide Fuel Modification Zone treatment direction for developers, architects, builders, Valley Center Fire Protection District and San Diego County Planning officials, and the individual lot owners to use in making all proposed structures on all parcels in the development safe from future wildland wildfires. This FPP includes:

- A wildland fire hazard-rating assessment and expected fire behavior of off-site and on-site native vegetative fuels;
- A long-term perimeter vegetative fuel modification treatment and maintenance plan to minimize any loss to the residential structures on all four parcels due to wildland wildfire; and,

- A long-term interior open space fuel modification treatment plan and “*Firewise landscaping*” criteria to be deployed around the planned structures on all parcels.

This FPP is based upon requirements listed in Ordinance No. 9669, an ordinance amending Appendix II-a of the San Diego County Fire Code relating to wildland/urban interface standards; California Department of Forestry and Fire Protection Public Resource Code; San Diego County Consolidated Fire Code; San Diego County Ordinance 9670 and 2001 California Fire Code; California Code of Regulations Title 24 Part 9 (which is based upon the 2000 Uniform Fire Code); Article 86 – Fire Protection Plan – Wildland Interface (UWI) Areas, Section 8601.

## 2.0 WILDLAND FIRE HAZARD AND RISK ASSESSMENT

### 2.1 Off/On-site Fire Hazard and Risk Assessment

The Fitzpatrick Development Subdivision is located in a hilly zone approximately thirty (30) miles inland from the Pacific Ocean. There are existing on and off site agricultural lands (citrus/avocado) along the south, east and west property lines. The northern subdivision property boundary line abuts a rural, undeveloped area. This off site area to the north of the development is vegetated with native and non-native annual grasses and southern mixed chaparral (approximately five feet in height), Mexican elderberry, coastal oaks and scattered manzanita. The on site west boundary is composed of southern willow scrub which is a proposed biological open space easement including buffer.

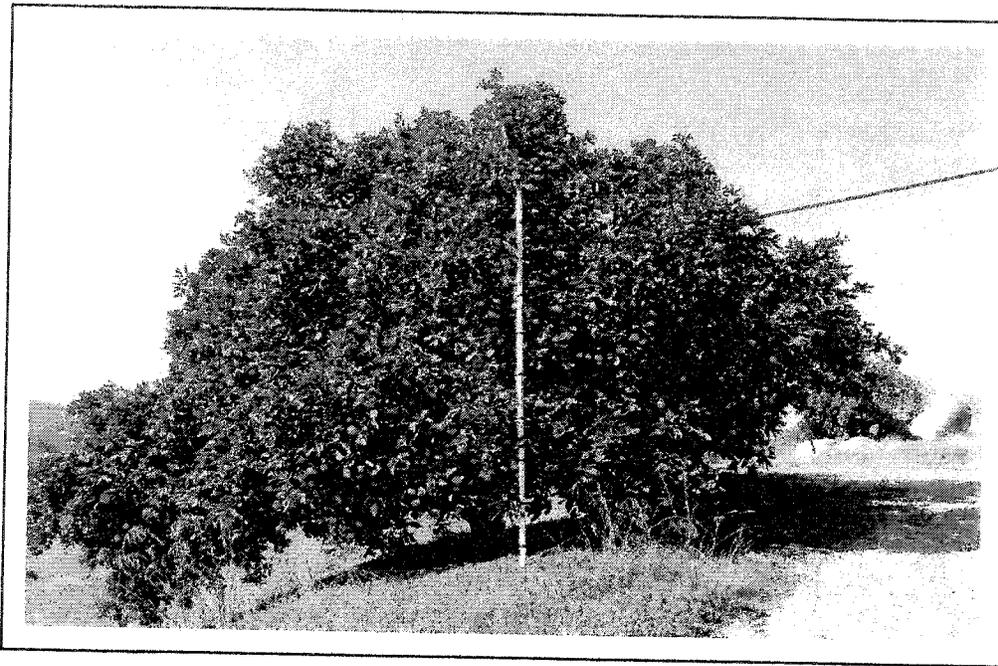
As is typical of grass and southern mix chaparral plants, a high percentage of the plants have an abundance of dead material. This is especially true of the black sage and sumac plants. This is due to the effects of the local Mediterranean climate where warm wet winters promote parcels of new growth, and long, hot and very dry summer seasons sometimes occur. Occasionally, multi-year droughts cause significant parts of these plants to die back. All of these plants are adapted to the intense wildfires they need for species regeneration. However, if wildfire occurs at too frequent intervals, the coastal sage scrub plant community reverts to a more flammable, less desirable community of short lived annual grasses with little wildlife value and poor ability to protect the soil.

The grassland and southern mixed chaparral community has functioned unimpeded in this Mediterranean climate for thousands of years, with both plants and animals thriving and adapting to the wind driven wildfires that burn through the coastal plains every 20 to 30 years. Today this world-renowned climate draws thousands of newcomers to southern California each year, particularly to San Diego County. In the endless search for new home sites, more new homes are being built in the grass and mixed chaparral plant community (**the wildland/urban interface**) where fire will also continue to be a visitor on both a planned and unplanned basis.

***The goal of the FPP is to reduce the potential for the loss of lives, homes and personal property when wildfires do occur with the challenge of allowing the development of well-planned home sites interspersed with fully-functioning grassland and southern mixed chaparral habitats. This goal is accomplished by requiring FIREWISE COMMUNITIES built with fire resistant materials and properly designed and maintained fuel modification treatments that will safely mitigate the Wildfire Hazard.***

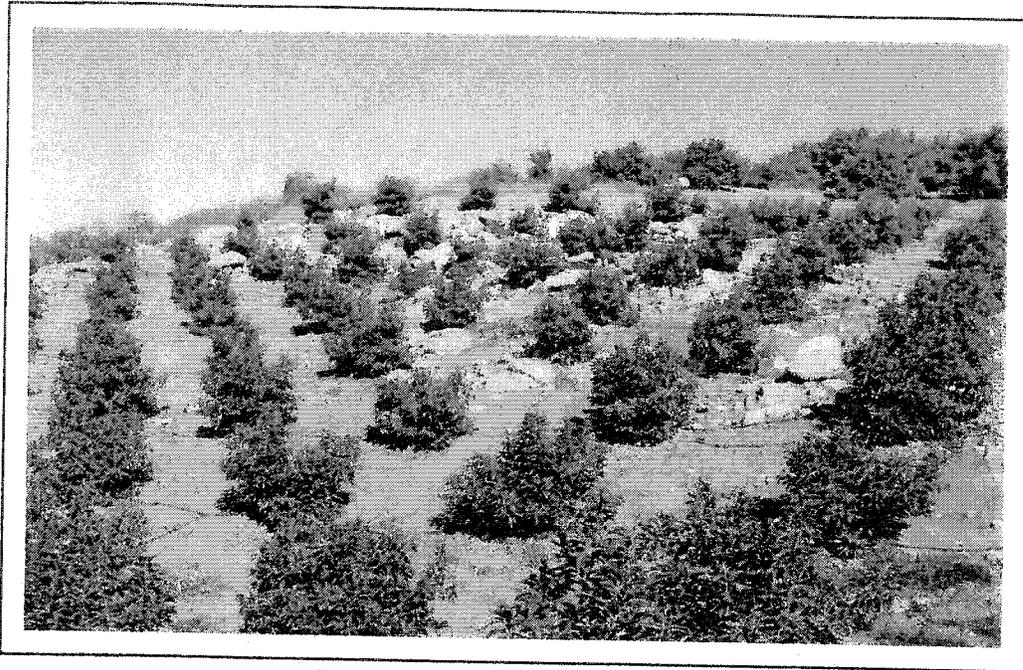
## 2.2 On-site Fire Hazard and Risk Assessment

With regard to the Fitzpatrick Development, interior areas are vegetated with irrigated, maintained avocado and citrus groves. It is important to understand that annual grasses, weeds, shrubs, laurel sumac, buckwheat, mustard and sage will take over the site and pose extreme fire hazards annually as the plants cure or lose live fuel moisture during hot, dry summer seasons. These areas can contribute to a damaging wildland fire event if the existing groves are not irrigated, properly managed and maintained in the future.



Ten foot (10')  
pole, one foot  
increments

↑ Photo 2: Existing citrus along proposed Street "A" (Parcel 1) on a 30% slope



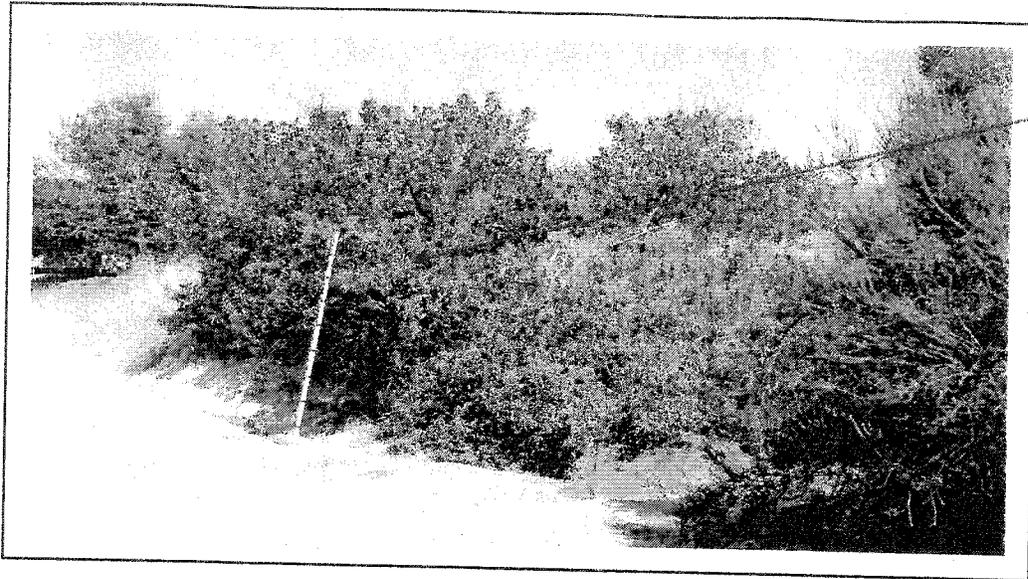
Irrigated,  
maintained  
avocado  
grove

↑ Photo 3: From proposed Street "A" looking north into Parcel 1



Avocado grove,  
Fuel Model 9

↑ Photo 4: From project area looking southwest toward the proposed cul-de-sac at Parcels 1 and 4



Ten foot (10') pole,  
one foot increments

↑ Photo 5: Typical mixed chaparral plants with a high dead-to-live vegetation fuel ratio along Street "A" (Parcel 1)



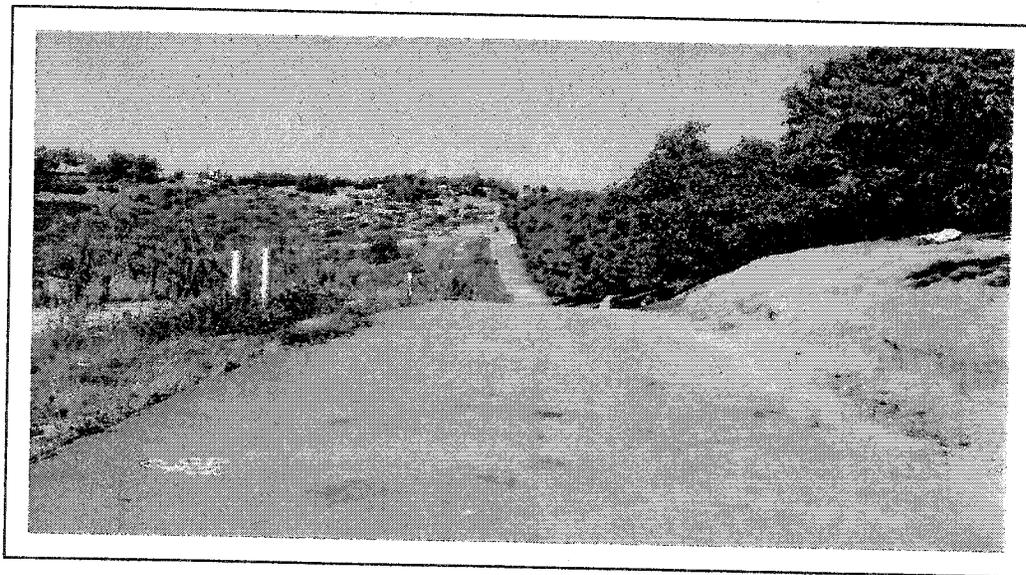
Fuel Model 1,  
weeds and  
annual grasses

↑ Photo 6: Looking east from project at an existing single family home situated on Castlecrest Drive; annual weed abatement accomplished by land owner in area along easterly property line



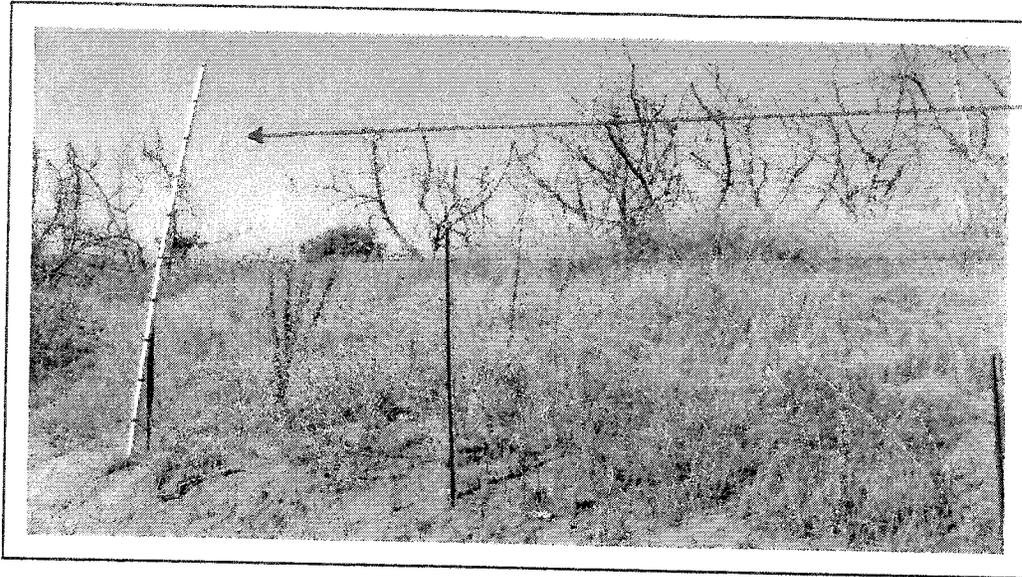
Existing avocado groves

↑ Photo 7: Looking south from Parcel 1 toward Parcel 3



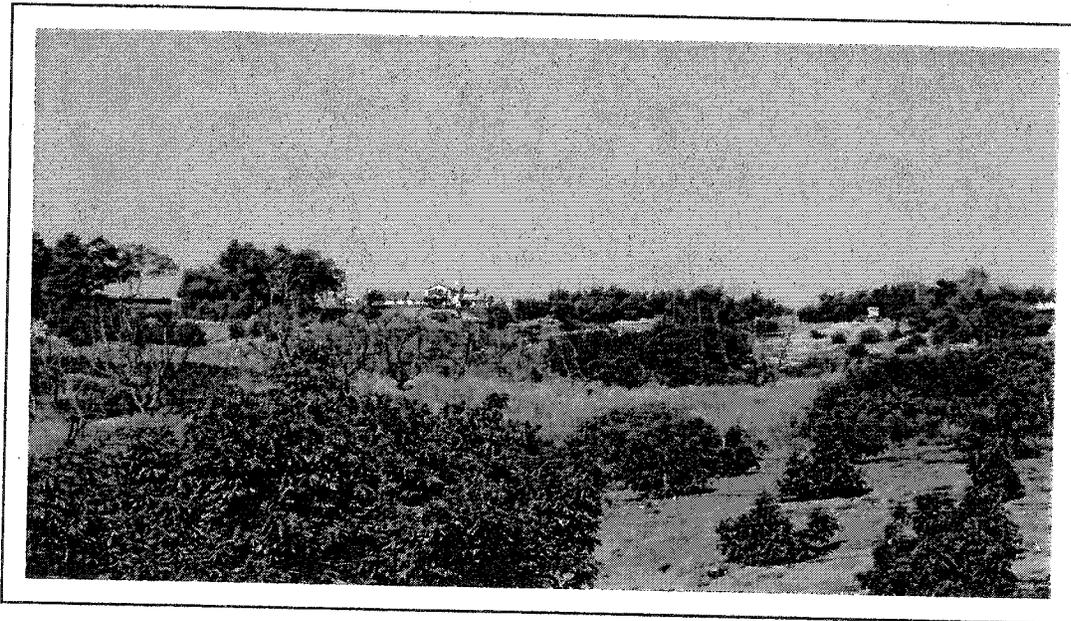
Existing Fire Dept. & Water District 20 ft. access road

↑ Photo 8: Looking north along the existing private, secondary access along Paymaster Road (per Parcel Map 129-291-05)

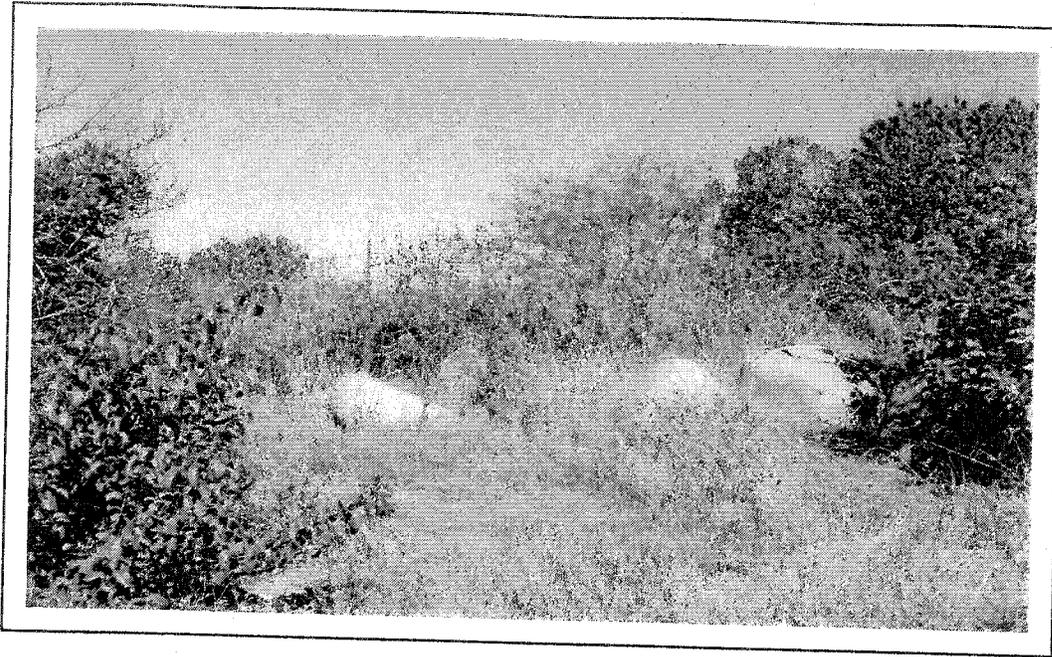


Ten foot (10') pole,  
one foot increments

↑ Photo 9: Hazardous vegetation along the northern boundary line adjacent to Parcel 1

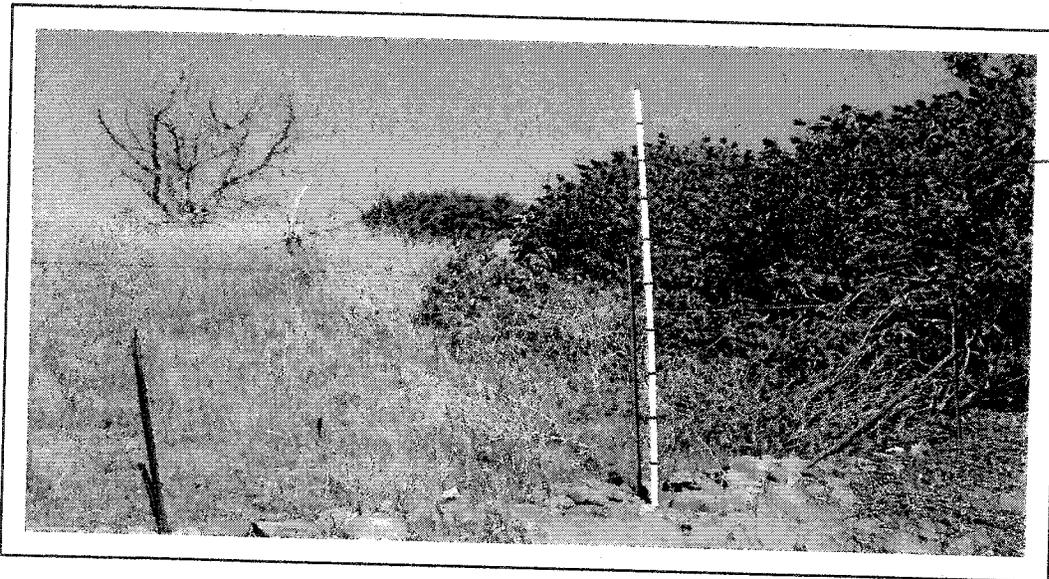


↑ Photo 10: Looking north toward existing neighborhood development from Parcel 1



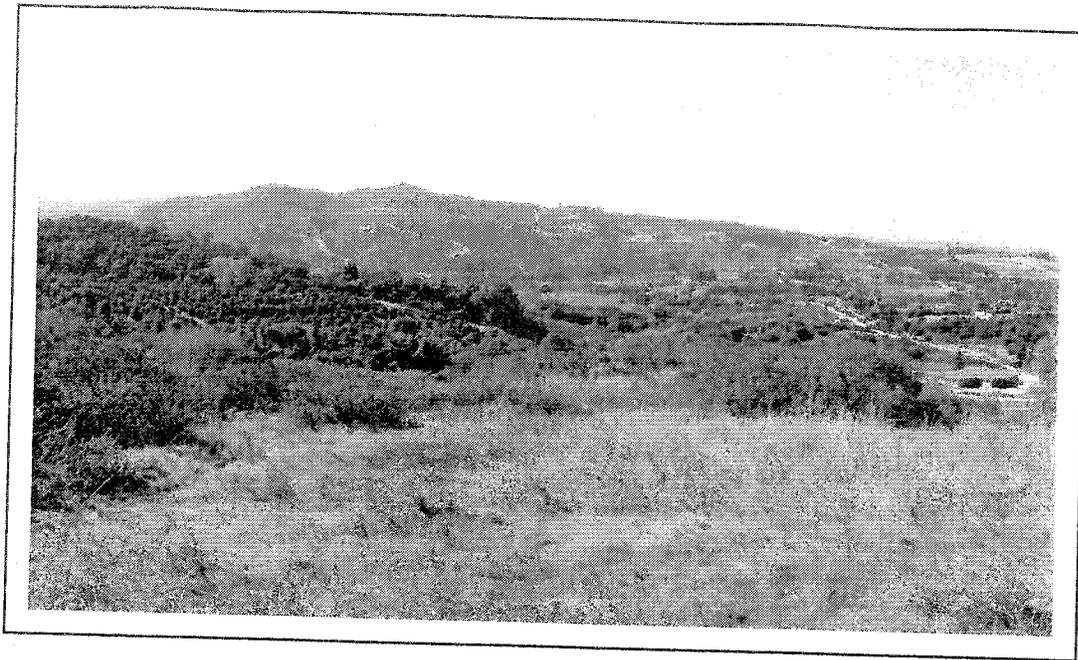
Fuel Model 1  
(non-native  
grasses and  
weeds)

↑ Photo 11: Looking at hazardous vegetation from the project's northern boundary at Parcel 1



Ten foot (10') pole,  
one foot increments

↑ Photo 12: Looking at non-native grasses and laurel sumac shrubs north of Parcel 2



View looking  
west from  
Paymaster Road

↑ Photo 13: Typical light, flashy fuel type along the northern boundary of the development consisting primarily of California laurel, common buckwheat, sage and mixed grasses



↑ Photo 14: Existing water stand pipe at the entrance of the development at Street "A"

\* In summary, any wind or topography driven wildfire burning under a northeastern (*Santa Ana*) wind pattern through the adjacent undeveloped land to the north and northeast creates an **extreme** wildland fire hazard to the structures on Lots 1-2. Wildland fires starting north of the development on a typical fire day with a southwest wind will burn away from the proposed structures and will generally not be a significant wildland fire hazard. However, a fire starting south of the development on a typical summer day with a southwest wind will create a **high** wildland fire hazard to structures on Lots 1, 3 and 4. All residential structures are threatened through wind-blown embers regardless of the wind direction. The Class A (non-combustible) roof assembly, including the roof cover, will mitigate against wind blown ember threat.

*The proposed fuel Modification treatments (Zone 1 and Zone 2 "Firewise" landscaping) and the use of "Firewise" building construction standards which includes the use of Class "A" roofs, eaves of heavy timber construction or boxed eaves with no attic ventilation openings or ventilation louvers in eave overhangs or between rafters at eaves, dual pane windows and non-combustible fire resistive exterior wall materials should reduce the wildfire risk and potential loss of any of the four homes due to wind driven embers and radiant heat against the boundaries of the Fitzpatrick Development.*

### 2.3 Predicting Wildland Fire Behavior

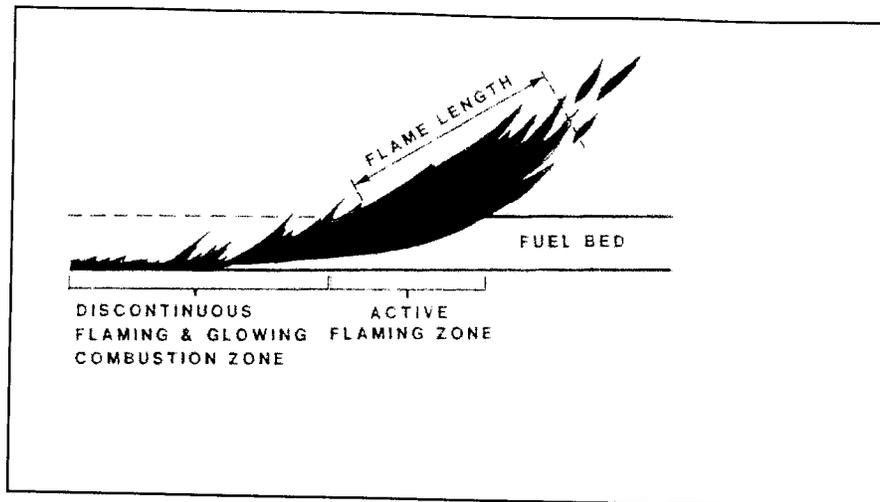
Can wildland fire behavior really be predicted? That depends on how accurate you expect the answer to be. The minute by minute movement of a wildland fire will probably never be totally predictable, certainly not from weather conditions forecast many hours before the fire.



↑ Photo 1a : Typical Intermediate Coastal Sage Scrub Fire Behavior

Nevertheless, practice and experienced judgment in assessing the fire environment, coupled with a systematic method of calculating fire behavior, yields suprisingly good results (Rothermel 1983).

The BEHAVE: Fire Behavior Prediction and Fuel Modeling System–Burn Subsystem, Part 1 by Patricia L. Andrews, is one of the best systematic methods for predicting wildland fire behavior. The BEHAVE fire behavior computer modeling system was developed by USDA–Forest Service research scientists at the Intermountain Forest Fire Laboratory, Missoula, Montana, and is used by wildland fire experts nationwide. "Because the model was designed to predict the spread of a fire, the fire model describes the fire behavior only within the flaming front." The primary driving force in the fire behavior calculations is the dead fuel less than one-fourth inch in diameter. These are the fine fuels that can carry fire.



↑ Figure 1: Description of Flame Length (Expressed in Feet)

Fuels larger than 1/4-inch contribute to fire intensity but not necessarily to fire spread. The BEHAVE fire model describes a wildfire spreading through surface fuels, which are the burnable materials within six (6') feet of the ground, and contiguous to the ground. Regardless of the limitations expressed, experienced wildland fire managers can use the BEHAVE modeling system to project the expected fire intensity (expressed as Btu/ft/sec), rate-of-spread (feet/minute) and flame lengths (feet) with a reasonable degree of certainty for use in fire protection planning purposes. Of these three fire behavior projections, flame length is the most critical in determining structure protection requirements. The *FIREWISE 2000*, Inc. evaluation team used the computer based BEHAVE Fire Behavior Prediction Model to make the following fire behavior assessments for the Fitzpatrick Development.

### 2.3.1 Wildland Fire Behavior Calculations for the off-site hazardous vegetative fuels.

Wildland fire behavior calculations have been projected for the hazardous vegetative fuels on the undeveloped areas in proximity to Lots 1 and 2. The TPM 20842 Vegetation Map dated 25 Jan 2005 identifies a blend of southern mixed chaparral and non-native grasses as the predominant vegetation along the north property line. Firewise 2000 determined that this mix of southern mixed chaparral and non-native grasses would best be represented by using standard Fire Behavior Fuel Model SCAL 18 (coastal sage scrub-Photos 9, 11, 12 and 13.). The projections are based on scenarios that are "worst case" San Diego County fire weather assumptions. The scenarios are depicted in Tables 2.2.1 through 2.2.4. The tables display the expected Rate of Fire Spread (expressed in feet per minute), Fireline Intensity (expressed in British Thermal Units per foot per second) and Flame Length (expressed in feet) for four separate BEHAVE PLUS-Fire Behavior Prediction and Fuel Modeling System Computer Calculations. The tables also include the calculation inputs used in the BEHAVE PLUS program which were obtained from the Fitzpatrick Development site observations and fuel levels typically observed during the local fire season.

**Fire Scenario #1: Late Fire Season With Late Season North, Northeast And East Wind (Santa Ana Wind) Conditions Along Northeast & North Project Boundary**

<b>Table 2.2.1 Fire Scenario #1 Expected Fire Behavior For Late Season 60 MPH Santa Ana Wind Condition Fire Burning in a SCAL Fuel Model 18</b>	
Rate of Spread	282 feet/minute
Fireline Intensity	20515 BTU's/foot/second
Flame Length	43.3 feet in length
<b>Fire Behavior Calculation Input Data:</b> <ul style="list-style-type: none"> <li>• 30 percent up slope</li> <li>• 60 mph 20-foot wind speed (24 mph mid-flame wind speed)</li> <li>• 140° direction of wind vector to slope</li> </ul> <b>Anticipated Fuel Moistures</b> <ul style="list-style-type: none"> <li>* 1-Hour Fine Fuel Moisture of .....2%</li> <li>* 10-Hour Fuel Moisture of.....3%</li> <li>* 100-Hour Fuel Moisture of ..... 5%</li> <li>* Live Herbaceous Fuel Moisture of.....30%</li> <li>* Live Woody Fuel Moisture of.....50%</li> </ul>	

Table 2.2.2 which follows shows the change in fire rate of spread, intensity and flame length following the completion of the *Firewise* required fuel modification work. The table displays the results of using two different fuel models (FM). FM-1 is a perennial native grass stand one (1) foot tall and Fuel Model 9 (hardwoods with litter). The plants should be spaced at 1 ½ the projected height of the mature plant (a plant six feet in height at maturity would need nine feet of spacing from other plants). In addition, native grasses must be removed from beneath the shrubs to eliminate vertical fuel ladders. The data in red displays the additional reduction in rate of spread, intensity and flame length when annual treatment is conducted after the grasses have headed out and cured. Treatment is typically completed in May or June each year.

**Fire Scenario #2: Late Fire Season With Late Season North, Northeast And East Wind (Santa Ana Wind) Conditions Along Northeast & East Project Boundaries**

<b>Table 2.2.2</b>	
<b>Expected Fire Behavior For For A Late Season 60 MPH Santa Ana Wind Condition In Fuels Modified To a FIREWISE Non-irrigated Zone 2 Criteria [Combined Fuel Model (Fuel Model 1 – Native Grasses 85% and Fuel Model 9 – Hardwoods with litter (15%)).</b>	
Rate of Spread	732 feet/minute
Fireline Intensity	1415 BTU's/foot/second
Flame Length	12.7 feet in length
<b>Fire Behavior Calculation Input Data:</b> <ul style="list-style-type: none"> <li>• 30 percent up slope</li> <li>• 60 mph 20-foot wind speed (24 mph mid-flame wind speed)</li> <li>• 140° direction of wind vector to uphill slope</li> </ul> <b>Anticipated Fuel Moistures</b> <ul style="list-style-type: none"> <li>* 1-Hour Fine Fuel Moisture of .....2%</li> <li>* 10-Hour Fuel Moisture of.....3%</li> <li>* 100-Hour Fuel Moisture of .....5%</li> <li>* Live Herbaceous Fuel Moisture of.....30%</li> <li>* Live Woody Fuel Moisture of.....50%</li> </ul>	
<b>COMMENTS: The above fire behavior projections are based on grass fuels one-foot tall and hardwoods 6 to 8 feet tall. Therefore, Rates of Spread, Fireline Intensity and Flame Lengths should be reduced two-thirds for 4-inch stubble grass fuels, i.e.,</b>	
Rate of Spread	= 242 feet/minute
Fireline Intensity	= 467 BTU's/ft/sec
Flame Length	= 4.2 feet in length

**Fire Scenario #3: Late Fire Season With Above Average Southwest Prevailing Wind Conditions Along Southwest Project Boundary**

<b>Table 2.2.3</b>	
<b>Fire Scenario #3</b>	
<b>Expected Fire Behavior For Above Average 30 MPH Southwest Prevailing Wind Condition Fire Burning in a SCAL Fuel Model 18</b>	
Rate of Spread	161 feet/minute
Fireline Intensity	11695 BTU's/foot/second
Flame Length	33.5 feet in length
<b>Fire Behavior Calculation Input Data:</b> <ul style="list-style-type: none"> <li>• 30 percent up slope</li> <li>• 30 mph 20-foot wind speed (12 mph mid-flame wind speed)</li> <li>• 0° direction of wind vector to uphill slope</li> </ul> <b>Anticipated Fuel Moistures</b> <ul style="list-style-type: none"> <li>* 1-Hour Fine Fuel Moisture of .....2%</li> <li>* 10-Hour Fuel Moisture of.....3%</li> <li>* 100-Hour Fuel Moisture of ..... 5%</li> <li>* Live Herbaceous Fuel Moisture of.....30%</li> <li>* Live Woody Fuel Moisture of.....50%</li> </ul>	

**Fire Scenario #4: Topography Driven Fire During Late Fire Season With Average South, Southwest and West Prevailing Wind Conditions Along Southeast Project Boundary in a non-irrigated thinned fuel model to Zone 2 requirement**

<b>Table 2.2.4</b> <b>Fire Scenario #4</b> <b>Expected Fire Behavior For Topography Driven Fire at the Southeast Project Boundary Under Average 30 MPH Southwest Prevailing Wind Conditions in a Fuel Model 1 – Native Grasses 85% and Fuel Model 9 – Hardwoods with litter (15%)</b>	
Rate of Spread	379 feet/minute
Fireline Intensity	607 BTU's/foot/second
Flame Length	8.6 feet in length
<b>Fire Behavior Calculation Input Data:</b> <ul style="list-style-type: none"> <li>• 30 percent up slope</li> <li>• 30 mph 20-foot wind speed (12 mph mid-flame wind speed)</li> <li>• 0° direction of wind vector to uphill slope</li> </ul> <b>Anticipated Fuel Moistures</b> <ul style="list-style-type: none"> <li>* 1-Hour Fine Fuel Moisture of .....4%</li> <li>* 10-Hour Fuel Moisture of.....6%</li> <li>* 100-Hour Fuel Moisture of ..... 8%</li> <li>* Live Herbaceous Fuel Moisture of.....40%</li> <li>* Live Woody Fuel Moisture of.....60%</li> </ul>	
<b>COMMENTS: The above fire behavior projections are based on grass fuels one-foot tall and hardwoods 6 to 8 feet tall. Therefore, Rates of Spread, Fireline Intensity and Flame Lengths should be reduced two-thirds for 4-inch stubble grass fuels, i.e.,</b>	
<b>Rate of Spread = 125feet/minute</b> <b>Fireline Intensity = 200 BTU's/ft/sec</b> <b>Flame Length = 2.8 feet in length</b>	

Table 2.2.4 above simulates the change in fire rate of spread, intensity and flame length following the completion of the *Firewise* required fuel modification work. The table displays the combined results of Fuel Model 1 and Fuel Model 9 . Fuel Model 9 is a hardwood with litter plant community with a combined total of 3.5 tons of 1hr, 10hr and 100hr fine fuel loading per acre. Fuel Model 1 is a native grasses and shrub plant community with a combined total of 0.74 tons of 1hr, 10hr and 100hr fine fuel loading per acre.

The plants should be spaced 1 ½ times the projected height of the mature plant (a plant six feet in height at maturity would need nine feet of spacing from other plants). In addition, native grasses must be removed from beneath the shrubs to eliminate vertical fuel ladders. The data in red displays the additional reduction in rate of spread, intensity and flame length when annual treatment is conducted after the grasses have headed out and cured. Treatment is typically completed in May or June of each year and the dead material is pruned out of the native coastal sage scrub plants).

Tables 2.2.5C and 2.2.5D show the change in fire rate of spread, intensity and flame length following the completion of the required fuel modification work. Fire behavior reductions from a SCAL Fuel Model 18 coastal sage scrub fuel model (as depicted in Tables 2.2.5 A and 2.2.5.B) to Treated

- Thinning Zone 2 (Simulated Fuel Model 9-Hardwoods with litter) depicted in Table 2.2.5C are as follow:

**SUMMARY FIRE BEHAVIOR TABLE:**

**TABLE 2.2.5A – 60-mph Northeast Wind**

<u>Prior to Fuel Treatment</u>	
Rate of Spread	282 Ft/min
Fireline Instensity	20515 BTU/ft/sec
Flame Length	<b>43.3 Feet</b>

**TABLE 2.2.5C - 60-mph Northeast Wind**

<u>After Fuel Treatment</u>	
Rate of Spread	242 ft/min
Fireline Instensity	467 BTU/ft/sec
Flame Length	<b>4.2 Feet</b>

VS.

**TABLE 2.2.5B – 30-mph Southwest Wind**

<u>Prior to Fuel Treatment</u>	
Rate of Spread	161 Ft/min
Fireline Instensity	11695 BTU/ft/sec
Flame Length	<b>33.5 Feet</b>

**TABLE 2.2.5D – 30-mph Southwest Wind**

<u>After Fuel Treatment</u>	
Rate of Spread	125 ft/min
Fireline Instensity	200 BTU/ft/sec
Flame Length	<b>2.8 Feet</b>

VS.

**3.0 ASSESSING STRUCTURE IGNITIONS IN THE WILDLAND/URBAN INTERFACE**

Structure ignitions from wildland wildfires basically come from two sources of heat: convective firebrands (flying embers) and radiant heat. During periods of high fire intensity and strong, dry, winds, convective firebrands have the capability of being transported over great distances (several hundred feet and up to several miles). **All homes will be constructed with non-combustible roofing and fire-resistive exterior building materials, and no attic vents or attic ventilation louvers will be installed in eave overhangs or between rafters at eaves, per County of San Diego Wildland/Urban Interface Fire Code Standards.** Therefore, due to the fact that only fire-resistive exterior building materials will be used in the construction of structures, only the radiant heat issue needs to be addressed in this FPP.

**This statement is made with the understanding that the eventual homeowners will be required to maintain the property to Zone 1 and Zone 2 fuel modification standards and will keep the roof and any rain gutters free of leaves, needles and other combustibile debris and all firewood and other combustibile materials are properly stored away from the structure so that burning embers falling on or near the structure have no suitable host. Individual Lot Owners will be responsible for keeping themselves informed about fire precautions such as keeping all doors and windows tightly closed whenever a wildland fire is reported in the near vicinity.**

“Firewise” landscaping is the act of converting native vegetation from a highly flammable and high intensity state to a more fire resistant and lower intensity condition. The comparisons of the untreated fuels in Tables 2.2.1 with Table 2.2.2 (“Firewise” Landscaping) demonstrates how “Firewise” landscaping substantially reduces flame lengths and fireline intensity to an acceptable level for home protection. Other than non-combustible roofing and exterior building materials, “Firewise”

landscaping has proven to be the most effective treatment for minimizing structure losses due to wildfire radiant heat.

A USDA-Forest Service research study entitled the "Structure Ignition Assessment Model (SIAM)" by Jack D. Cohen, Intermountain Fire Science Laboratory, Missoula, Montana has helped to validate how much distance is required to keep structures from igniting due to wildfire radiant heat. Preliminary SIAM results suggest that for reducing structure ignitions from radiant heat, vegetation modification beyond 100 feet distance from a structure has no significant benefit unless there is supporting data justifying more than 100 feet of vegetation modification. In this case, fuel modification measures up to 100 feet are more than adequate to protect the homes on lots adjacent to native vegetation.

The SIAM Ignition Study indications and the personal experience of the ***FIREWISE 2000, Inc.*** evaluation team helped establish the fuel modification recommendations found in Section 5.0: Fuel Modification Descriptions, Recommended Treatments and Landscaping & Fuel Treatment Location Map.

### 3.1 Terminology.

Although any plant will burn, wildland fire research has shown over and over that some types of plants, including many natives, are more fire resistant than others. The Recommended Plant List in APPENDIX "A" includes a listing of these low fuel volume, non-oily, non-resinous plants commonly referred to as "Fire Resistant". This term comes with the proviso that each year these plants are pruned, all dead wood is removed and all grasses or other plant material are removed from beneath the circumference of their canopies.

The Approved Plant List in APPENDIX "A" includes native species occurring on the Fitzpatrick Development property that are not considered undesirable from either a biological or wildfire risk management perspective provided they are properly maintained by June of each year.

## 4.0 FIRE DEPARTMENT RESPONSE TIMES

The Fitzpatrick Development is within the response area of the Valley Center Fire Protection District. Fire Station 72 on 28741 Cole Grade Road is the closest primary engine within the fire district, and is 5.57 miles or 11 minutes travel time to the development. However, the nearest fire station, Fire Station 1 at 8790 Circle "R" Drive, of the Deer Springs Fire Protection District is approximately 4.89 miles or 10 minutes travel time distant. This engine would respond under an automatic aid agreement. Despite the relatively close proximity of the either fire station, there is absolutely no assurance that the Engine Companies would be in their stations when a wildfire might threaten the Fitzpatrick Development from an ignition inside/outside the development boundaries. On high/extreme fire danger days there are often multiple starts and engine companies are often already deployed on other incidents. For this reason, Firewise Communities use "*Survivable Space*" strategies to help their communities to survive a wildfire on their own and minimize the loss of any structures or lives, and without the intervention of the Fire Department if fire fighting resources are drawn down and unavailable for extensive periods of time.

## 5.0 FUEL MODIFICATION DESCRIPTIONS, REQUIRED TREATMENTS and FUEL TREATMENT LOCATION MAP

### 5.1 Fuel Modification Descriptions

**5.1.1 Fuel Modification Zone 1.** Zone 1 comprises the first 50 feet around a structure (front, back and side yards) and is commonly called the defensible space zone. This *Firewise 2000* landscaped zone is irrigated and primarily consists of fire resistant, maintained native or ornamental plantings usually less than 18 inches in height. However, this zone may contain occasional fire resistant trees and single well spaced ornamental shrubs up to 48 inches in height, intermixed with ground covers and lawn. *Plants in this zone need to be fire resistant and should not include any pyrophytes that are high in oils and resins such as pines, eucalyptus, cedar, cypress or juniper species.*

Trees must be planted so that when they reach maturity the tips of their branches are at least 10 feet away from any structure. Refer to APPENDIX 'A' "*FIREWISE*" Planting Considerations, Lists for Recommended Plants and APPENDIX 'B' for Prohibited Plants.

**Thick, succulent or leathery leaf species are the most "fire resistant".**

**Regular maintenance and continued irrigation is most important in Zone 1.** Irrigated Zone 1 will be cleared of all existing native vegetation, replanted with drought tolerant and irrigated fire resistant lawns, ground covers and shrubs. Each individual lot owner in the Fitzpatrick Development will be required to maintain that portion of their yard that lies within Zone 1 in a typical "*firewise*" yard landscaping and irrigated condition (i.e., lawn, ornamental shrubs and occasional well spaced fire resistant trees). Shrubs and trees will be selected from the approved plant list in APPENDIX 'A' and are to be annually maintained free of dead material. Trees will be placed and maintained so that their crown cover at maturity will be more than ten (10) feet from any structure. All tree crowns will be separated by twenty (20) feet and each tree will be limbed to maintain a separation of six feet between the ground fuels (shrubs and ground covers) and the lower limbs. If water for irrigation is limited, use more of the available water in Zone 1 rather than in Zone 2. Plants with high moisture content are less likely to burn. Non-flammable concrete patios, driveways, swimming pools, walkways, boulders, rock, and gravel can be used to break up fuel continuity within Zone 1.

**5.1.2 Fuel Modification Zone 2.** Zone 2 is the area 50 to 100 feet or more away from any structures and twenty feet (20') along streets and emergency access roads. Fitzpatrick Development individual lot owner will be required to maintain vegetation treatments along streets, emergency access roads and individual lot owner maintenance buildings within the development to Zone 2 criteria. This zone can be irrigated fire resistant landscaping or non-irrigated natural slope thinning areas. Zone 2 may include single or small clusters of trimmed fire resistant ornamental and/or native plants [natives only in Thinning Zone 2 (*Yellow*)] up to 48 inches in height and trimmed ornamental and native trees [natives only in Thinning Zone 2 (*Yellow*)] limbed up to six feet from the ground. Selected native plant clusters must be separated by at least 1 ½ times the fully developed height of the retained plants. All of the dead material must be pruned out on an as-needed basis, but at least annually each spring. Trimmed material can be cut and scattered as mulch. "*Firewise*" landscaping criteria are important in this zone. Irrigation, partial irrigation or non-irrigation can be used in this zone depending upon the plant species selected.

The following native species will not be permitted to regrow on manufactured slopes or in the natural areas that are part of the fuel modification plan: Chamise (*Adenostoma faeciculatum*); California sagebrush, (*Artemisia californica*); flat-topped buckwheat, (*Eriogonum fasciculatum*); and black sage, (*Salvia mellifera*).

Parcel owners shall be responsible for maintaining fuel modification Zones 1 and 2 within their lots. Weed abatement regulations will be followed if the lot is not landscaped. In the event a lot is repossessed, the unit/agency holding title to the lot will be responsible for the maintenance.

**5.1.3 Manufactured Slopes [Fitzpatrick Development Lot Owner Maintained (Fuel Modification Zone 2)].** These are irrigated, temporarily irrigated, or non-irrigated and maintained slopes replanted with low fuel volume plants. Maintenance of these manufactured slopes will be the responsibility of the individual homeowners if they fall within the lot boundary. The individual home/lot owner will be responsible for the maintenance of all Common Area Manufactured Slopes (maintenance buildings/roadside treatment areas) within of the individual lot owner boundaries. Long-term maintenance shall meet Fuel Modification Zone 2 criteria (Shown as Green on the Fuel Treatment Location Map).

**5.1.4 Natural Slopes [Fitzpatrick Development Lot Owner Maintained (Fuel Modification Zone 2)].** Natural Slopes are those slopes that are maintained by the individual lot owners to Zone 2 criteria but are not within Manufactured Slope Landscape Zones (Shown as Yellow or Brown on the Fuel Treatment Location Map) such as: the annual weed abatement requirements along maintained roadways. Individual homeowners will be responsible for maintenance of natural slopes that fall within their lot boundaries. Highly flammable native vegetation shall be removed and annual grasses and other weeds shall be weed-whipped down (annual weed abatement) to a 4-inch stubble height by June 1<sup>st</sup> of each year. The following native species will be totally removed from natural slope fuel modification areas: Chamise (*Adenostoma faeciculatum*); California sagebrush (*Artemisia californica*); flat-topped buckwheat (*Eriogonum fasciculatum*); and, black sage (*Salvia mellifera*).

## **5.2 Required Treatments and Actions**

**5.2.1 Lot Front, Side and Back Yards.** (Shown as No Color on the Fuel Treatment Location Map) Each individual lot owner will be required to maintain their front, side and back yards within 15 to 30 feet of their homes with irrigated “Firewise” Zone 1 landscaping. Any remaining portion of the backyard lot will be maintained to either Zone 1 or Zone 2 criteria, depending upon lot size. Manufactured slopes inside a lot boundary will be maintained to Zone 2 criteria by each lot owner.

**5.2.2 Manufactured Slopes (Lot Owner Maintained)** (Shown as Green on the Fuel Treatment Location Map). Landscaping and maintenance will be to Zone 2 criteria. Common area slopes and parkways will be planted with “Firewise” landscaping, mostly ornamentals, consisting of well spaced and maintained fire resistant plants and trees. Long term maintenance will be by the individual lot owners (please refer back to Sections 5.1.1 and 5.1.3). Maintenance will be on-going throughout the year as needed.

**5.2.3 Natural Slopes (Lot Owner Maintained)** (Shown as Yellow or Brown on the Fuel Treatment Location Map). Implementation and maintenance will be to Zone 2 criteria. Treatment consists of

thinned native vegetation out to 100 feet around structures by lot owners and 20 feet along streets/private access roads by individual lot owners. Please refer back to Sections 5.1.2 and 5.1.4.

**5.2.4 Yard Combustible Free Zone.** (Shown as Purple on the Fuel Treatment Location Map). All combustible building materials will be permanently restricted on all residential lots 2, 3, and 4 because of the high fire hazard from the existing native and exotic vegetation. No combustible structures can be built in the areas shaded Purple, which range in width from the edge of the structure to 25 feet from the proposed home, depending on the lot layout. Combustible decks, patio covers and gazebos will be prohibited in this zone. The homeowners of these lots are not restricted from having concrete patios, concrete walkways or a swimming pool within this zone, provided the lot is large enough. The front, back and side yards will be maintained to Zone 1 and Zone 2 criteria by the lot owners. Refer to Appendix D for photos and descriptions of non-combustible decks, patio covers, and railings.

**Biological Open Space Easement (proposed).** The western boundary is composed of southern willow scrub which is a proposed biological open space easement including buffer. This proposed easement and associated fuel modification buffer is approximately 150 feet from the structure on Lot 4.

**5.2.5 Basic Fire-Resistive Construction Requirements For All Structures.** All structures (residential/ individual owned) will be built with a Class A Roof Assembly, including a Class A roof covering. Attic or foundation ventilation louvers or ventilation openings in vertical walls shall not exceed 144 square inches per opening and shall be covered with 1/4 inch mesh corrosion-resistant metal screening or other approved material that offers equivalent protection. Attic ventilation shall also comply with the requirements of the Uniform Building Code (U.B.C.). Ventilation louvers and openings may be incorporated as part of access assemblies. Paper-faced insulation shall be prohibited in attics or ventilated spaces.

All chimney, flue or stovepipe openings will have an approved spark arrester. An approved spark arrester is defined as a device constructed of nonflammable materials, 12 gauge minimum thickness or other material found satisfactory by the Fire Department, having 1/2-inch perforations for arresting burning carbon or sparks. It shall be installed to be visible for the purposes of inspection and maintenance.

All glass or other transparent, translucent or opaque glazing materials including skylights, shall be constructed of tempered glass or multi-layered glazed panels. No skylights will be allowed on the roof assembly facing hazardous vegetation.

The exterior walls surface materials shall be non-combustible or an approved alternate. In all construction, exterior walls are required to be protected with 2-inch nominal solid blocking between rafters at all roof overhangs.

No attic ventilation openings or ventilation louvers shall be permitted in soffits, in eave overhangs, between rafters at eaves, or in other overhanging areas.

All eaves, fascias and soffits will be enclosed (boxed) with non-combustible materials. The entire structure perimeter shall comply.

All Fitzpatrick development residential structures will have automatic interior sprinklers installed according to the National Fire Protection Association (NFPA) 13D- Standard for the Installation of Sprinkler Systems in One- and Two-family Homes and Manufactured Homes and Valley Center Fire Protection District standards.

**5.2.6 Water Supply.** Fitzpatrick Development water supply will be connected to the Valley Center Municipal Water District water system. Hydrants, mains and water pressures have been designed to comply with County of San Diego Code requirements. Please refer to Civil Engineering Design Plans.

- The existing stand pipe at the entrance to the development is not adequate for required fire flows (photo 14). A standard fire hydrant shall be placed along Street "A" to meet current codes and must be approved by the Valley Center Fire Protection District.

**5.2.7 Access Roads.** All streets and cul-de-sacs have been designed to County of San Diego standards. (Refer to Civil Engineering Design Plans). Clearance of brush or vegetative growth along new and existing on and off-site roadways will comply with Consolidated Fire Code for the 17 Fire Protection Districts in San Diego County.

- Clearance of Brush or Vegetative Growth from Roadways: The area on each side of the improved width of private easement roads and along development street(s) shall comply with the requirements of Fuel Modification Zone 2 criteria. Fitzpatrick Development Street "A" is forty feet (40') in width. The private access road leading to/from Castlecrest Road is twenty feet (20') in width which require twenty feet (20') of fire hazard vegetation clearance on each side of the roadway.
- Secondary Access maybe deemed necessary by the Chief for fire apparatus access/evacuation to or from the project. Cumulative road length for parcels zoned for 1 acre to 4.99 acres are limited to a maximum length of 1320 feet. The cumulative proposed road length for this project is approximately 950 feet, which meets the requirement.
- Access rights to the primary access of the development is along the existing 20' paved private road easement that leads west from Castlecrest Drive has been granted to the property owner. An approved Knox Box fire department access system shall be installed on all locked gate(s).
- The secondary access route is along the existing 20' paved private Paymaster Road that leads north to Spearhead Trail.
- The Fire Department required turning radius at the entrance of the proposed development (intersection of Paymaster Road and Street A) shall be a minimum of 28 feet.

### **5.3 Requirements for inclusion in the CC&R's:**

- The lot/home owner is personally responsible for all required fuel treatment measures within their lots.
- The Valley Center Fire Protection District has authority for enforcing required fuel treatment measures on all lots and restrictions on combustible structures on all restricted lots.
- The Fuel Treatment Zones, as depicted on the Fuel Treatment Map, will be shown on the CC&Rs and recorded against all lots. The Fitzpatrick Development individual lot owner will be responsible for complying with all required fuel modification treatments on their lots.
- All property owners will financially support the annual maintenance of all required Fuel Modification Areas surrounding the Fitzpatrick Development Subdivision as needed.

- The individual lot owners are responsible to the Fire Marshal for the completion of all required Fuel Modification Treatments prior to the annual fire season.
- All individual lot landscaping plans, including additional structures, must be approved by the Valley Center Fire Protection District and shall comply with the Fire Protection Plan.
- Any disputes relating to approval of Fuel Modification Zones and individual lot landscaping, with regard to interpretation of the Fire Protection Plan, shall be decided by the Valley Center Fire Protection District-Fire Marshal. The Fire Marshal's decision shall be final and binding on the lot owner.

### 5.3 Proposed Fuel Treatment Location Map

The following page is a folder containing the FUEL TREATMENT LOCATION MAP depicting the location of all proposed fuel modification treatment locations on and adjacent to all lots. In addition to the Fuel Treatment Location Map *all fuel management zones shall be permanently marked on the ground* for the purpose of guiding annual fuel management maintenance operations. The most reliable markers are steel fence posts with a baked on painted finish. The upper half of the above ground portion of the fence post is then either painted white, or a bright "day glo" orange to improve visibility. These Fuel Treatment Zone markers must be spaced so that the markers on each side of an installed marker can be seen from that marker.

**APPENDIX A**

**San Diego County**

**Approved Plant List**

## SUGGESTED PLANT LIST FOR A DEFENSIBLE SPACE

<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>Climate Zone</u>
<b>TREES</b>		
Acer		
platanoides	Norway Maple	M
rubrum	Red Maple	M
saccharinum	Silver Maple	M
saccarum	Sugar Maple	M
macrophyllum	Big Leaf Maple	C/ (R)
Alnus rhombifolia	White Alder	C/I/M (R)
Arbutus		
unedo	Strawberry Tree	All zones
Archontophoenix		
cunninghamiana	King Palm	C
Arctostaphylos spp.**	Manzanita	C/I/D
Brahea		
armata	Blue Hesper Palm	C/D
edulis	Guadalupe Palm	C/D
Ceratonia siliqua	Carob	C/I/D
Cercidium floridum	Blue Palo Verde	D
Cercis occidentalis**	Western Redbud	C/I/M
Cornus		
nuttallii	Mountain Dogwood	I/M
stolonifera	Redtwig Dogwood	I/M
Eriobotrya		
japonica	Loquat	C/I/D
Erythrina caffra	Kaffirboom Coral Tree	C
Ginkgo biloba "Fairmount"	Fairmount Maidenhair Tree	I/M
Gleditsia triacanthos	Honey Locust	I/D/M
Juglans		
californica	California Walnut	I
hindsii	California Black Walnut	C/I
Lagerstroemia indica	Crape Myrtle	I/D/M
Ligustrum lucidum	Glossy Privet	I
Liquidambar styraciflua	Sweet Gum	C/I/M
Liriodendron tulipifera	Tulip Tree	I
Lyonothamnus floribundus		
ssp. Asplenifolius	Fernleaf Catalina Ironwood	C
Melaleuca spp.	Melaleuca	C/I/D
Parkinsonia aculeate	Mexican Palo Verde	C/I
Pistacia		
chinensis	Chinese Pistache	
	Pistachio Nut	C/I/D

vera	Pistachio Nut	I
Pittosporum		
phillyraeoides	Willow Pittosporum	C/I/D
viridiflorum	Cape Pittosporum	C/I
Platanus		
acerifolia	London Plane Tree	All zones
racemosa**	California Sycamore	C/I/M
Populus		
alba	White Poplar	D/M
fremontii**	Western Cottonwood	I
trichocarpa	Black Cottonwood	I/M
Prunus		
xblireiana	Flowering Plum	M
caroliniana	Carolina Laurel Cherry	C
ilicifolia**	Hollyleaf Cherry	C
lyonii**	Catalina Cherry	C
serrulata 'Kwanzan'	Flowering Cherry	M
yedoensis 'Akebono'	Akebono Flowering Cherry	M
Quercus		
agrifolia**	Coast Live Oak	C/I
engelmannii	Engelmann Oak	I
**  suber	Cork Oak	C/I/D
Rhus		
lancea**	African Sumac	C/I/D
Salix spp.**	Willow	All zones (R)
Tristania conferta	Brisbane Box	C/I
Ulmus		
parvifolia	Chinese Elm	I/D
pumila	Siberian Elm	C/M
Umbellularia californica**	California Bay Laurel	C/I

# SHRUBS

Agave	Century Plant	D
americana	Century Plant	D
deserti	Shawis Century Plant	D
shawi**		
Amorpha fruticosa**	False Indigobush	I
Arbutus		
menziesii**	Madrone	C/I
Arctostaphylos spp.**	Manzanita	C/I/D
Atriplex**		
canescens	Hoary Saltbush	I
lentiformis	Quail Saltbush	D
Baccharis**		
glutinosa	Mule Fat	C/I
pilularis	Coyote Bush	C/I/D
Carissa grandiflora	Natal Plum	C/I
Ceanothus spp.**	California Lilac	C/I/M
Cistus spp.	Rockrose	C/I/D
Cneoridium dumosum**	Bushrue	C
Comarostaphylis**		
diversifolia	Summer Holly	C
Convolvulus cneorum	Bush Morning Glory	C/I/M
Dalea		
orcuttii	Orcutt's Delea	D
spinosa**	Smoke Tree	I/D
Elaeagnus		
pungens	Silverberry	C/I/M
Encelia**		
californica	Coast Sunflower	C/I
farinose	White Brittlebush	D/I
Eriobotrya		
deflexa	Bronze Loquat	C/I
Eriophyllum		
confertiflorum**	Golden Yarrow	C/I
staechadifolium	Lizard Tail	C
Escallonia spp.	Escallonia	C/I
Feijoa sellowiana	Pineapple Guava	C/I/D
Fouquieria splendens	Ocotillo	D
Fremontodendron**		
californicum	Flannelbush	I/M
mexicanum	Southern Flannelbush	I
Galvezia		
juncea	Baja Bush-Snapdragon	C
speciosa	Island Bush-Snapdragon	C
Garrya		
elliptica	Coast Silktassel	C/I
flavescens**	Ashy Silktassel	I/M

Heteromeles arbutifolia**	Ashy Silktassel	I/M
Lantana spp.	Toyon	C/I/M
Lotus scoparius	Lantana	C/I/D
Mahonia spp.	Deerweed	C/I
	Barberry	C/I/M
Malacothamnus clementinus		
	San Clemente Island Bush Mallow	C
fasciculatus**		
	Mesa Bushmallow	C/I
Melaleuca spp.		
Mimulus spp.**	Melaleuca	C/I/D
Nolina	Monkeyflower	C/I (R)
parryi		
parryi ssp. wolfii	Parry's Nolina	I
Photinia spp.	Wolf's Bear Grass	D
Pittosporum	Photinia	All Zones
crassifolium		
rhombifolium		C/I/I
tobira 'Wheeler'	Queensland Pittosporum	C/I
undulatum	Wheeler's Dwarf	C/I/D
viridiflorum	Victorian Box	C/I
Plumbago auriculata	Cape Pittosporum	C/I
Prunus	Cape Plumbago	C/I/D
caroliniana		
ilicifolia**	Carolina Laurel Cherry	C
lyonii**	Hollyleaf Cherry	C
Puncia granatum	Catalina Cherry	C
Pyracantha spp.	Pomegranate	C/I/D
Quercus	Firethorn	All Zones
dumosa**		
Rhamus	Scrub Oak	C/I
alaternus		
californica**	Italian Blackthorn	C/I
Rhaphiolepis spp.	Coffeeberry	C/I/M
Rhus	Rhaphiolepis	C/I/D
integrifolia**		
laurina	Lemonade Berry	C/I
lentii	Laurel Sumac	C/I
ovata**	Pink-Flowering Sumac	C/D
trilobata**	Sugarbush	I/M
Ribes	squawbush	I
viburnifolium		
speciosum**		
Romneya coulteri	Evergreen Currant	C/I
Rosa	Fuschia-Flowering Gooseberry	C/I/D
californica**	Matilija Poppy	I
minutifolia		

Salvia spp.**	California Wild Rose	C/I
Sambucus spp.**	Baja California Wild Rose	C/I
Symphoricarpos mollis**	Sage	All Zones
Syringa vulgaris	Elderberry	C/I/M
Tecomaria capensis	Creeping Snowberry	C/I
Teucrium fruticans	Lilac	M
Toxicodendron**	Cape Honeysuckle	C/I/D
diversilobum	Bush Germander	C/I
Verbena		
lilacina	Poison Oak	I/M
Xylosma congestum		
Yucca**	Lilac Verbena	C
schidigera	Shiny Xylosma	C/I
whipplei		
	Mojave Yucca	D
	Foothill Yucca	I

## GROUNDCOVERS

Achillea**	Yarrow	All Zones
Aptenia cordifolia	Apteria	C
Arctostaphylos spp.**	Manzanita	C/I/D
Baccharis**		
pilularis	Coyote Bush	C/I/D
Ceanothus spp.**	California Lilac	C/I/M
Cerastium tomentosum	Snow-in-Summer	All Zones
Coprosma kirkii	Creeping Coprosma	C/I/D
Cotoneaster spp.	Redberry	All Zones
Drosanthemum hispidum	Rosea Ice Plant	C/I
Dudleya		
brittonii	Brittonis Chalk Dudleya	C
pulverulenta**	Chalk Dudleya	C/I
virens	Island Live Fore-ever	C
Eschscholzia californica**	California Poppy	All Zones
Euonymus fortunei		
'Carrierei'	Glossy Winter Creeper	M
'Coloratus'	Purple-Leaf Winter Creeper	M
Ferocactus viridescens**	Coast Barrel Cactus	C
Gaillardia grandiflora	Blanket Flower	All Zones
Gazania spp.	Gazania	C/I
Helianthemum spp.**	Sunrose	All Zones
Lantana spp.	Lantana	C/I/D
Lasthenia		
californica**	Common Goldfields	I
glabrata	Coastal Goldfields	C
Lupinus spp.**	Lupine	C/I/M
Myoporum spp.	Myoporum	C/I
Pyracantha spp.	Firethorn	All zones
Rosmarinus officinalis	Rosemary	C/I/D
Santolina		
chamaecyparissus	Lavender Cotton	All Zones
virens	Santolina	All Zones
Trifolium frageriferum	O'Connor's Legume	C/I
Verbena		
rigida	Verbena	All Zones
Viguiera laciniata**	San Diego Sunflower	C/I
Vinca		
minor	Dwarf Periwinkle	M

## VINES

Antigonon leptopus	San Miguel Coral Vine	C/I
Distictis buccinatoria	Blood-Red Trumpet Vine	C/I/D
Keckiella cordifolia**	Heart-Leaved Penstemon	C/I
Lonicera		
japonica 'Halliana'	Hall's Honeysuckle	All Zones
subspicata**	Chaparral Honeysuckle	C/I
Solanum		
jasminoides	Potato Vine	C/I/D

## PERENNIALS

Coreopsis		
gigantea	Giant Coreopsis	C
grandiflora	Coreopsis	All Zones
maritime	Sea Dahlia	C
verticillata	Coreopsis	C/I
Heuchera maxima	Island Coral Bells	C/I
Iris douglasiana**	Douglas Iris	C/M
Iva hayesiana**	Poverty Weed	C/I
Kniphofia uvaria	Red-Hot Poker	C/M
Lavandula spp.	Lavender	All Zones
Limonium californicum		
var. mexicanum	Coastal Statice	C
perezii	Sea Lavender	C/I
Oenothera spp.	Primrose	C/I/M
Penstemon spp.**	Penstemon	C/I/D
Satureja douglasii	Yerba Buena	C/I
Sisyrinchium		
bellum	Blue-Eyed Grass	C/I
californicum	Golden-Eyed Grass	C
Solanum		
xantii	Purple Nightshade	C/I
Zauschneria**		
californica	California Fuschia	C/I
cana	Hoary California Fuschia	C/I
'Catalina'	Catalina Fuschia	C/I

## ANNUALS

Lupinus spp.**	Lupine	C/I/M
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**APPENDIX B**

**San Diego County**

**Undesirable Plant List**

## UNDESIRABLE PLANT LIST

The following species are highly flammable and should be avoided when planting within the first 50 feet adjacent to a structure. The plants listed below are more susceptible to burning, due to rough or peeling bark, production of large amounts of litter, vegetation that contains oils, resin, wax, or pitch, large amounts of dead material in the plant, or plantings with a high dead to live fuel ratio. Many of these species, if existing on the property and adequately maintained (pruning, thinning, irrigation, litter removal, and weeding), may remain as long as the potential for spreading a fire has been reduced or eliminated.

<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>
<u>Abies species</u>	Fir Trees
<u>Acacia species</u>	Acacia (trees, shrubs, groundcovers)
<u>Adenostoma sparsifolium**</u>	Red Shanks
<u>Adenostoma fasciculatum**</u>	Chamise
<u>Agonis juniperina</u>	Juniper Myrtle
<u>Araucaria species</u>	Monkey Puzzle, Norfolk Island Pine
<u>Artemisia californica**</u>	California Sagebrush
<u>Bambusa species</u>	Bamboo
<u>Cedrus species</u>	Cedar
<u>Chamaecyparis species</u>	False Cypress
<u>Coprosma pumila</u>	Prostrate Coprosma
<u>Cryptomeria japonica</u>	Japanese Cryptomeria
<u>Cupressocyparis leylandii</u>	Leylandii Cypress
<u>Cupressus forbesii**</u>	Tecate Cypress
<u>Cupressus glabra</u>	Arizona Cypress
<u>Cupressus sempervirens</u>	Italian Cypress
<u>Dodonea viscosa</u>	Hopseed Bush
<u>Eriogonum fasciculatum**</u>	Common Buckwheat
<u>Eucalyptus species</u>	Eucalyptus
<u>Heterotheca grandiflora**</u>	Telegraph Plant
<u>Juniperus species</u>	Junipers
<u>Larix species</u>	Larch
<u>Lonicera japonica</u>	Japanese Honeysuckle
<u>Miscanthus species</u>	Eulalia Grass
<u>Muehlenbergia species**</u>	Deer Grass
<u>Palmae species</u>	Palms
<u>Picea species</u>	Spruce Trees
<u>Pickeringia Montana**</u>	Chaparral Pea
<u>Pinus species</u>	Pines
<u>Podocarpus species</u>	Fern Pine
<u>Pseudotsuga menziesii</u>	Douglas Fir
<u>Rosmarinus species</u>	Rosemary
<u>Salvia mellifera**</u>	Black Sage
<u>Taxodium species</u>	Cypress
<u>Taxus species</u>	Yew
<u>Thuja species</u>	Arborvitae
<u>Tsuga species</u>	Hemlock
<u>Urtica urens**</u>	Burning Nettle

\*\* San Diego County native species

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# APPENDIX "C"

## Literature Referenced in this FPP

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2. BEHAVE: Fire Behavior Prediction and Fuel Modeling System - BURN Subsystem, Part 2. General Technical Report INT-260. May 1989. Patricia L. Andrews and Carolyn H. Chase, United States Department of Agriculture - Forest Service, Intermountain Station, Ogden, Utah 84401.
3. BehavePlus Fire Modeling System, Version 2.0 General Technical Report RMRS-GRT-106WWW. June 2003. Patricia L. Andrews, Collin D. Bevins & Robert C. Seli. United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.
4. Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model General Technical Report RMRS-GTR-153. June 2005. Joe H. Scott & Robert E. Burgan. United States Department of Agriculture-Forest Service, Rocky Mountain Research Station, Missoula, Montana.
5. California State Senate Bill 1369 – Amends Section 51182 of the Government Code and Section 4291 of the Public Resource Code Relating to Fire Protection.
6. County of San Diego Ordinance No. 9669 – An Ordinance Repealing and Reenacting the County Fire Code.
7. County of San Diego Ordinance No 9670 – An Ordinance Amending the County Building Code to Adopt the 2001 California Building Code and to Add Certain Fire-Resistive Construction Standards.
8. How to Predict the Spread and Intensity of Forest and Range Fires. General Technical Report INT-143. June 1983. Richard C. Rothermel. United States Department of Agriculture - Forest Service, Intermountain Station, Ogden, Utah 84401.
9. National Fire Protection Association - NFPA 1144 Standard for Protection of Life and Property from Wildfire (2002).

# Appendix D

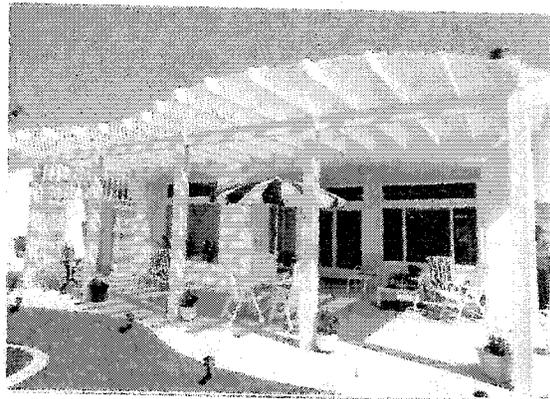
## Non-combustible & Fire Resistant Building Materials For balconies, Carports, Decks, Patio Covers and Floors

Examples of non-combustible & fire resistant building materials for balconies, carports decks, patio covers and floors are as follows:

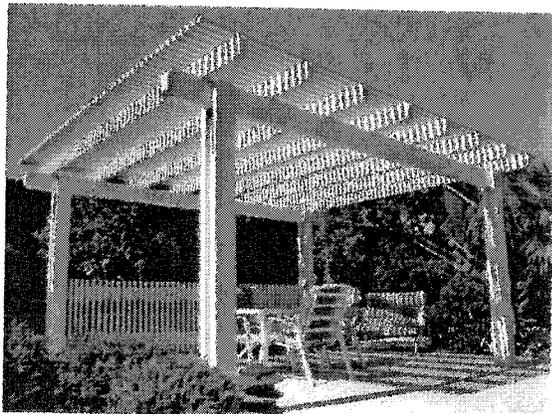
I. **NON-COMBUSTIBLE HEAVY GAGE ALUMINUM MATERIALS - Metals USA Building Products Group - Ultra-Lattice**



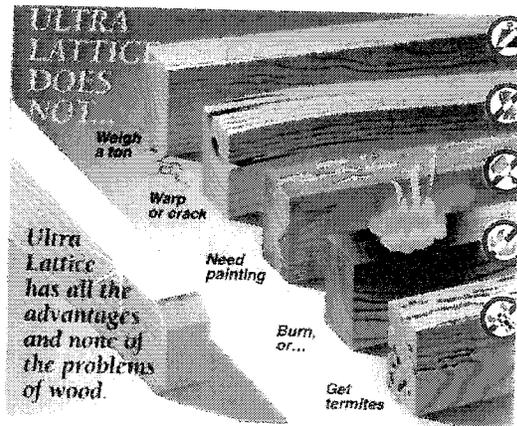
**Ultra-Lattice Stand Alone Patio Cover**



**Ultra-Lattice Attached Patio Cover**



**Ultra-Lattice Solid Patio Cover**



**Ultra-Lattice Vs. Wood**