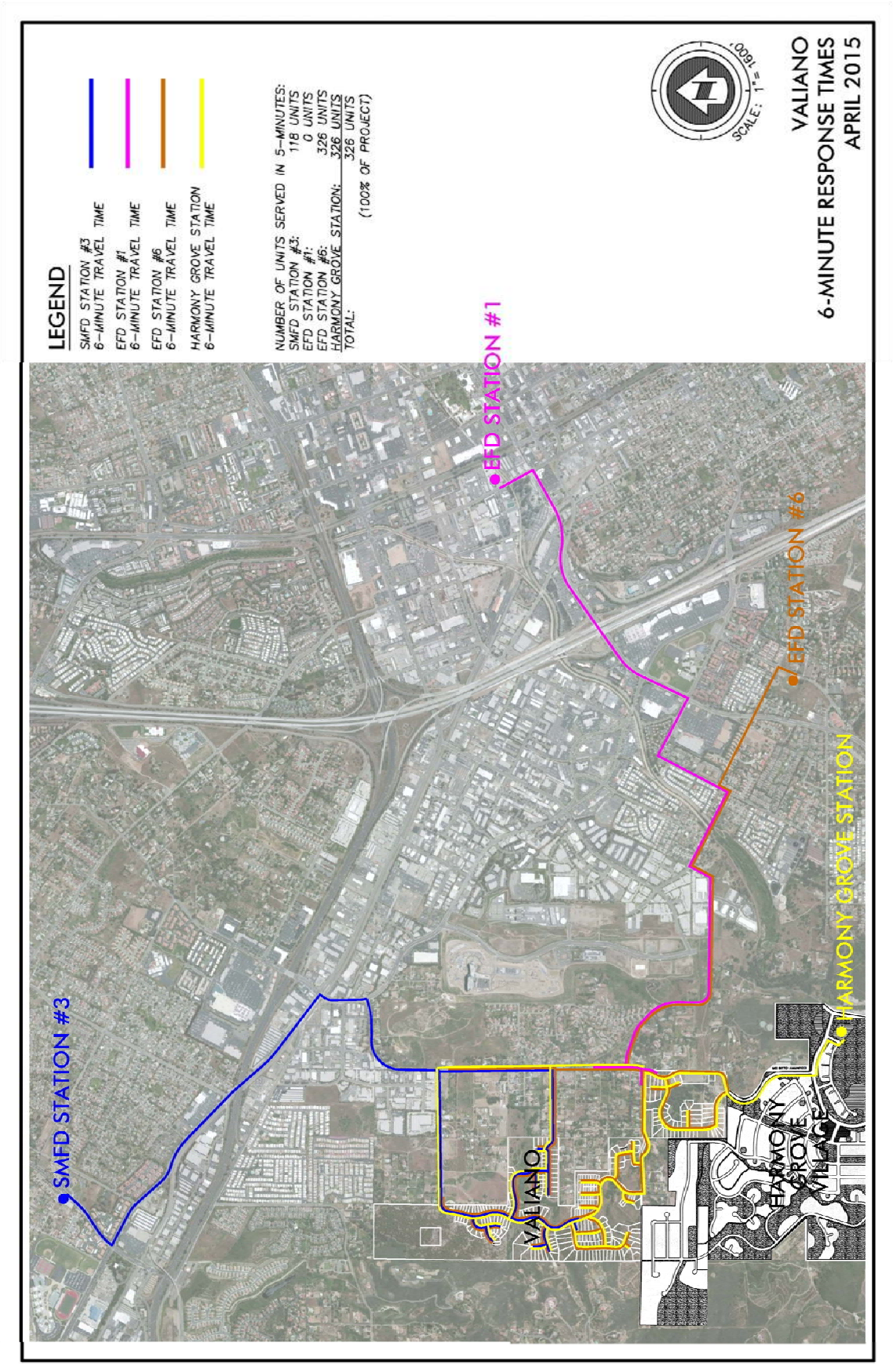


Figure 8 - 6-Minute Response Times

In addition, this recommendation is also made for the following reasons as developed in this FPP:

1. Ignition-resistant construction requirements will provide critical improvements to all structures for them to survive a worst-case scenario fire storm in this area;

2. As required by fire code, all buildings will be fully protected with automatic fire sprinkler systems; and,

3. A 150-foot Fuel Modification Zone is required from the Project perimeter to the edge of around the entire perimeter and around all residential structures of the development; an exception would be a minimum 100-foot fuel modification zone between internal islands of natural fuels and adjacent residential structures with implementation of the Requirements for Homes with Reduced Defensible Space.

4. The Project's water supply meets the requirements of the San Diego County's Consolidated Fire Code and the Fire Code for a residential development, and fire access to the project will meet the requirements of the County and San Marcos Fire Department.

To conclude, SMFD has existing capability and capacity to respond to emergency incidents on the Project. Though SMFD cannot respond with emergency equipment to the furthest structure in 5 minutes or less with existing station locations, there are nearby fire stations pursuant to mutual aid agreements with other departments within close proximity to the Project. There is a minimum of 3 emergency apparatus that can respond within 8 minutes for a reinforced response. In addition, there is a new station that will be built as a requirement of the nearby Harmony Grove development which will be built at a location that would provide emergency service to this Project within 5 minutes.

4.2 Fire Apparatus Access

Primary ingress and egress for the proposed development will be via Eden Valley Lane, Mt. Whitney Road, and two from Country Club Drive. There will also be two emergency access points, one at Hill Valley Drive and one from Mt. Whitney Road.

Hill Valley Road is an existing road to be improved to a road approximately 24 feet wide, except for one section of this road, approximately 185-foot length, can only be improved to 20 feet wide due to easement access issues. The San Marcos Fire Protection District will accept this section of approximately 185 foot length of road as 20 feet wide. The developer shall prepare and submit a fire access road plan to San Marcos Fire Department that identifies road widths along the entire length of Hill Valley Road. The fire department will review and approve this plan upon satisfactory submittal.

If access roads are not currently to DPW road standards, they will be improved to the applicable DPW road standards (See APPENDIX 'G' - Valiano Neighborhood Exhibit and Road Circulation Plan).

Access for fire apparatus to on-site open space/patches/islands of flammable vegetation will be provided.

The following specific requirements are outlined, but not all inclusive, for fire apparatus access per the SMFD Fire Code and the County Consolidated Fire Code:

4.2.1 Fire apparatus access roads shall have an unobstructed improved width of not less than 24 feet, unless indicated otherwise by SMFD, and a turning radius of 40 feet at the bulb of the cul-de-sac for fire apparatus turn around. Fire apparatus access roadways will be designated "fire access roadways or fire "fire lanes" and not obstructed in any manner, including the parking of vehicles, as required by CA Vehicle Code, section 22500.1.22658(a) and San Marcos Fire Protection District. The SMFD will approve sign locations. EXCEPTION: Where roadways are 32 feet in width, parking would be permitted, on one side only. When serving one home, the access width will be a minimum of 16 feet. All standards for apparatus access roads and fire lanes will follow the County Fire Code and submitted to the Fire Marshal for review and approval. Every cul-de-sac shall accommodate all front line and reserve fire apparatus and ladder trucks currently in use by San Marcos Fire Department.

4.2.2 Access points to pockets of islands of open space/flammable vegetation shall be provided and identified for fire and emergency service apparatus.

4.2.3 Emergency vehicle turnarounds shall be provided on 'fire lanes' exceeding 150 feet in length. In this development, turnarounds and turning radius for emergency vehicles must be reviewed and approved by the SMFD and the County's Engineering Department (See APPENDIX 'I' – Site Plan).

4.2.4 Fire apparatus access road shall extend within 150 feet of all portions of a structure and all portions of the exterior walls of the first story of a residence as measured by a route around the exterior of every residence in the development.

4.2.5 All roads shall be provided with an approved driving surface for each phase of development. The first layment of asphalt must be in place and serviceable prior to delivery of combustible construction materials to the site.

4.2.6 Gates proposed for this development shall be in compliance with SMFD guidelines and County Consolidated Fire Code, Section 503.6. An automatic gate across a fire apparatus/equipment access roadway or driveway shall be equipped with a Knox rapid entry system and emergency vehicle strobe detector. Any gate or barrier across a fire apparatus access roadway shall have specific plans reviewed and approved by SMFD prior to installation.

The following gate design features are suggested for gates across fire access roadways, at the discretion of the SMFPD:

1. KNOX Gate: Key operated dual switch device on the date, which overrides all other controls so the gate can be opened by the Fire Department or law enforcement using a KNOX key. Each fire engine and law enforcement vehicle would be provided with a KNOX key.
2. KNOX Box: Installation of a box which contains a KNOX padlock for manual access.
3. SOS Siren: This device would active a gate within 2.5 seconds when the "yelp feature" on siren is used, or 4.5 seconds from when a standard siren is deployed. A sign will be placed on gates stating "Emergency vehicles; operate siren to open gate."
4. Click 2 Enter Device: This device opens the gate upon the clicking of a mobile radio in an emergency vehicle or portable radio. The device is activated by the FCC assigned radio frequencies which are assigned to public safety agencies for restricted use only.
5. Gates will be designed to ensure that they will open automatically when vehicles approach, to allow for egress from the development for any vehicle (e.g. magnetic loop).

Other optional features may include:

1. Backup (battery) or solar power
2. Access control motors that accept and interface with various third party accessories
3. *Design provisions to open if bumped by a fire engine, and a hidden "break glass" manual* release
4. Gates programmed to remain open in the event of power outage

4.2.7 The road and street grade standard for fire apparatus shall not exceed 20 percent, and any roadway over 15 percent shall be a concrete surface with a deep broom finish perpendicular to the direction of travel to enhance traction.

4.2.8 Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus of not less than 75,000 pounds, or 32,000 pounds single axle loading, and will be provided with an approved paved surface so as to provide all-weather driving capabilities.

4.2.9 **Secondary Access and Dead End Roadways.** The development in combination with designated and marked 'fire lanes' will provide adequate secondary access. There will be several ingress and egress points for the proposed development (See Figure 6 – Ingress and Egress Points for the Proposed Valiano Project).

As stated above, all emergency access roadways must meet private, public and DPW standards.

The maximum length of a dead-end road, including all dead-end roads accessed from a dead-end road, shall not exceed 800 feet.

4.2.9 Roadway design features (speed bumps, speed humps, speed control dips, traffic calming devices, etc.) which may interfere with emergency apparatus responses shall not be installed on fire access roadways, unless they meet design criteria approved by SMFD.

4.2.10 The project will meet the requirements of the County and San Marcos Fire Department with respect to access

4.2.11 If street trees are planted; they shall not interfere with fire apparatus and will be required to be maintained at a 13 foot, 6 inch vertical clearance. Any street trees planted shall be spaced so that tree canopies at full maturity do not grow within 20 feet of each other.

4.3 Water Supply

Water supply will meet the water supply requirements of the San Diego County's Consolidated Fire Code and the Fire Code for a residential development. Following are specific requirements.

4.3.1 All buildings shall be fully protected with automatic fire sprinkler systems. All buildings shall be fully protected with automatic fire sprinkler systems. The installation of the sprinkler systems shall meet 2013 NFPA 13D and 13R Standards, also 2013 CBC and CFC. The 2013 California Building Standards Code requires automatic fire sprinkler systems for all new one-and two-family dwellings and townhouse construction statewide. Sprinkler system plans must be submitted to Parsley Consulting, for sprinkler plan review consultant for San Marcos Fire Protection District.

4.3.2 An automatice fire sprinkler system designed to the appropriate NFPA Standard shall be installed in all community recreation buildings; including restroom buildings, maintenance buildings, sewer plant and other structures.

4.3.3 All fire hydrants shall be installed and serviceable by all acceptable code standards prior to delivery of combustible construction materials to the site.

4.3.4 For single-family dwellings, all fire hydrants shall be installed per the local Water District and SMFD specifications, whichever is applicable.

4.3.5 All fire hydrants shall be capable of supplying a minimum of 1500 gallons per minute fire flow for a 2-hour duration at 20 psi residual pressure. Waterlines for fire control must be capable of supplying this required demand through the hydrants, plus the largest fire sprinkler demand, plus any domestic use supplied from that line.

4.3.6 When an on-site waterline serves more than two hydrants, the line must be looped, providing two hydraulically remote points of connection with the water district lines. The interior loop must have isolation valving, such that not more than two hydrants and/or sprinkler systems are between isolation points. If the on-site fire water system for a building is a private loop, the two points of connection are needed to the public supply and appropriate fire department connections.

4.3.7 Fire hydrants shall be located along 'fire lanes' and all structures and other improvements shall be reached with a maximum hose pull of 150 feet, or as approved by the SMFD.

4.3.8 Each hydrant for this development shall be Jones or Clow hydrants and have one 4-inch and two 2-1/2-inch outlets. In some instances SMFD may require a fire hydrant to have other combinations of outlets. All fire hydrants will be of bronze construction, including all internal parts except seat.

4.3.9 Fire Hydrants serving the Multi-Family Residential area (Condos) located on street 1B and 1C (north of Mt. Whitney Rd) shall meet the following criteria:

1. Hydrants shall be equipped with two, 4-inch ports and one, 2-1/2 inch port.
2. Spacing of hydrants for condo area shall be every 300 feet. Final location shall be approved by fire dept.
3. Fire flow shall be 1,500gpm for 3 hours @ 20 psi residual pressure. (SMMC sect. 17.64.140)
4. A map showing all hydrant locations shall be provided to fire department.

4.3.10 NOTE: All hydrants in development shall be painted yellow, with the top cap of hydrant painted green per NFPA standards for color coding.

4.3.11 The SMFD approval shall be required for on-site hydrant and fire service waterline based on the final building construction location, type and largest building size.

4.3.12 All hydrants shall be located along access roadways and shall not be closer than 50 feet from structures.

4.3.13 Fire hydrants shall be located with blue reflective raised pavement markers at approved locations for each hydrant.

4.4 Defensible Space and Vegetation Management

The SMFD Fire Code requires fuel modification for 150 feet from the edge of inhabited structures. In this Fuel Management Zone, fuel modification and management is the act of converting and maintaining native and non-native vegetative fuels from a highly flammable and high fire intensity state to a more fire resistant and low fire intensity condition. Fire resistant landscaping has been proven to be very effective treatment for minimizing structure losses due to wildland fire radiant heat.

Creating defensible space involves the clearing of flammable vegetation such as pine and eucalyptus trees, grasses, and brush. Steep slopes and/or the presence of dangerous topography may require the defensible space distances to be increased. If vegetation is properly modified and maintained, a wildfire can be slowed down, the length of flames shortened, and the amount of heat reduced, all of which contribute to the survivability of a structure.

The following strategy for the management of flammable vegetation would provide effective treatment of flammable fuels for minimizing structure loses due to a wildfire event for the proposed Valiano development:

4.4.1 Implement and maintain a 50-foot irrigated Zone 1 (low fuel volume/defensible space) with a limited building zone (LBZ) of 15 feet at the backyard boundary and a selectively thinned 50-150-foot non-irrigated Zone 2 around each residential structure, and a 20-foot Zone 2 criteria applied along roadways as described herein.

4.4.2 A long-term interior open space fuel modification treatment plan and fire resistant landscaping criteria to be deployed around all planned structures as described herein.

4.4.3 For the benefit of the proposed community, the fuel modification and maintenance of common areas would be under the control of a homeowners association or other common ownership, established in perpetuity.

4.4.4 For perimeter structures with less than 150 feet of defensible space, there are two scenarios for meeting this requirement:

1) Adjacent properties with a responsibility to meet hazard abatement/fuel modification for their property (e.g., required modification of hazardous fuels 150 feet from off-site structures, active agriculture activities, or perimeter fuel hazard abatement);

2) Perimeter off-site properties when the owner does not or fails to modify hazardous fuels along their property. The Valiano Project shall complete City of San Marcos Grant of Easement forms to modify hazardous fuels on adjacent property(s). The APN's of parcels identified for modification are as follows: 232-491-01, 232-491-42, 232-492-02 (See Exhibit 1 – Fuel Treatment Location Map).

4.4.5 There are structures that do not provide a 150-foot defensible space from interior RPO buffers. An analysis was completed to determine the risk of each structure based on worst case scenarios for potential wildfire events during an extreme northeast winds event (Santa Ana winds), and a late summer unusual southwestern wind event. See APPENDIX 'K' – RPO Buffers and Fuel Modification Zones for the analsis. With the conclusion drawn from the analysis and the mitigation

provided by enhanced ignition-resistant construction requirements, it is recommended that wildfire protection shall be met for each dwelling with more than 100 feet defensible space, but less than 150 feet of defensible space, as required by San Marcos Fire Protection District.

4.5 Fuel Modification Zones for This Development

On-site, the perimeter buffer and Fuel Management Zone would consist of a minimum of 50 foot irrigated zone from the edge of all structures in the development. All vegetation would be removed that is not fire resistant and re-planted with irrigated fire-resistant landscaping. This would be defined as Zone 1.

Unless included in Zone 1, the area between 50 to 150 feet from the edge of Zone 1 (50 to 100 feet to interior islands of natural fuels), all dead and dying vegetation shall be removed. Where native- and non-native vegetation exists within this Zone, it may remain provided that the vegetation is modified so that combustible vegetation does not occupy more than 50 percent of the square footage of this area. In this Zone the actively managed and irrigated orchard (mostly avocado) presently located within the proposed development may be integrated into the zone (See EXHIBIT 1 - Fuel Treatment Location Map, for illustration and description of Zones).

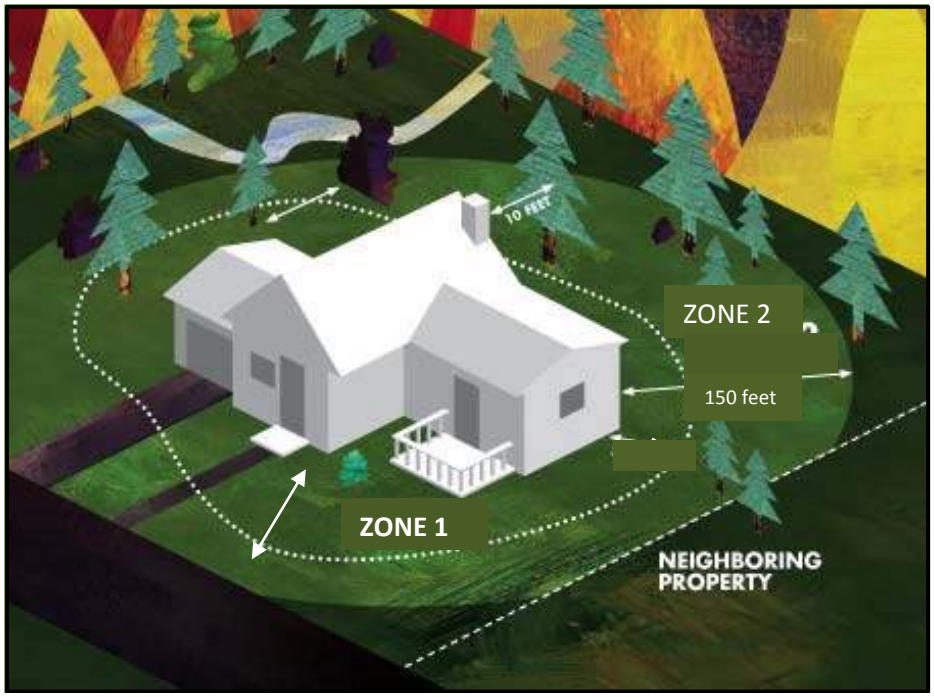


Figure 9 - Example Fuel Modification Around Residential Structure

As stated above, the FMZ shall be a minimum of a 150-foot area, or as approved by the SMFD, surrounding and extending in all directions from all structures, in which flammable vegetation or other combustible growth is cleared away or modified, except for:

- Single specimens of trees or other vegetation that are well pruned and maintained
- Non-irrigated grass (weed-whipped to 4 inch stubble height) and other vegetation located more than 50 feet from the structure and less than 18 inches in height above the ground
- All ornamental landscaping that is consistent with San Diego County acceptable plants for a defensible space in fire prone areas plant list (See APPENDIX 'A')

- A Non-irrigated Zone 2 fuel modification less than 100 feet beyond Zone 1 onsite with one of the following: 1) With approved construction mitigation and enhancement construction requirements by San Marcos Fire Protection District when fuel modification is over 100 feet but less than 150 feet from RPO buffers and the edge of structures,, 2) fuel modification on adjacent property which provides the additional distance to meet Zone 2 criteria, 3) where adjacent managed and irrigated agriculture crops/orchards provide fuel modification to meet Zone 2 fuel modification requirements, 5) where twice the calculated fire flame length is less than the zone width, 6) where calculated fireline intensities would not create a significant hazard to ignition-resistant structures (See these measured distances illustrated in Exhibit 1 – Fuel Treatment Location Map, or 7) where Zone 2 fuel modification criteria is applied to 20 feet on either side of roadways.

Maintenance of fuel treatment zones is highly important. Latham (1989) found that ember ignitions were primarily a function of ground fuels, including litter depth. Also imporant to ignition of a ground fuel is moisture content, size of the litter material as well as the mineral content of the dead vegetation. To the benefit of the eventual homeowners, ground fires burn with less intensity than an aerial fuel. However, a ground fire may carry to adjacent aerial fuels which is a concern.

4.5.1 Fuel Modification Zone 1 – Irrigated

Zone 1 (*Shown as "blue" on the Fuel Treatment Location Map*) is the area 50 feet beyond from the each of residences. Roads and other "non-structure" improvements are allowed in this zone. Manufactured slopes will be included in this zone when present. In addition, included is a building setback of 15 feet at the rear of the lots. Following are other specific requirements for Zone 1.

4.5.1.1 This Zone shall be irrigated (micro-irrigation acceptable when overhead irrigation may cause erosion). It includes a 15 feet setback at the rear of the backyard and the manufactured slopes within the zone. Landscaping material from the approved plant list (See APPENDIX 'A') required or in an approved landscape plan and approved by the Fire Marshal.

4.5.1.2 All undesirable non-native vegetation (See APPENDIX 'B') shall be removed. Also, no plants on the California Exotic Pest Plant Council's list of "Exotic Pest Plants of Greatest Ecological Concern in California as of October 1999" or more recent version shall be planted.

4.5.1.3 Vegetation may include single or cluster (no more than two to three plants/tree) of trimmed fire resistant native and ornamental plants.

4.5.1.4 Dense plant masses adjacent to the structures and at bases of trees and tree clusters shall not be placed in this zone. Vegetation must be low growing, fire resistive, deep rooted, drought tolerant plantings to maintain erosion control and soil stability, especially on manufactured slopes.

4.5.1.5 Native or ornamental trees can be retained within this fuel modification zone. They shall be pruned to maintain a vertical separation of approximately 10 feet above underlying shrubs or groundcover. Pruning of the shrubs will minimize the impact of the tree pruning.

4.5.1.6 Tree canopies shall not be allowed to overhang the roof of any structure; the outer edge of the canopies of mature trees will be a minimum of 10 feet from the building eaves, and free of all dead or dying parts. All the dead material must be pruned out of all vegetation on a regular basis. Trees

and vegetation should not be planted in areas where fire truck access is impaired, should not impair or obstruct the use of fire department ladders.

4.5.1.7 Mulches, chips and other small multi-cuttings (cut to less than two inches in diameter and four inches in length) shall be evenly spread over the area no more than 4 inches, at least 50 feet from structures. This can be used to maintain soil moisture and prevent grass and weed encroachments within the treated areas. Regular maintenance, vegetation pruning, and irrigation to establish drought tolerant, fire-resistive landscaping are very important in this Zone.

4.5.1.8 Construction materials, firewood, and other combustible materials shall not be stored in unenclosed spaces beneath buildings or structures, or on decks or under eaves, canopies or other projections or overhangs. Storage may occur in the defensible space located a minimum of 30 feet from structures and separated from the crown of trees by a minimum of 10 feet, measured horizontally.

4.5.1.9 Ornamental plants will not be planted or allowed to become established within this Zone, unless shown in the Recommended Plant Lists in APPENDIX 'A' (or in a landscape plan approved by the Fire Marshal).

4.5.1.10 Plants in this zone will not include any pyrophytes that are high in oils and resins (particularly undesirable plant species listed in APPENDIX 'B').

4.5.1.11 Ornamental plants will not be planted or allowed to become established within this zone, unless non fire-resistive trees, including conifers, pepper trees, eucalyptus and acacia species, shall be planted and maintained so that the trees drip line at maturity is a minimum of 30 feet from any combustible structure.

4.5.1.12 Non- flammable patios, walkways, rock, driveways and gravel can be used to break up fuel continuity within this zone.

4.5.1.13 If shrubs are located underneath a tree's drip line, the lowest branch will be at least three times as high as the understory shrubs or 10 feet, whichever is greater.

4.5.1.14 Trees may be planted and/or maintained as individual specimens, or clustered with 2 to 3 trees in a single cluster; crowns of mature trees shall maintain a minimum horizontal clearance of 20 feet for fire resistant trees on level ground and 30 feet for non-fire resistive trees on slopes; and avoid planting trees directly uphill or one another. The following table 4907.3.1 from the County Consolidated Fire Code provides guidance for the distance between mature tree canopies by percent slope.

TABLE 4907.3.1
DISTANCE BETWEEN TREE CANOPIES

Distance between Tree Canopies by Percent Slope	
Percent of Slope	**Required Distances Between Edge of Mature Tree Canopies (1)**
0 to 20	10 feet
21 to 40	20 feet
41 plus	30 feet

Exception: Due to the water shortage caused by the current drought and water shortage in southern California, the "defensible zone" landscaping may not include irrigated green lawn, but may be modified with a water-less or trees, shrubs, groundcovers, and other vegetation capable of sustained growth and reproduction with only natural moisture landscaping design. This would include strict adherence to removal of highly flammable and undesirable plant material (See APPENDIX 'B'). It would also include strict adherence and use of the San Diego County Acceptable Plants list (See APPENDIX 'A').

4.5.2 Zone 2 Fuel Modification – Non-Irrigated

Zone 2 (*Shown as "Green" on the Fuel Treatment Location Map*) is generally the area described as 50-150 feet beyond Zone 1, except 50 to 100 feet to interior islands of natural fuels, or as per exceptions in Section 4.5 above. Roads and other "non-structure" improvements are allowed in this zone. Zone 2 fuel management shall also be applied to all roadways, including private controlled access roadways. Manufactured slopes will be included in this zone when present.

Zone 2 can either be cleared in conformance with Zone 1 above, or selectively cleared and modified as described below.

4.5.2.1 Zone 2 is generally an area 50 to 150 feet (or more) beyond Zone 1 and where the fuel volume will be removed or thinned by 50 percent, including the removal of all undesirable species.

4.5.2.2 Irrigation will be used only if needed to establish and maintain fire-resistive landscaping.

4.5.2.3 As the native vegetation cover in Zone 2 is reduced, there is a very high probability that the openings will be dominated with non-native weed or grass species. Therefore, all grasses and weeds are to be mowed or weed-whipped to a 4-inch stubble height by June 1st of each year or when the fuels become cured, whichever occurs first.

4.5.2.4 Any vegetative biomass (debris and trimmings) produced by thinning and pruning shall be removed from the site or converted to mulch by chipping and evenly distributed to a maximum depth of four (4) inches a minimum of 30 feet from the edge of structures. This mulching concept helps to maintain soil moisture for the designated plants, reduces the growth of annual grass and minimizes soil erosion.

4.5.2.5 The area on each side of the improved width of highways, private roads, and driveways shall comply with the requirements of a this fuel modification zone. For newly constructed roads, the vegetation shall be modified/reduced by 50 percent for 30 feet on either side of the road.

4.5.2.6 The following native species will be removed in this zone even as specimen plants because of their flammability:

- California sagebrush, *Artemisia californica;*
- Flat-topped buckwheat, *Eriogonum fasciculatum*; and
- Black sage, *Salvia mellifera*.

4.5.3 Zone 3 Fuel Modification – Non-Irrigated - Off Site.

Zone 3 (*Shown as "Light Brown" on the Fuel Treatment Location Map*) is the off-site perimeter parcels which provide required 150-foot fuel treatment zone for select Valiano perimeter structures. As stated earlier, there are two scenarios for off-site parcels to provide Valiano protection:

1) Adjacent properties with a responsibility to meet hazard abatement/fuel modification for their property (e.g., required modification of hazardous fuels 150 feet from off-site structures, active agriculture activities, or perimeter fuel hazard abatement);

2) Perimeter off-site properties when the owner does not or fails to modify hazardous fuels along their property. The Valiano Project shall complete City of San Marcos Grant of Easement forms to modify hazardous fuels on adjacent property(s). The APN's of parcels on which modification is needed are as follows: 232-491-01, 232-491-42, 232-492-02.

4.5.4 Requirements for Homes with Reduced Defensible Space

The following construction mitigation requirements shall be met for each dwelling within the Valiano Development that provides more than a 100-foot defensible space, but less than 150-foot defensible space required by San Marcos Fire Protection District. These requirements exceed the County Consolidated Fire Code and the ignition-resistive standards of Chapter 7A of the County Building Code. All construction and landscape requirements listed below shall be met for specific dwellings (See APPENDIX 'K').

4.5.4.1 The following lots fall below the 150' defensible space requirement: 1, 3, 4, 119-123, 127, 135, 149, 150, 158, 162, 163, 170, 171, 258, 268, 289 and shall be called out on a separate plan sheet in plan submittal. The plan sheet for these dwelling units shall list the following requirements shown below in items 2 thru 13.

4.5.4.2 The exterior walls of the dwelling unit facing the open space that fall within the area that is less than the 150' defensible space requirement shall be two-hour fire rated. Provide a detail sheet on plan that identifies two-hour rated exterior walls as approved by I.C.C. Evaluation Services.

4.5.4.3 All roofs shall be Class 'A' material. Roof or floor coverings for patio covers or balconies shall also be Class A' rated or non-combustible material.

4.5.4.4 All eaves, overhangs or projections shall be non-combustible material. No exposed wood allowed.

4.5.4.5 All Windows shall be dual pane, with both window panes being tempered glass. This also applies to any skylights being installed.

4.5.4.6 All vents shall be ember-resistant type with baffles; Brandguard, O'Hagan or equivalent. No vents shall be on side of dwelling facing vegetation.

4.5.4.7 Any accessory attachments or structures such as patio covers, decks, partially enclosed exterior patios; sheds play structures, etc.; shall be non-combustible or heavy timber and comply with OSFM requirements for fire resistive materials. This shall only apply to that area(s) of the lot that fall below the 150' setback requirement

4.5.4.8 Exterior fire sprinklers will be required for any projection from dwelling that exceeds four feet in width and/or length.

4.5.4.9 All spaces of dwelling shall be sprinklered throughout; including attic and concealed spaces, closets or other areas.

4.5.4.10 Exterior fences attached to dwellings shall be non-combustible material on the side of the dwelling facing Open Space that is within the 150' defensible space.

4.5.4.11 No fire pits will be allowed. Enclosed exterior fireplaces may be allowed on case by case basis.

4.5.4.12 In areas that fall within the 150' defensible space requirement i) New Trees shall be planted a minimum of 40 feet from dwelling ii) No tree canopy at full maturity shall grow within 20 feet of any wall of dwelling, iii) Trees shall be planted in a manner that tree canopies at full maturity shall be spaced a minimum of 30 feet from each other.

4.5.4.13 Any new vegetation planted shall be fire resistive, drought tolerant and meet SD County list of requirements for plants, shrubs and trees.

4.5.5 Fuel Maintenance

Maintenance within the zones shall be performed year-round and include the following:

4.5.5.1 Prune and thin trees around structures to decrease fuel volume, retain succulent growth and to provide adequate clearance between structures and plants, as required in the County Consolidated Fire Code.

4.5.5.2 Trees and vegetation overhanging fire access roads shall be maintained so branches and limbs provide a minimum vertical clearance of 13 feet 6 inches above ground at all times.

4.5.5.3 No pine trees or similar flammable vegetation shall be planted within the project boundaries.

4.5.5.4 Trees shall be planted and appropriate distance from structure, and maintained so that the tree canopy does not grow within 10 feet of roof.

4.5.5.5 Trash and combustible debris shall be cleared from around structures, and removed from roofs and rain gutters.

4.5.5.6 Irrigation systems will be maintained to ensure that they function properly and plantings are watered sufficiently to maintain succulent growth.

4.5.5.7 The responsibility for the fuel modification maintenance defined below shall remain with each lot owner and any subsequent owners, and a Home Owner Association (HOA) for the common areas. In the event a lot is repossessed or sold, the unit or agency holding title to the lot will be responsible for maintenance.

4.6 Ignition Resistant Construction and Fire Protection Systems

Ignition-resistant construction for all structures will provide significant protection in this very high fire hazard zone. Ignition-resistant construction requirements will provide critical improvements to all types of structures for them to survive a worst case scenario fire storm in this area. Another significant requirement will be that the maintenance and repair of these proposed structures will be with the same ignition-resistant materials and construction features. Also, this FPP requires that ignition-resistant construction will apply to mitigate the ignitability of all future proposed residential structures and projections (exterior balconies, carports, decks, patio covers, unenclosed roofs and floors).

All structures within a wildland-urban interface must be built using the ignition-resistive construction methods (County Building Code Title 9, Division 2, Chapter 1 of the San Diego County Code of Regulatory Ordinances).

The ignition-resistive construction design requirements found in the County Building Code (more restrictive than the California Building Code) will significantly reduce the threat of wildfire for this development, especially the flying embers entering a structure, landing on a receptive fuel and starting a new fire.

Following are specific fire-resistive building features that shall be applied to all structure construction that will be implemented at the site plan or building permit stage:

4.6.1 All stuctures within the Valiano Project shall be built with a Class A roof assembly, including a Class A roof covering (per CBC Chapter 7A). It should be noted that recent testing has found that solar panels mounted within about 5 inches of a Class A roof assembly may nullify the Class A rating of the assembly.

4.6.2 All exterior walls on all sides of the buildings shall be constructed with one-hour fire resistant building materials, and protected with two-inch nominal solid blocking between rafters at all roof overhangs and under the exterior wall covering. Wood siding of 3/8 inch plywood or ¾ inch drop siding is permitted, but must have an underlayment of ½ inch fire-rated gypsum sheathing that is tightly butted or taped and mudded, or other ignition-resistive materials approved by the Fire Authority Having Jurisdiction (FAHJ) and/or the Planning Authority Having Jurisdiction (PAHJ).

4.6.3 All vents (roof, foundation, combustion-air, etc.) shall resist the intrusion of flames and embers or shall be protected by louvers and 1/8" non-combustible, corrosion-resistant mesh. Turbine attic vents shall be equipped to allow rotation in only one direction (County Building Code 704A.2.1). Attic ventilation openings or ventilation louvers will not be permitted in soffits, in eave overhangs, between rafters at eaves, or in other similar exterior overhanging areas in this wildland/urban interface area. Attic ventilation shall also comply with the requirements of the California Fire Code (it is recommended that vents produced by Vulcan or Brandguard or any simiular vents be used in wildland/urban interface areas).

4.6.4 All eaves or roof overhangs shall be enclosed (boxed eaves) on all sides with non combustible materials or constructed with heavy timber such as 2x starter board and 3x6 rafter tails.

4.6.5 Structure openings: Louvers, ventilators, or openings in walls, roofs, attics, and under floor areas having headroom less than four (4) feet in height which are not fitted with sash or doors shall be covered with wire screen. The screen covering of such openings will be of corrosion-resistant metal or other approved material that offers equivalent protection, and will have a maximum mesh of one-eighth (1/8) inch.

4.6.6 All projections (exterior balconies, stairs, covers, unenclosed roofs and floors, and similar architectural appendages and projections) shall be of non-combustible construction. When such appendages and projections are attached to exterior fire-resistive walls, they shall be constructed to maintain the fire-resistive integrity of the wall. No wood siding will be allowed in this development. Non-combustible cementitious type siding, e.g., hardiplank style siding would be allowed.

4.6.7 All glass or other transparent, translucent or opaque glazing materials, including skylights, shall be constructed of tempered glass or a dual glazed windows with minimally one pane of tempered glass.

4.6.8 Fences and other structures less than 5 feet from a building shall be non-combustible construction, heavy timber or fire retardant pressure treated wood.

4.6.9 All rain gutters, down spouts and gutter hardware shall be constructed from metal or other noncombustible material to prevent wildfire ignition along eave assemblies.

4.6.10 Gutters shall be designed to reduce the accumulation of leaf litter and debris that contribute to roof edge ignition.

4.6.11 Exterior door assemblies will conform to the performance requirements of standard SFM 12-7A-1 or will be of approved non-combustible construction, or solid core wood having stiles and rails not less than 1 3/8 inches thick with interior field panel thickness no less than 1 1/4 inches thick, or will have a fire-resistance rating of not less than 20 minutes when tested according to ASTME 2074.

4.6.12 All windows to be screened shall be provided with mesh metal or similar non-combustible window screens to prevent embers from entering the structure during high wind condition.

4.6.13 Any damaged or replacement window, siding, roof coverings, and specific non-combustible wall shall meet or exceed the original intent of the fire protection discussed in this Plan.

4.6.14 Buildings and structures will be set back a minimum of 30 feet from property lines and open space easements unless the County Zoning Ordinance requires a greater minimum. When the property line abuts a roadway the setback will be measured from the centerline of the roadway.

4.6.15 Fire protection tactical operations for proposed two-story residential structures will be based on structures less than 35 feet in height.

4.6.16 All community recreation buildings, including restroom buildings, maintenance buildings, sewer plant and other structures, shall be constructed with one-hour rated ignition resistant construction and include all walls, doors, roofs, windows, skylights and vents.

4.7 Cumulative Impact Analysis

The combination of San Diego County's weather, fuel, and terrain has often contributed to intense, uncontrolled wildland fires. This was clearly evident in the recent fire sieges of 2003 and 2007. Fire hazards and risks to all types of development will continue to be encountered as they have over the last century. The proposed project site is adjacent to wildlands that have the potential to support wildland fires. At present, the density of development in this portion of San Diego County is relatively low and the local fire protection district has the capacity to provide adequate fire protection. If the recommendations in this plan are implemented, this development will not expose people or habitable structures to a significant risk of loss, injury or death. Following the recommendations would also decrease the risk of loss for surrounding existing uses. As proposed, the project is not anticipated to contribute to a significant cumulative impact relative to wildland fire risk.

4.8 Additional Requirements

4.8.1 All parcels within the project area must be annexed into San Marcos's Community Facilities District (CFD) before any building plans will be approved.

4.8.2 The grading plan must be submitted and approved by the SMFD.

4.8.3 Single story structures shall be setback a minimum 15 feet horizontally from top of a slope to the farthest projection from a roof. A single story structure shall be less than 12 feet above grade. A two story structure shall be setback a minimum of 30 feet horizontally from top of slope to the farthest projection from a roof.

4.8.4 Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHTO HB-17. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits and clearance limitations shall be posted at both entrances to bridges when required by the fire code official.

4.8.5 Brush and other flammable vegetation will be removed prior to commencing any construction activity. During construction at least 50 feet of clearance around the structures will be kept free of all flammable vegetation as an interim fuel modification zone during construction of structures.

4.8.6 The on-site actively managed avocado orchard is anticipated to remain a productive orchard into the foreseeable future. However, if the active management is abandoned and the orchard become dead/decadent and a fire hazard, the SMFD will have authority to remove or have removed the abandoned orchard as a community protection measure.

4.8.7 Any disputes over fuel modification of individual lots or common areas and interpretation of this Fire Protection Plan (FPP) shall be decided by SMFD Fire Chief and Fire Marshal. The Fire Marshal's decision shall be final and binding for the development.

4.8.8 This plan and its recommendations should be incorporated by reference into the final project Supplemental Environmental Impact Report.

4.8.9 Directory signs shall meet all San Marcos Fire Department Guidelines and an illuminated directory shall be placed at each of the three entry points to the development.

4.9 Fuel Treatment Location Map

A Fuel Treatment Location Map will show the location of all proposed fuel modification treatment locations and other mitigation measures for the known locations of structures within the development. For this FPP, Exhibit 1 in this document (and attached maps) illustrates the recommended fuel modification treatment locations to provide adequate fuel modification requirements for the development.

5.0 CONCLUSIONS

This FPP evaluated the adverse environmental effects that the proposed Valiano development may have from wildland fire and to properly mitigate those impacts to ensure that this development does not unnecessarily expose people or structures to a significant risk of loss, injury or death involving wildland fires.

5.1 Emergency Response

Travel times from SMFD's fire station #3 to the furthest structure of the project would be approximately 7.0 minutes. This travel time would exceed the County General Plan policy for maximum travel time. As summarized in Section 4.1 and illustrated in Figures 7 and 8 above, SMFD's Station #3 and EFD's Station #6 could provide coverage to 47 percent of residential structures in 5 minutes and in 6 minutes, these two stations can provide 100 percent coverage. Additionally, it is estimated that ESD's Station #1 would be able to respond to the Valiano Project in approximately 7.5 minutes. This station has the capability to support an emergency incident within the Valiano Project with a robust response of four different emergency apparatus, to include a paramedic engine, a truck company, a brush engine, and an ambulance. Thus, the response to an emergency incident by these stations would ensure response by multiple emergency apparatus or equipment from 5 up to 7.5 minutes.

It is the discretion of the Director of PDS to determine if emergency services to the project are adequate. It is recommended that alternatives and potential options outlined in Section 4.1 above would provide significant assistance and reinforcement for emergency incidents within the Valiano development.

5.2 Emergency Road Access

The emergency road access requirements for this project will be adequate and fire code compliant in terms of access and construction standards for roadways. The project, then, will meet the requirements of the county and San Marcos Fire Department with respect to access.

5.3 Enhanced Fire-resistive Building Materials and Construction Measures

The prescribed ignition-resistant construction for all structures will provide significant protection in this very high fire hazard zone. The ignition-resistant construction requirements will provide critical improvements to structures for them to survive a worst case scenario fire storm in this rural area.

Another significant requirement will be that the maintenance and repair of these proposed residences will be with the same ignition-resistant materials and construction features. In addition, the FPP requires that ignition-resistant construction will apply to mitigate the ignitability of all future proposed structures and projections (exterior balconies, carports, decks, patio covers, unenclosed roofs and floors).

5.4 Fuel Management Zones

The requirements of this FPP provide the fuel modification standards which mitigate the exposure of people to a significant risk of loss, injury or death. The setback area and fuel modification criteria prescribed provides a defensible space zone for fire suppression forces and will protect structures from radiant and convective heat.

The project demonstrates compliance with applicable fire regulations, including but not limited to the California Fire Code, California Code of Regulations, County Fire Code, or the County Consolidated Fire Code.

6.0 LIST OF PREPARERS, PERSONS, AND ORGANIZATIONS CONTACTED

6.1 List of Preparers

The principal author and preparer of this Valiano Project Fire Protection Plan is C. Douglas Pumphrey, Senior Wildland Fire Associate of ***FIRE*WISE 2000, Inc.**, and certified by David C. Bacon, President of ***FIRE*WISE 2000, Inc.** and a San Diego County PDS certified wildland fire consultant.

6.2 List of Persons Contacted During the Course of this Project

Melissa Krause, Integral Communities
Bob Chase, FUSCOE Engineering
Ken Kozlik, Project Manager, FUSCOE Engineering
Jason Simmons, Vice-President of Operations, Consultants Collaborative
Matt Simmons, Vice-President of Field Operations, Consultants Collaborative
Matthew Ernau, Division Chief/Fire Marshal, San Marcos Fire Department
Robert Scott, Division Chief/Fire Marshal, San Marcos Fire Department
Mike Lowry, Chief, Escondido Fire Department

INTENTIONALLY LEFT BLANK

APPENDIX "A"

COUNTY OF SAN DIEGO
ACCEPTABLE PLANTS FOR DEFENSIBLE SPACE
IN FIRE PRONE AREAS

ALL NATIVE PLANTS ON THE FOLLOWING LIST are considered to be drought-tolerant in the particular climate zone they are found. Those that grow best in riparian areas, as indicated by the "R", are generally the least drought-tolerant plants on the list.

SPECIAL NOTE: When planting, it is necessary to water deeply to encourage the plant roots to seek natural moisture in the soil. This watering should continue for at least three years to allow the plants to naturalize. More water should be provided in summer and less (if any) in the winter. These plants should be weaned off the supplemental irrigation and become less dependent on it over the establishment period.

No plant is totally fire resistant. The plants listed were chosen due to their high water content, minimum amount of flammable resins and/or low fuel volume.

Definitions:

Defensible Space: The area around a structure, where material capable of causing fire has been cleared, reduced or changed, to act as a barrier between an advancing fire and the structure.

Drought-Tolerant Plant Materials: Trees, shrubs, groundcovers, and other vegetation capable of sustained growth and reproduction with only natural moisture. Occasional supplemental irrigation is necessary only in extreme drought situations.

Establishment Period: The time it takes for a plant to become drought-resistant. This is usually a period of three years and is the time when supplemental irrigation is necessary.

Native or Naturalizing Plant Species: Plant species native to the region or introduced which, once established, are capable of sustaining growth and reproduction under local climatic conditions without supplemental irrigation.

FIRE*WISE* **2000, Inc. Note:** The plant list which follows was developed using the plants found on the San Diego County approved plant list. This list was then compared to those plants which are suitable for the climatic zone in which the project is located. Only those plants suitable for the project area listed below. The list is therefore shorter than that provided by the county. By providing this custom list, plants that are likely to be killed or seriously damaged by frost or will not perform in hot dry conditions have been eliminated. ***FIRE****WISE* **2000, Inc.** believes that the planting of species suited to the site is essential to fire management goals and is an environmentally sound practice.

San Diego County
Customized Acceptable Plant List
For the Valiano Project

Type	Genus	Species	Common Name
Annual	Lupinus spp.	nanus	Lupine
Groundcover	Achillea	millefolium	Yarrow
Groundcover	Arctostaphylos spp.		Manzanita
Groundcover	Cerastium	tomentosum	Snow-in-Summer
Groundcover	Coprosma	kirkii	Creeping Coprosma
Groundcover	Cotoneaster spp.		Redberry
Groundcover	Drosanthemum	hispidum	Rosea Ice Plant
Groundcover	Dudleya	virens	Island Live-Forever
Groundcover	Eschscholzia	californica	California Poppy
Groundcover	Ferocactus	viridescens	Coast Barrel Cactus
Groundcover	Gaillardia	grandiflora	Blanket Flower
Groundcover	Gazania spp.		Gazania
Groundcover	Helianthemum spp.		Sunrose
Groundcover	Lantana spp.		Lantana
Groundcover	Lasthenia	californica	Common Goldfields
Groundcover	Lasthenia	glabrata	Coastal Goldfields
Groundcover	Lupinus spp.		Lupine
Groundcover	Pyracantha spp.		Firethorn
Groundcover	Rosmarinus	officinalis	Rosemary
Groundcover	Santolina	chamaecyparissus	Lavender Cotton
Groundcover	Trifolium	frageriferum	O'Connor's Legume
Groundcover	Verbena	rigida	Verbena
Groundcover	Viguiera	laciniata	San Diego Sunflower
Groundcover	Vinca	major	Periwinkle
Groundcover	Vinca	minor	Dwarf Periwinkle
Perennial	Coreopsis	grandiflora	Coreopsis
Perennial	Coreopsis	maritima	Sea Dahlia
Perennial	Coreopsis	verticillata	Coreopsis
Perennial	Heuchera	maxima	Island Coral Bells
Perennial	Iris	douglasiana	Douglas Iris
Perennial	Kniphofia	uvaria	Red-Hot Poker
Perennial	Lavandula spp.		Lavender
Perennial	Penstemon spp.		Penstemon
Perennial	Satureja	douglasii	Yerba Buena
Perennial	Sisyrinchium	bellum	Blue-Eyed Grass
Perennial	Sisyrinchium	californicum	Golden-Eyed Grass
Perennial	Solanum	xantii	Purple Nightshade
Perennial	Zauschneria	'Catalina'	Catalina Fuschia
Perennial	Zauschneria	californica	California Fuschia
Perennial	Zauschneria	cana	Hoary California Fuschia
Shrub	Agave	americana	Desert Century Plant
Shrub	Agave	Amorpha fruticosa	False Indigobush
Shrub	Agave	deserti	Shaw's Century Plant
Shrub	Agave	shawii	NCN
Shrub	Agave		Century Plant
Shrub	Arbutus	menziesii	Madrone
Shrub	Arctostaphylos spp.		Manzanita
Shrub	Atriplex	canescens	Hoary Saltbush
Shrub	Atriplex	lentiformis	Quail Saltbush
Shrub	Baccharis	pilularis	Coyote Bush
Shrub	Baccharis	salicifolia	Mule Fat "R"

Shrub	Carissa	macrocarpa	Natal Plum
Shrub	Ceanothus spp.		California Lilac
Shrub	Cistus spp.		Rockrose
Shrub	Cneoridium	dumosum	Bush rue
Shrub	Comarostaphylis	diversifolia	Summer Holly
Shrub	Convolvulus	cneorum	Bush Morning Glory
Shrub	Elaeagnus	pungens	Silverberry
Shrub	Encelia	californica	Coast Sunflower
Shrub	Encelia	farinosa	White Brittlebush
Shrub	Eriobotrya	deflexa	Bronze Loquat
Shrub	Eriophyllum	confertiflorum	Golden Yarrow
Shrub	Escallonia spp.		Escallonia
Shrub	Feijoa	sellowiana	Pineapple Guava
Shrub	Fouqueria	splendens	Ocotillo
Shrub	Fremontodendron	californicum	Flannelbush
Shrub	Fremontodendron	mexicanum	Southern Flannelbush
Shrub	Galvezia	juncea	Baja Bush-Snapdragon
Shrub	Galvezia	speciosa	Island Bush-Snapdragon
Shrub	Garrya	elliptica	Coast Silktassel
Shrub	Garrya	flavescens	Ashy Silktassel
Shrub	Heteromeles	arbutifolia	Toyon
Shrub	Lantana spp.		Lantana
Shrub	Lotus	scoparius	Deerweed
Shrub	Mahonia spp.		Barberry
Shrub	Malacothamnus	clementinus	San Clemente Island Bush
Shrub	Malacothamnus	fasciculatus	Mesa Bushmallow
Shrub	Melaleuca spp.		Melaleuca
Shrub	Mimulus spp.		Monkeyflower
Shrub	Nolina	parryi	Parry's Nolina
Shrub	Photinia spp.		Photinia
Shrub	Pittosporum	rhombifolium	Queensland Pittosporum
Shrub	Pittosporum	tobira 'Wheeleri'	Wheeler's Dwarf
Shrub	Plumbago	auriculata	Cape Plumbago
Shrub	Prunus	caroliniana	Carolina Laurel Cherry
Shrub	Prunus	ilicifolia	Hollyleaf Cherry
Shrub	Prunus	lyonii	Catalina Cherry
Shrub	Puncia	granatum	Pomegranate
Shrub	Pyracantha spp.		Firethorn
Shrub	Rhamus	alaternus	Italian Buckthorn
Shrub	Rhamus	californica	Coffeeberry
Shrub	Rhaphiolepis spp.		Rhaphiolepis
Shrub	Rhus	continus	Smoke Tree
Shrub	Rhus	ovata	Sugarbush
Shrub	Rhus	trilobata	Squawbush
Shrub	Romneya	coulteri	Matilija Poppy
Shrub	Rosa	californica	California Wild Rose
Shrub	Rosa	minutifolia	Baja California Wild Rose
Shrub	Salvia spp.		Sage
Shrub	Sambucus spp.		Elderberry
Shrub	Symphoricarpos	mollis	Creeping Snowberry
Shrub	Syringa	vulgaris	Lilac
Shrub	Teucrium	fruticans	Bush Germander
Shrub	Verbena	lilacina	Lilac Verbena
Shrub	Xylosma	congestum	Shiny Xylosma
Shrub	Yucca	schidigera	Mojave Yucca
Shrub	Yucca	whipplei	Foothill Yucca

Tree	Acer	macrophyllum	Big Leaf Maple
Tree	Acer	saccarum	Sugar Maple
Tree	Acer	saccharinum	Silver Maple
Tree	Alnus	rhombifolia	White Alder "R"
Tree	Arbutus	unedo	Strawberry Tree
Tree	Brahea	edulis	Guadalupe Palm
Tree	Ceratonia	siliqua	Carob
Tree	Cercis	occidentalis	Western Redbud
Tree	Cerdidium	floridum	Blue Palo Verde
Tree	Cornus	nuttallii	Mountain Dogwood
Tree	Cornus	stolonifera	Redtwig Dogwood
Tree	Elaeagnus	angustifolia	Russian Olive
Tree	Eriobotrya	japonica	Loquat
Tree	Gingko	biloba "Fairmount"	Fairmount Maidenhair Tree
Tree	Gleditisia	triacanthos	Honey Locust
Tree	Juglans	californica	California Walnut
Tree	Juglans	hindsii	California Black Walnut
Tree	Lagerstroemia	indica	Crape Myrtle
Tree	Ligustrum	lucidum	Glossy Privet
Tree	Liquidambar	styraciflua	Sweet Gum
Tree	Liriodendron	tulipifera	Tulip Tree
Tree	Melaleuca spp.		Melaleuca
Tree	Nerium	oleander	Oleander
Tree	Parkinsonia	aculeata	Mexican Palo Verde
Tree	Pistacia	chinensis	Chinese Pistache
Tree	Pistacia	vera	Pistachio Nut
Tree	Pittosporum	phillyreoides	Willow Pittosporum
Tree	Platanus	acerifolia	London Plane Tree
Tree	Platanus	racemosa	California Sycamore "R"
Tree	Populus	alba	White Poplar
Tree	Populus	fremontii	Western Cottonwood "R"
Tree	Populus	trichocarpa	Black Cottonwood "R"
Tree	Prunus	caroliniana	Carolina Laurel Cherry
Tree	Prunus	cersifera ‘Newport’	Newport Purple-Leaf Plum
Tree	Prunus	ilicifolia	Hollyleaf Cherry
Tree	Prunus	lyonii	Catalina Cherry
Tree	Prunus	serrulata ‘Kwanzan’	Flowering Cherry
Tree	Prunus	xblireiana	Flowering Plum
Tree	Prunus	yedoensis ‘Akebono’	Akebono Flowering Cherry
Tree	Quercus	agrifolia	Coast Live Oak
Tree	Quercus	engelmannii	Engelmann Oak
Tree	Quercus	suber	Cork Oak
Tree	Rhus	lancea	African Sumac
Tree	Salix spp.		Willow "R"
Tree	Ulmus	parvifolia	Chinese Elm
Tree	Ulmus	pumila	Siberian Elm
Tree	Umbellularia	californica	California Bay Laurel "R"
Vine	Antigonon	leptopus	San Miguel Coral Vine
Vine	Distictis	buccinatoria	Blood-Red Trumpet Vine
Vine	Keckiella	cordifolia	Heart-Leaved Penstemon
Vine	Lonicera	japonica ‘Halliana’	Hall’s Honeysuckle
Vine	Lonicera	subspicata	Chaparral Honeysuckle
Vine	Solanum	jasminoides	Potato Vine

APPENDIX 'B'

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.

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

APPENDIX 'C'

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

Andrews, Patricia L.; Bevins, Collin D.; Seli, Robert C. 2004. *BehavePlus Fire Modeling System, version 5.0.5: User's Guide. Gen. Tech. Rep. RMRS-GTR-106WWW.* Ogden, UT: Department of Agriculture, Forest Service, Rocky Mountain Research Station. 132p

Andrews, Patricia L. 1986. *BEHAVE: Fire Behavior Prediction and Fuel Modeling System Burn Subsystem, Part 1.* Gen Tech. Rep. INT-194. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station. 130 pages.

ANSI A-300 - *Tree, Shrub, and Other Woody Plant Maintenance - Standard Practices. A series of maintenance and management practices.* Tree Care Industry Association. Londonderry, NH 03053.

County of San Diego, Consolidated Fire Code, 2014

County of San Diego. *Plant List and Acceptable Plants for a Defensible Space in Fire Prone Areas.* Department of Planning and Land Use, December, 1998

County of San Diego. *Guidelines for Determining Significance and Report Format and Content Requirement.* Wildland Fire and Fire Protection Land Use and Environment Group Department of Planning and Land Use, Department of Public Works, December 19, 2008

County of San Diego. *Guidelines for Determining Significance and Report Format and Content Requirements* Wildland Fire and Fire Protection Land Use and Environment Group Department of Planning and Land Use, Department of Public Works, March 19, 2007.

County of San Diego. *Plant List and Acceptable Plants for a Defensible Space in Fire Prone Areas.* Department of Planning and Land Use, December 15, 1998.

County of San Diego. *Standards for Private Roads."* Department of Public Works, Adopted June 30, 1999.

Guidance Document Ignition Resistant Eave Construction. San Diego County's Wildland-Urban Interface - 2008 Code Changes summary document (PDS #664)

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

Latham, D. J. and J. A. Schleiter. (1989) *Ignition Probabilities of Wildland Fuels Based on Simulated Lightning Discharges*. USDA Forest Service General Technical Report INT-411, Ogden, UT. (6,497 KB; 20 pages)

National Fire Protection Association - *NFPA 1144 Standard for Reducing Structure Ignition Hazards from Wildland Fire* (2013 Edition). 30 pages.

National Fire Protection Association - *NFPA 1142 Standard on Water Supplies for Suburban and Rural Fire Fighting,* 2012 Edition.

San Marcos Fire Department. *Wildland Urban Interface, Community Wild Conceptual Fire Protection Plan. December, 2007*

Scott, Joe H.; Burgan, Robert E. 2005. *Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model*. Gen. Tech. Rep. RMRS-GTR-153. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 72 pages.

Western Region Climate Center. *Historic Climate Data from Remote Automated Weather Stations.* RAWS USA Climate Archive. Reno, NV. Data for all Remote Automated Weather Stations is available at: http://www.raws.dri.edu/index.html.

APPENDIX 'D'

BEHAVEPLUS VERSION 5.0.5
FIRE BEHAVIOR CALCULATIONS

BehavePlus 5.0.5 (Build 307)

VALIANO_sh7_NE60MPH
Wed, Feb 13, 2013 at 08:18:53

Input Worksheet

Inputs: SURFACE

Input Variables	Units	Input Value(s)
Fuel/Vegetation, Surface/Understory		
Fuel Model		sh7
Fuel Moisture		
1-h Moisture	%	2
10-h Moisture	%	3
100-h Moisture	%	5
Live Herbaceous Moisture	%	30
Live Woody Moisture	%	50
Weather		
Midflame Wind Speed	mi/h	24
Direction of Wind Vector (from upslope)	deg	45
Terrain		
Slope Steepness	%	40
Notes		

Run Option Notes

Maximum reliable effective wind speed limit IS imposed [SURFACE].

Calculations are only for the direction of maximum spread [SURFACE].

Fireline intensity, flame length, and spread distance are always for the direction of the spread calculations [SURFACE].

Wind and spread directions are degrees clockwise from upslope [SURFACE].

Direction of the wind vector is the direction the wind is pushing the fire [SURFACE].

Results

Output Variable	Value	Units
Surface Rate of Spread (maximum)	503.0	ft/min
Heat per Unit Area	2778	Btu/ft2
Fireline Intensity	23284	Btu/ft/s
Flame Length	45.9	ft
Max Eff Wind Exceeded?	No	

BehavePlus 5.0.5 (Build 307)

VALIANO_sh7_SW30MPH
Wed, Feb 13, 2013 at 08:29:18

Input Worksheet

Inputs: SURFACE

Input Variables	Units	Input Value(s)
Fuel/Vegetation, Surface/Understory		
Fuel Model		sh7
Fuel Moisture		
1-h Moisture	%	2
10-h Moisture	%	3
100-h Moisture	%	5
Live Herbaceous Moisture	%	30
Live Woody Moisture	%	50
Weather		
Midflame Wind Speed	mi/h	12
Direction of Wind Vector (from upslope)	deg	225
Terrain		
Slope Steepness	%	40
Notes		

Run Option Notes

Maximum reliable effective wind speed limit IS imposed [SURFACE].

Calculations are only for the direction of maximum spread [SURFACE].

Fireline intensity, flame length, and spread distance are always for the direction of the spread calculations [SURFACE].

Wind and spread directions are degrees clockwise from upslope [SURFACE].

Direction of the wind vector is the direction the wind is pushing the fire [SURFACE].

Results

Output Variable	Value	Units
Surface Rate of Spread (maximum)	206.7	ft/min
Heat per Unit Area	2778	Btu/ft2
Fireline Intensity	9567	Btu/ft/s
Flame Length	30.5	ft
Max Eff Wind Exceeded?	No	

BehavePlus 5.0.5 (Build 307)

VALIANO_gs2FM(60%)&9FM(40%)_NE60MPH

Wed, Feb 13, 2013 at 08:47:34

Input Worksheet

Inputs: SURFACE

Input Variables	Units	Input Value(s)
Fuel/Vegetation, Surface/Understory		
First Fuel Model		gs2
Second Fuel Model		9
First Fuel Model Coverage	%	60
Fuel Moisture		
1-h Moisture	%	2
10-h Moisture	%	3
100-h Moisture	%	5
Live Herbaceous Moisture	%	30
Live Woody Moisture	%	50
Weather		
Midflame Wind Speed	mi/h	24
Direction of Wind Vector (from upslope)	deg	45
Terrain		
Slope Steepness	%	15
Notes		

Run Option Notes

Two fuel model weighting method: two-dimensional spread [SURFACE].

Maximum reliable effective wind speed limit IS imposed [SURFACE].

Calculations are only for the direction of maximum spread [SURFACE].

Fireline intensity, flame length, and spread distance are always for the direction of the spread calculations [SURFACE].

Wind and spread directions are degrees clockwise from upslope [SURFACE].

Direction of the wind vector is the direction the wind is pushing the fire [SURFACE].

Results

Output Variable	Value	Units
Surface Rate of Spread (maximum)	406.2	ft/min
Heat per Unit Area	614	Btu/ft2
Fireline Intensity	5051	Btu/ft/s
Flame Length	22.7	ft
Max Eff Wind Exceeded?	No	

APPENDIX 'E'

PROJECT FACILITY AVAILABILITY FORMS
(Fire and Water)

PROJECT FACILITY AVAILABILITY LETTER-FIRE

COUNTY OF SAN DIEGO
DEPARTMENT OF PLANNING AND LAND USE: Zoning
PROJECT FACILITY AVAILABILITY FORM, Fire

Please type or use pen

Eden Hills Project Owner, LLC — 760-471-2365
Owner's Name — Phone

2235 Encinitas Blvd, Suite 216
Owner's Mailing Address — Street

Encinitas — Ca — 92024
City — State — Zip

ORG_____
ACCT_____
ACT_____
TASK_____
DATE_____ AMT $_____
DISTRICT CASHIER'S USE ONLY

F

SECTION 1. PROJECT DESCRIPTION — **TO BE COMPLETED BY APPLICANT**

A
- [X] Major Subdivision (TM)
- [ ] Minor Subdivision (TPM)
- [ ] Boundary Adjustment
- [ ] Rezone (Reclassification) from____ to____ zone.
- [ ] Major Use Permit (MUP), purpose:____
- [ ] Time Extension...Case No.____
- [ ] Expired Map...Case No.____
- [ ] Other____
- [ ] Specific Plan or Specific Plan Amendment
- [ ] Certificate of Compliance:____

B.
- [X] Residential ..... Total number of dwelling units 390
- [ ] Commercial ..... Gross floor area____
- [ ] Industrial ..... Gross floor area____
- [ ] Other ..... Gross floor area____

C. Total Project acreage 195 Total lots 390 Smallest proposed lot 5000

Assessor's Parcel Number(s) (Add extra if necessary)

232-013-02	228-313-13
232-013-03	228-313-18
232-020-55	232-492-01
232-492-01	232-500-18,19,20,21, 235-031-41

Thomas Bros. Page 1129 Grid B, 2,3,4 22,23
3240 Mount Whitney Rd.
Project address — Street
San Dieguito Planning Group — 92091
Community Planning Area/Subregion — Zip

OWNER/APPLICANT AGREES TO COMPLETE ALL CONDITIONS REQUIRED BY THE DISTRICT.

Applicant's Signature: [signature] Date:
Address: 2235 Encinitas Blvd, Suite 216. Encinitas, Ca 92024 Phone: 760-471-2365
(On completion of above, present to the district that provides fire protection to complete Section 2 and 3 below.)

SECTION 2: FACILITY AVAILABILITY — **TO BE COMPLETED BY DISTRICT**

District name SAN Marcos Fire Dept

Indicate the location and distance of the primary fire station that will serve the proposed project: Station # 3 4041 Woodland Parkway 4 miles

A. [X] Project is in the District and eligible for service.
- [ ] Project is not in the District but is within its Sphere of influence boundary, owner must apply for annexation.
- [ ] Project is not in the District and not within its Sphere of influence boundary.
- [ ] Project is not located entirely within the District and a potential boundary issue exists with the ____ District.

B. [ ] Based on the capacity and capability of the District's existing and planned facilities, fire protection facilities are currently adequate or will be adequate to serve the proposed project. The expected emergency travel time to the proposed project is 5406 minutes.
- [ ] Fire protection facilities are not expected to be adequate to serve the proposed development within the next five years.

C. [X] District conditions are attached. Number of sheets attached: 1
- [ ] District will submit conditions at a later date.

SECTION 3. FUELBREAK REQUIREMENTS

Note: The fuelbreak requirements prescribed by the fire district for the proposed project do not authorize any clearing prior to project approval by the Department of Planning and Land Use.

[X] Within the proposed project 150 feet of clearing will be required around all structures.
[ ] The proposed project is located in a hazardous wildland fire area, and additional fuelbreak requirements may apply. Environmental mitigation requirements should be coordinated with the fire district to ensure that these requirements will not pose fire hazards.

(Exp in one year from 2/19/13)

This Project Facility Availability Form is valid until final discretionary action is taken pursuant to the application for the proposed project or until it is withdrawn, unless a shorter expiration date is otherwise noted.

[signature] Matthew Emsu Fire Marshal 760 744-1050 2/19/13
Authorized signature — *Print name and title* — *Phone* — *Date*

On completion of Section 2 and 3 by the District, applicant is to submit this form with application to:
Zoning Counter, Department of Planning and Land Use, 5201 Ruffin Road, Suite B, San Diego, CA 92123

DPLU-399F (12/09)

Comments on the proposed Eden Hills Project
provided by the San Marcos Fire Protection District
2/19/13

The following comments are provided as an attachment to the Project Facility Availability Form.

1. Access/Roadway: The roadways serving this project shall have a minimum improved paved width of 24 feet with no parking on both sides. When serving one home the access will be 16 feet. Any other roadway features such as cul-de-sacs, gates, etc must meet the design criteria of the San Marcos Fire Department. The first layment of asphalt must be in place and serviceable prior to delivery of combustible construction materials to the site.

2. Eden Hills grading plan to be submitted and approved by this office.

3. Gates: Any automatic gates are required to have a Knox rapid entry system and emergency vehicle strobe detector.

4. Hydrants: Fire hydrants with an adequate water supply must be installed at locations approved by the San Marcos Fire Protection District. Hydrant spacing shall be 600 feet apart. Type of hydrants are to be Jones one 4" & one 2 ½" outlet. Fire flow requirement to be determined at a later date. Fire hydrants shall be in place and serviceable prior to the delivery of combustible construction materials to the site.

5. Automatic fire sprinklers: Automatic Fire Sprinklers will be required in all structures.

6. Fuel Management Plan: A Fuel Management Plan is required. A 150' fuel modification is required from all sides of all structures, approved by this office

7. Use of building materials: Shall comply with enhanced construction design using San Diego County Building Codes.

8. Other requirements may be asked for during plan approval process.

9. All parcels within the project area must be annex into cities Community Facilities District (CFD) before any building plans will be approved.

PROJECT FACILITY AVAILABILITY LETTER-WATER

Rincon del Diablo
Municipal Water District

A Public Agency Serving the Greater Escondido Valley Since 1954

Dr. Gregory Quist
Division I

David Drake
Division II

James Murtland
Division III

David Draper
Division IV

Diana Towne
Division V

Mitchell Dion
General Manager

Redwine & Sherrill
General Counsel

District Office
1920 North Iris Lane
Escondido, CA 92026

Phone: 760 745-5522
FAX: 760-745-4235

www.rinconwater.org

August 15, 2012

County of San Diego
Department of Planning and Land Use
5201 Ruffin Road
San Diego, CA 92123

Subject: **Project Facility Availability Form, Water**
Eden Hills Development
3240 Mt. Whitney Road

The above referenced project lies within the Rincon del Diablo Municipal Water District's (Rincon's) Improvement District 1 service area. At this time, it is eligible to receive potable and recycled water for fire, normal domestic, and irrigation use following completion of the required facilities, in accordance with all District Rules and Regulations.

The objectives of the District are to ensure that new development conforms to best practices for indoor and outdoor water conservation measures. Therefore, the District anticipates this development will conform to this objective in both building features and landscaping and reflect this as standards in the CCRs if any are required.

Please be advised that due to critical water issues throughout the State Rincon is currently in a Level 1 Drought Watch (voluntary water reductions) and just last year lifted a two-year Level 2 Drought Alert (mandatory restrictions). If Rincon is forced to re-enter the Level 2 Drought Alert, the Board of Directors will suspend consideration of new potable water availability certifications and rescind outstanding certifications for all commercial projects and residential projects of more than one home.

Please note that the subject project surrounds a property owned by Rincon that is designated for a future potable and/or recycled water reservoir. Also, it is our understanding that some of the proposed home elevations are above the service levels of our existing reservoirs. Therefore, an extensive hydraulic analysis is required to determine the potable facility requirements to serve the new development and integrate it with our existing system. Similar analyses will also be required for the recycled water system including fire flows.

If you have any questions or require additional information, please call.

Sincerely,

Randy Whitmann
Senior Engineer

PROJECT FACILITY AVAILABILITY FORM – WATER

COUNTY OF SAN DIEGO
DEPARTMENT OF PLANNING AND LAND USE: Zoning
PROJECT FACILITY AVAILABILITY FORM, Water

Please type or use pen

Eden Hills Project Owner, LLC — 760-471-2365
Owner's Name — Phone

2235 Encinitas Blvd, Suite 216
Owner's Mailing Address — Street

Encinitas — Ca — 92042
City — State — Zip

ORG_____
ACCT_____
ACT_____
TASK_____
DATE_____ AMT $_____

W

DISTRICT CASHIER'S USE ONLY

SECTION 1. PROJECT DESCRIPTION — **TO BE COMPLETED BY APPLICANT**

A. ☒ Major Subdivision (TM) ☐ Specific Plan or Specific Plan Amendment
☐ Minor Subdivision (TPM) ☐ Certificate of Compliance:_____
☐ Boundary Adjustment
☐ Rezone (Reclassification) from_____ to _____ zone.
☐ Major Use Permit (MUP), purpose:_____
☐ Time Extension...Case No._____
☐ Expired Map...Case No._____
☐ Other_____

B. ☒ Residential . . . . . Total number of dwelling units_____
☐ Commercial. . . . . Gross floor area_____
☐ Industrial . . . . . Gross floor area_____
☐ Other . . . . . Gross floor area_____

C. ☒ Total Project acreage 195 Total number of lots 390

D. Is the project proposing the use of groundwater? ☒ Yes ☐ No
Is the project proposing the use of reclaimed water? ☐ Yes ☒ No

Assessor's Parcel Number(s) (Add extra if necessary)

232-013-02	
232-013-03	
232-020-55	
232-492-01	

Thomas Bros. Page 1129 Grid B, 2,3,4

3240 Mount Whitney Rd.
Project address — Street

San Dieguito Planning Group — 92091
Community Planning Area/Subregion — Zip

Owner/Applicant agrees to pay all necessary construction costs, dedicate all district required easements to extend service to the project and COMPLETE ALL CONDITIONS REQUIRED BY THE DISTRICT.

Applicant's Signature: [signature] Date: 7-5-12

Address: 2235 Encinitas Blvd, Suite 216. Encinitas, Ca 92024 Phone: 760-471-2365

(On completion of above, present to the district that provides water protection to complete Section 2 below.)

SECTION 2: FACILITY AVAILABILITY — **TO BE COMPLETED BY DISTRICT**

District Name: Rincon Del Diablo MWD Service area 1

A. ☒ Project is in the district.
☐ Project is not in the district but is within its Sphere of Influence boundary, owner must apply for annexation.
☐ Project is not in the district and is not within its Sphere of Influence boundary.
☐ The project is not located entirely within the district and a potential boundary issue exists with the _____ District.

B. ☒ Facilities to serve the project ☒ ARE ☐ ARE NOT reasonably expected to be available within the next 5 years based on the capital facility plans of the district. Explain in space below or on attached_____. (Number of sheets)
☐ Project will not be served for the following reason(s):_____

C. ☐ **District conditions are attached. Number of sheets attached:**_____
☐ **District has specific water reclamation conditions which are attached. Number of sheets attached:**_____
☒ **District will submit conditions at a later date.** See attached letter.

D. ☒ **How far will the pipeline(s) have to be extended to serve the project?** Unknown, See attached letter

This Project Facility Availability Form is valid until final discretionary action is taken pursuant to the application for the proposed project or until it is withdrawn, unless a shorter expiration date is otherwise noted.

Authorized signature: [signature] Print name Randy Whitmann

Print title Senior Engineer Phone 760 745 5522 Date 7/27/12

NOTE: THIS DOCUMENT IS NOT A COMMITMENT OF SERVICE OR FACILITIES BY THE DISTRICT
On completion of Section 2 by the district, applicant is to submit this form with application to:
Zoning Counter, Department of Planning and Land Use, 5201 Ruffin Road, San Diego, CA 92123

DPLU-399W (12/09)

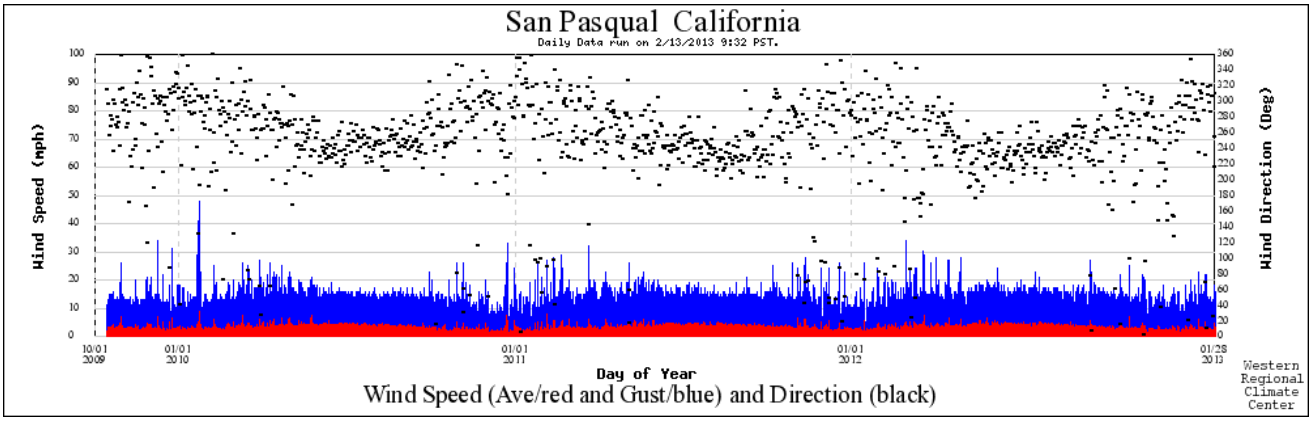
APPENDIX 'F'

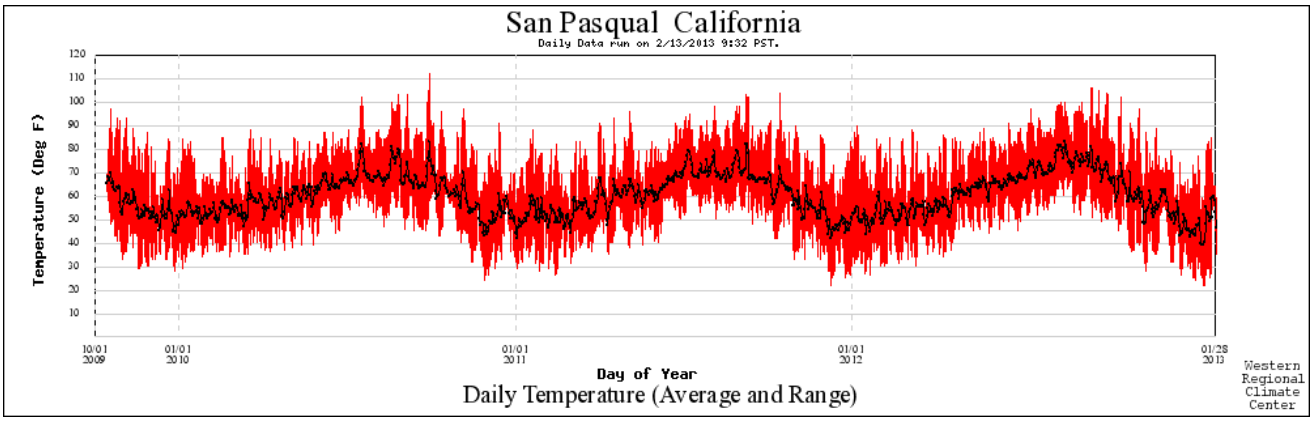
Weather Summary Charts

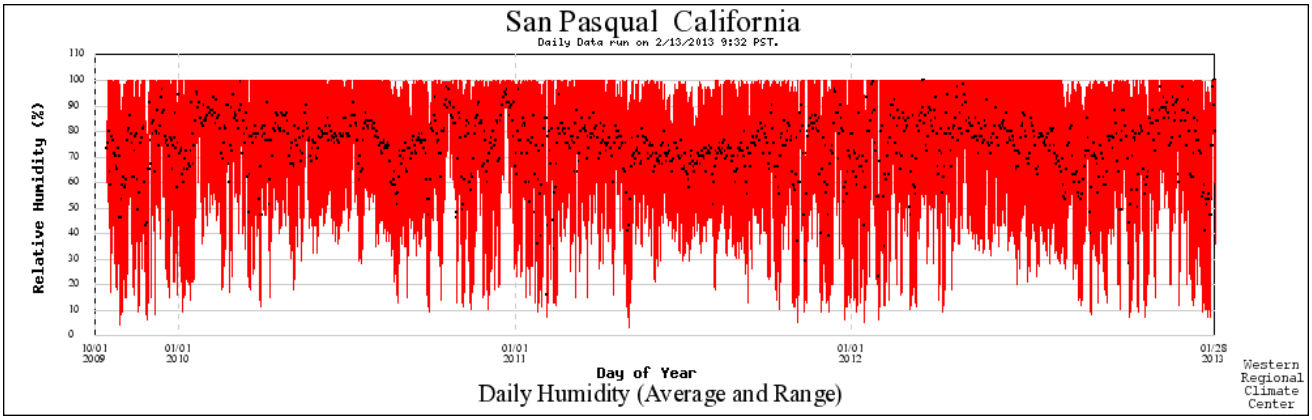
The key to how fast, how hot and at what intensity a wildland fire will burn is directly related to wind speed, wind direction, the age, composition and condition of burnable vegetative fuel and amount of moisture in the atmosphere. Wind direction usually determines how dry or moist (expressed as relative humidity) the air will be in the wind pattern. Local weather conditions (wind speed and live and dead fuel moistures) still are the key ingredients in determining fire intensity and rate of spread.

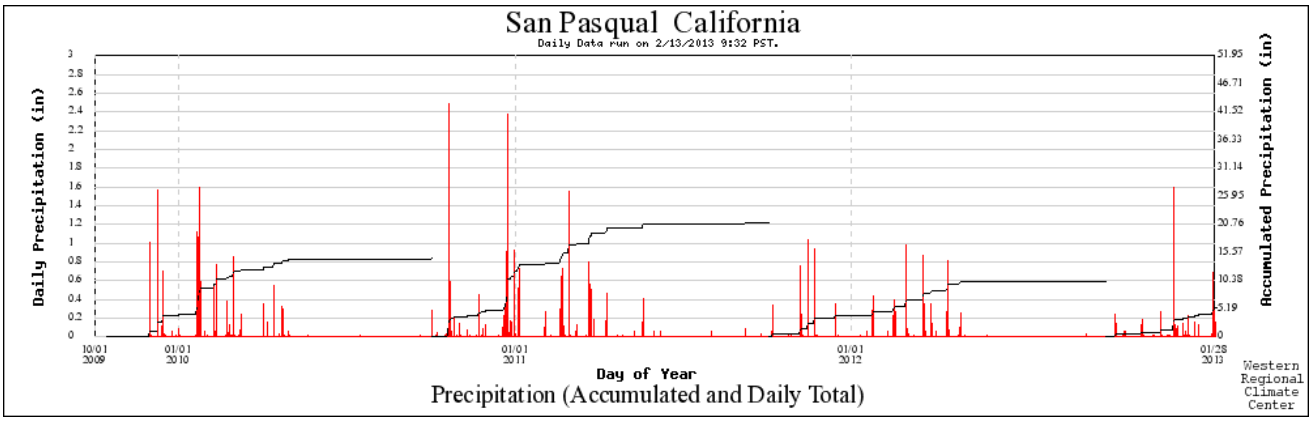
The most critical wind pattern to the Valiano is an off-shore wind coming out of the north/northeast, typically referred to as a Santa Ana wind. Such wind conditions are usually associated with strong (> 40-MPH), hot, dry winds with very low (< 15%) relative humidity. Santa Ana winds originate over the dry desert land and can occur anytime of the year. However, they generally occur in the late fall (September through November). This is also when non-irrigated vegetation is at its lowest moisture content.

Fire agencies throughout the western United States rely on a sophisticated system of Remote Automated Weather Stations (RAWS) to monitor weather conditions and aid in the forecasting of fire danger. The data acquired from RAWS is important to modeling wildland fire behavior. ***FIRE****WISE* **2000, Inc.** determined that the San Pasqual RAWS located is the closest station to the project in a similar Transitional Climate Zone. It did not captured significant weather data during the major southern California fires of October 2003 and most recently the fires of 2007, but does show extreme wind, temperature, relative humidities, and precipitation during the late fire season time frame:









In reviewing the figures above, it can be noted that during the late fire season time (August-October) the wind gusts were very strong, relative humidity was very low, temperatures were high, and lack of any precipitation. These parameters occur when Santa Ana wind events generally occur. For planning purposes, ***FIRE*WISE 2000, Inc.** utilized the worst-case scenarios for wind, relative humidities, and temperatures. Higher wind speeds may occur during winter storms when humidity is high. Such winds are not a wildfire concern.

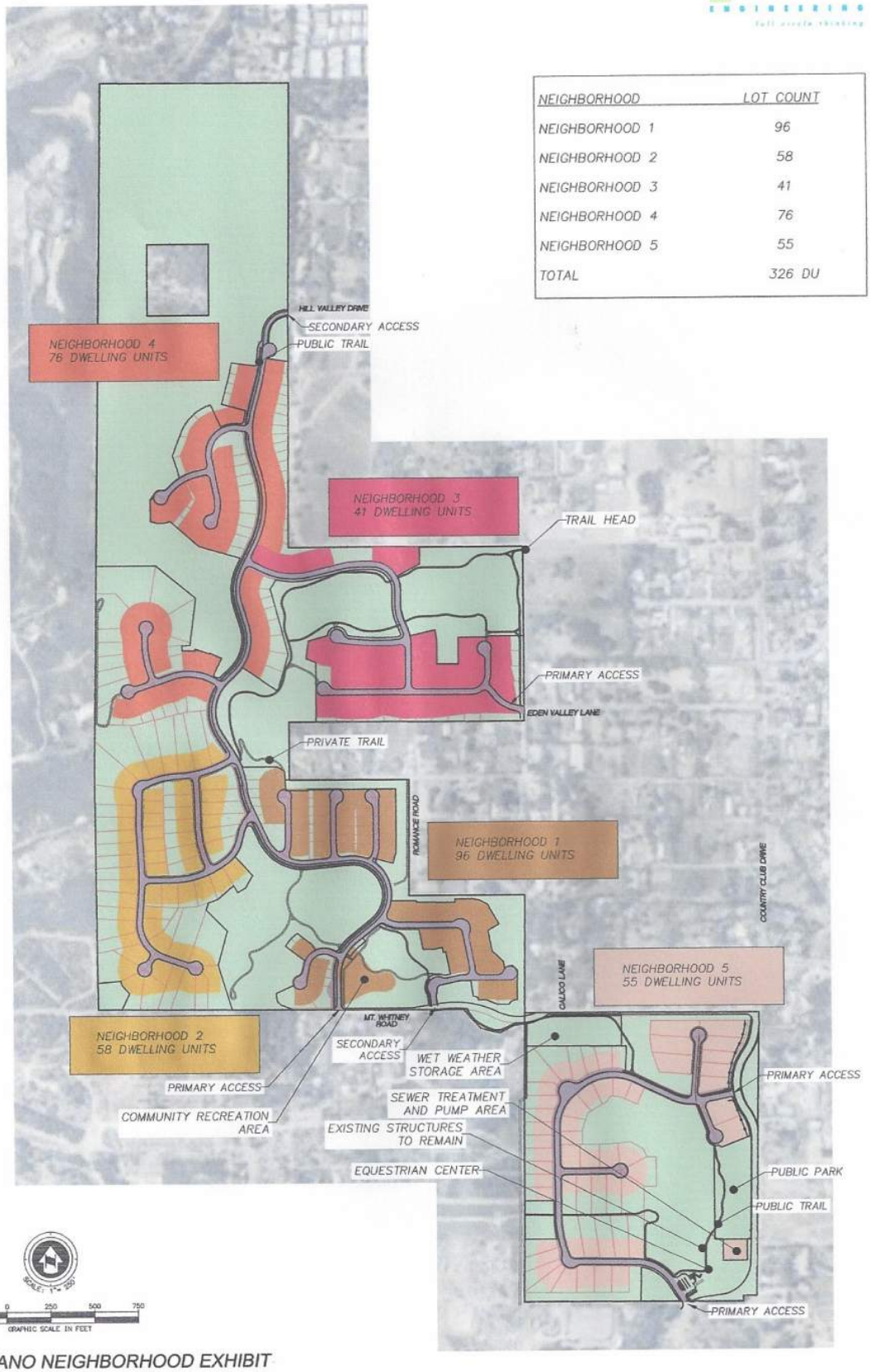
The San Pasqual RAWS is located approximately 12 miles to the southeast of the project at an elevation of 1,068 feet. Data for all RAWS is archived in the Western Region Climate Center in Reno, Nevada. Weather data for all of October 2007 for Ammo Dump RAWS is presented as an example of extreme fire weather. This historic weather data was used to help determine the more extreme fuel moisture regimes found later in this plan.

APPENDIX 'G'

VALIANO NEIGHBORHOOD EXHIBIT

FUSCOE ENGINEERING

NEIGHBORHOOD	LOT COUNT
NEIGHBORHOOD 1	96
NEIGHBORHOOD 2	58
NEIGHBORHOOD 3	41
NEIGHBORHOOD 4	76
NEIGHBORHOOD 5	55
TOTAL	326 DU

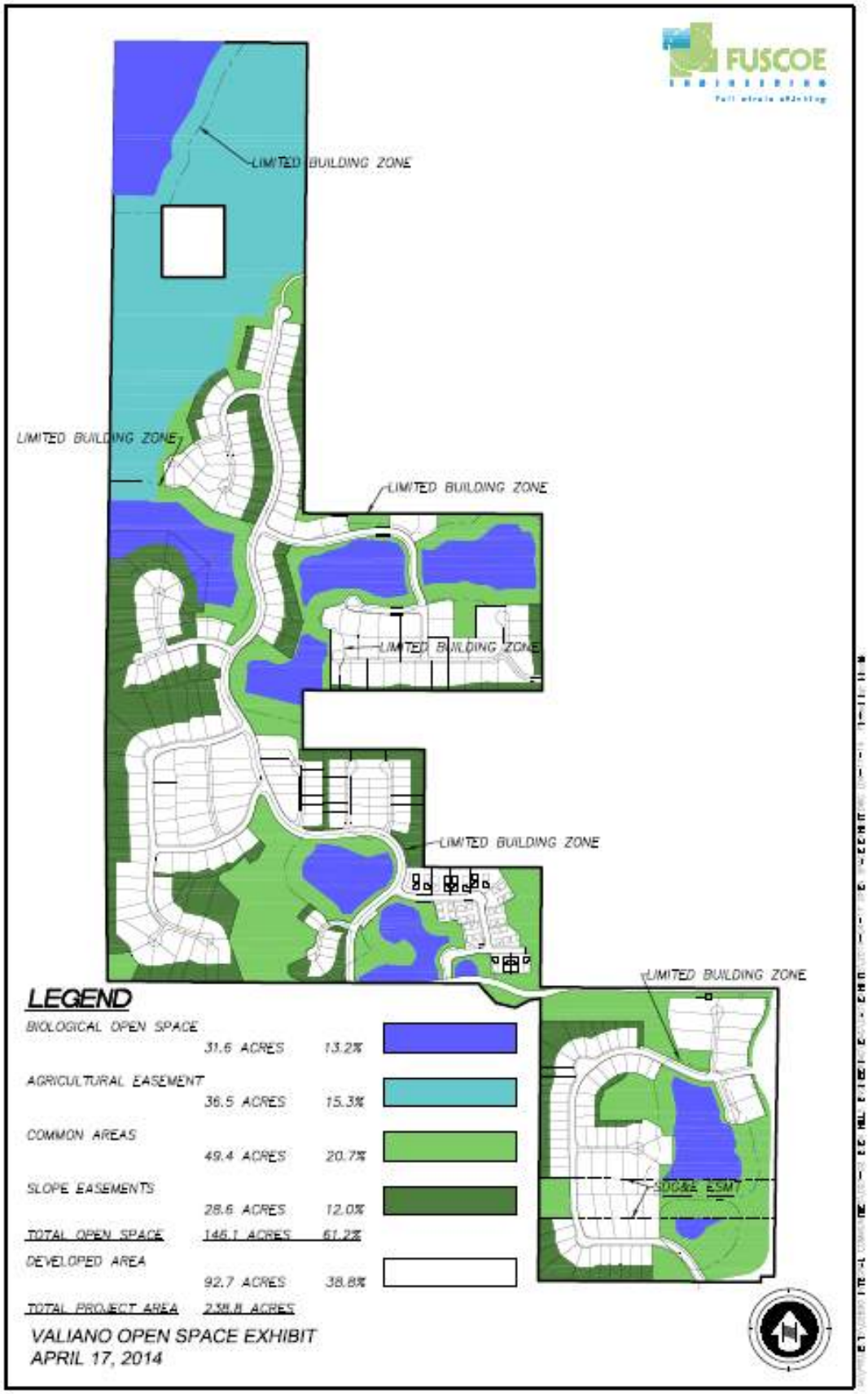


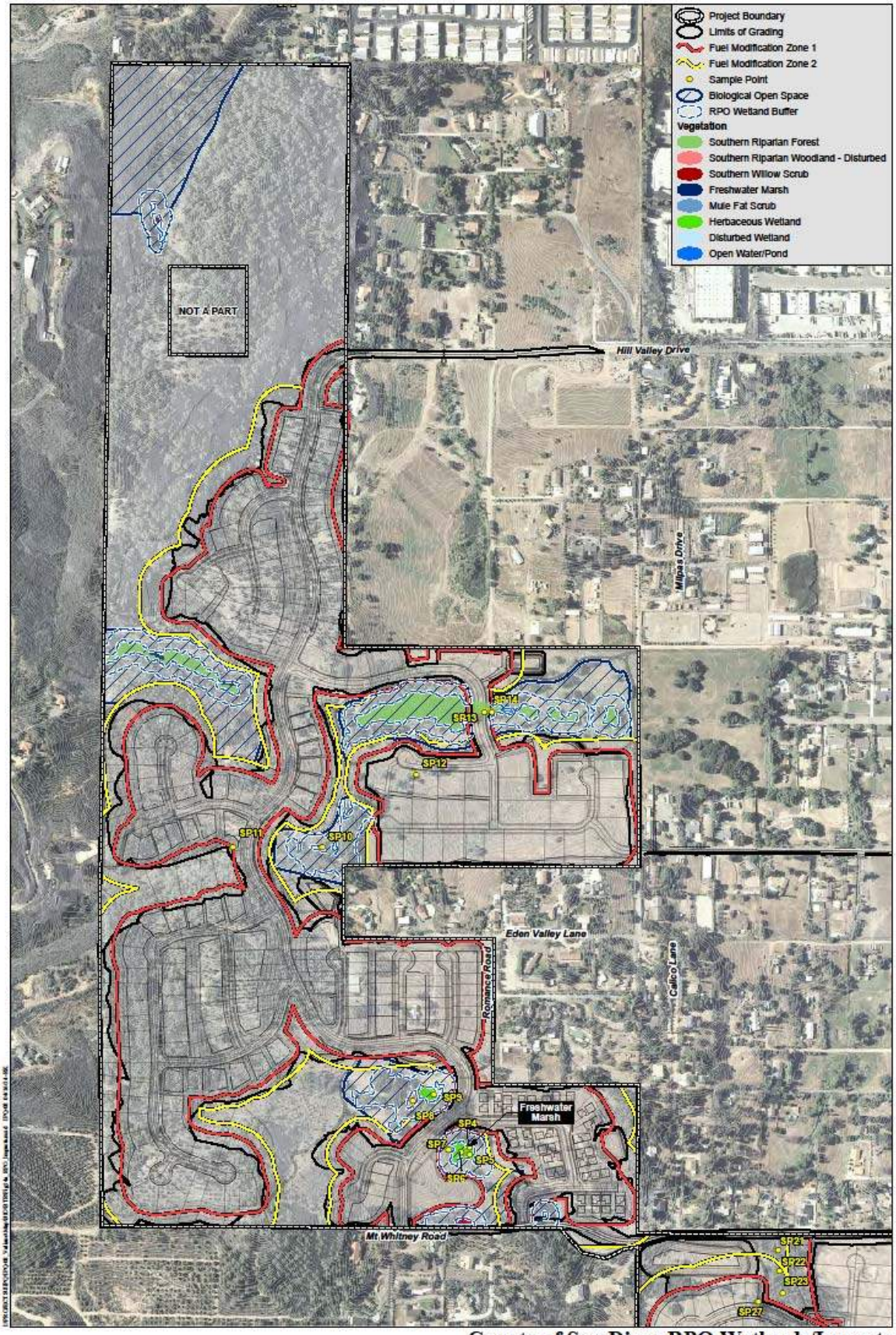
VALIANO NEIGHBORHOOD EXHIBIT
FEBRUARY 12, 2015
SCALE: 1"=250'

APPENDIX 'H'

OPEN SPACE EXHIBIT

RPO WETLANDS IMPACTS MAP
(From HELIX Environmental Planning)


FUSCOE
LIMITED BUILDING ZONE
LIMITED BUILDING ZONE
LIMITED BUILDING ZONE
LIMITED BUILDING ZONE
LIMITED BUILDING ZONE
LIMITED BUILDING ZONE
SLOPE ESMT
LEGEND
BIOLOGICAL OPEN SPACE 31.6 ACRES 13.2%
AGRICULTURAL EASEMENT 36.5 ACRES 15.3%
COMMON AREAS 49.4 ACRES 20.7%
SLOPE EASEMENTS 28.6 ACRES 12.0%
TOTAL OPEN SPACE 146.1 ACRES 61.2%
DEVELOPED AREA 92.7 ACRES 38.8%
TOTAL PROJECT AREA 238.8 ACRES
VALIANO OPEN SPACE EXHIBIT
APRIL 17, 2014

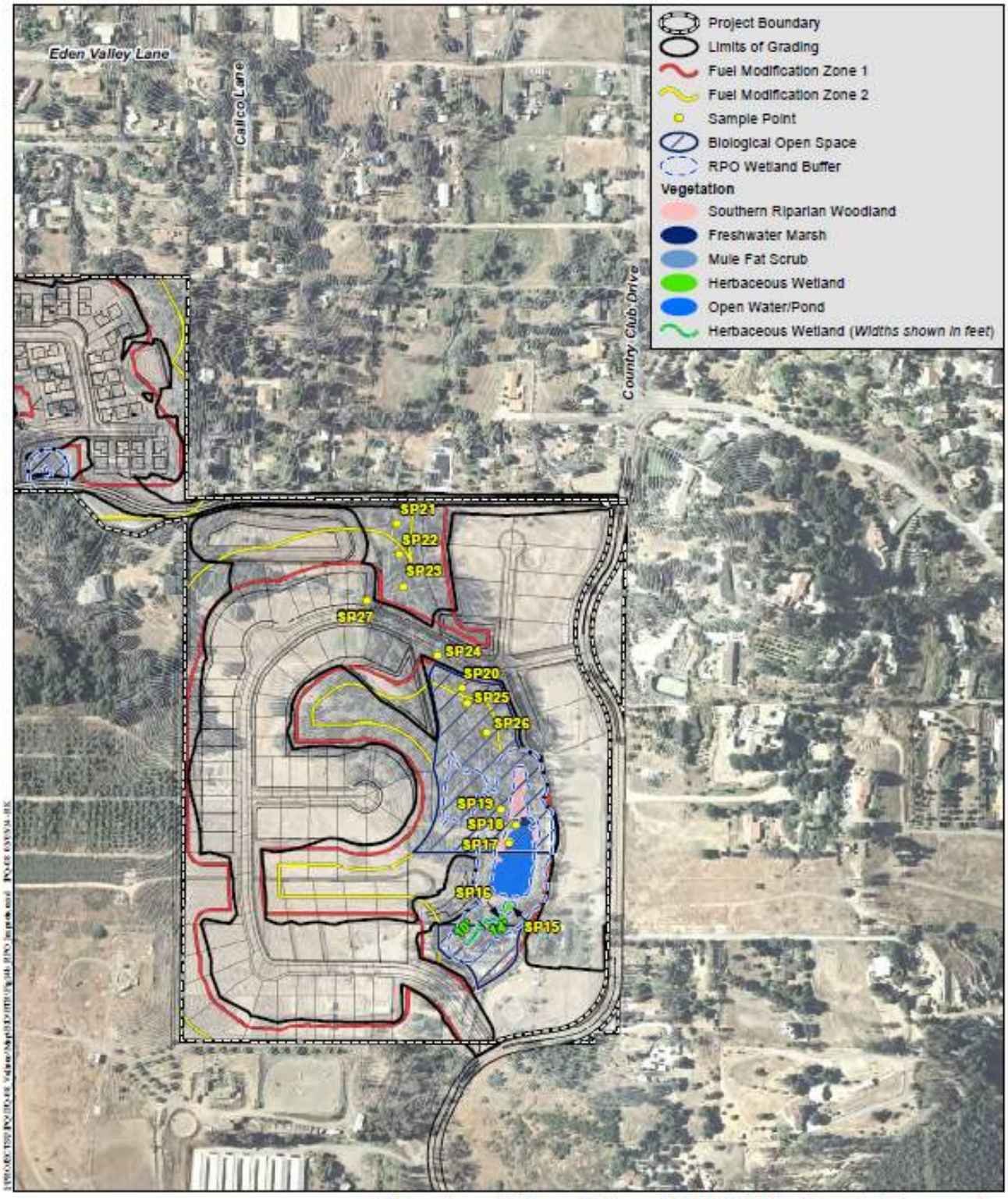


County of San Diego RPO Wetlands/Impacts

VALIANO

HELIX

Figure 14a



County of San Diego RPO Wetlands/Impacts

VALIANO

HELIX Environmental Planning

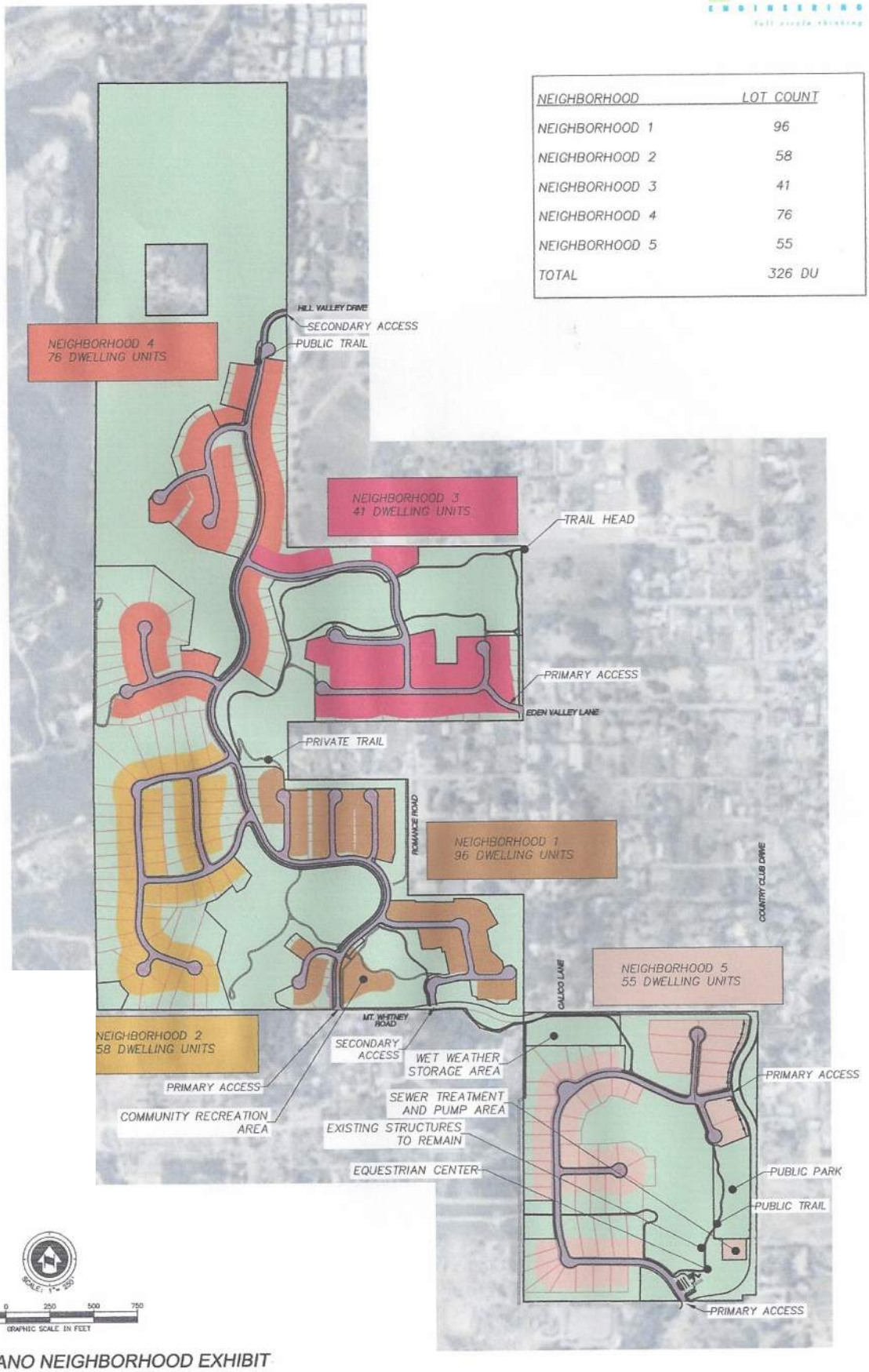
0 400 Feet

Figure 14b

APPENDIX 'I'

SPECIFIC PLAN – SITE PLAN

NEIGHBORHOOD	LOT COUNT
NEIGHBORHOOD 1	96
NEIGHBORHOOD 2	58
NEIGHBORHOOD 3	41
NEIGHBORHOOD 4	76
NEIGHBORHOOD 5	55
TOTAL	326 DU



VALIANO NEIGHBORHOOD EXHIBIT
FEBRUARY 12, 2015
SCALE: 1"=250'

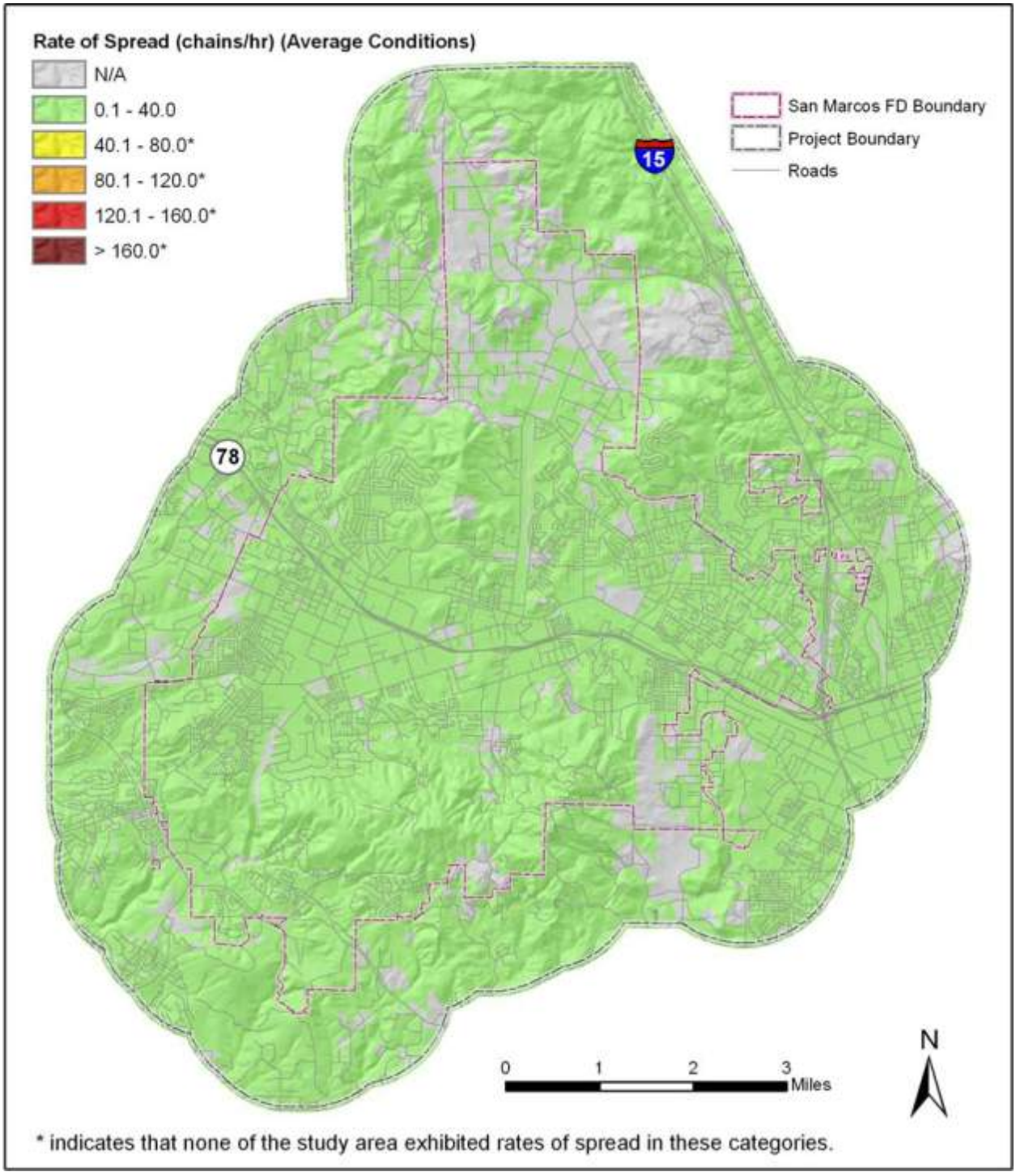
APPENDIX 'J'

FIRE BHEAVIOR POTENTIAL MAPS

***Flame Length Predictions (Average Weather Conditions**
***Rate of Spread Predictions (Average Weather Conditions)**
***Flame Length Predictions (Annual Extreme Weather Conditions)**
***Flame Length Predictions (Annual Extreme Weather Conditions)**

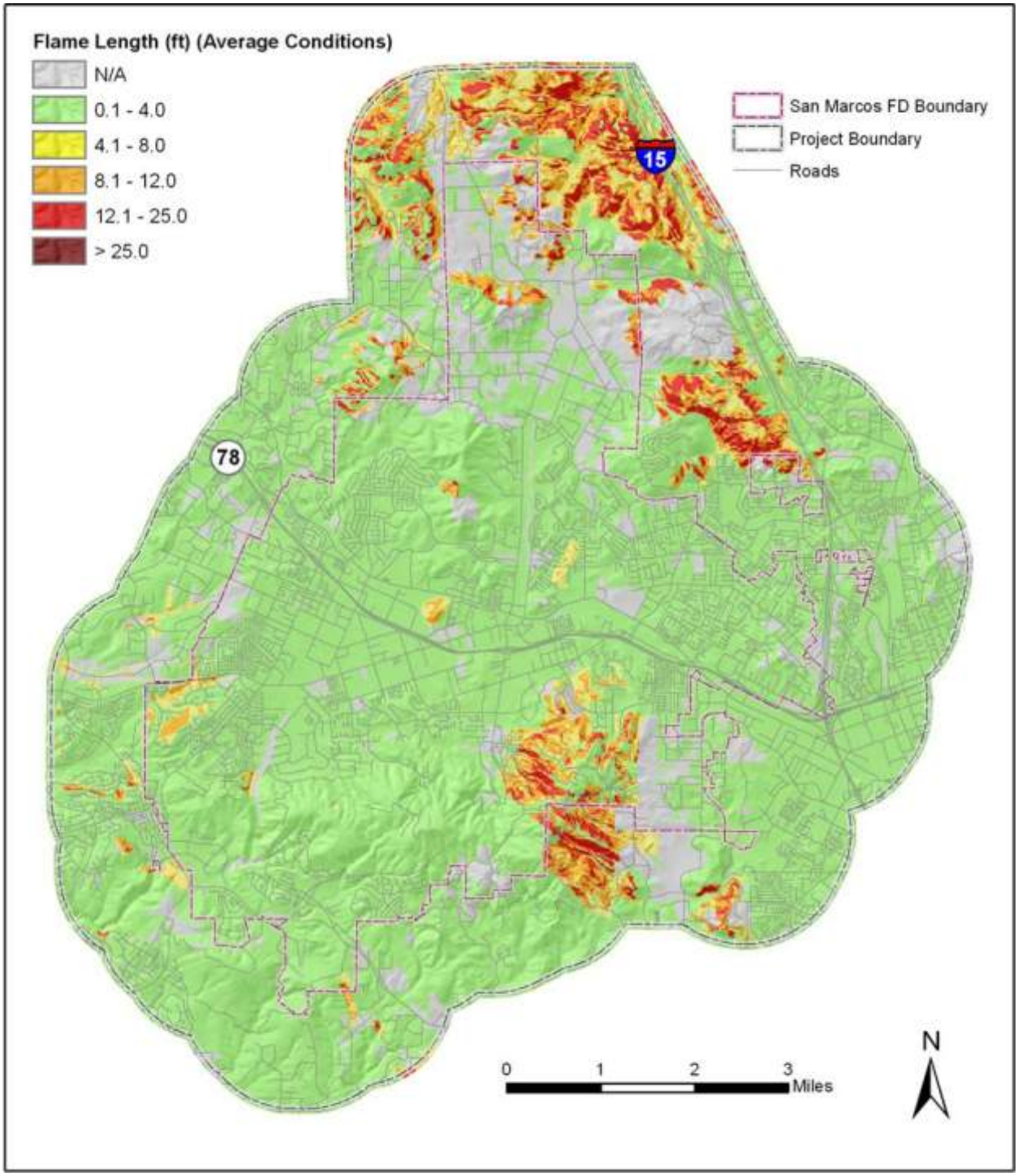
****Fire behavior potential maps from the San Marcos Fire Department's Community Fire Protection Plan, December 2007***

…from the San Marcos Fire Department's Community Fire Protection Plan, December 2007



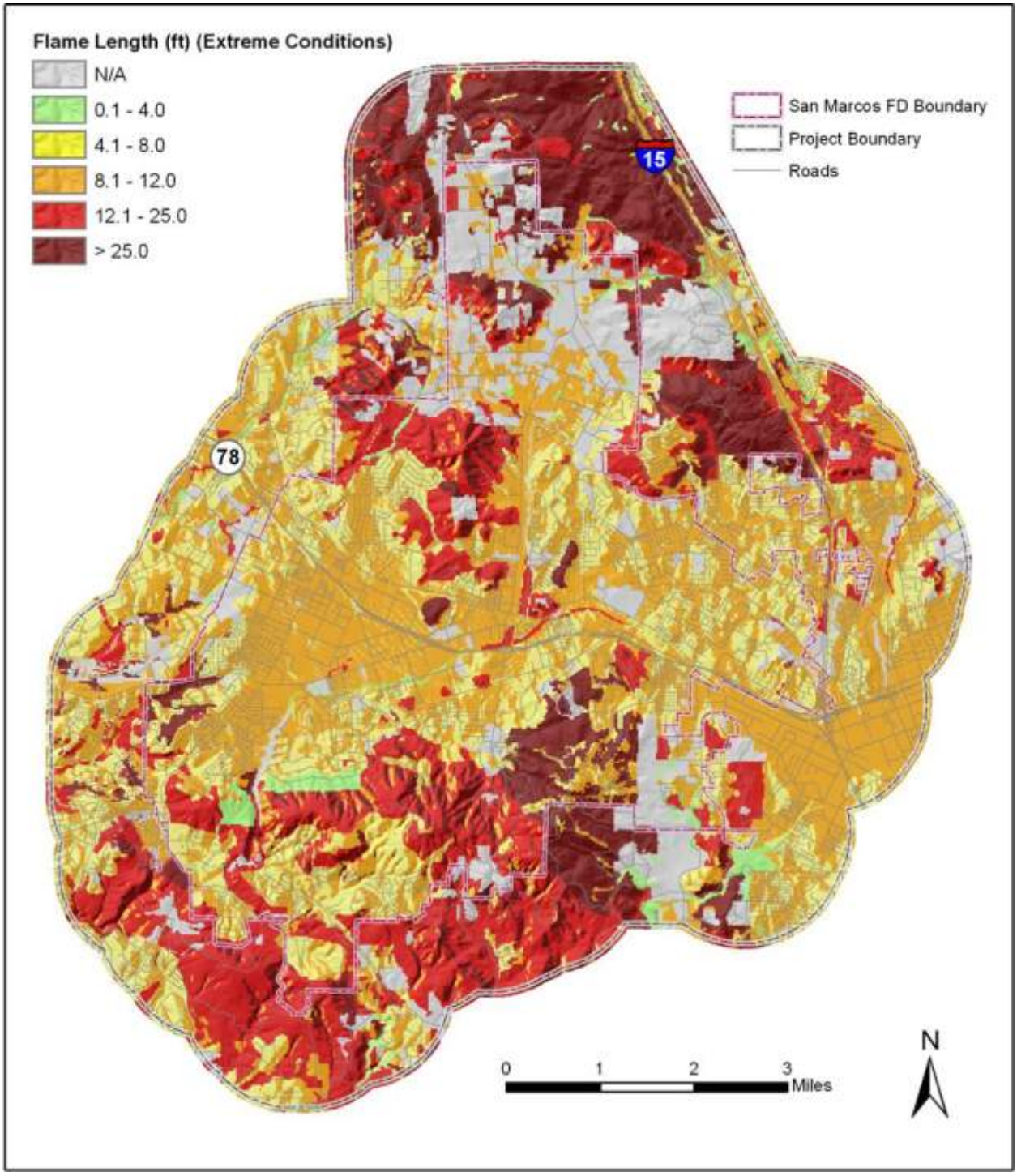
N/A = Not Applicable
A chain is a logging and fire line measurement (1 chain = 66 feet. 80 chains/hour = 1 MPH)

**** San Marcos Fire Department's Community Fire Protection Plan, December 2007***



N/A = Not Applicable
Flame Length: The distance between the flame tip and the midpoint of the flame depth at the base of the flame (generally the ground surface); an indicator of fire intensity.

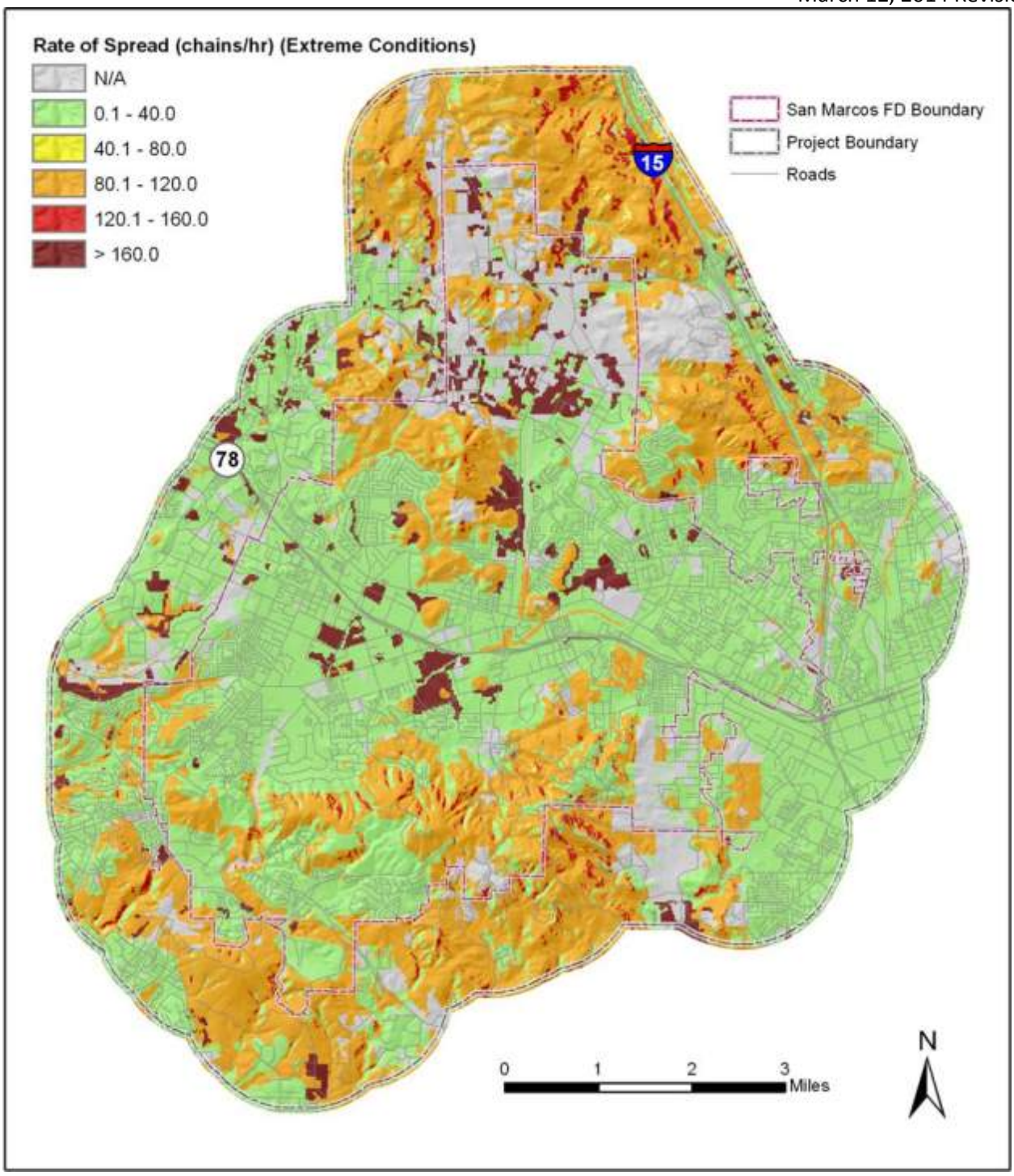
****San Marcos Fire Department's Community Fire Protection Plan, December 2007***



N/A = Not Applicable

Flame Length: The distance between the flame tip and the midpoint of the flame depth at the base of the flame (generally the ground surface); an indicator of fire intensity.

**** San Marcos Fire Department's Community Fire Protection Plan, December 2007***



N/A = Not Applicable
A chain is a logging and fire line measurement (1 chain = 66 feet. 80 chains/hour = 1 MPH)