

# Fire and Life Safety Program



## Newport Banning Ranch Newport Beach, California January, 2009

Prepared by:



## 1 PURPOSE AND INTENT

This Fire and Life Safety Program was prepared for Newport Banning Ranch to analyze and mitigate for potential wildland fire hazards. This Program, prepared by Firesafe Planning Solutions in cooperation with the Newport Beach Fire Department, establishes fuel management requirements for publicly and privately maintained landscape and enhanced construction requirements for structures bordering native vegetation areas.

The purpose and intent of the Program is to significantly reduce the potential risk to the loss of lives, homes, and personal property if and when brushfires occur, while allowing the development of well-planned public parks, homesites, and resort areas adjacent to fully-functional habitat areas, which are an important resource to the City and the California Coastal Commission.

This Fire and Life Safety Program sets forth the site planning, design, and administrative requirements for the Newport Banning Ranch community. The program is based on adherence to the City of Newport Beach Fire Code (including amendments to State codes) and to Fire Department Guidelines, as well as planning and review meetings with the City of Newport Beach Fire Department.

This program establishes:

- 1.1 **Fuel Management Zones** – provide protection for homes and other uses adjoining the natural open space areas;
- 1.2 **Fire Access** – provide access to all structures throughout the Project for maintenance and all emergency needs; and
- 1.3 **Fire Sprinklers** – provide automatic fire sprinkler systems to all habitable structures throughout the Project.

## 2 BASIS FOR FIRE AND LIFE SAFETY PROGRAM

This Fire and Life Safety Program consolidates standards and summarizes requirements from a variety of sources:

### 2.1 City Municipal Fire Code/Fire Department Guidelines

This Fire and Life Safety Program is intended to meet or exceed the requirements set forth in the City of Newport Beach Fire Code and all its amendments to the 2007 California Building Code, 2007 California Fire Code, and the International Fire Code, 2006 Edition.

### 2.2 Wildland Urban Interface (WUI)

Newport Banning Ranch does not lie within a Special Fire Protection Area, as defined in the Newport Beach Fire Code Section 9.04.030 (as adopted). However, the State of California is updating the state-wide fire hazard maps and it is anticipated the Newport Banning Ranch will be classified as a “moderate” or “high” fire hazard area.

### **2.3 Newport Banning Ranch Fuel Management and Maintenance Program Analysis (See Attachment 1)**

This Fire and Life Safety Program incorporates the key provisions and standards from the Newport Banning Ranch Fuel Management and Maintenance Program Analysis drafted for the Fire Department by Firesafe Planning Solutions, a recognized wildland and Fire and Life Safety consulting firm, specifically for the Newport Banning Ranch Project, and provided as Attachment 1

The Fuel Management Plan described in Section 3 below incorporates the findings of a fire behavior analysis performed with BEHAVE PLUS fire behavior prediction software. The BEHAVE PLUS program calculates a “worst case” fire behavior result with inputs for plant type, topography, weather, humidity and distance to predict fire behavior, size, and flame lengths. With these results, the fuel management zones can be designed to protect the community in the potential “worst case” fire.

Attachment 1 provides the Fuel Management and Maintenance Program Analysis for the Newport Banning Ranch. Attachment 2 provides the proposed permitted plant palettes for the Fuel Management Zones that are used in the Fuel Management Plan described below.

## **3 FUEL MANAGEMENT PLAN (NEWPORT BANNING RANCH DEVELOPMENT PLAN)**

Fire protection in landscape areas will be achieved by avoiding and reducing highly flammable plant material in open space areas adjacent to development. This will be accomplished by revegetation with low-fuel-volume plantings, remove or pruning and thinning of certain native plants, and/or selective irrigation.

Generally, Fuel Management Areas are a composite of two (2) or more often three (3) successive fuel management zones, which progressively provide an increasing amount of fire protection as they become closer to the homes or other habitable buildings that need to be protected.

This Fire and Life Safety Program establishes five (5) Fuel Management Zones: Zone “A”, Zone “B”, Zone “C”, Zone “1”, and Zone “2”. These zones are described below in Section 3.1. For most of the Community’s wildland development edge, a 120-foot minimum combined width of Fuel Management Zones will be provided, most often composed of a 20-foot Zone “A”, 50-foot Zone “B”, and 50-foot Zone “C” The combined width may be reduced to a 110-foot minimum (e.g., a 10-foot Zone “A”, 50-foot Zone “B”, and 50-foot Zone “C”) between the Resort Inn and West Coast Highway where the fire behavior models show a significantly reduced risk.

A conceptual version of the Fuel Management Plan is illustrated on Exhibit 1, which also locates the cross-sections in Exhibits 2 through 12 that illustrate the range of fuel management conditions within Newport Banning Ranch and how they will be addressed by the Project. This Fire and Life Safety Program contains a more detailed Fuel Managed Defensible Zone Map that defines Fuel Managed Defensible Space (FMDS) Zones, fire access points within the community, and limits the type of plants permitted within the Newport Banning Ranch community to actively manage wildland fire fuel sources.

### 3.1 Fuel Management Zones (FMZ) and Maintenance Responsibilities

Fuel management programs vary in complexity and designs which are dependent upon the type and spacing of vegetation as well as topography, weather conditions, and the placement of structures. The Newport Banning Ranch Fuel Management and Maintenance Program Analysis, based on BEHAVE PLUS fire behavior modeling, establish that 120' of Fuel Management will exceed the protection required for this Project for the WUI areas.

The Five (5) Fuel Management Zones, as illustrated on Exhibit 1, shall be installed and maintained within the Newport Banning Ranch as described below.

#### Zone "A"

Generally, Zone A is a 20-foot minimum within residential rear yards; a flat or level grade defensible space area consisting of irrigated landscape. Zone "A" will be located on private lots generally within the rear yards of the lots, and may in certain situations reduce to a 10-foot minimum in a side yard situation. Zone "A" is a 10-foot minimum at the Resort Inn overlooking West Coast Highway where fire behavior models show a significantly reduced risk.

Combustible structures will be prohibited within Zone A. Existing vegetation within the zone will be removed and replaced with plants listed in the Permitted Plant Palette for Zone "A" as shown in Attachment 2. Plants determined by the Fire Department to be highly combustible will be removed during regular maintenance (See Attachment 3 for current "undesirable" plant list).

There are no potentially sensitive habitats within or adjacent to Zone "A", and thinning of landscape will be permitted throughout the year.

#### Zone "B"

Zone "B" will vary in width from a minimum of 50 feet up to approximately 126 feet from Zone "A" towards native vegetation areas and consist of a low fuel landscape within an irrigation system designed to mimic normal/average rainfall and to provide the necessary fuel moisture to the plants during dry periods or seasons.

All of Zone "B" will be maintained by a Homeowners Association or similar community entity. Existing vegetation within Zone "B" will be removed and replanted with the permitted low-fuel-volume plants listed on the permitted plant palette for Zone "B" as shown in Attachment 2. Plants determined by the Fire Department to be highly combustible will be removed during regular maintenance.

There are no potentially sensitive habitats within Zone "B" and thinning and/or removal of non-approved landscape will be permitted throughout the year (See Attachment 3 for current "undesirable" plant list). As in Zone A, combustible structures and construction are not allowed within Zone "B".

### Zone “C”

Zone “C” will adjoin Zone “B” or Zone “2” and be the minimum width of 50 feet, in most areas connecting Zone “B” or Zone “2” to existing potentially sensitive habitat. Zone “C” also serves as native habitat restoration area as proposed in the proposed Habitat Restoration Plan for the community. Zone “C” will be maintained either by the Homeowners Association and/or a Conservancy Group yet to be determined.

Zone “C” will be composed of native grassland and/or cactus areas consisting of non-irrigated native plant species that contain low fuel loads as described in the plant palette as shown in Attachment 2. All existing non-native plants and species not approved by the Habitat Restoration Plan for this area will be removed. Zone “C” will not include the pruning, thinning, or removing of approved native vegetation.

Maintenance within Zone “C” will include removal of non-native/invasive species and dead plant material. As in Zones “A” and “B”, combustible structures and construction are not allowed within Zone “C”.

### Zone “1”

Zone “1” is a 20-foot minimum flat or level grade defensible space area consisting of hardscape and/or irrigated landscape. Zone “1” will generally be limited to public streets, private rear yards, and some private front yard lots. The maintenance responsibility shall be with the property owner for all portions of Zone “1” located within an owner’s lot. Any portion of Zone “1” outside a property owner’s lot shall be maintained by a Homeowners Association or similar entity.

Existing vegetation within Zone “1” will be removed and replaced with plants listed in the Permitted Plant Palette for Zone “1” as shown in Attachment 2. Plants determined by the Newport Beach Fire Department to be highly combustible will be removed during regular maintenance.

There are no potentially sensitive habitats within or adjacent to Zone “2”, and thinning of landscape will be permitted throughout the year. Combustible structures and construction are prohibited within Zone “1”.

### Zone “2”

Zone “2” will vary in width from essentially 0 feet up to approximately 150 feet from Zone “1”. Zone “2” will consist of community landscape plant material with a full irrigation system.

All of Zone “2” will be maintained by a Homeowners Association or similar entity. Existing vegetation within Zone “2” will be removed and replanted with the permitted plant palette specific for Zone “2” as shown in Attachment 2. Plants determined by the Newport Beach Fire Department to be highly combustible will be removed during regular maintenance. (See Attachment 3 for current “undesirable” plant list)

There are no sensitive habitats within or adjacent to Zone “2”, and thinning of landscape will be permitted throughout the year. As in Zone “1”, combustible structures and construction are not allowed in Zone “2”.

### **3.2 Access for Fire Fighters and Fuel Management Maintenance Crews**

The Fire and Life Safety Program for the Newport Banning Ranch Project has been designed to include emergency fire access points to the Fuel Management Zones approximately every 500 feet of fuel management edge from streets, paseos, and side yard locations. These access points will also provide access locations for the maintenance of the fuel management zones.

## **4 FIRE SAFETY REQUIREMENTS FOR ALL STRUCTURES**

All structures within Newport Banning Ranch shall conform to the following requirements:

### **4.1 Compliance with City Codes**

All structures on lots within 100' of the Fuel Modification/Fuel Management edge shall receive enhanced construction on all four (4) sides per 2007 California Building Code Chapter 7A and the 2007 California Fire Code Chapter 47 as locally amended by the City of Newport Beach, including Automatic Fire Sprinkler System. Refer to Ch. 7A and Ch. 47 provided as part of this package.

Structures outside the Enhanced Construction Zone defined above will not be required to include construction enhancements, except for Chapter 7A roof and venting requirements.

Open landscape structures such as gazebos and trellises within scenic lookouts and viewpoints within the Bluff-top Park and similar parks will be exempt from Enhanced Construction requirements.

### **4.2 Sprinkler Systems**

All single-family and multi-family homes will be required to be constructed with approved modified NFPA 13 Automatic Fire Sprinkler System installed by a licensed fire sprinkler contractor. All commercial use buildings will require a full NFPA 13 Automatic Fire Sprinkler System installed by a licensed fire sprinkler contractor. Separate plans are required to be submitted to the Fire Department for approval prior to installation.

### **4.3 Agreement to Fire Restrictions in CC&Rs**

All potential property owners will agree to the rules related to fire protection features, which shall be established in the CC&Rs, prior to purchase of property.

## **5 FIRE ACCESS / FIRE MASTER PLAN**

A Fire Master Plan will be prepared at a later date for construction-level Site Plans showing all fire access and life safety elements for the Project. The standards set forth and discussed by Firesafe Planning Solutions with the Newport Beach Fire Department

will be included as part of the plan. Alternative Design Standards may include reduced street widths, increased hydrant spacing, increased hose-pull lengths, and increased fire lane signage distances.

Generally within the community, fire and emergency access points from development areas to the Fuel Management Areas will be provided at minimum 500-foot intervals along the Fuel Management Edge. The access locations may be provided from streets, paseos, public parks, yard easements, and in other locations as approved by the Newport Beach Fire Department. These access points will also provide access locations for the permitted and required maintenance of the Fuel Management Zones.

Many of the Alternative Design Standards utilized to create a “green/sustainable” community at Newport Banning Ranch have been verbally discussed and positively received by the Newport Beach Fire Department due to the Landowner/Master Developer’s commitment to provide Automatic Fire Sprinklers for all habitable structures within the Project.

### **5.1 Emergency Ingress and Egress**

There will be one (1) primary ingress and egress route, and three (3) secondary ingress and egress routes, into the Newport Banning Ranch Community. The primary access will be on the southern edge of the Project from West Coast Highway. All three (3) secondary accesses will be from the east side of the Project, from 15th Street, 16th Street, and 17th Street. None of the secondary access points are in the vicinity of a UWI Area; however the west side of the primary access from West Coast Highway does border a Fuel Management Area.

### **5.2 Emergency Access Design Standards / Access Roads**

All streets and cul-de-sacs, as well as road widths and grades, will fully comply with the Alternative Design Standards for Banning Ranch verbally discussed and preliminarily accepted by the Newport Beach Fire Department. Street sections for Banning Ranch will be provided at a later date after continued discussions.

The minimum width of a fire access road shall be 20 feet, with no vehicle parking allowed. The width will be increased to 26 feet within 30 feet of a hydrant, with no vehicle parking allowed. Parking on one (1) side will be permitted on 27-foot-wide streets. Parking on two (2) sides will be permitted on 34-foot-wide streets.

Roads must be constructed of a material that provides an all-weather driving surface capable of withstanding a vehicle weight of 72,000 pounds. Alternative road surfaces may be used in lieu of conventional asphalt and/or concrete.

### **5.3 Water Supply / Fire Flow**

The Newport Beach Water Department will serve the Newport Banning Ranch Project. All underground water systems, mains, and water pressures shall be designed to fully comply with City of Newport Beach Fire Code Requirements.

### **5.4 Hydrants and Utilities**

All hydrants and all-weather access roads shall be installed and approved leading to and in the specific building area where combustible materials will be delivered. A temporary access plan may be designed and considered for approval of temporary access and hydrants. Hydrants shall be spaced no greater than 500 feet from hydrant to hydrant, and 250 feet from the end of a cul-de-sac within the community. Hydrant spacing will be no greater than 1,000 feet from hydrant to hydrant on backbone streets not directly serving any habitable structures.

### **5.5 Fire Apparatus Hose Pulls**

The 2007 California Fire Code states that fire apparatus access roads shall be provided for every building or portion of a building constructed when any portion of the building is located more than 150 feet from the fire apparatus access measured by an approved route around the exterior of the building. After discussions with the Newport Fire Department about providing Automatic Fire Sprinklers for all habitable structures within the entire community, a proposed distance of 250 feet from the fire apparatus was positively received as an alternative of the 150 feet normally required by the California Fire Code without sprinklers. The final decision on the required distance will be made by the Newport Beach Fire Department

## **6 FIRE DEPARTMENT REFINEMENTS AND MODIFICATIONS TO FIRE AND LIFE SAFETY PROGRAM OVER TIME**

The Newport Beach Fire Department may refine or modify the requirements set forth in this Newport Banning Ranch Fire and Life Safety Program to conform with City Ordinances, Fire Department Guidelines, and/or State Regulations as they may change in the future to better protect public health and safety. The Newport Beach Fire Department may refine or modify specific components of the Newport Banning Ranch Fire and Life Safety Program, based upon a proposal by the Landowner/Master Developer or a project developer, if such proposal, on balance, serves to equally or better protect public health and safety. The Newport Beach Fire Department is empowered to interpret and clarify this Fire and Life Safety Program as necessary to protect public health and safety.

## **7 USE OF FIRE AND LIFE SAFETY PROGRAM**

Fire-resistant building requirements, FMDS Zone requirements, and other fire protection measures shall be provided to the Landowner/Master Developer, project developers, builders, architects, landscape architects, and the Newport Banning Ranch Homeowners Association (HOA) to ensure all structures in the Newport Banning Ranch Project will be constructed and will remain over time reasonably safe from future wildland fires.

The information in this Fire and Life Safety Program shall also be provided to future individual homeowners, either as a stand-alone document or as part of a larger educational handout for Newport Banning Ranch residents.

SEE PDFs 44 TO 51 FOR ATTACHMENTS  
AND EXHIBITS