Shea/Baker Ranch

Appendix E – Fuel Modification Plan

NOTE:
REFER TO SHEET 2 FOR THE 2007 CALIFORNIA BUILDING CODE CHAPTER 7A LANGUAGE.

PLANT REMOVAL LIST

100% REMOVAL FROM ALL FUEL MODIFICATION ZONES PER THE ORANGE COUNTY FIRE AUTHORITY FUEL MODIFICATION GUIDELINES - ATTACHMENT 7

THESE PLANT SPECIES SHALL BE REMOVED FROM ALL FUEL MODIFICATION ZONES.

BOTANICAL NAME	COMMON NAME
AGENOSTOMA FASCICULATUM	WILD TURNIP, YELLOW MUSTARD
ADENOSTOMA SPARSIFOLIUM	RED SHANKS
ANTHEMIX COTULA	MAYWEED
ARTEMISIA CALIFORNICA	CALIFORNIA SAGEBRUSH
BRASSICA NIGRA	BLACK MUSTARD
BRASSICA RAPA	CHAMISE
CARDARIA DRABA	NOMRY CRESS, PERENNIAL PEPPERGRASS
CENTAUREA SOLSTITIALIS	YELLOW STAR-THISTLE
CIRSIUM VULGARE	WILD ARTICHOKE
CONVIZA CANADENSIS	HORSEWEED
CORTADERIA SELLOANA	PAMPAS GRASS
CYNARA CARDUNCULUS	ARTICHOKE THISTLE
DATURA WRIGHTII	JIMSONWEED
ERIOGONUM FASCICULATUM	COMMON BUCKWHEAT
FOENICULUM VULGARE	FENNEL
HETEROTHACA GRANDIFLORA	TELEGRAPH PLANT
LACTUCA SERRIOLA	PRICKLY LETTUCE
MALOSMA LAURINA	LAUREL SUMAC
NICOTIANA BIGELEVII.	INDIAN TOBACCO
NICOTIANA GLAUCA	TREE TOBACCO
SALVIA MELLIFERA	BLACK SAGE
SALSOLA AUSTRALIS	RUSSIAN THISTLE/TUMBLEWOOD
SILYBUM MARIANUM	MILK THISTLE
RICINUS COMMUNIS	CASTOR BEAN PLANT
URTICA URENS	BURNING NEEDLE
ORNAMENTALS	
CORTADERIA SELLOANA	PAMPAS GRASS
CUPRESSUS SP.	CYPRESS
EUCALYPTUS SP.	EUCALYPTUS
JUNIPERUS SP.	JUNIPER
PINUS SP.	PINE

SAMPLE
FUEL MODIFICATION AND CONSTRUCTION FOR ALL LOTS PRIVATE HOME OWNER DISCLOSURE EXHIBIT TYPICAL

LEGEND

ZONE "A"
SET BACK ZONE
NON-COMBUSTIBLE PROPERTY OWNER MAINTAINED PER OCFA MAINTENANCE GUIDELINES, AREA PLANTED WITH APPROVED PLANT MATERIAL.

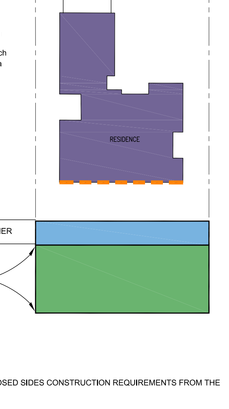
ZONE "B"
FULLY IRRIGATED WET ZONE
(100% REMOVAL OF UNDESIRABLE PLANT SPECIES)
HOMEOWNERS ASSOCIATION MAINTAINED PER OCFA MAINTENANCE GUIDELINES, AREA PLANTED WITH APPROVED PLANT PALETTE ONLY.

ENHANCED CONSTRUCTION ZONE
All residential structures constructed with in this project shall receive "enhanced construction" on all four (4) sides per 2007 California Building Code Chapter 7A including NFPA-13D / 13-R of Full 13 Automatic Fire Sprinklers, as applicable to the structure. Attic vent screens require vents to be a minimum of 1/4" and a maximum of 1/2; however we are providing a maximum of 1/4" venting.

INDICATES SIDE THAT SHALL HAVE NO VENTING:
All structures adjoining the Fuel Modification lot have no venting on side facing the Fuel Modification as show on plan. All other vents throughout the entire project requiring Chapter 7A amendments, which require vents to be a minimum of 1/4" and a maximum of 1/2", shall be a maximum of 1/4" venting.

NOTES:

1. HOMEOWNER / PROPERTY OWNER IS RESPONSIBLE TO MAINTAIN "A" ZONE SETBACK IF IN PRIVATE BACKYARD PER APPROVED FUEL MODIFICATION PLAN GUIDELINES.



I UNDERSTAND AND AGREE TO COMPLY WITH ALL FUEL MODIFICATION AND EXPOSED SIDES CONSTRUCTION REQUIREMENTS FROM THE APPROVED FUEL MODIFICATION PLAN WHICH APPLY TO THIS PROPERTY:

BUYER SIGNATURE BUYER SIGNATURE

DATE DATE

October 13, 2010

Bret Anderson
Senior Fire Prevention Specialist
Planning and Development Services Section
Orange County Fire Authority
1 Fire Authority Road
Irvine, CA 92856

Subject: Baker Ranch Precise Fuel Modification Plan
Planting Plan Submittal Time Table
OCFA SR# 173719
Tentative Tract# 16466

Mr. Anderson,

This letter has been provided to you to establish and commit to a time table for the Landscape Planting Plans to be submitted and approved to OCFA.

Planting plans drawn by a licensed Landscape Architect are required to be submitted for review and approval by OCFA prior to issuance of building permits and prior to installation of the plants.

Sincerely,

David Oatis
FireSafe Planning Solutions
As agent for Shea Baker Ranch Associates, LLC

FUEL MODIFICATION MAINTENANCE NOTES

Zone A - Setback Zone
The purpose of the setback zone is to provide a defensible space for fire suppression forces and to protect structures from radiant heat and convective heat. No combustible construction shall be allowed within the 10 to 26-foot setback zone (Zone A). In no case shall the A Zone be less than 10 feet minimum. This zone is to be located on a level graded area at the top or base of slope and shall be between Zone B and the structure. If the Zone A is located within the lot containing the structure, it shall be the most distal 10-26 feet of the lot. If the Zone A is outside of the lot containing the protected structure, it shall begin immediately outside the lot line and may incorporate trails, roadways and other flat, noncombustible areas that create defensible space for fire crews between the protected structure and Zone B. The latter condition is preferred as it allows combustible construction within individually owned lots.

Zone A – Specific Requirements
A. Automatic irrigation systems to maintain healthy vegetation with high moisture content and be regularly irrigated.
B. Pruning of foliage to reduce fuel load, vertical continuity, and removal of plant litter and dead wood in accordance with Attachment 6.
C. Complete removal of undesirable plant species (See Attachment 7). There is also minimal allowance for retention of selected native vegetation.
D. Plants in this zone shall be highly fire resistant and selected from the Attachment 8 for the setback zone and given geographical area. (Refer to Attachment 8 and Section 3).
E. Tree species are not allowed within 10 feet of combustible structures (measured from the edge of a full growth crown).
F. Maintenance includes thinning and removal of over-growth, replacement of dead/dying fire resistant plantings, and maintenance of the operation of the irrigation system.
G. Devices that burn solid fuels are not permitted in any fuel modification zone.
H. No combustible construction shall be allowed within Zone A.

Zone B - Irrigated Zone
This portion of fuel modification consists of irrigated landscaping. The plans must delineate that portion of the fuel modification area that will be permanently irrigated. Plant material selection, irrigation system design, and the landscape maintenance management plan shall sensitively address water conservation practices and include methods of erosion control to protect against slope failure. All irrigation shall be kept a minimum of 20 feet from the drip line of any existing native Quercus (oak) species. These irrigated zones are a minimum of 74 feet in width and may be increased as conditions warrant. Zone B shall be cleared of all undesirable plant species, irrigated, and planted with plants from the approved OCFA Plant List. Exceptions to save desirable species may be submitted for approval by the Fire chief on a site-specific basis. As in Zone A, combustible construction is not allowed in Zone B.

Zone B – Specific Requirements
A. Groundcover shall be maintained at a height not to exceed 18 inches.
B. In order to maintain proper coverage, native grasses shall be allowed to go to seed. Native grasses shall be cut after annual seeding. Cut heights shall not exceed 6 inches.
C. Irrigation shall be designed to supplement native vegetation and establish and maintain planted natives and ornamentals.
D. All plant species designed for Zone B shall be selected from Attachment 8. Existing fuel modification maintenance programs are limited to the plants listed on the approved plans unless a revision is requested. Planting and maintenance shall be in accordance with planting restrictions from Attachments 7 and 8.
E. Groups of trees and tree-form shrubs shall be vertically pruned, and horizontally spaced in accordance with Attachment 6. Tree-form shrubs are defined as any shrubs that naturally exceed 4 feet in height.
F. Shrubs ranging from 18 inches to 4 feet in height shall be designed and maintained to not create an excessive fuel mass larger than 50% of Zone B. Design continuity massing shall include areas with species of lower heights to reduce the intensity of fire within Zone B.
G. Removal of dead and dying vegetation and undesirable plant species from Attachment 7.
H. Devices that burn solid fuels are not permitted in any fuel modification zone.
I. Combustible construction is not allowed within Zone B.

Fuel Modification Implementation & Required Inspections
A. Prior to Rough Grading Permit Issuance: The developer/builder shall have approved/stamped Conceptual or Precise Fuel Modification Plan.

B. Prior to Precise Grading Permit Issuance: The developer/builder shall have approved/stamped Precise Fuel Modification Plan, with applicable note stating maintenance language will be provided in CC&Rs and reviewed prior to issuance of certificate of occupancy (Refer to Attachment 5).

C. Prior to Building Permit Issuance: Prior to dropping lumber, the developer/builder shall implement those portions of the approved fuel modification plan determined to be necessary by the OCFA prior to the introduction of any combustible materials into the area. Removal of undesirable species may meet this requirement or a separation of combustible vegetation for a minimum distance of 100 feet from the location of the structure and lumber stock-pile. This generally involves removal and thinning of plant materials indicated on the approved plan. An inspection envelope letter to the building department is required.

D. Prior to Issuance of Certification of Occupancy: The fuel modification zones adjacent to structures must be installed, irrigated, and inspected. This includes physical installation of features identified in the approved precise fuel modification plan (including, but not limited to, plant establishment, thinning, irrigation, zone markers, access easements, etc). An OCFA Inspector will provide written approval of completion at the time of this final inspection. A written disclosure may be requested by the OCFA Inspector indicating that the homeowner is aware of the fuel modification zone on their land and that they are aware of the associated restrictions of the zone. Copies of buyer or builder signed emergency and maintenance access easements shall be presented upon occupancy final (See Section 1G).

E. Prior to Home Owner Association (HOA) Maintenance Acceptance from Developer:
This inspection/meeting must include the Fire Inspector and the following representatives:
- Landscape design professional
- Installing landscape contractor
- HOA management representative
- HOA landscape maintenance contractor

The fuel modification areas shall be maintained as originally installed and approved. A copy of the approved plans must be provided to the HOA representatives at this time. Landscape professionals must convey ongoing maintenance requirements to HOA representatives. The CC&R language for maintenance must also be provided and approved by the OCFA (Refer to Attachment 5).

F. Annual Inspection and Maintenance: The property owner is responsible for all maintenance of the fuel modification. All areas must be maintained indefinitely in accordance with notes on the approved fuel modification plans. This generally includes a minimum of two growth reduction maintenance activities throughout all fuel modification zones each year. Perform maintenance sometime within time periods of early to late spring and once again in early to late fall. Other activities include maintenance of irrigation systems, replacement of dead or dying vegetation with approved materials, removal of dead plant material, removal of trees and shrubs not on the approved plans, and removal of undesirable highly combustible plants. The OCFA may conduct inspections of established fuel modification areas. Ongoing maintenance shall be conducted a minimum of twice each year regardless of the dates of these inspections. The property owner shall retain all approved fuel modification plans. The plans should be used to perform the maintenance. As property is transferred, property owners shall disclose the location and regulations of fuel modification zone to the new property owners.

OCFA MAINTENANCE GUIDELINES

ATTACHMENT 5
SAMPLE CC&R MAINTENANCE LANGUAGE

It is recommended that the following language be included in the CC&Rs recorded for a common interest development:
The duty of the homeowners' association to perform "Fire Prevention Maintenance" (as defined below) for all Fuel Modification Zones and manufactured interior slopes within the development shall be included as an express obligation in the recorded CC&Rs for the development. Similarly, each Owner whose Lot (or Condominium) is subject to Fuel Modification Zone restrictions (e.g., non-combustible structure setback, etc.) shall be obligated to comply with such restrictions.

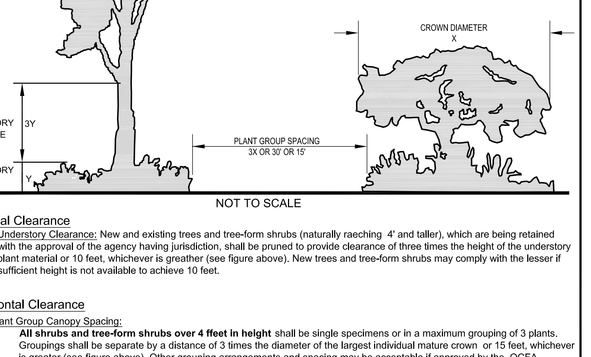
1. The OCFA will be designated as a third party beneficiary of a homeowner association's duty to perform "Fire Prevention Maintenance" (as defined below) for all portions of the Association Property (or Common Area) that constitute fuel modification zones and designated interior/manufactured slopes to be maintained by the homeowners' association, and of any Owner's duty to comply with any fuel modification zone restrictions applicable to their lot (or condominium). Additionally, OCFA shall have the right, but not the obligation, to enforce the homeowners' association's duty to perform such Fire Prevention Maintenance, and to enforce compliance by any owner with any fuel Modification zone restrictions applicable to their lot (or Condominium). In furtherance of such right the OCFA shall be entitled to recover its costs of suit, including its actual attorneys' fees, if it prevails in an enforcement action against a homeowners' association and/or an individual owner. (A sample third party beneficiary provision to be incorporated into the CC&Rs is attached hereto as Addendum "1").

2. As used herein, "Fire Prevention Maintenance" shall mean the following:
(i) All portions of the Association Property (or Common Area) that constitute fuel modification zones or designated interior/manufactured slopes shall be regularly maintained by the homeowners association on a year-round basis in accordance with the fuel modification plan on file with the property manager for the development.
(ii) The irrigation system for fuel modification zones or designated interior/manufactured slopes shall be kept in good condition and proper working order at all times. The irrigation system shall not be turned off except for necessary repairs and maintenance.

ADDENDUM "1"

Enforcement by the OCFA: The OCFA is hereby designated as an intended third party beneficiary of the Association's duties to perform "Fire Prevention Maintenance" for all portions of the Association Property (or Common Areas) consisting of fuel modification zones or designated interior/manufactured slopes in accordance with the fuel modification plan, and of each Owner's duty to comply with any fuel modification zone or designated interior/manufactured slopes restrictions applicable to his Lot (or condominium) as set forth in the fuel modification plan. In furtherance thereof, the OCFA shall have the right, but not the obligation, to enforce the performance by the association of its duties and any other fire prevention requirements which were imposed by the OCFA or other public agency as a condition of approval for the development (e.g., prohibition of parking in fire lanes, maintenance of the blue reflective markers indicating the location of fire hydrants, etc.) and shall also have the right, but not the obligation, to enforce compliance by any owner with any fuel modification zone or designated interior/manufactured slopes restrictions applicable to his lot (or condominium) as set forth in the fuel modification plan. If in its sole discretion, the OCFA shall deem it necessary to take legal action against the association or any owner to enforce such duties or other requirements, and prevails in such action, the OCFA shall be entitled to recover the full costs of said action including its actual attorneys' fees, and to impose a lien against the association property, or an owner's lot (or condominium), as the case may be, until said costs are paid in full.

ATTACHMENT 6
TREE AND TREE-FORM SHRUB PRUNING AND SPACING FOR NEW PLANTINGS AND THINNING ZONES



NOT TO SCALE

Vertical Clearance
1. Understory Clearance: New and existing trees and tree-form shrubs (naturally reaching 4' and taller), which are being retained with the approval of the agency having jurisdiction, shall be pruned to provide clearance of three times the height of the understory plant material or 10 feet, whichever is greatter (see figure above). New trees and tree-form shrubs may comply with the lesser if sufficient height is not available to achieve 10 feet.

Horizontal Clearance
2. Plant Group Canopy Spacing:
a. **All shrubs and tree-form shrubs over 4 feet in height** shall be single specimens or in a maximum grouping of 3 plants. Groupings shall be separate by a distance of 3 times the diameter of the largest individual mature crown or 15 feet, whichever is greater (see figure above). Other grouping arrangements and spacing may be acceptable if approved by the OCFA.
b. Trees shall be single specimens or in a maximum grouping of 3. Groupings shall be separated by a distance of 3 times the diameter of the largest individual mature crown or 30 feet, whichever is greater (see figure above). Other grouping arrangments and spacing may be acceptable if approved by the OCFA.
c. Plant specimens listed in the OCFA "Approved Plant Palette-Qualification Statements for Select Plant Species" shall comply with plant groupings and spacing requirements specified in these restrictions.
d. Tree-form shrubs should be spaced away form trees using the tree-form shrub spacing.
e. Recommended canopy spacing for single trees is 30 feet and 15 feet for tree-form shrubs.

ALTERNATE MEANS & METHODS REQUEST LETTER

firesafe PLANNING SOLUTIONS

August 30, 2010

Bret Anderson
Senior Fire Prevention Specialist
Planning and Development Services Section
Orange County Fire Authority
1 Fire Authority Road
Irvine, CA 92856-0086

SUBJECT: Baker Ranch
Alternate Means and Methods for Fuel Modification
Lake Forest, California
OCFA SR#: 173719

On behalf of the Baker Ranch Development, we hereby submit a request for use of Alternate Means and Methods (AMM), per the 2007 California Fire Code. Our request relates to fuel modification widths of 100 feet rather than the traditional 1700cet.

The following information is being provided to assist in your evaluation of this proposed AMM.

A. Project information:

- Project name: Baker Ranch
- Contact person: David Oatis, Firesafe Planning Solutions, (949) 240-5911
- 302 N. El Camino Real Suite 202, San Clemente, CA 92672
- Current landowner: Shea Baker Ranch Associates, LLC
- Development type: Single Family and Multi Family Residences. and supporting Commercial and Park uses

B. Code Sections for which the modification is requested:

- 2007 California Fire Code (CFC) Section 317 and local amendments.

C. General Description:

The Baker Ranch project is a planned community that will consist of single family, multi family, and commercial tracts within the City of Lake Forest, California. The Baker Ranch Planned Community lies to the southwest of the 241 Toll Road at the dead end of Alton Parkway. To the northwest of the project site the area is vacant open space and is the only Wildland Interface. Surrounding the project to North, East and South are existing commercial structures, and industrial use areas.

D. Fuel Modification Zones

The Fuel Modification Plan of the Baker Ranch community will occur in two (2) different zones. Along the entire perimeter of the proposed pad lots adjoining the open space area there shall be a combination of Zone A and Zone B. The total distance of the fuel modification zones will be no less than 100'. The Fuel modification zone shall consist of Zone A of a minimum of 10' and a maximum of 26' and Zone B of a minimum of 74' and a maximum of 110'. All shrub material within the fuel modification along this area shall be maintained at no more than 4 feet in height.

Justification for the Fuel Modification distance of 100' has been provided within the technical document Fire Behavior Analysis and Report. Provided within this technical document are BEHAVE Fire Behavior Prediction and Fuel Modeling System results that provide the most popular and accurate method for predicting wildland fire behavior in pre-fire defense planning. These results have demonstrate that under a "worst case scenario" condition for a wild fire; which includes a 65 mph Northeast Santa Ana wind condition coupled with a slope factor of 0° and the low grass and High Load dry climate shrub vegetation existing within and the adjoining open space, will produce flame lengths of no more than 59 feet. The provided Zone B; accompanied with the requirements set forth for the open space Conservancy Easement and the Landscaped Zones directly beyond the Fuel Modification which devoid these areas of undesirable plant species, more than adequately provide protection as a "heat sink", or fire break, for the development area from an impending wild fire. In addition to the vegetation restrictions, the topography directly adjoining the Fuel Modification consists of 1:1 slope conditions and sparse vegetation within the Borrego wash and the slightly upslope area from the Borrego Wash to beyond the project boundary consists of a Riparian habitat, and eight unnamed watercourses. Riparian habitat acts as a natural fire break in development areas from a wild fire. Additional fire protection features for the justification of the deficient fuel modification zones have been provided within this Precise Fuel Modification and supplemental technical booklet (Fire Behavior Analysis and Report).

E. Hardship:

Our hardship is: Directly adjoining the proposed Fuel Modification limits, within the project boundary, exists the Borrego Wash, which is considered a sensitive riparian habitat, and eight unnamed watercourses. The California Department of Fish and Game require a Lake or Streambed Alteration Agreement "because it could substantially adversely affect an existing fish or wildlife resource". Our Fuel Modification plan must address the concerns of the Department Fish and Game to preserve this sensitive habitat and watercourses by limiting the Fuel Modification distances as to not impede within these areas.

F. Proposed alternative fire protection measures:

- The Fuel Modification shall be no less than 100' and will be composed of only wet zones.
- The groundcover shall be a riparian type material and will be low in height not to exceed 12"-18".
- All structures adjoining a fuel modification edge shall comply with all of the 2007 California Building Code Chapter 7A requirements, except for venting requires which shall be exceeded as described below.
- All structures adjoining the Fuel Modification shall exceed the 2007 California Building Code Chapter 7A venting requirement by providing no venting on side facing the Fuel Modification as show on plan. All other vents throughout the entire project requiring Chapter 7A amendments, which require vents to be a minimum of 1/4" and a maximum of 1/2", shall be a maximum of 1/4" venting.
- All structures shall be protected with NFPA 13-D, NFPA 13-R or a Full NFPA 13 Fire Sprinkler System as appropriate for each structure.
- The plant material installed within Zone B shall naturally grow to no more than 4' in height.

Thank you in advance for your consideration of this proposed AMM request. Please feel free to call me with any questions or requests for additional information.

Sincerely,

David Oatis
Firesafe Planning Solutions for: Shea Baker Ranch Associates, LLC

ALTERNATE MEANS & METHODS ACCEPTANCE LETTER

ORANGE COUNTY FIRE AUTHORITY
Fire Prevention Department
P.O. Box 19283, Irvine, CA 92623-9283 • 1 Fire Authority Road, Irvine, CA 92602
Planning and Development Services • www.ocfa.org • (714) 573-6100 / Fax (714) 368-8943

October 6, 2010

Firesafe Planning Solutions
302 N. El Camino Real, Suite 202
San Clemente, 92672

Subject: **Alternative Materials and Methods Request Response**
FIRE PROTECTION PLAN
Service Request #173719
Baker Ranch Precise Fuel Modification
Tract Number 16466
Lake Forest

Dear Applicant,

In accordance with Section 104.9 of the 2007 California Fire Code (CFC), you are requesting an Alternative Materials and Methods (AM & M) for the proposed project detailed below. We have reviewed your AM & M request, Chapter 7A of the 2010 CBC, and OCFA Fuel Modification Guideline C-05 and are granting approval upon the conditions described in your request letter and this OCFA response letter. The fire master plan is under a separate application.

Project Description:

The Baker Ranch is planned community consisting of residential single and multi family tracts and some commercial development. This community will be bordered on the North, East, and South sides by existing commercial development. There is a wildland interface on the east side of the proposed communities. The unimproved land on the east side is controlled by Federal agencies and marked on CalFire Fire Hazard Severity Zone (FHSZ) maps as Very High and High designated zones. Also on the east there is a wide riparian drainage called the Borrego Wash located on the boundary line between the City of Lake Forest and the Federally controlled land. The Wash is approx. 1000' wide at its widest point. The Wash is a "blue line" stream. The development will occur in the City of Lake Forest and is not currently mapped in a fire area on the existing Bates Bill Fire Hazard Severity Zone maps drafted in 1995. The new CalFire LRA draft map shows the future community to be in a mix of Non-zoned, Very High, High, and Moderate land designations within the City limits.

Serving the City of: Aliso Viejo • Dana Point • Irvine • Laguna Hills • Laguna Niguel • Laguna Woods • Lake Forest • Los Alamitos • Mission Viejo • Rancho Santa Margarita • San Clemente • San Juan Capistrano • Seal Beach • Stanton • Tustin • Villa Park • Westminster • Yorba Linda • and unincorporated areas of Orange County

RESPONSIVE SERVICES FOR SAFER LIVES

Baker Ranch Fuel Modification AM and M / SR# 173719 Page 2

Code Intent:

2007 California Fire Code (CFC), Chapter 47 and 2007 CBC Chapter 7A.

Hardship:

The Borrego riparian drainage wash is located between the wildland area and the future development. The Wash is a natural fire break that will significantly reduce the potential for embracing fire spread and intensity because the wash is a sensitive habitat area. Therefore the fuel modification zone needs to be located outside of the sensitive habitat area. The width of the fuel modification zone limits the size the available land used for buildings.

Additionally, the land in which the Baker Ranch community will occur is not currently mapped as a fire area meaning there would be no enhanced construction features from Chapter 7A of the CBC if the community was built today. The new LRA FHSZ maps are scheduled for adoption in 2011 and if building permits are applied after the adoption of the map there would be enhanced construction features required. The reduced sized fuel modification width is an opportunity for the developer to propose the enhanced construction features not currently required.

Justification and Conditions:

1. Technical fire modeling of the available fuels was performed. The technical report indicates the flame spread direction with the available wind structure alignment in a Santa Ana wind condition will tend to push a fire away from the communities because the land located on the Borrego Wash is a sensitive habitat area. Therefore the fuel modification zone will have less than half of the fire intensity and spread rates compared to a North-east wind driven fire.
2. A Fire Protection Plan (FPP) shall be submitted to OCFA for approval in the future identifying enhanced construction features. The FPP will provide the information necessary for the review of the architectural features by the City of Lake Forest Building Department.
3. The Fire Protection Plan (FPP) shall ensure the fuel modification zones will be designed to meet all requirements of 2010 CBC Chapter 7A.
4. Structures that are not considered to be the first row are not subject to direct flame impingement or a high level of radiant heat from the actual location of a wildfire. These structures will have construction features from Chapter 7A that assist in preventing ember intrusion into the structures.
5. A non-grass non ground cover will be designed along with no shrubs that grow taller than 4 feet within the Zone A. This is to ensure a low amount of fire intensity should the fuels in the fuel modification zone ignite.
6. Structures will be provided with automatic sprinkler systems.
7. A roadway is located between the wildland area and the future community. This helps because fire crews can use the road, the road serves as a fire break, and maintenance of the fuel modification zone is easier to perform.

Baker Ranch Fuel Modification AM and M / SR# 173719 Page 3

OCFA Response:

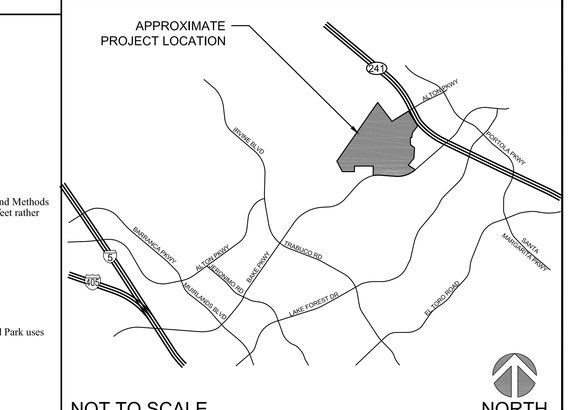
Your request has been approved as allowed by Section 104.9 of the 2007 CFC.

Respectfully, Concurred,

Bret Anderson, Chris Tonne, P.E. Date
Senior Fire Prevention Specialist Fire Protection Engineer

CC: City of Lake Forest Building Department

VICINITY MAP



PLANTING NOTE

All new landscaping plans proposed within the Baker Ranch Community shall be devoid of eucalyptus, juniper, cedar, cypress, acacia (except acacia redolens 'Desert Carpet' is permitted) and pine trees, California sagebrush, chamise, buckwheat and black and white sage (Salvia spp.). Pine trees shall be allowed within the public right-of-ways as part of the street scape landscaped areas only. This landscape palette restriction is to be recorded as part of all applicable CC&Rs documents, and applies to all interior landscape areas and homeowner lots, not just within the Fuel Modification zones, and shall be enforced by the Baker Ranch Homeowners Association.

BUILDING CLASSIFICATION LEGEND

RADIANT HEAT/EMBER INTRUSION ZONE - ENHANCED CONSTRUCTION:
The first structure adjoining a fuel modification edge as depicted on this plan shall receive "enhanced construction" on all four (4) sides per complying with all requirements per the 2007 California Building Code Chapter 7A .

EMBER MITIGATION ZONE - ENHANCED CONSTRUCTION
Structures on the lots within the balance of the project as depicted on this plan shall comply with the 2007 California Building Code Chapter 7A roofing, venting and decking requirements only, refer to Chapter 7A language provided on this sheet. These requirements area as follows:

- 704A.1.1 Roofing General
- 704A.1.2 Roof Valleys
- 704A.1.3 Roof Gutters
- 704A.2.1 Attic Vent General
- 704A.2.2 Eave & Cornice Vents
- 704A3.2.1 Exterior Wall Vents
- 704A4.1.1 Decking Surfaces

In addition, all residential structures within this project shall be protected with a NFPA 13-D or NFPA 13-R Automatic Fire Sprinkler System as appropriate for each structure.

INDICATES SIDE THAT SHALL HAVE NO VENTING:
All structures adjoining the Fuel Modification shall have no venting on side facing the Fuel Modification as show on plan. All other vents throughout the entire project requiring Chapter 7A amendments, which require vents to be a minimum of 1/4" and a maximum of 1/2", shall be a maximum of 1/4" venting.

FUEL MODIFICATION LEGEND

ZONE A- NON-COMBUSTIBLE CONSTRUCTION:
10'-0" to 26'-0" setback zone for non-combustible construction only. Zone A shall be maintained by the private homeowner or the Homeowners Association.

ZONE B - WET ZONE (100% REMOVAL UNDESIRABLE SHRUBS):
First 74'-0" to 130'-0" from Zone A, Zone B shall be permanently irrigated, fully landscaped with approved drought tolerant, deep rooted, moisture retentive material. If any new plant material is added this zone shall be planted with container shrub material. Zone B area shall be maintained the Homeowners Association.

LANDSCAPED ZONE - (100% REMOVAL UNDESIRABLE SHRUBS):
Landscaped areas directly outside of the Fuel Modification Zones within the water quality control basin as depicted on this plan shall be devoid of any plant material from the OCFA Undesirable Plant List. Any plant material installed within this area shall be from the approved OCFA Plant List. This area shall be maintained by the Homeowners Association.

CONSERVATION EASEMENT - (100% REMOVAL UNDESIRABLE SHRUBS):
Open space area beyond the Fuel Modification, as depicted on this plan, shall be devoid of plant material from OCFA Undesirable Plant List.

SYMBOL LEGEND

ACCESS POINT
Fuel Modification walk in access point (a 5' non-combustible tubular steel gate will only be provided where necessary). 500' minimum distance between access points at fuel modification.

IDENTIFICATION MARKER
Permanent identification markers shall be constructed to identify the limits of applicable Fuel Modification zones. marker design shall be 2" dia. x 6'-0" long galvanized pipe. embed minimum 2'-0" into solid ground. 1" reflector tape 1 tape band at top for Zone B. Expose pipe 2'-0" above vegetation minimum.

FUEL MODIFICATION LIMITS

BORREGO WASH - CHANNEL BOTTOM LIMITS

SHEET INDEX

SHEET NO.	DESCRIPTION
1	FUEL MODIFICATION LAYOUT
2	FUEL MODIFICATION SECTIONS AND SITE IMAGES
3	FUEL MODIFICATION PLANTING LAYOUT

OCFA APPROVAL

NO.	REVISIONS	APP.	DATE
1			
2			
3			
4			

SCALE: 1" = 200' - 0"
0 100' 200' 300' 400' 600' 800'
NORTH

BAKER RANCH - FUEL MODIFICATION PLAN CONTROL | PLAN SET: "A" | DATE: 08/30/2010

PREPARED FOR:
SHEA BAKER RANCH ASSOCIATES, LLC
130 VANTIS, SUITE 200
ALISO VIEJO, CA 92656
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PREPARED BY:
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FUEL MODIFICATION LAYOUT
BAKER RANCH
PRECISE FUEL MODIFICATION PLAN
LAKE FOREST, CA SR# 173719

ORANGE COUNTY FIRE AUTHORITY

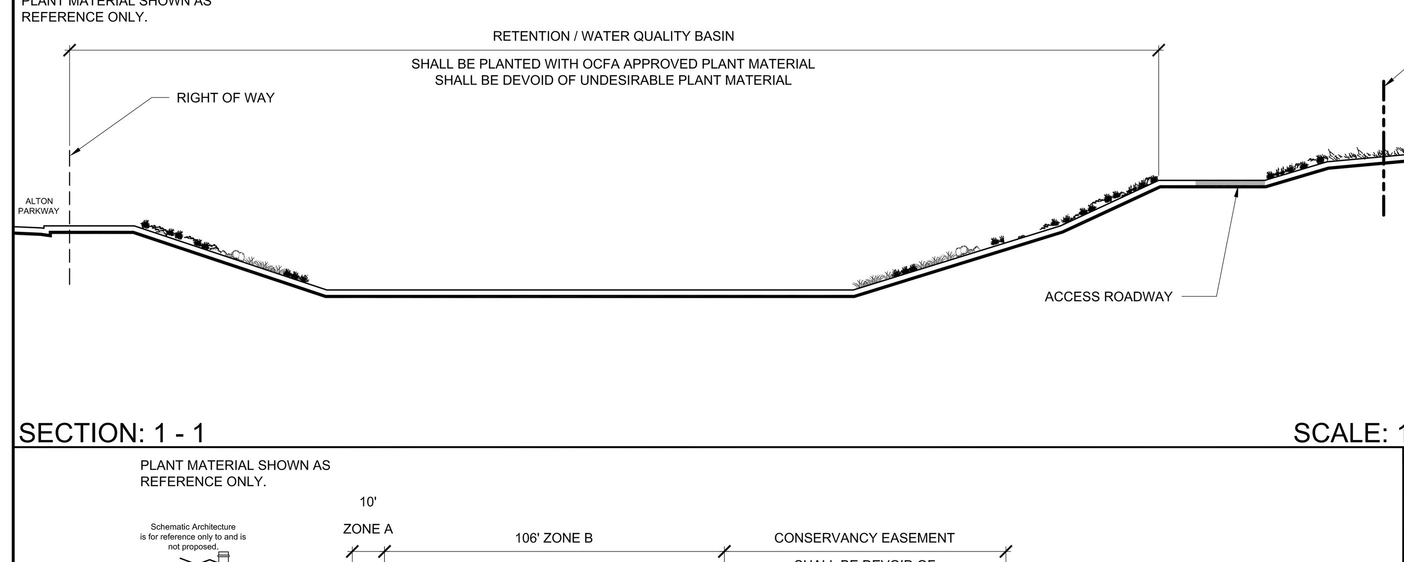
SHEET 1 OF 3

The use of these plans and specifications shall be restricted to the original site for which they were prepared and publication thereof is expressly limited to such use. Reproduction, publication, or re-use by any method, in whole or in part without the express consent of FIRESAFE PLANNING is prohibited.

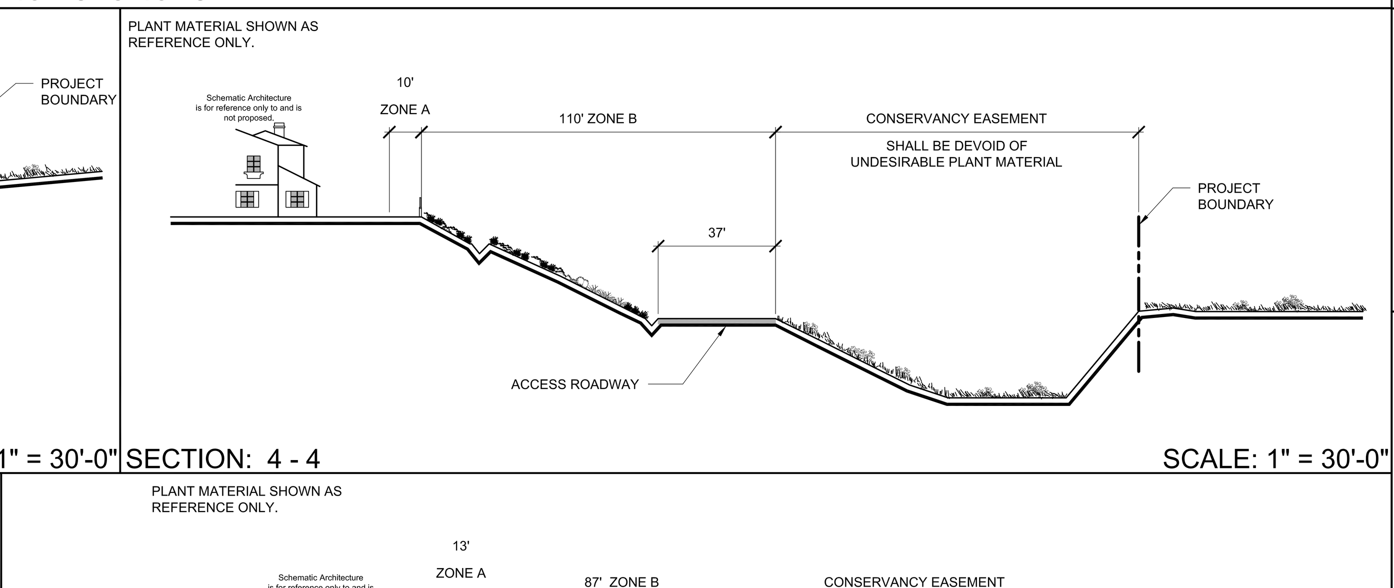
S:\SHEA\Baker Ranch\Cad Files\BakerRanch-FuelMod.dwg ,Jerry Canales Plot date: October 18, 2010

SHEA BAKER RANCH ASSOCIATES, LLC - BAKER RANCH - PRECISE FUEL MODIFICATION PLAN - SR# 173719

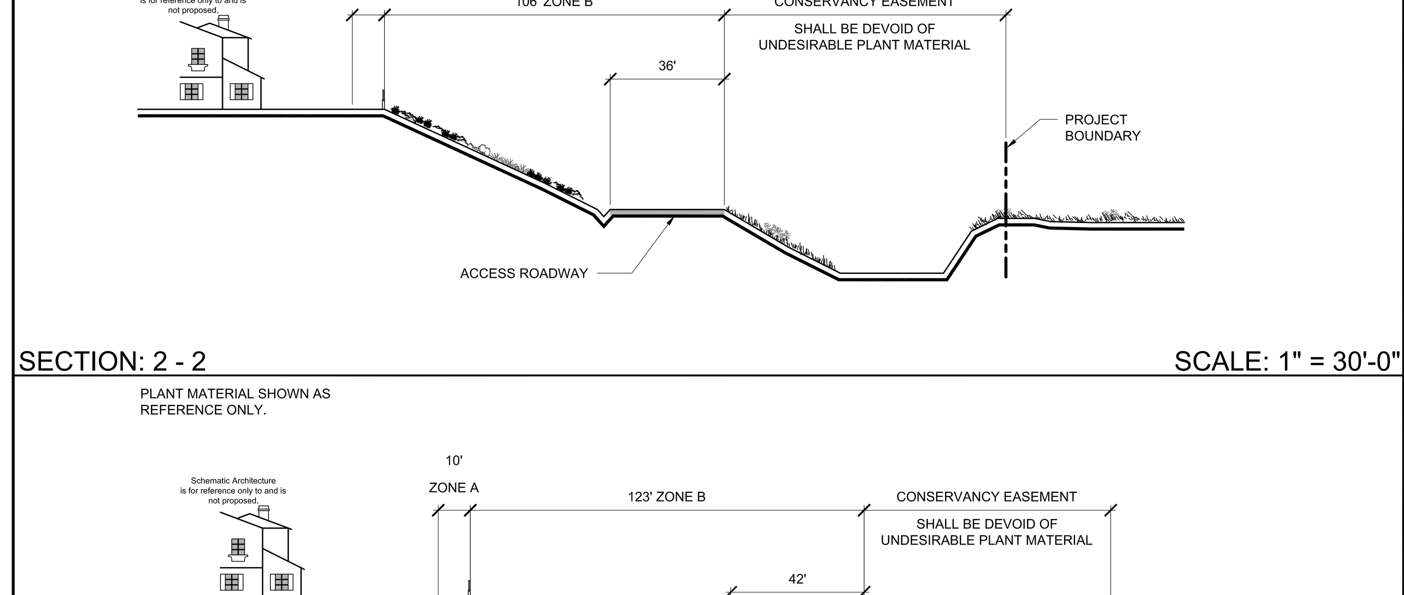
FUEL MODIFICATION SECTIONS



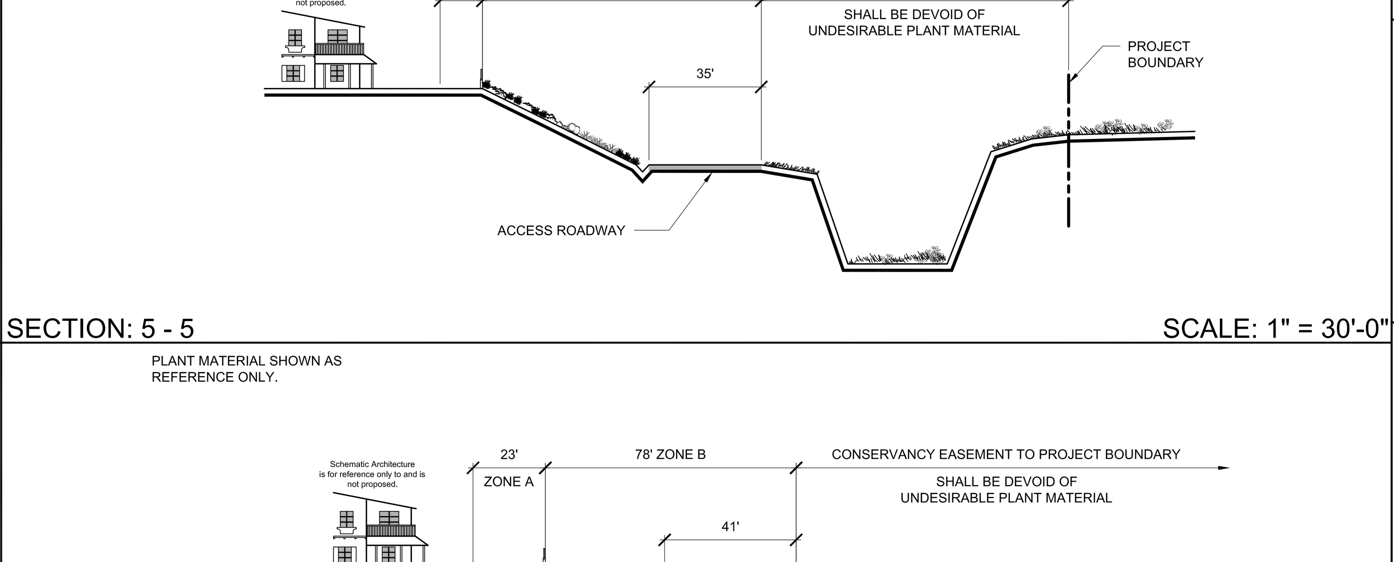
SECTION: 1 - 1 SCALE: 1" = 30'-0"



SECTION: 4 - 4 SCALE: 1" = 30'-0"



SECTION: 2 - 2 SCALE: 1" = 30'-0"



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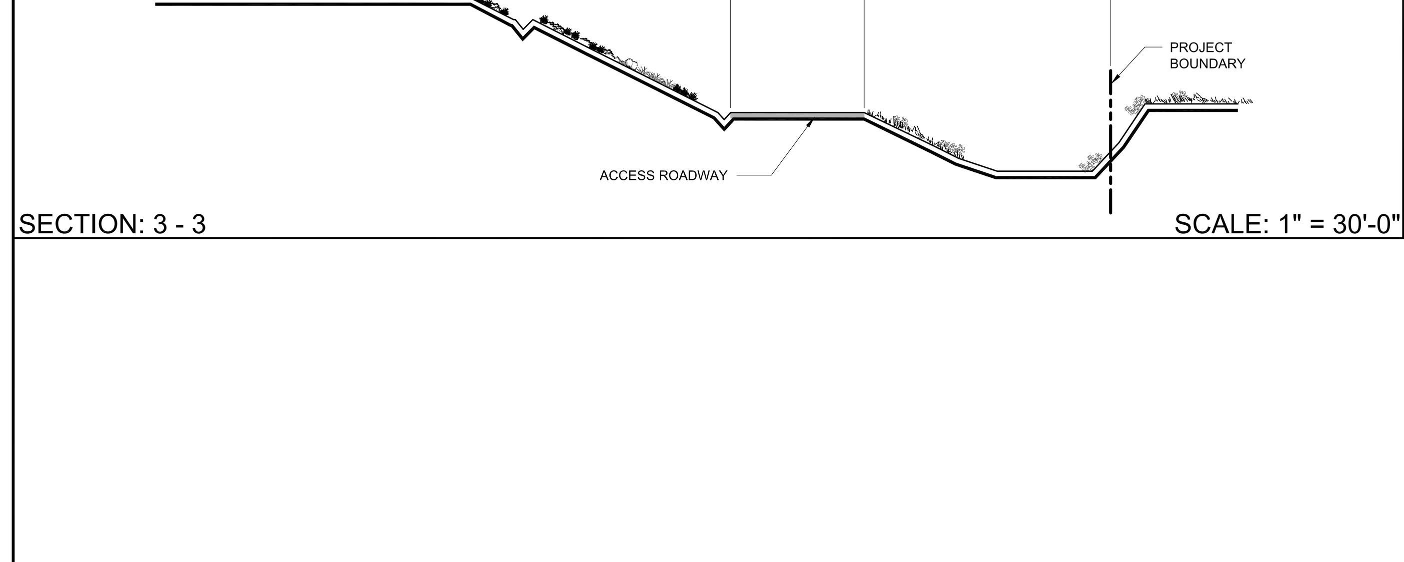
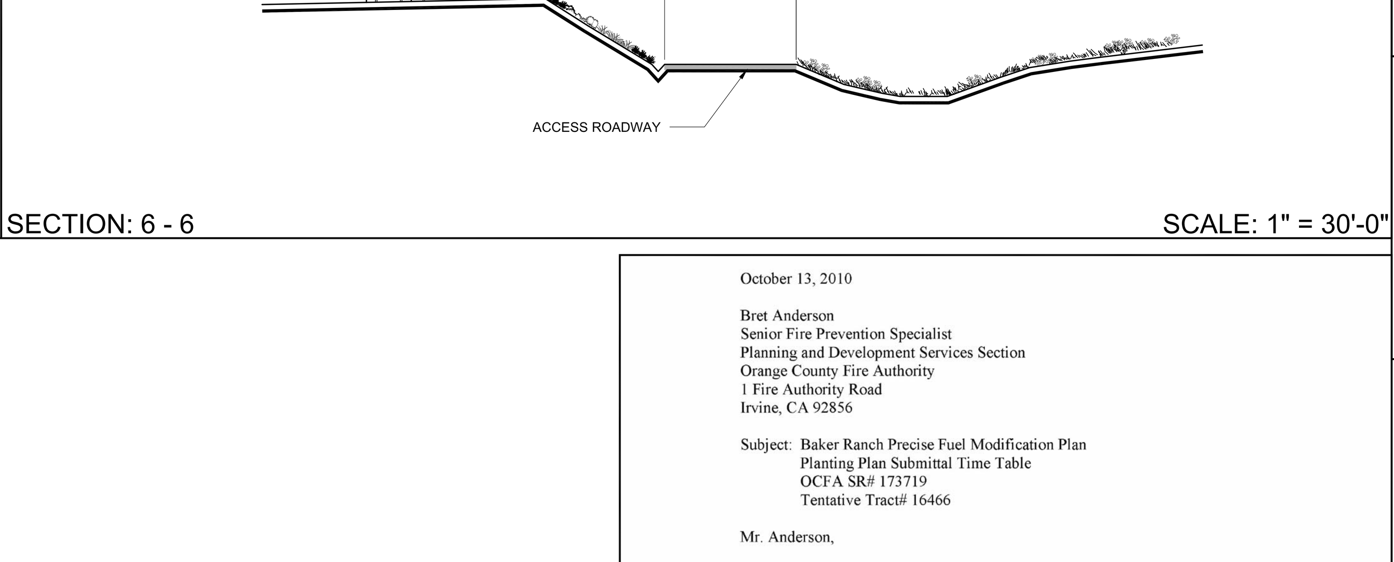


SECTION: 3 - 3 SCALE: 1" = 30'-0"



SECTION: 6 - 6 SCALE: 1" = 30'-0"

October 13, 2010

Bret Anderson
Senior Fire Prevention Specialist
Planning and Development Services Section
Orange County Fire Authority
1 Fire Authority Road
Irvine, CA 92856

Subject: Baker Ranch Precise Fuel Modification Plan
Planting Plan Submittal Time Table
OCFA SR# 173719
Tentative Tract# 16466

Mr. Anderson,

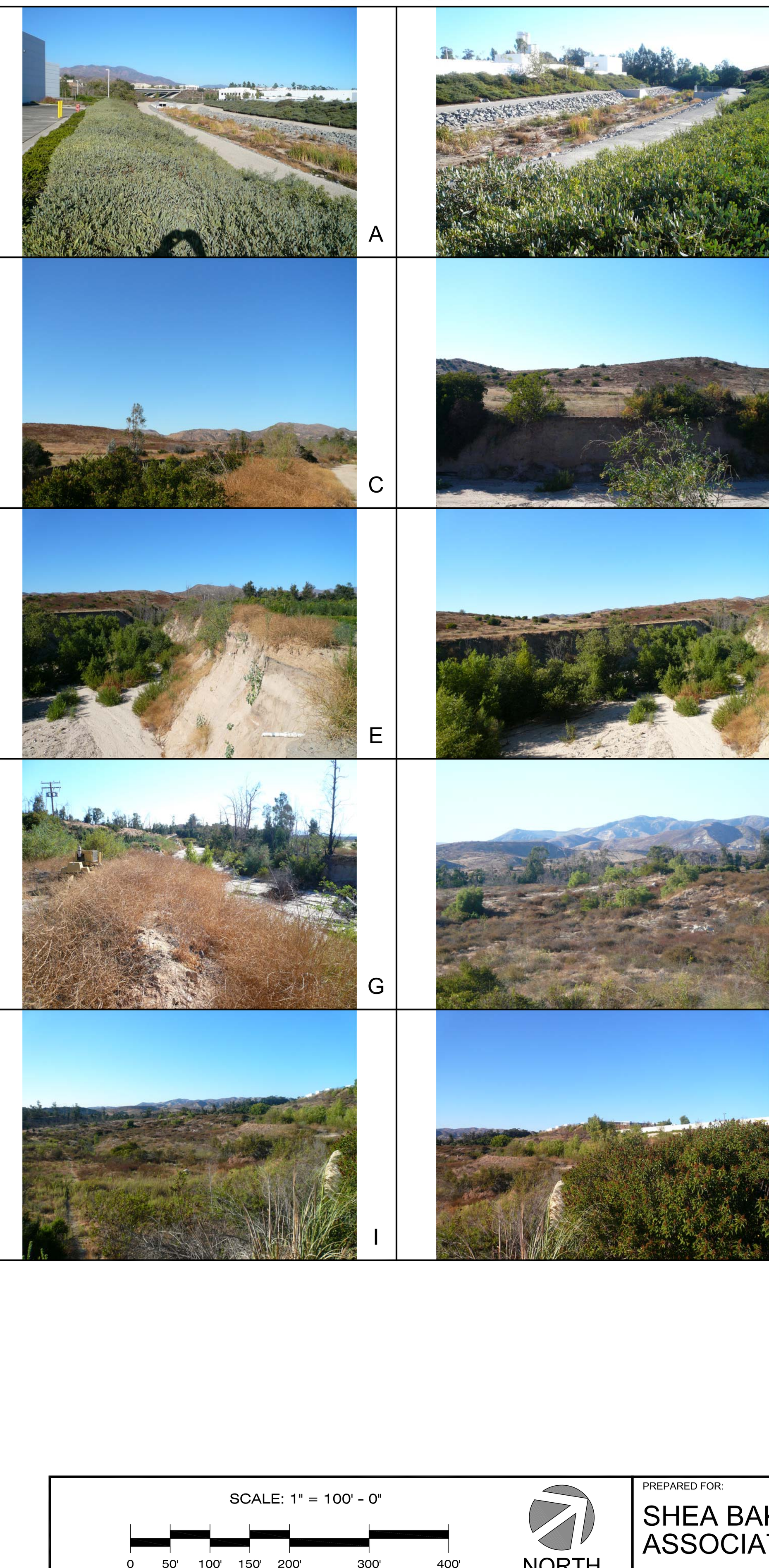
This letter has been provided to you to establish and commit to a time table for the Landscape Planting Plans to be submitted and approved to OCFA.

Planting plans drawn by a licensed Landscape Architect are required to be submitted for review and approval by OCFA prior to issuance of building permits and prior to installation of the plants.

Sincerely,

David Oatis
FireSafe Planning Solutions
As agent for Shea Baker Ranch Associates, LLC

SITE IMAGES



PLANT REMOVAL LIST

100% REMOVAL FROM ALL FUEL MODIFICATION ZONES PER THE ORANGE COUNTY FIRE AUTHORITY FUEL MODIFICATION GUIDELINES - ATTACHMENT 7

THESE PLANT SPECIES SHALL BE REMOVED FROM ALL FUEL MODIFICATION ZONES.

BOTANICAL NAME	COMMON NAME	CONT. BOTANICAL NAME	COMMON NAME
ADENOSTOMA FASCICULATUM	WILD TURNIP, YELLOW MUSTARD	DATURA WRIGHTII	JIMSONWEED
ADENOSTOMA SPARSIFOLIUM	RED SHANKS	ERIOGONUM FASCICULATUM	COMMON BUCKWHEAT
ANTHEMIX COTULA	MAYWEED	FOENICULUM VULGARE	FENNEL
ARTEMISIA CALIFORNICA	CALIFORNIA SAGEBRUSH	HETEROTHECA GRANDIFLORA	TELEGRAPH PLANT
BRASSICA NIGRA	BLACK MUSTARD	LACTUCA SERRIOLA	PRICKLY LETTUCE
BRASSICA RAPA	CHAMISE	MALOSMA LAURINA	LAUREL SUMAC
CARDARIA DRABA	NOARY CRESS, PERENNIAL PEPPERGRASS	NICOTIANA BIGELEVII	INDIAN TOBACCO
CENTAUREA SOLSTITIALIS	YELLOW STAR-THISTLE	NICOTIANA GLAUCA	TREE TOBACCO
CIRSIUM VULGARE	WILD ARTICHOKE	SALVIA MELLIFERA	BLACK SAGE
CONYZA CANADENSIS	HORSEWEED	SALSOLA AUSTRALIS	RUSSIAN THISTLE/TUMBLEWOOD
CORTADERIA SELLOANA	PAMPAS GRASS	SILYBUM MARIANUM	MILK THISTLE
CYNARA CARDUNCULUS	ARTICHOKE THISTLE	RICINUS COMMUNIS	CASTOR BEAN PLANT
		URTICA URENS	BURNING NEEDLE
		ORNAMENTALS	
		CORTADERIA SELLOANA	PAMPAS GRASS
		CUPRESSUS SP.	CYPRESS
		EUCALYPTUS SP.	EUCALYPTUS
		JUNIPERUS SP.	JUNIPER
		PINUS SP.	PINE

2007 CALIFORNIA BUILDING CODE CHAPTER 7A

CHAPTER 7A [SFM]
MATERIALS AND CONSTRUCTION METHODS FOR EXTERIOR WILDFIRE EXPOSURE
SECTION 701A
SCOPE, PURPOSE AND APPLICATION

701A.1 Scope. This chapter applies to building materials, systems and/or assemblies used in the exterior design and construction of new buildings located within a Wildland-Urban Interface Fire Area as defined in Section 702A.

701A.2 Purpose. The purpose of this chapter is to establish minimum standards for the protection of life and property by increasing the ability of a building located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland-Urban Interface Fire Area to resist the intrusion of flames or burning embers projected by a vegetation fire and contributes to a systematic reduction in conflagration losses.

701A.3 Application. New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after December 1, 2005, shall comply with the following sections:
1. 704A.1-Roofing
2. 704A.2-Attic Ventilation

701A.3.1 Alternates for materials, design, tests, and methods of construction. The enforcing agency is permitted to modify the provisions of this chapter for site-specific conditions in accordance with Appendix Chapter 1, Section 104.10. When required by the enforcing agency for the purposes of granting modifications, afire protection plan shall be submitted in accordance with the California Fire Code, Chapter 47.

701A.3.2 New buildings located in any fire hazard severity zone. New buildings located in any Fire Hazard Severity Zone, or any Wildland- Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.

701A.3.2.1 Inspection and certification. Building permit applications and final completion approvals for buildings within the scope and application of this chapter shall comply with the following:

701A.3.2.2 The local building official shall, prior to construction, provide the owner or applicant a certification that the building as proposed to be built complies with all applicable state and local building standards, including those for materials and construction methods for wildfire exposure as described in this chapter.

701A.3.2.3 The local building official shall, upon completion of construction, provide the owner or applicant with a copy of the final inspection report that demonstrates the building was constructed in compliance with all applicable state and local building standards, including those for materials and construction methods for wildlife exposure as described in this chapter.

701A.3.2.4 Prior to building permit final approval the property shall be in compliance with the vegetation clearance requirements prescribed in California Public Resources Code 4291 California Government Code Section 51182.

SECTION 702A DEFINITIONS

For the purposes of this chapter, certain terms are defined below:

CDF DIRECTOR means the Director of the California Department of Forestry and Fire Protection.

FIRE PROTECTION PLAN is a document prepared for a specific project or development proposed for a Wildland Urban Interface Fire Area. It describes ways to minimize and mitigate potential for loss from wildfire exposure.

The Fire Protection Plan shall be in accordance with this chapter and the California Fire Code, Chapter 47. When required by the enforcing agency for the purposes of granting modifications, a fire protection plan shall be submitted. Only locally adopted ordinances that have been filed with the California Building Standards Commission or the Department of Housing and Community Development in accordance with Section 101.8 shall apply.

FIRE HAZARD SEVERITY ZONES are geographical areas designated pursuant to California Public Resources Codes Sections 4201 through 4204 and classified as Very High, High, or Moderate in State Responsibility Areas or as Local Agency Very High Fire Hazard Severity Zones designated pursuant to California Government Code, Sections 51175 through 51189. See California Fire Code Article 86.

The California Code of Regulations, Title 14, Section 1280, entitles the maps of these geographical areas as "Maps of the Fire Hazard Severity Zones in the State Responsibility Area of California."

IGNITION-RESISTANT MATERIAL is any product which, when tested in accordance with ASTM E 84 for a period of 30 minutes, shall have aflame spread of not over 25 and show no evidence of progressive combustion. In addition, the flame front shall not progress more than 10½ feet (3200 mm) beyond the centerline of the burner at any time during the test.

Materials shall pass the accelerated weathering test and be identified as exterior type, in accordance with ASTM D 2898 and ASTM D 3201. All materials shall bear identification showing the fire performance rating thereof. That identification shall be issued by ICC-ES or a testing facility recognized by the State Fire Marshal having a service for inspection of materials at the factory.

Fire-Retardant-Treated Wood or noncombustible materials as defined in Section 202 shall satisfy the intent of this section.

The enforcing agency may use other definitions of ignition-resistant material that reflect wildfire exposure to building materials and/or their materials, performance in resisting ignition.

LOCAL AGENCY VERY HIGH FIRE HAZARD SEVERITY ZONE means an area designated by a local agency upon the recommendation of the CDF Director pursuant to Government Code Sections 51177(c), 51178 and 5118 that is not a state responsibility area and where a local agency, city, county, city and county, or district is responsible for fire protection.

STATE means lands that are classified by the Board of Forestry pursuant to Public Resources Code Section 4125 where the financial responsibility of preventing and suppressing forest fires is primarily the responsibility of the state.

WILDFIRE is any uncontrolled fire spreading through vegetative fuels that threatens to destroy life, property, or resources as defined in Public Resources Code Sections 4103 and 4104.

WILDFIRE EXPOSURE is one or a combination of radiant heat, convective heat, direct flame contact and burning embers being projected by vegetation fire to a structure and its immediate environment.

WILDLAND-URBAN INTERFACE FIRE AREA is a geographical area identified by the state as a "Fire Hazard Severity Zone" in accordance with the Public Resources Code Sections 4201 through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires. See Section 706A for the applicable referenced sections of the Government Code and the Public Resources Code.

SECTION 703A
STANDARDS OF QUALITY

703A.1 General. Material, systems, and methods of construction used shall be in accordance with this Chapter.

703A.2 Qualification by testing. Material and material assemblies tested in accordance with the requirements of Section 703A shall be accepted for use when the results and conditions of those tests are met. Testing shall be performed by a testing agency approved by the State Fire Marshal or identified by an ICICLES report.

703A.3 Standards of quality. The State Fire Marshal standards listed below and as referenced in this chapter are located in the California Referenced Standards Code, Part 12 and Chapter 35 of this code.

SAM 12-7A-1, Exterior Wall Siding and Sheathing. SFM 12-7A-2, Exterior Window.
SFM 12-7A-3, Under Eave.
SFM 12-7A-4, Decking.

SECTION 704A
MATERIALS, SYSTEMS AND METHODS OF CONSTRUCTION

704A.1 Roofing.

704A.1.1 General. Roofs shall comply with the requirements of Chapter 7A and Chapter 15. Roofs shall have a roofing assembly installed in accordance with its listing and the manufacturer's installation instructions.

704A.1.2 Roof coverings. Where the roof profile allows a space between the roof covering and roof decking, the spaces shall be constructed to prevent the intrusion of flames and embers, be fire stopped with approved materials or have one layer of No. 72 ASTM cap sheet installed over the combustible decking.

704A.1.3 Roof valleys. When provided, valley flashings shall be not less than 0.019-inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide (914 mm) underlayment consisting of one layer of No. 72 ASTM cap sheet running the full length of the valley.

704A.1.4 Reserved.

704A.1.5 Roof gutters. Roof gutters shall be provided with the means to prevent the accumulation of leaves and debris in the gutter.

704A.2 Attic ventilation.

704A.2.1 General. When required by Chapter 15, roof and attic vents shall resist the intrusion of flame and embers into the attic area of the structure, or shall be protected by corrosion-resistant, noncombustible wire mesh with 1/4-inch (6 mm) openings or its equivalent.

704A.2.2 Eave or cornice vents. Vents shall not be installed in eaves and cornices.

Exception: Eave and cornice vents may be used provided they resist the intrusion of flame and burning embers into the attic area of the structure.

704A.2.3 Eave protection. Eaves and soffits shall meet the requirements of SFM 12-7A-3 or shall be protected by ignition-resistant materials or noncombustible construction on the exposed underside.

704A.3 Exterior walls.

704A.3.1 General. Exterior walls shall be approved noncombustible or ignition-resistant material, heavy timber, or log wall construction or shall provide protection from the intrusion of flames and embers in accordance with standard SFM 12-7A-1.

704A.3.1.1 Exterior wall coverings. Exterior wall coverings shall extend from the top of the foundation to the roof, and terminate at 2-inch (50.8 mm) nominal solid wood blocking between rafters at all roof overhangs, or in the case of enclosed eaves, terminate at the enclosure.

704A.3.2 Exterior wall openings. Exterior wall openings shall be in accordance with this section.

704A.3.2.1 Exterior wall vents. Unless otherwise prohibited by other provisions of this code, vent openings in exterior walls shall resist the intrusion of flame and embers into the structure or vents shall be screened with a corrosion-resistant, noncombustible wire mesh with ¼ - inch (6 mm) openings or its equivalent.

704A.3.2.2 Exterior glazing and window walls. Exterior windows, window walls, glazed doors, and glazed openings within exterior doors shall be insulating-glass units with a minimum of one tempered pane, or glass block units, or have a fire-resistance rating of not less than 20 minutes, when tested according to ASTME 2010, or conform to the performance requirements of SFM 12-7A-2.

704A.3.2.3 Exterior door assemblies. Exterior door assemblies shall conform to the performance requirements of standard SFM 12-7A-1 or shall be of approved noncombustible construction, or solid core wood having stiles and rails not less than 1⅜ inches thick with interior field panel thickness no less than 1¼ inches thick, or shall have a fire resistance rating of not less than 20 minutes when tested according to ASTM E 2074.

Exception: Noncombustible or exterior fire-retardant treated wood vehicle access doors are not required to comply with this chapter.

704A.4 Decking, floors and underfloor protection. 704A.4.1 Decking.

704A.4.1.1 Decking surfaces. Decking, surfaces, stair treads, risers, and landings of decks, porches, and balconies where any portion of such surface is within 10 feet (3048 mm) of the primary structure shall comply with one of the following methods:

1. Shall be constructed of ignition-resistant materials and pass the performance requirements of SFM 12-7A-4, Parts A and B.

2. Shall be constructed with heavy timber, exterior fire-retardant-treated wood or approved noncombustible materials.

3. Shall pass the performance requirements of SFM 12-7A-4, Part A, 12-7A-4.7.5.1 only with a net peak heat release rate of 25kW/sq-ft for a 40-minute observation period and:

a. Decking surface material shall pass the accelerated weathering test and be identified as exterior type, in accordance with ASTME 84 and;

b. The exterior wall covering to which it the deck is attached and within 10 (3048 mm) feet of the deck shall be constructed of approved noncombustible or ignition resistant material.

Exception: Walls are not required to comply with this subsection if the decking surface material conforms to ASTM E-84 Class B flame spread.

The use of paints, coatings, stains, or other surface treatments are not an approved method of protection as required in this chapter.

704A.4.2 Underfloor and appendages protection.

704A.4.2.1 Underside of appendages and floor projections. The underside of cantilevered and overhanging appendages and floor projections shall maintain the ignition-resistant integrity of exterior walls, or the projection shall be enclosed to the grade.

704A.4.2.2 Unenclosed underfloor protection. Buildings shall have all underfloor areas enclosed to the grade with exterior walls in accordance with Section 704A.3.

Exception: The complete enclosure of under floor areas may be omitted where the underside of all exposed floors, exposed structural columns, beams and supporting walls are protected as required with exterior ignition-resistant material construction or be heavy timber.

704A.5 Ancillary buildings and structures.

704A.5.1 Ancillary buildings and structures. When required by the enforcing agency, ancillary buildings and structures and detached accessory structures shall comply with the provisions of this chapter.

PLANTING NOTE

All new landscaping plans proposed within the Baker Ranch Community shall be devoid of eucalyptus, juniper, cedar, cypress, acacia (except acacia redolens 'Desert Carpet' is permitted) and pine trees, California sagebrush, chamise, buckwheat and black and white sage (Salvia spp.). Pine trees shall be allowed within the public right-of-ways as part of the street scape landscaped areas only. This landscape palette restriction is to be recorded as part of all applicable CC&Rs documents, and applies to all interior landscape areas and homeowner lots, not just within the Fuel Modification zones, and shall be enforced by the Baker Ranch Homeowners Association.

BUILDING CLASSIFICATION LEGEND

RADIANT HEAT/EMBER INTRUSION ZONE - ENHANCED CONSTRUCTION:
The first structure adjoining a fuel modification edge as depicted on this plan shall receive "enhanced construction" on all four (4) sides per complying with all requirements per the 2007 California Building Code Chapter 7A.

EMBER MITIGATION ZONE - ENHANCED CONSTRUCTION
Structures on the lots within the balance of the project as depicted on this plan shall comply with the 2007 California Building Code Chapter 7A roofing, venting and decking requirements only, refer to Chapter 7A language provided on this sheet. These requirements area as follows:

- 704A.1.1 Roofing General
- 704A.1.3 Roof Valleys
- 704A.1.5 Roof Gutters
- 704A.2.1 Attic Vent General
- 704A.2.2 Eave & Cornice Vents
- 704A3.2.1 Exterior Wall Vents
- 704A4.1.1 Decking Surfaces

In addition, all residential structures within this project shall be protected with a NFPA 13-D or NFPA 13-R Automatic Fire Sprinkler System as appropriate for each structure.

INDICATES SIDE THAT SHALL HAVE NO VENTING:
All structures adjoining the Fuel Modification shall have no venting on side facing the Fuel Modification as shown on plan. All other vents throughout the entire project requiring Chapter 7A amendments, which require vents to be a minimum of ⅛" and a maximum of ¼", shall be a maximum of ⅛" venting.

FUEL MODIFICATION LEGEND

ZONE A- NON-COMBUSTIBLE CONSTRUCTION:
10'-0" to 26'-0" setback zone for non-combustible construction only. Zone A shall be maintained by the private homeowner or the Homeowners Association.

ZONE B - WET ZONE (100% REMOVAL UNDESIRABLE SHRUBS):
First 74'-0" to 130'-0" from Zone A. Zone B shall be permanently irrigated, fully landscaped with approved drought tolerant, deep rooted, moisture retentive material. If any new plant material is added this zone shall be planted with container shrub material. Zone B area shall be maintained the Homeowners Association.

LANDSCAPED ZONE - (100% REMOVAL UNDESIRABLE SHRUBS):
Landscaped areas directly outside of the Fuel Modification Zones within the water quality control basin as depicted on this plan shall be devoid of any plant material from the OCFA Undesirable Plant List. Any plant material installed within this area shall be from the approved OCFA Plant List. This area shall be maintained by the Homeowners Association.

CONSERVATION EASEMENT - (100% REMOVAL UNDESIRABLE SHRUBS):
Open space area beyond the Fuel Modification, as depicted on this plan, shall be devoid of plant material from OCFA Undesirable Plant List.

SYMBOL LEGEND

ACCESS POINT
Fuel Modification walk in access point (a 5' non-combustible tubular steel gate will only be provided where necessary). 500' minimum distance between access points at fuel modification.

IDENTIFICATION MARKER
Permanent identification markers shall be constructed to identify the limits of applicable Fuel Modification zones. marker design shall be 2" dia. x 8'-0" long galvanized pipe. embed minimum 2'-6" into solid ground. 1" reflector tape 1 tape band at top for Zone B. Expose pipe 2'-0" above vegetation minimum.

FUEL MODIFICATION LIMITS

BORREGO WASH - CHANNEL BOTTOM LIMITS

FUEL MODIFICATION SECTION LOCATION
Indicates section locations, refer to this sheet for Fuel Modification Sections.

SITE IMAGE APPROXIMATE LOCATION
Approximate location and direction of site images. Refer to Site Images on this sheet.

SCALE: 1" = 100' - 0'
0 50' 100' 150' 200' 300' 400'
NORTH

BAKER RANCH - FUEL MODIFICATION	PLAN SET: "A"
PLAN CONTROL	DATE: 08/30/2010

PREPARED FOR:
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130 VANTIS, SUITE 200
ALISO VIEJO, CA 92656
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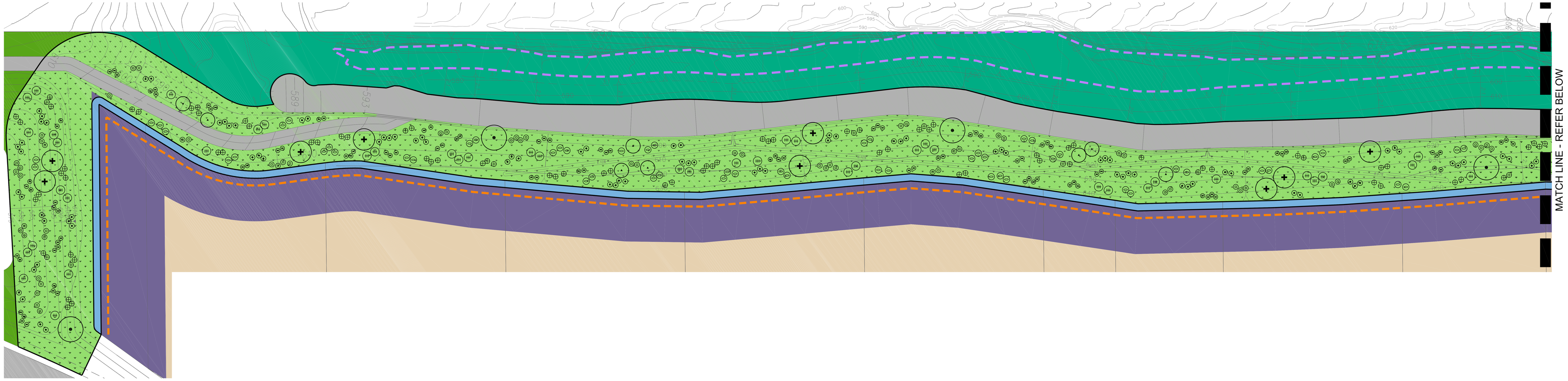
WWW.FIRESAFEPLANNING.COM

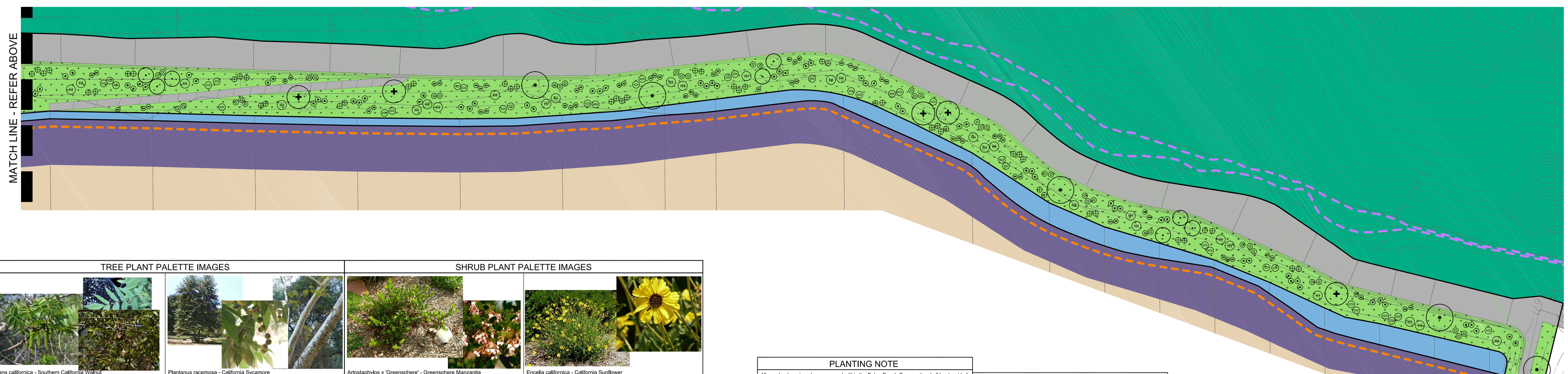
FUEL MODIFICATION SECTIONS & SITE IMAGES
BAKER RANCH
PRECISE FUEL MODIFICATION PLAN
LAKE FOREST, CA SR# 173719
ORANGE COUNTY FIRE AUTHORITY

SHEET 2 OF 3

The use of these plans and specifications shall be restricted to the original site for which they were prepared and publication thereof is expressly limited to such use. Reproduction, publication, or re-use by any method, in whole or in part without the express consent of FIRESAFE PLANNING is prohibited.

S:\SHEA\Baker Ranch\Cad Files\BakerRanch-FuelMod.dwg ,Jerry Canales Plot date: October 18, 2010





TREE PLANT PALETTE IMAGES

Juglans californica - Southern California Walnut

Plantanus racemosa - California Sycamore

Quercus agrifolia - Coast Live Oak

SHRUB PLANT PALETTE IMAGES

Artostaphylos x 'Greenspshere' - Greenspshere Manzanita

Encelia californica - California Sunflower

Mimulus aurantiacus - Bush Monkeyflower

Mirabillis californica - Wishbone Bush

Opuntia littoralis - Coastal Prickly Pear

Penstemon heterophyllus - Foothill Penstemon

PLANTING NOTE

All new landscaping plans proposed within the Baker Ranch Community shall be devoid of eucalyptus, juniper, cedar, cypress, acacia (except acacia redolens 'Desert Carpet' is permitted) and pine trees, California sagebrush, chamise, buckwheat and black and white sage (Salvia spp.). Pine trees shall be allowed within the public right-of-ways as part of the street scape landscaped areas only. This landscape palette restriction is to be recorded as part of all applicable CC&Rs documents, and applies to all interior landscape areas and homeowner lots, not just within the Fuel Modification zones, and shall be enforced by the Baker Ranch Homeowners Association.

PLANT PALETTE

TREES:

	BOTANICAL NAME	COMMON NAME	GROWTH SIZE	SIZE	QUANTITY
+	Juglans californica	Southern California Walnut	13'-20' sp x 13'-26' ht	36" Box	16
+	Plantanus racemosa	California Sycamore	25'-50' sp x 30'-80' ht	36" Box	9
+	Quercus agrifolia	Coast Live Oak	15' - 30' sp x 15' - 65' ht	36" Box	14

SHRUBS:

	BOTANICAL NAME	COMMON NAME	GROWTH SIZE	SIZE	QUANTITY
(A)	Artostaphylos x 'Greenspshere'	Greenspshere Manzanita	3' sp x 3' ht	5 gal.	155
(EN)	Encelia californica	California Sunflower	3' - 6' sp x 3' - 4' ht	5 gal.	93
(S)	Mimulus aurantiacus	Bush Monkeyflower	4' ht	5 gal.	101
(B)	Mirabilis californica	Wishbone Bush	3' sp x 1.5' - 3' ht	5 gal.	134
(OB)	Opuntia littoralis	Coast Prickly Pear	9' sp x 3' ht	5 gal.	72
(P)	Penstemon heterophyllus	Foothill Penstemon	5' sp x 3' ht	5 gal.	168

GROUND COVER:

BOTANICAL NAME	COMMON NAME	GROWTH SIZE	SIZE	SPACING
Acacia redolens 'Desert Carpet'	Desert Carpet	15' sp x 2' ht	Flats	24" O.C.

Acacia 'Desert Carpet' to be installed as ground cover from flats through out bare areas within B Zone for erosion control.

PLANT REMOVAL LIST

100% REMOVAL FROM ALL FUEL MODIFICATION ZONES PER THE ORANGE COUNTY FIRE AUTHORITY FUEL MODIFICATION GUIDELINES - ATTACHMENT 7

THESE PLANT SPECIES SHALL BE REMOVED FROM ALL FUEL MODIFICATION ZONES.

BOTANICAL NAME	COMMON NAME
ADENOSTOMA FASCICULATUM	WILD TURNIP, YELLOW MUSTARD
ADENOSTOMA SPARSIFOLIUM	RED SHANK
ANTHEMIX COTULA	MAYWEED
ARTEMISIA CALIFORNICA	CALIFORNIA SAGEBRUSH
BRASSICA NIGRA	BLACK MUSTARD
BRASSICA RAPA	CHAMISE
CARDARIA DRABA	NOARY CRESS, PERENNIAL PEPPERGRASS
CENTAUREA SOLSTITIALIS	YELLOW STAR-THISTLE
CIRSIUM VULGARE	WILD ARTICHOKE
CONYZA CANADENSIS	HORSEWEED
CORTADERIA SELLOANA	PAMPAS GRASS
CYNARA CARDUNCULUS	ARTICHOKE THISTLE
DATURA WRIGHTII	JIMSON WEED
ERIOGONUM FASCICULATUM	COMMON BUCKWHEAT
FOENICULUM VULGARE	FENNEL
HETEROTHACA GRANDIFLORA	TELEGRAPH PLANT
LACTUCA SERRIOLA	PRICKLY LETTUCE
MALOSMA LAURINA	LAUREL SUMAC
NICOTIANA BIGELEVII.	INDIAN TOBACCO
NICOTIANA GLAUCA	TREE TOBACCO
SALVIA MELLIFERA	BLACK SAGE
SALSOLA AUSTRALIS	RUSSIAN THISTLE/TUMBLEWOOD
SILYBUM MARIANUM	MILK THISTLE
RICINUS COMMUNIS	CASTOR BEAN PLANT
URTICA URENS	BURNING NEEDLE
ORNAMENTALS	
CORTADERIA SELLOANA	PAMPAS GRASS
CUPRESSUS SP.	CYPRESS
EUCALYPTUS SP.	EUCALYPTUS
JUNIPERUS SP.	JUNIPER
PINUS SP.	PINE

BUILDING CLASSIFICATION LEGEND

RADIANT HEAT/EMBER INTRUSION ZONE - ENHANCED CONSTRUCTION:
The first structure adjoining a fuel modification edge as depicted on this plan shall receive "enhanced construction" on all four (4) sides per complying with all requirements per the 2007 California Building Code Chapter 7A .

EMBER MITIGATION ZONE - ENHANCED CONSTRUCTION
Structures on the lots within the balance of the project as depicted on this plan shall comply with the 2007 California Building Code Chapter 7A roofing, venting and decking requirements only, refer to Chapter 7A language provided on this sheet. These requirements area as follows:

- 704A.1.1 Roofing General
- 704A.1.3 Roof Gutters
- 704A.1.4 Roof Valleys
- 704A.2.1 Attic Vent General
- 704A.2.2 Eave & Cornice Vents
- 704A.3.2.1 Exterior Wall Vents
- 704A4.1.1 Decking Surfaces

In addition, all residential structures within this project shall be protected with a NFPA 13-D or NFPA 13-R Automatic Fire Sprinkler System as appropriate for each structure.

INDICATES SIDE THAT SHALL HAVE NO VENTING:
All structures adjoining the Fuel Modification shall have no venting on side facing the Fuel Modification as show on plan. All other vents throughout the entire project requiring Chapter 7A amendments, which require vents to be a minimum of ¼" and a maximum of ½", shall be a maximum of ¼" venting.

SYMBOL LEGEND

FUEL MODIFICATION LIMITS

BORREGO WASH - CHANNEL BOTTOM LIMITS

FUEL MODIFICATION LEGEND

ZONE A- NON-COMBUSTIBLE CONSTRUCTION:
10'-0" to 26'-0" setback zone for non-combustible construction only. Zone A shall be maintained by the private homeowner or the Homeowners Association.

ZONE B - WET ZONE (100% REMOVAL UNDESIRABLE SHRUBS):
First 74'-0" to 130'-0" from Zone A, Zone B shall be permanently irrigated, fully landscaped with approved drought tolerant, deep rooted, moisture retentive material. If any new plant material is added this zone shall be planted with container shrub material. Zone B area shall be maintained the Homeowners Association.

LANDSCAPED ZONE - (100% REMOVAL UNDESIRABLE SHRUBS):
Landscaped areas directly outside of the Fuel Modification Zones within the water quality control basin as depicted on this plan shall be devoid of any plant material from the OCFA Undesirable Plant List. Any plant material installed within this area shall be from the approved OCFA Plant List. This area shall be maintained by the Homeowners Association.

CONSERVATION EASEMENT - (100% REMOVAL UNDESIRABLE SHRUBS):
Open space area beyond the Fuel Modification, as depicted on this plan, shall be devoid of plant material from OCFA Undesirable Plant List.

October 13, 2010

Bret Anderson
Senior Fire Prevention Specialist
Planning and Development Services Section
Orange County Fire Authority
1 Fire Authority Road
Irvine, CA 92856

Subject: Baker Ranch Precise Fuel Modification Plan
Planting Plan Submittal Time Table
OCFA SR# 173719
Tentative Tract# 16466

Mr. Anderson,

This letter has been provided to you to establish and commit to a time table for the Landscape Planting Plans to be submitted and approved to OCFA.

Planting plans drawn by a licensed Landscape Architect are required to be submitted for review and approval by OCFA prior to issuance of building permits and prior to installation of the plants.

Sincerely,

David Ontis
David Ontis
FireSafe Planning Solutions
As agent for Shea Baker Ranch Associates, LLC

NO.	REVISIONS	APP.	DATE
1			
2			
3			
4			

SCALE: 1" = 40' - 0"
0 20' 40' 60' 80' 120' 160'
NORTH

BAKER RANCH - FUEL MODIFICATION PLAN CONTROL	PLAN SET: "A" DATE: 08/30/2010

PREPARED FOR:
SHEA BAKER RANCH ASSOCIATES, LLC
130 VANTIS, SUITE 200
ALISO VIEJO, CA 92656
PHONE: (949) 389-7116 FAX: (949) 389-7466

ENGINEER:
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PLANNING • ENGINEERING • SURVEYING
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IRVINE, CA 92610
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PREPARED BY:
firesafe PLANNING SOLUTIONS
302 N. EL CAMINO REAL, SUITE 202
SAN CLEMENTE, CA 92672
(949) 240-5911 (949) 240-6291 FAX
WWW.FIRESAFEPLANNING.COM

FUEL MODIFICATION PLANTING LAYOUT
BAKER RANCH
PRECISE FUEL MODIFICATION PLAN
LAKE FOREST, CA SR# 173719

ORANGE COUNTY FIRE AUTHORITY

SHEET 3 OF 3

The use of these plans and specifications shall be restricted to the original site for which they were prepared and publication thereof is expressly limited to such use. Reproduction, publication, or re-use by any method, in whole or in part without the express consent of FIRESAFE PLANNING is prohibited.

SHEA BAKER RANCH ASSOCIATES, LLC - BAKER RANCH - PRECISE FUEL MODIFICATION PLAN - SR# 173719

S:\SHEA\Baker Ranch\Cad Files\BakerRanch-FuelMod.dwg ,Jerry Canales Plot date October 18, 2010