



## CITY OF LAGUNA HILLS CITY COUNCIL/PLANNING AGENCY

### REGULAR MEETING AGENDA Tuesday, October 25, 2022 – 7:00 PM (Closed Session at 6:00 PM when scheduled)

Dave Wheeler, Mayor

Janine Heft, Mayor Pro Tempore  
Erica Pezold, Council Member

Don Caskey, Council Member  
Don Sedgwick, Council Member

**Location: City Council Chamber, 24035 El Toro Road, Laguna Hills, CA 92653**

Any person wishing to address the City Council/Planning Agency on any matter, whether or not it appears on this Agenda, is asked to complete a pink "Request to Speak" form available on the table at the back of the Chamber. The completed form is to be submitted to the City Clerk prior to an individual being heard by the City Council/Planning Agency. Completion of the form is voluntary. All persons may attend the meeting regardless of whether this form is completed.

Members of the public wishing to address the City Council can do so during the Public Comments portion of the Agenda with a time limitation of three minutes per person, an overall time limit of ten minutes for any one subject, and a total time limit of thirty minutes for Public Comments. If you are commenting on an Agenda item, your comments will be heard at the time that item is scheduled on the Agenda. If you are addressing the City Council on an item not listed on the Agenda, the City Council is prohibited by law from discussing or taking any action on that item.

**Submission of Electronic Public Comments:** While you may attend this meeting in person, those wishing to make electronic public comments may submit their comments by email to the City Clerk at [publiccomments@lagunahillsCA.gov](mailto:publiccomments@lagunahillsCA.gov), by 5:00 p.m. on October 25, 2022. In the subject line of the email, please state your name and the item number you are commenting on. Any public comment received that does not specify a particular agenda item number will be announced during the general public comment portion of the agenda. If you wish to submit a public comment on more than one agenda item, please send a separate email for each item you are commenting on. All comments received by 5:00 p.m. on the date of the meeting will be provided to the City Council in advance to allow time for the Council Members to read them.

**Announcement of Electronic Public Comments:** During the applicable agenda item, the City Clerk will announce the name of the sender and subject matter of all email comments received by 5:00 p.m. on October 25, 2022. Email comments will NOT be read by the City Clerk during the meeting. Electronic public comments may only be submitted via email and comments via text and social media (Facebook, Twitter, etc.) will not be accepted. The email comments, including your name, will become part of the record of the City Council meeting and will be public information.

**GENERAL BUSINESS - CONVENING AT 7:00 PM****CALL TO ORDER**

Resolution No. 96-04-09-1 established rules of decorum for public meetings held by the City of Laguna Hills. Resolution No. 96-04-09-1 is available on the table at the back of the City Council Chamber.

**INVOCATION:** Chaplain Kai Chur of the 3rd Battalion, 5th Marines

**PLEDGE OF ALLEGIANCE:** Boy Scout Troop 12

**ROLL CALL OF CITY COUNCIL MEMBERS****1. PRESENTATIONS AND PROCLAMATIONS****1.1 Laguna Hills High School Student Liaison**

**Recommendation:** That the City Council receive a report from Laguna Hills High School 2022 Fall Student Liaison Ella Carnahan.

**1.2 3rd Battalion, 5th Marines**

**Recommendation:** That the City Council receive an update from Maj. Matthew Alvis on the 3rd Battalion, 5th Marines activities.

**1.3 Presentation on Proposed Improvements to the Fossil Exhibits Located at the Laguna Hills Community Center**

**Recommendation:** That the City Council receive a presentation on proposed improvements to the Community Center's fossil exhibits.

**1.4 Recognition of Janice Reyes**

**Recommendation:** That the City Council recognize Janice Reyes for 28 years of service to the City and that Mayor Wheeler present a City Tile and a Certificate of Recognition to Ms. Reyes.

**2. SCHEDULE OF FUTURE EVENTS****2.1 Schedule of Future Events**

**Recommendation:** That the City Clerk announce the upcoming meetings and events.

**3. PUBLIC COMMENTS**

This is the time to address the City Council on any matter not listed on this Agenda that is within the subject matter jurisdiction of the City Council. Public Comments are limited to three minutes per person, an overall time limit of ten minutes for any one subject, and a total time limit of thirty minutes.

**4. CONSENT CALENDAR**

All matters listed under "CONSENT CALENDAR" are considered to be routine and will be enacted by one motion approving the recommendation listed on the Agenda. There will be no separate discussion unless Members of the City Council or City staff request specific items be removed from the Consent Calendar.

**4.1 Waive Reading in Full of all Ordinances and Resolutions on the Agenda**

**Recommendation:** That the City Council waive reading in full of all ordinances and resolutions on the agenda and declare that said titles which appear on the public agenda shall be determined to have been read by title and further reading waived.

**4.2 Approval of Minutes for October 11, 2022, Regular Meeting**

**Recommendation:** That the City Council approve the City Council Minutes for the October 11, 2022, Regular Meeting.

**4.3 Ratification of October 25, 2022, Warrant Register**

**Recommendation:** That the City Council ratify the accompanying Warrant Register for the period from September 30, 2022, to October 13, 2022, in the amount of \$1,079,064.51.

**4.4 Proposed Amendment No. 3 to the Consulting Services Agreement with Eco/Nomics, Inc., for Continued Solid Waste and Recycling Consulting Services**

**Recommendation:** That the City Council: 1) Waive formal competitive bidding requirements and procedures set forth in the City of Laguna Hills Municipal Code (LHMC) Section 3-08.150 pursuant to the exceptions set forth in LHMC Sections 3-08.110(I) and (J), for approval of the proposed Amendment No. 3 to the Consulting Services Agreement for Solid Waste and Recycling Consulting Services with Eco/Nomics, Inc.; 2) Approve proposed Amendment No. 3 to the Consulting Services Agreement with Eco/Nomics, Inc., increasing the maximum contract amount by \$150,000 from \$578,000 to \$728,000; and 3) Authorize the Mayor or the Mayor Pro Tempore to sign the proposed Amendment No. 3.

**ITEMS REMOVED FROM THE CONSENT CALENDAR****5. PLANNING AGENCY**

There are no separate Planning Agency Business Items for this meeting.

**6. CITY COUNCIL PUBLIC HEARINGS****7. ADMINISTRATIVE REPORTS****7.1. City Manager****7.2. Deputy City Manager/Community Services Director****7.2.1 2022 Holiday Season Events Schedule**

**Recommendation:** That the City Council receive and file the report.

**7.3. Community Development Director****7.3.1 2022 Building and Fire Codes Adoption**

**Recommendation:** That the City Council take the following actions:

1) Introduce for first reading, read by title only, and waive further reading of an Ordinance entitled: "An Ordinance of the City of Laguna Hills, California, amending Title 10 (Buildings And Construction) of the Laguna Hills Municipal Code and adopting by reference the 2022 Edition of the California Building Standards Code (California Code of Regulations, Title 24), consisting of the 2022 California Building Code, the 2022 California Residential Code, the 2022 California Electrical Code, the 2022 California Mechanical Code, the 2022 California Plumbing Code, the 2022 California Energy Code, the 2022 California Historical Building Code, the 2022 California Existing Building Code, the 2022 California Green Building Standards Code, and the 2022 California Referenced Standards Code, together with certain amendments, additions, and deletions thereto; and adopting by reference the 2021 International Property Maintenance Code."

2) Introduce for first reading, read by title only, and waive further reading of an Ordinance entitled: "An Ordinance of the City of Laguna Hills, California, amending Chapter 5-16 (Fire Code) of Title 5 (Health and Sanitation) of the Laguna Hills Municipal Code and adopting by reference the 2022 Edition of the California Fire Code including Appendices B, BB, C, and CC, together with certain amendments, additions, and deletions thereto."

- 3) Direct staff to place the Ordinances on the November 15, 2022, meeting agenda for a Public Hearing and second reading, and to publish the hearing notice.

## **8. MATTERS AGENDIZED AND PRESENTED BY CITY COUNCIL MEMBERS**

### **8.1. Mayor Wheeler**

#### **8.1.1 Notification Letter to Existing Short Term Rentals**

**Recommendation:** Mayor Wheeler recommends that the City Council direct staff to draft and distribute a notification letter to the owners of existing short term rentals located in the City, advising that short term rentals are not a permitted use in the City of Laguna Hills because they are not enumerated in the City's Development Code listings of permitted uses, and any use not specifically enumerated is considered prohibited.

## **9. CITY COUNCIL MEMBER COMMITTEE REPORTS**

### **9.1. Committee Assignment Reports**

**Recommendation:** That the City Council receive oral reports on the following City Council Committee Assignments:

1. OC Mosquito and Vector Control District Board of Trustees  
(Council Member Pezold)  
October 20, 2022 Meeting
2. Orange County Transportation Authority Citizens Advisory Committee  
(Mayor Wheeler)  
October 18, 2022 Meeting

## **10. CITY COUNCIL MEMBER COMMENTS**

### **ADJOURNMENT**

Adjourned to November 15, 2022 at 7:00 p.m., in the City Council Chambers located at 24035 El Toro Road, Laguna Hills, California. The regular meetings scheduled for November 8, 2022 and November 22, 2022 have been cancelled.

## CERTIFICATION

I, JENNIFER LEE, City Clerk of the City of Laguna Hills, do hereby certify that a copy of the foregoing Agenda was posted at Laguna Hills City Hall, Laguna Hills Community Center, and the Courtyard at La Paz Center by October 21, 2022, at 5:00 p.m.

  
\_\_\_\_\_  
Jennifer Lee, City Clerk

October 21, 2022

\_\_\_\_\_  
Date

***In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, you should contact the office of the City Clerk at (949) 707-2635. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to assure accessibility to this meeting.***

***Materials related to an item on this Agenda submitted to the City Council after distribution of the agenda packet are available for public inspection in the City Clerk's Office at 24035 El Toro Road, Laguna Hills, California, during normal business hours.***

***City Council Members receive no additional compensation or stipend as a result of simultaneously convening meetings of the Laguna Hills Planning Agency.***



# City of Laguna Hills

## City Council/Planning Agency

### Staff Report

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**DATE:** October 25, 2022

**TO:** Mayor and Council Members

**FROM:** David Reynolds  
Deputy City Manager/Community Services Director

**ISSUE:** Presentation on Proposed Improvements to the Fossil Exhibits Located at the Laguna Hills Community Center

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**RECOMMENDATION:** That the City Council receive a presentation on proposed improvements to the Community Center's fossil exhibits.

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#### **SUMMARY:**

The City of Laguna Hills Community Center and Sports Complex were built on one of the richest fossil sites in the United States. In 1996, this wealth of fossil resources was chosen as a theme around which the Community Center and the Prehistoric Playground were designed. Paleontologist Carol Stadum was instrumental in the establishment of the City's fossil exhibits at the Laguna Hills Community Center.

Ms. Stadum has met with staff to discuss certain improvements to the fossil exhibits and also required maintenance to the exhibits. Staff will provide the City Council with a PowerPoint presentation at the October 25, 2022, meeting to highlight the proposed improvements to the fossil exhibits and also required maintenance. Ms. Stadum will also be attending this meeting to participate in the presentation and discussion. The proposed improvements include:

1. Exhibit Restoration & Support
  - a. Agreement with Paleontologist
  - b. Reposition fossils and labels
  - c. Inventory/Catalogue

- d. Introduce new fossils
  - e. Appropriate labeling
  - f. Educational Programs (Fossil Finders Fossil Fixers, PaleoPack Program, Prehistoric Audio Display)
- 2. Pecten Reef Education
  - 3. Promote City's Fossil History

At its August 3, 2022, meeting, the Parks and Recreation Commission were presented with these proposed improvements and were in favor of implementing them.

**FISCAL IMPACT:**

The budget amendment approved by City Council on October 11, 2022, includes \$15K to help fund the proposed improvements through the remainder of this fiscal year. Staff will recommend a budget to continue forward with improvements in the next budget cycle.



# City of Laguna Hills

## City Council/Planning Agency

### Staff Report

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**DATE:** October 25, 2022  
**TO:** Mayor and Council Members  
**FROM:** Jarad Hildenbrand  
City Manager  
**ISSUE:** Recognition of Janice Reyes

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**RECOMMENDATION:** That the City Council recognize Janice Reyes for 28 years of service to the City and that Mayor Wheeler present a City Tile and a Certificate of Recognition to Ms. Reyes.

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#### **SUMMARY:**

Janice Reyes, was first hired by the City as a Finance Intern on June 1, 1994, and was promoted to full-time Junior Accountant in 1996. Over the years, Janice has also served the City as Accountant, Accounting Supervisor, Finance Manager and was promoted to Finance Director on February 19, 2018.

After 28 years of service to the City of Laguna Hills, and numerous accomplishments on behalf of the City, Ms. Reyes has decided to leave the City effective November 4, 2022. A Certificate of Recognition has been prepared officially recognizing Janice Reyes for her service to the City.

#### **ATTACHMENTS:**

- Certificate of Recognition - Janice Reyes



# CITY OF LAGUNA HILLS

## CERTIFICATE OF RECOGNITION

### JANICE REYES Finance Director

WHEREAS, Janice Reyes was first hired by the City as a Finance Intern on June 1, 1994 and was hired to a full-time position of Junior Accountant on August 12, 1996. She has since served the City as Accountant, Accounting Supervisor, Finance Manager and on February 19, 2018, was promoted to her current position of Finance Director; and

WHEREAS, Janice Reyes, has admirably and continuously served as the Finance Director in a professional, caring, and conscientious manner and has received many awards for her efforts in financial reporting and budgeting; and

WHEREAS, the service Janice Reyes has provided to the City has greatly contributed to the overall success of the City in its efforts to provide quality local government services, programs, and accurate financial reports and information to the residents and businesses of Laguna Hills; and

WHEREAS, Janice Reyes, has decided to leave after 28 of years as a City employee, effective November 4, 2022, and will be sincerely missed by friends, colleagues, and co-workers alike.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA, does hereby express sincere appreciation and thanks to Janice Reyes, for her distinguished and dedicated service to the City of Laguna Hills, highly commends her for the manner in which she has carried out her duties as Finance Director and wishes her nothing but the very best in her future endeavors.

Dated this 25<sup>th</sup> day of October 2022.

\_\_\_\_\_  
Dave Wheeler, Mayor

\_\_\_\_\_  
Janine Heft, Mayor Pro Tempore

\_\_\_\_\_  
Don Caskey, Council Member

\_\_\_\_\_  
Erica Pezold, Council Member

\_\_\_\_\_  
Don Sedgwick, Council Member



# City of Laguna Hills

## City Council/Planning Agency

### Staff Report

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**DATE:** October 25, 2022  
**TO:** Mayor and Council Members  
**FROM:** Jennifer Lee  
 Interim City Clerk  
**ISSUE:** Schedule of Future Events

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**RECOMMENDATION:** That the City Clerk announce the upcoming meetings and events.

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#### **SUMMARY:**

##### **Election Day**

Tuesday, November 8, Vote Centers will be open 7:00 a.m. – 8:00 p.m.

##### **Veteran's Day – City Hall Closed** (Community Center will be open)

Friday, November 11

##### **Adjourned Regular City Council Meeting**

Tuesday, November 15, 7:00 p.m., Laguna Hills Civic Center Council Chamber

##### **Events, Communication, and Beautification Committee Regular Meeting**

Wednesday, November 16, 3:00 p.m., Admin Conference Room

##### **Traffic Commission Meeting**

Wednesday, November 16, 7:00 p.m., Laguna Hills Civic Center Council Chamber

##### **Movies in the Park, Movie to be announced**

Friday, November 18, 6:00 p.m. – 8:00 p.m., Soccer Fields at Laguna Hills Community Center and Sports Complex (Inclement weather location: Community Center Heritage Room)

##### **Thanksgiving Holiday – City Hall Closed** (Community Center will be open)

Thursday, November 24 and Friday, November 25

## Schedule of Future Events

October 25, 2022

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**Herald in the Holiday**, tree lighting ceremony and music from a brass choir  
Thursday, December 8, 6:00 p.m. – 8:00 p.m., Laguna Hills Community Center

**Breakfast with Santa**

Saturday, December 10, 9:00 a.m. – 11:00 a.m., Laguna Hills Community Center



# City of Laguna Hills

## City Council/Planning Agency

### Staff Report

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**DATE:** October 25, 2022  
**TO:** Mayor and Council Members  
**FROM:** Jennifer Lee  
Interim City Clerk  
**ISSUE:** Approval of Minutes for October 11, 2022, Regular Meeting

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**RECOMMENDATION:** That the City Council approve the City Council Minutes for the October 11, 2022, Regular Meeting.

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**ATTACHMENTS:**

- 221011 CC Minutes

**CITY OF LAGUNA HILLS  
CITY COUNCIL/PLANNING AGENCY**

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**REGULAR MEETING  
MINUTES  
Tuesday, October 11, 2022**

**GENERAL BUSINESS - CONVENING AT 7:00 PM**

**CALL TO ORDER**

The meeting was called to order at 6:59 p.m. by Mayor Wheeler.

**INVOCATION:** Council Member Sedgwick

**PLEDGE OF ALLEGIANCE:** Council Member Pezold

**ROLL CALL OF CITY COUNCIL MEMBERS**

| Attendee Name | Title             | Status  | Arrived |
|---------------|-------------------|---------|---------|
| Dave Wheeler  | Mayor             | Present |         |
| Janine Heft   | Mayor Pro Tempore | Present |         |
| Don Caskey    | Council Member    | Present |         |
| Erica Pezold  | Council Member    | Present |         |
| Don Sedgwick  | Council Member    | Present |         |

**1. PRESENTATIONS AND PROCLAMATIONS**

**1.1 Laguna Hills High School Student Liaison**

The City Council received an oral report from Laguna Hills High School 2022 Fall Student Liaison Kia Arfania.

**1.2 Orange County Transportation Agency's (OCTA) Making Better Connections Study**

The City Council received a PowerPoint presentation from OCTA Director of Strategic Planning, Kurt Brotcke on OCTA's bus restructuring study.

**1.3 Transportation Corridor Agency's (TCA) Strategic Plan**

The City Council received a PowerPoint presentation from TCA Deputy CEO, Valarie McFall on TCA's seven-year Strategic Plan.

**2. SCHEDULE OF FUTURE EVENTS****2.1 Schedule of Future Events**

Interim City Clerk Lee announce the upcoming meetings and events.

**3. PUBLIC COMMENTS**

The following individuals addressed the City Council on non-agendized items:

William “Bill” Moorhead, candidate for re-election to Moulton Niguel Water District Board of Directors, provided comments on Moulton Niguel Water District’s efforts and the upcoming election.

Mario Vasquez, a resident of Laguna Hills, expressed concerns regarding rezoning of Alicia Plaza and Alicia Village apartment complexes.

**4. CONSENT CALENDAR**

Motion to approve the Consent Calendar with Council Member Pezold removing Item No. 4.7.

|                  |                                                                                                                                             |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RESULT:</b>   | <b>APPROVED [UNANIMOUS]</b>                                                                                                                 |
| <b>MOVER:</b>    | Janine Heft, Mayor Pro Tempore                                                                                                              |
| <b>SECONDER:</b> | Erica Pezold, Council Member                                                                                                                |
| <b>AYES:</b>     | Dave Wheeler, Mayor; Janine Heft, Mayor Pro Tempore; Don Caskey, Council Member; Erica Pezold, Council Member; Don Sedgwick, Council Member |

**4.1 Waive Reading in Full of all Ordinances and Resolutions on the Agenda**

**Recommendation:** That the City Council waive reading in full of all ordinances and resolutions on the agenda and declare that said titles which appear on the public agenda shall be determined to have been read by title and further reading waived.

**4.2 Consideration to Cancel the Regular Meetings of the City Council/Planning Agency on November 8, 2022, and November 22, 2022, and Notice an Adjourned Regular Meeting for November 15, 2022**

**Recommendation:** That the City Council cancel the November 8, 2022, and November 22, 2022, Regular Meetings and Notice an Adjourned Regular Meeting for November 15, 2022.

**4.3 Approval of Minutes for April 20, 2021, Special Meeting**

**Recommendation:** That the City Council approve the City Council Minutes for the April 20, 2021, Special Meeting.

**4.4 Approval of Minutes for September 27, 2022, Regular Meeting**

**Recommendation:** That the City Council approve the City Council Minutes for the September 27, 2022, Regular Meeting.

**4.5 Ratification of October 11, 2022, Warrant Register**

**Recommendation:** That the City Council ratify the accompanying Warrant Register for the period from September 16, 2022, to September 29, 2022, in the amount of \$1,100,040.69.

**4.6 Amendments to the Fiscal Year 2022/2023 City Budget**

**Recommendation:** That the City Council adopt Resolution No. 2022-10-11-1: "A Resolution of the City Council of the City of Laguna Hills, California, amending the Fiscal Year 2022/2023 Operating Budget."

**4.8 Resolution Approving Adjustments to City Attorney Service Rates**

**Recommendation:** That the City Council adopt Resolution No. 2022-10-11-2: "A Resolution of the City Council of the City of Laguna Hills, California, approving amended Exhibit "A" to the Retainer Agreement for City Attorney Service Rates."

**ITEMS REMOVED FROM THE CONSENT CALENDAR****4.7 Proposed Contract Services Agreement with Millennium Alarm Systems, Inc. for the Purchase and Installation of Additional Security Cameras at the Laguna Hills Community Center and Sports Complex**

Council Member Pezold removed Item No. 4.7 from the Consent Calendar to request additional information.

City Manager Hildenbrand responded to Council Member requests for additional information.

Deputy City Manager/Community Services Director Reynolds responded to Council Member requests for additional information.

Public Services Director/City Engineer Ames responded to Council Member requests for additional information.

**Recommendation:** That the City Council: 1) Waive formal competitive bidding requirements and procedures set forth in the Laguna Hills Municipal Code ("LHMC") Section 3-08.090 pursuant to the exceptions set forth in LHMC Sections 3-08.110(F), (I) and (J), for approval of a proposed Contract Services Agreement with Millennium Alarm Systems, Inc., for the purchase and installation of additional security cameras at the Community Center and Sports Complex; and 2) Approve and authorize the Mayor or the Mayor Pro Tempore to sign the proposed Contract Services Agreement with Millennium Alarm Systems, Inc., in the total maximum not-to-exceed contract amount of \$165,711.64.

|                  |                                                                                                                                             |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RESULT:</b>   | <b>APPROVED [UNANIMOUS]</b>                                                                                                                 |
| <b>MOVER:</b>    | Don Sedgwick, Council Member                                                                                                                |
| <b>SECONDER:</b> | Janine Heft, Mayor Pro Tempore                                                                                                              |
| <b>AYES:</b>     | Dave Wheeler, Mayor; Janine Heft, Mayor Pro Tempore; Don Caskey, Council Member; Erica Pezold, Council Member; Don Sedgwick, Council Member |

## 5. PLANNING AGENCY

There were no separate Planning Agency Business Items for this meeting.

## 6. CITY COUNCIL PUBLIC HEARINGS

There were no City Council public hearings.

## 7. ADMINISTRATIVE REPORTS

### 7.1. City Manager

#### 7.1.1 Adoption of Amended Confidential, Management, and Part-Time Salary and Benefits Resolution and Appointment of City Clerk

City Manager Hildenbrand reviewed the information in the staff report and responded to Council Member requests for additional information.

**Recommendation:** That the City Council take the following actions:

- 1) Adopt Resolution No. 2022-10-11-3: "A Resolution of the City Council of the City of Laguna Hills, California, regarding employment and establishing salary ranges and benefits for Management, Confidential, and Part-time classes of employment with the City and rescinding Resolution No. 2021-07-13-4."

2) Adopt Resolution No. 2022-10-11-4: "A Resolution of the City Council of the City of Laguna Hills, California, appointing Jennifer Lee as City Clerk of the City of Laguna Hills in accordance with the procedures established by Laguna Hills Municipal Code Chapter 2-12."

3) Authorize the Mayor to administer the Oath of Office to the City Clerk.

|                  |                                                                                                                                             |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RESULT:</b>   | <b>APPROVED [UNANIMOUS]</b>                                                                                                                 |
| <b>MOVER:</b>    | Janine Heft, Mayor Pro Tempore                                                                                                              |
| <b>SECONDER:</b> | Don Sedgwick, Council Member                                                                                                                |
| <b>AYES:</b>     | Dave Wheeler, Mayor; Janine Heft, Mayor Pro Tempore; Don Caskey, Council Member; Erica Pezold, Council Member; Don Sedgwick, Council Member |

Mayor Wheeler administered the Oath of Office to Jennifer Lee.

## 8. MATTERS AGENDIZED AND PRESENTED BY CITY COUNCIL MEMBERS

There were no matters agendized by City Council Members.

## 9. CITY COUNCIL MEMBER COMMITTEE REPORTS

### 9.1. Committee Assignment Reports

**Recommendation:** That the City Council receive oral reports on the following City Council Committee Assignments:

1. Association of California Cities - Orange County (Mayor Pro Tempore Heft and Council Member Caskey)  
September 30, 2022 Leadership Conference

Mayor Pro Tempore Heft provided an oral report.

## 10. CITY COUNCIL MEMBER COMMENTS

### Council Member Pezold

Council Member Pezold reported on the success of a recent Rooted Volunteer planting event and the City's 1<sup>st</sup> annual Heritage Day event.

**Mayor Pro Tempore Heft**

Mayor Pro Tempore Heft expressed her appreciation to staff and the City Council for the efforts to beautify the City and for the recent 1<sup>st</sup> annual Heritage Day event.

**Council Member Caskey**

Council Member Caskey applauded the efforts of everyone for the success of the 1<sup>st</sup> annual Heritage Day event.

Council Member Caskey provided comments regarding technological advances in transportation.

**Mayor Wheeler**

Mayor Wheeler requested a discussion on distributing notification letters to existing short term rentals in the City be agendaized for a future meetings and received a second from Council Member Pezold.

**ADJOURNMENT**

There being no further business before the City Council at this session, Mayor Wheeler declared the meeting adjourned at 9:23 p.m.

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Jennifer Lee, City Clerk

ATTEST:

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Dave Wheeler, Mayor

Approved at meeting of October 25, 2022



## City of Laguna Hills

### City Council/Planning Agency

### Staff Report

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**DATE:** October 25, 2022  
**TO:** Mayor and Council Members  
**FROM:** Janice Reyes  
Finance Director  
**ISSUE:** Ratification of October 25, 2022, Warrant Register

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**RECOMMENDATION:** That the City Council ratify the accompanying Warrant Register for the period from September 30, 2022, to October 13, 2022, in the amount of \$1,079,064.51.

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#### **SUMMARY:**

The City issues accounts payable disbursements on a regular basis and presents it to City Council for ratification at its next regularly scheduled City Council Meeting. The attached Warrant Register containing checks and electronic funds transfers for the period from September 30, 2022, to October 13, 2022, is being presented for ratification by the City Council. Payments have been reviewed and approved by the appropriate departmental staff. The Director of Finance certifies to the accuracy of the attached register and to the availability of monies for payment thereof.

#### **ATTACHMENTS:**

- Warrant Register - October 25, 2022
- Payables Detail Report - October 25, 2022



City of Laguna Hills, CA

## Warrant Register - October 25, 2022

By Check Number

Date Range: 09/30/2022 - 10/13/2022

| Check Number          | Vendor Number | Vendor Name                                              | Payment Date | Payment Amount |
|-----------------------|---------------|----------------------------------------------------------|--------------|----------------|
| Payment Type: Regular |               |                                                          |              |                |
| 1140                  | O-1528        | OCTA                                                     | 10/05/2022   | 3,125.00       |
| 1141                  | C-1215        | CODE OF THE WEST                                         | 10/06/2022   | 300.00         |
| 1142                  | C-0023        | COX COMMUNICATION                                        | 10/06/2022   | 661.17         |
| 1143                  | C-1122        | CROSSTOWN ELECTRICAL AND DATA, INC.                      | 10/06/2022   | 3,644.70       |
| 1144                  | D-0561        | DOCU-TRUST                                               | 10/06/2022   | 155.85         |
| 1145                  | E-0504        | EL TORO WATER DISTRICT                                   | 10/06/2022   | 21,868.72      |
| 1146                  | E-0608        | EVERDE GROWERS                                           | 10/06/2022   | 2,783.00       |
| 1147                  | G-0821        | G2 CONSTRUCTION INC.                                     | 10/06/2022   | 12,498.75      |
| 1148                  | G-0867        | GAMECRAFT BREWING                                        | 10/06/2022   | 443.00         |
| 1149                  | G-0862        | GRANICUS                                                 | 10/06/2022   | 4,853.52       |
| 1150                  | J-1071        | JCTEES.COM CORPORATION                                   | 10/06/2022   | 689.19         |
| 1151                  | K-1202        | KUSTOM IMPRINTS                                          | 10/06/2022   | 283.38         |
| 1152                  | L-1383        | LABOR LAW POSTER SERVICE LLC                             | 10/06/2022   | 99.50          |
| 1153                  | Z-CS-0394     | LABOY, PETER                                             | 10/06/2022   | 500.00         |
| 1154                  | M-1585        | MCDONALD, KAYLE                                          | 10/06/2022   | 273.46         |
| 1155                  | P-1804        | PATROL ONE                                               | 10/06/2022   | 2,600.00       |
| 1156                  | P-1832        | PRINTEX PRINTING AND GRAPHICS INC.                       | 10/06/2022   | 507.50         |
| 1157                  | Q-1717        | QUADIENT FINANCE USA, INC.                               | 10/06/2022   | 1,042.99       |
| 1158                  | R-1977        | RJ ELECTRIC                                              | 10/06/2022   | 1,044.00       |
| 1159                  | S-1949        | SMART AND FINAL                                          | 10/06/2022   | 313.45         |
| 1160                  | S-2220        | SPORTS FIELD SERVICES CSA HOLDINGS, INC.                 | 10/06/2022   | 5,410.50       |
| 1161                  | U-2165        | UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA         | 10/06/2022   | 163.27         |
| 1162                  | W-2448        | WEST GATE CONTRACTOR                                     | 10/06/2022   | 8,000.00       |
| 1163                  | A-0138        | ALL CITY MANAGEMENT, INC.                                | 10/13/2022   | 7,274.40       |
| 1164                  | A-0359        | ANDERSON PENNA PARTNERS, INC.                            | 10/13/2022   | 2,600.00       |
| 1165                  | A-0304        | AU-YEUNG, MELISSA                                        | 10/13/2022   | 67.63          |
| 1166                  | B-0304        | BEE MAN, THE                                             | 10/13/2022   | 695.00         |
| 1167                  | B-0437        | BRINKS, INCORPORATED                                     | 10/13/2022   | 217.34         |
| 1168                  | B-0440        | BUCKNAM INFRASTRUCTURE GROUP, INC.                       | 10/13/2022   | 1,127.50       |
| 1169                  | C-1179        | CANON SOLUTIONS AMERICA                                  | 10/13/2022   | 75.74          |
| 1170                  | C-1144        | CHARLES ABBOTT ASSOCIATES, INC                           | 10/13/2022   | 1,125.00       |
| 1171                  | E-0553        | CHRISTINA ELKINS                                         | 10/13/2022   | 2,058.00       |
| 1172                  | C-1139        | COMPLETE OFFICE OF CALIFORNIA                            | 10/13/2022   | 12.22          |
| 1173                  | C-0023        | COX COMMUNICATION                                        | 10/13/2022   | 214.25         |
| 1174                  | C-1122        | CROSSTOWN ELECTRICAL AND DATA, INC.                      | 10/13/2022   | 13,540.83      |
| 1175                  | E-0554        | ECONOMICS, INC.                                          | 10/13/2022   | 8,949.16       |
| 1176                  | E-0600        | EWING IRRIGATION PRODUCTS, INC                           | 10/13/2022   | 164.81         |
| 1177                  | C-1190        | FINGERPRINT ID (AFIS) LAW ENF. - COUNTY OF ORANGE        | 10/13/2022   | 1,188.00       |
| 1178                  | Z-CD-0390     | HOLMES, RANDY                                            | 10/13/2022   | 1,110.00       |
| 1179                  | I-0960        | IRV SEAVER MOTORCYCLES                                   | 10/13/2022   | 992.60         |
| 1180                  | I-0942        | IRVINE RANCH WATER DISTRICT                              | 10/13/2022   | 226.22         |
| 1181                  | J-1057        | JAMEY CLARK, INC.                                        | 10/13/2022   | 321.00         |
| 1182                  | K-1126        | KNIGHT, LORNA                                            | 10/13/2022   | 952.00         |
| 1183                  | L-1390        | LAGUNA TERRACE BEAUTIFICATION TEAM                       | 10/13/2022   | 517.00         |
| 1184                  | Z-CD-0391     | MITCHELL GENERAL CONTRACTORS, INC.                       | 10/13/2022   | 1,087.50       |
| 1185                  | M-1388        | MOBILE MINI, INC.                                        | 10/13/2022   | 225.71         |
| 1186                  | M-1302        | MOULTON NIGUEL WATER DISTRICT                            | 10/13/2022   | 33,854.74      |
| 1187                  | Z-CD-0382     | NEIGHBORHOOD ROOFING                                     | 10/13/2022   | 2,610.00       |
| 1188                  | O-1546        | OFFICE SOLUTIONS                                         | 10/13/2022   | 514.74         |
| 1189                  | O-1575        | ORANGE COUNTY REGISTER-FREEDOM CA. NEWSPAPER PARTNERSHIP | 10/13/2022   | 191.08         |
| 1190                  | P-1843        | PACIFIC SYMPHONY                                         | 10/13/2022   | 2,000.00       |
| 1191                  | C-1003        | PARKING VIOLATIONS OC TREASURER-TAX COLLECTOR            | 10/13/2022   | 1,698.50       |
| 1192                  | R-1830        | RALPHS GROCERY COMPANY                                   | 10/13/2022   | 78.12          |

Attachment: Warrant Register - October 25, 2022 (2994 : Warrant Register, October 25, 2022)

## Warrant Register - October 25, 2022

| Check Number | Vendor Number | Vendor Name                        |
|--------------|---------------|------------------------------------|
| 1193         | R-1855        | RICHARD FISHER ASSOCIATES          |
| 1194         | R-1977        | RJ ELECTRIC                        |
| 1195         | Z-CS-0027     | SANCHEZ, PATRICIA                  |
| 1196         | S-2295        | SOUTHERN COMPUTER WAREHOUSE        |
| 1197         | S-2250        | SPARKLETTS                         |
| 1198         | Z-CS-0395     | STUDEBAKER, JAMES                  |
| 1199         | W-2302        | THOMSON REUTERS - WEST             |
| 1200         | T-2698        | TPX COMMUNICATIONS                 |
| 1201         | V-2224        | VERIZON WIRELESS                   |
| 1202         | V-2254        | VITUITY - URGENT CARE SERVICES, PC |
| 1203         | W-2337        | WEST COAST ARBORISTS, INC.         |
| 1204         | W-2379        | WEST COAST TURF                    |
| 1205         | W-2450        | WEX BANK                           |

## Date Range: 09/30/2022 - 10/13/2022

| Payment Date          | Payment Amount    |
|-----------------------|-------------------|
| 10/13/2022            | 4,972.00          |
| 10/13/2022            | 2,578.50          |
| 10/13/2022            | 335.00            |
| 10/13/2022            | 4,796.72          |
| 10/13/2022            | 133.36            |
| 10/13/2022            | 500.00            |
| 10/13/2022            | 293.94            |
| 10/13/2022            | 684.52            |
| 10/13/2022            | 1,696.11          |
| 10/13/2022            | 100.00            |
| 10/13/2022            | 26,756.00         |
| 10/13/2022            | 82,908.00         |
| 10/13/2022            | 1,085.66          |
| <b>Total Regular:</b> | <b>283,789.85</b> |

Attachment: Warrant Register - October 25, 2022 (2994 : Warrant Register, October 25, 2022)

## Warrant Register - October 25, 2022

Date Range: 09/30/2022 - 10/13/2022

| Check Number                    | Vendor Number | Vendor Name                                               | Payment Date | Payment Amount    |
|---------------------------------|---------------|-----------------------------------------------------------|--------------|-------------------|
| <b>Payment Type: Bank Draft</b> |               |                                                           |              |                   |
| DFT0002191                      | C-1007        | OCSD LAW ENFORCEMENT CONTRACT, OC TREASURER-TAX COLLECTOR | 10/13/2022   | 795,274.66        |
| <b>Total Bank Draft:</b>        |               |                                                           |              | <b>795,274.66</b> |

## Bank Code AP Bank Summary

| Payment Type   | Payable<br>Count | Payment<br>Count | Discount    | Payment             |
|----------------|------------------|------------------|-------------|---------------------|
| Regular Checks | 95               | 66               | 0.00        | 283,789.85          |
| Manual Checks  | 0                | 0                | 0.00        | 0.00                |
| Voided Checks  | 0                | 0                | 0.00        | 0.00                |
| Bank Drafts    | 1                | 1                | 0.00        | 795,274.66          |
| EFT's          | 0                | 0                | 0.00        | 0.00                |
|                | <b>96</b>        | <b>67</b>        | <b>0.00</b> | <b>1,079,064.51</b> |

Attachment: Warrant Register - October 25, 2022 (2994 : Warrant Register, October 25, 2022)

### All Bank Codes Check Summary

| Payment Type   | Payable<br>Count | Payment<br>Count | Discount    | Payment             |
|----------------|------------------|------------------|-------------|---------------------|
| Regular Checks | 95               | 66               | 0.00        | 283,789.85          |
| Manual Checks  | 0                | 0                | 0.00        | 0.00                |
| Voided Checks  | 0                | 0                | 0.00        | 0.00                |
| Bank Drafts    | 1                | 1                | 0.00        | 795,274.66          |
| EFT's          | 0                | 0                | 0.00        | 0.00                |
|                | <b>96</b>        | <b>67</b>        | <b>0.00</b> | <b>1,079,064.51</b> |

### Fund Summary

| Fund | Name | Period  | Amount              |
|------|------|---------|---------------------|
| 998  | POOL | 10/2022 | 1,079,064.51        |
|      |      |         | <b>1,079,064.51</b> |



City of Laguna Hills, CA

# Payables Detail Report

By Fund

Payment Dates 09/30/2022 - 10/13/2022

| Payment Date                    | Vendor Name                                  | Payable Number      | Description (Payable)                      | Account Number | Amount    |
|---------------------------------|----------------------------------------------|---------------------|--------------------------------------------|----------------|-----------|
| <b>Fund: 100 - GENERAL FUND</b> |                                              |                     |                                            |                |           |
| 10/05/2022                      | OCTA                                         | AR143399            | Annual Lease, FY 22/23                     | 100-356-700100 | 3,125.00  |
| 10/06/2022                      | DOCU-TRUST                                   | 047602              | Offsite Data Storage, Sep '22              | 100-155-700030 | 155.85    |
| 10/06/2022                      | COX COMMUNICATION                            | 091622              | T-1 Line, Sep '22                          | 100-195-630000 | 446.41    |
| 10/06/2022                      | COX COMMUNICATION                            | 091822              | Cable, City Hall, Sep '22                  | 100-195-630000 | 32.14     |
| 10/06/2022                      | COX COMMUNICATION                            | 091922              | WiFi, City Hall, Sep '22                   | 100-195-630000 | 182.62    |
| 10/06/2022                      | QUADIENT FINANCE USA, INC.                   | 092622              | Postage Replenishment, Sep '22             | 100-195-625000 | 1,042.99  |
| 10/06/2022                      | CODE OF THE WEST                             | 092822              | Heritage Day Expense, Sep '22              | 100-310-695531 | 300.00    |
| 10/06/2022                      | MCDONALD, KAYLE                              | 100422              | Heritage Day Expense, Oct '22              | 100-310-695531 | 273.46    |
| 10/06/2022                      | EL TORO WATER DISTRICT                       | 100422              | Water Usage, Public Services, Aug          | 100-355-635000 | 21,868.72 |
| 10/06/2022                      | EVERDE GROWERS                               | 1111186             | Rooted Campaign Event, Sep '22             | 100-310-695500 | 2,783.00  |
| 10/06/2022                      | GRANICUS                                     | 156522              | Agenda Software, 10/1/22 -                 | 100-195-720050 | 4,853.52  |
| 10/06/2022                      | SPORTS FIELD SERVICES CSA                    | 212105              | Retention Release, CIP #238-C Phase        | 100-000-201001 | 5,410.50  |
|                                 | HOLDINGS, INC.                               |                     |                                            |                |           |
| 10/06/2022                      | G2 CONSTRUCTION INC.                         | 220930-F            | Retention Release CIP #412-J               | 100-000-201001 | 12,498.75 |
| 10/06/2022                      | PRINTEX PRINTING AND GRAPHICS                | 23370 (1)           | Operating Supplies, Aug '22                | 100-155-622000 | 249.98    |
|                                 | INC.                                         |                     |                                            |                |           |
| 10/06/2022                      | PRINTEX PRINTING AND GRAPHICS                | 23493 (1)           | Special Events, Rooted Campaign, Sep '22   | 100-310-695500 | 85.12     |
|                                 | INC.                                         |                     |                                            |                |           |
| 10/06/2022                      | PRINTEX PRINTING AND GRAPHICS                | 23581 (1)           | Special Events, Rooted Campaign, Sep '22   | 100-310-695500 | 172.40    |
|                                 | INC.                                         |                     |                                            |                |           |
| 10/06/2022                      | SMART AND FINAL                              | 3831400012901       | Office & Operating Supplies, Sep '22       | 100-155-622000 | 45.52     |
| 10/06/2022                      | SMART AND FINAL                              | 3831400012901       | Office & Operating Supplies, Sep '22       | 100-195-620000 | 65.23     |
| 10/06/2022                      | SMART AND FINAL                              | 3831400013401       | Heritage Day Expense, Sep '22              | 100-310-695531 | 202.70    |
| 10/06/2022                      | WEST GATE CONTRACTOR                         | 41                  | Graffiti Removal, Public Services, Sep '22 | 100-355-720500 | 8,000.00  |
|                                 |                                              |                     |                                            |                |           |
| 10/06/2022                      | KUSTOM IMPRINTS                              | 41021               | City Anniversary Expense, Sep '22          | 100-310-695530 | 283.38    |
| 10/06/2022                      | CROSSTOWN ELECTRICAL AND DATA, INC.          | 4296-22-009         | Traffic Signal Maintenance, Sep '22        | 100-356-720420 | 3,644.70  |
|                                 | INC.                                         |                     |                                            |                |           |
| 10/06/2022                      | PATROL ONE                                   | 489381              | Fourth of July, FY 22/23                   | 100-310-695508 | 2,600.00  |
| 10/06/2022                      | RJ ELECTRIC                                  | 61119               | Maintenance & Repair, Comm Ctr, Sep '22    | 100-310-645500 | 270.00    |
|                                 |                                              |                     |                                            |                |           |
| 10/06/2022                      | RJ ELECTRIC                                  | 61167               | Parks Contract Repair, Sep '22             | 100-355-720701 | 546.00    |
| 10/06/2022                      | RJ ELECTRIC                                  | 61188               | Parks Contract Repair, Sep '22             | 100-355-720701 | 228.00    |
| 10/06/2022                      | JCTEES.COM CORPORATION                       | 8378                | Heritage Day Expense, Sep '22              | 100-310-695531 | 689.19    |
| 10/06/2022                      | LABOR LAW POSTER SERVICE LLC                 | A13530053695        | Office Supplies, Community Center, 2023    | 100-310-620500 | 99.50     |
|                                 |                                              |                     |                                            |                |           |
| 10/06/2022                      | LABOY, PETER                                 | FRD-0281            | Refund, Facility Deposit, R #1034761.002   | 100-000-222000 | 500.00    |
|                                 |                                              |                     |                                            |                |           |
| 10/06/2022                      | GAMECRAFT BREWING                            | GC-3671             | Heritage Day Expense, Oct '22              | 100-310-695531 | 443.00    |
| 10/13/2022                      | ORANGE COUNTY REGISTER-FREEDOM CA. NEWSPAPER | 0000551441          | Legal Advertising, Sep '22                 | 100-155-624001 | 191.08    |
|                                 |                                              |                     |                                            |                |           |
| 10/13/2022                      | RALPHS GROCERY COMPANY                       | 0922133217_22929424 | Operating Supplies, Comm Svcs, Sep '22     | 100-310-622005 | 78.12     |
|                                 |                                              |                     |                                            |                |           |
| 10/13/2022                      | COX COMMUNICATION                            | 092822              | WiFi, Community Center, Sep '22            | 100-195-630000 | 214.25    |
| 10/13/2022                      | MOULTON NIGUEL WATER DISTRICT                | 092922              | Water Usage, Public Works, Sep '22         | 100-355-635000 | 33,854.74 |
| 10/13/2022                      | IRVINE RANCH WATER DISTRICT                  | 100322              | Water Usage, Public Services, Sep '22      | 100-355-635000 | 226.22    |
| 10/13/2022                      | LAGUNA TERRACE BEAUTIFICATION TEAM           | 100622              | Heritage Day, Oct '22                      | 100-310-695531 | 517.00    |
|                                 |                                              |                     |                                            |                |           |
| 10/13/2022                      | AU-YEUNG, MELISSA                            | 101022              | Reimbursement, Operating Supplies          | 100-195-622000 | 67.63     |
| 10/13/2022                      | KNIGHT, LORNA                                | 101022              | Contract Instructor Services, Yoga         | 100-310-721500 | 952.00    |
| 10/13/2022                      | CHRISTINA ELKINS                             | 101122              | Contract Instructor Services, Dance        | 100-310-721500 | 2,058.00  |
| 10/13/2022                      | BEE MAN, THE                                 | 120165              | Bee Removal, Public Services, Oct '22      | 100-355-720701 | 695.00    |
| 10/13/2022                      | BRINKS, INCORPORATED                         | 12077834            | Courier Fee, Armored Transport, Oct '22    | 100-155-625000 | 217.34    |
|                                 |                                              |                     |                                            |                |           |
| 10/13/2022                      | ANDERSON PENNA PARTNERS, INC.                | 129203              | Inspection Services, Sep '22               | 100-356-700255 | 2,600.00  |

Attachment: Payables Detail Report - October 25, 2022 (2994 : Warrant Register, October 25, 2022)

## Payables Detail Report

Payment Dates: 09/30/2022 - 10/13/2022

| Payment Date | Vendor Name                        | Payable Number        | Description (Payable)                             | Account Number | Amount    |
|--------------|------------------------------------|-----------------------|---------------------------------------------------|----------------|-----------|
| 10/13/2022   | TPX COMMUNICATIONS                 | 161782957-0           | Communications Expense, Oct '22                   | 100-195-630000 | 684.52    |
| 10/13/2022   | EWING IRRIGATION PRODUCTS, INC     | 17838353              | Rooted Campaign Event, Sep '22                    | 100-310-695500 | 164.81    |
| 10/13/2022   | WEST COAST ARBORISTS, INC.         | 190561                | Tree Trimming Services, Sep '22                   | 100-355-720702 | 26,756.00 |
| 10/13/2022   | IRV SEAVER MOTORCYCLES             | 20222094              | Motorcycle Maintenance, Police Svcs, Sep '22      | 100-420-646100 | 992.60    |
| 10/13/2022   | COMPLETE OFFICE OF CALIFORNIA      | 2705737-0             | Computer Supplies, Oct '22                        | 100-195-621000 | 12.22     |
| 10/13/2022   | BUCKNAM INFRASTRUCTURE GROUP, INC. | 361-01.30             | Computer Consulting Services, Sep                 | 100-195-700090 | 1,127.50  |
| 10/13/2022   | CROSTOWN ELECTRICAL AND DATA, INC. | 4172 - 4229           | Traffic Signal Maintenance, Sep '22               | 100-356-720420 | 13,540.83 |
| 10/13/2022   | SPARKLETTES                        | 4228482 100722        | Operating Supplies, Oct '22                       | 100-195-622000 | 133.36    |
| 10/13/2022   | RICHARD FISHER ASSOCIATES          | 4516                  | Professional Services, CIP #237, Sep '22          | 100-600-790600 | 4,972.00  |
| 10/13/2022   | CANON SOLUTIONS AMERICA            | 6001952129            | Copier Usage, Community Services, Sep '22         | 100-195-641200 | 75.74     |
| 10/13/2022   | RJ ELECTRIC                        | 61136                 | Heritage Day, Oct '22                             | 100-310-695531 | 2,000.00  |
| 10/13/2022   | RJ ELECTRIC                        | 61189                 | Parks Contract Repair, Sep '22                    | 100-355-720701 | 578.50    |
| 10/13/2022   | CHARLES ABBOTT ASSOCIATES, INC     | 64781-B PARKS LANDSCA | Parks Contract Repair, Sep '22                    | 100-355-720701 | 1,125.00  |
| 10/13/2022   | JAMEY CLARK, INC.                  | 73388                 | Park Repairs, Public Services, Oct '22            | 100-355-720701 | 321.00    |
| 10/13/2022   | ALL CITY MANAGEMENT, INC.          | 80153                 | Crossing Guard Services, 9/18/22 - 10/1/22        | 100-420-720822 | 7,274.40  |
| 10/13/2022   | WEX BANK                           | 83879185 COMDEV       | Vehicle Fuel, Sep '22                             | 100-225-613100 | 257.50    |
| 10/13/2022   | WEX BANK                           | 83879272 PUBWKS       | Vehicle Fuel, Sep '22                             | 100-356-613100 | 591.08    |
| 10/13/2022   | WEX BANK                           | 83879272 PUBWKS       | Vehicle Fuel, Sep '22                             | 100-356-646100 | 39.99     |
| 10/13/2022   | WEX BANK                           | 83879310 POLSVCS      | Vehicle Fuel, Sep '22                             | 100-420-613100 | 197.09    |
| 10/13/2022   | THOMSON REUTERS - WEST             | 847096337             | Subscription, City Clerk, Oct '22                 | 100-155-626000 | 293.94    |
| 10/13/2022   | MOBILE MINI, INC.                  | 9015382246            | Storage Rental, Community Center, 9/28 - 10/25/22 | 100-310-641000 | 225.71    |
| 10/13/2022   | VITUITY - URGENT CARE SERVICES,    | 987K20515             | Recruitment, Oct '22                              | 100-195-617000 | 100.00    |
| 10/13/2022   | VERIZON WIRELESS                   | 9916704568            | Communication Expense, Sep '22                    | 100-195-630000 | 1,696.11  |
| 10/13/2022   | NEIGHBORHOOD ROOFING               | CD-0896-BLDR-1377-202 | Refund, C&D Deposit, REC-008443-2022              | 100-000-227001 | 630.00    |
| 10/13/2022   | NEIGHBORHOOD ROOFING               | CD-0897-BLDR-1309-202 | Refund, C&D Deposit, REC-008025-2022              | 100-000-227001 | 600.00    |
| 10/13/2022   | NEIGHBORHOOD ROOFING               | CD-0898-BLDR-1307-202 | Refund, C&D Deposit, REC-008013-2022              | 100-000-227001 | 690.00    |
| 10/13/2022   | NEIGHBORHOOD ROOFING               | CD-0899-BLDR-1326-202 | Refund, C&D Deposit, REC-008075-2022              | 100-000-227001 | 690.00    |
| 10/13/2022   | HOLMES, RANDY                      | CD-0900-BLDR-1350-202 | Refund, C&D Deposit, REC-008249-2022              | 100-000-227001 | 240.00    |
| 10/13/2022   | HOLMES, RANDY                      | CD-0901-BLDR-1362-202 | Refund, C&D Deposit, REC-008340-2022              | 100-000-227001 | 870.00    |
| 10/13/2022   | MITCHELL GENERAL CONTRACTORS, INC. | CD-0902-BLDC-0138-202 | Refund, C&D Deposit, REC-006696-2022              | 100-000-227001 | 1,087.50  |
| 10/13/2022   | STUDEBAKER, JAMES                  | FRD-0282              | Refund, Facility Deposit, R #1035089.002          | 100-000-222000 | 500.00    |
| 10/13/2022   | SANCHEZ, PATRICIA                  | FRD-0283              | Refund, Facility Deposit, R #1034795.002          | 100-000-222000 | 500.00    |
| 10/13/2022   | SANCHEZ, PATRICIA                  | FRD-0283              | Refund, Facility Deposit, R #1034795.002          | 100-000-451100 | (165.00)  |
| 10/13/2022   | OFFICE SOLUTIONS                   | I-02051417            | Office Supplies, Oct '22                          | 100-195-620000 | 319.40    |
| 10/13/2022   | OFFICE SOLUTIONS                   | I-02053566            | Operating Supplies, Oct '22                       | 100-195-622000 | 195.34    |
| 10/13/2022   | SOUTHERN COMPUTER WAREHOUSE        | INV00753271           | Software License, Sep '22                         | 100-195-720050 | 4,796.72  |
| 10/13/2022   | WEST COAST TURF                    | INV033541             | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 6,048.00  |
| 10/13/2022   | WEST COAST TURF                    | INV033542             | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 6,048.00  |
| 10/13/2022   | WEST COAST TURF                    | INV033543             | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 6,048.00  |
| 10/13/2022   | WEST COAST TURF                    | INV033544             | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 6,048.00  |
| 10/13/2022   | WEST COAST TURF                    | INV033545             | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 6,048.00  |
| 10/13/2022   | WEST COAST TURF                    | INV035811             | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 6,048.00  |
| 10/13/2022   | WEST COAST TURF                    | INV035812             | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 6,048.00  |
| 10/13/2022   | WEST COAST TURF                    | INV035813             | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 6,048.00  |
| 10/13/2022   | WEST COAST TURF                    | INV035814             | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 6,048.00  |

Attachment: Payables Detail Report - October 25, 2022 (2994 : Warrant Register, October 25, 2022)

## Payables Detail Report

Payment Dates: 09/30/2022 - 10/13/2022

| Payment Date                                    | Vendor Name                                      | Payable Number | Description (Payable)                             | Account Number | Amount       |
|-------------------------------------------------|--------------------------------------------------|----------------|---------------------------------------------------|----------------|--------------|
| 10/13/2022                                      | WEST COAST TURF                                  | INV035815      | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035832      | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035833      | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035834      | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035839      | Professional Svcs, CIP #238, Jul '22              | 100-600-790600 | 4,284.00     |
| 10/13/2022                                      | PARKING VIOLATIONS OC                            | SEP 22         | Parking Fee Surcharge, Sep '22                    | 100-420-720823 | 1,698.50     |
| 10/13/2022                                      | TREASURER-TAX COLLECTOR                          |                |                                                   |                |              |
| 10/13/2022                                      | FINGERPRINT ID (AFIS) LAW ENF. -                 | SH 63203       | Fingerprint ID System Charges, Oct                | 100-420-720835 | 1,188.00     |
| 10/13/2022                                      | COUNTY OF ORANGE                                 |                |                                                   |                |              |
| 10/13/2022                                      | OCSD LAW ENFORCEMENT                             | SH 63227       | Law Enforcement Services, Oct '22                 | 100-420-720800 | 795,274.66   |
| 10/13/2022                                      | CONTRACT, OC TREASURER-TAX                       |                |                                                   |                |              |
| 10/13/2022                                      | PACIFIC SYMPHONY                                 | SOTG101522     | Special Events, Symphony on the Go, Oct '22       | 100-310-695500 | 2,000.00     |
| Fund 100 - GENERAL FUND Total:                  |                                                  |                |                                                   |                | 1,069,952.08 |
| <b>Fund: 212 - MEASURE M</b>                    |                                                  |                |                                                   |                |              |
| 10/06/2022                                      | UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA | 22-2301053     | Street Maintenance, Sep '22                       | 212-355-720400 | 37.77        |
| 10/06/2022                                      | UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA | 920220383      | Street Maintenance, Sep '22                       | 212-355-720400 | 125.50       |
| Fund 212 - MEASURE M Total:                     |                                                  |                |                                                   |                | 163.27       |
| <b>Fund: 307 - C &amp; D FORFEITED DEPOSITS</b> |                                                  |                |                                                   |                |              |
| 10/13/2022                                      | ECONOMICS, INC.                                  | 2017-2018.63   | Professional Services, Recycling Program, Sep '22 | 307-355-700000 | 8,949.16     |
| Fund 307 - C & D FORFEITED DEPOSITS Total:      |                                                  |                |                                                   |                | 8,949.16     |
| <b>Fund: 600 - CAPITAL IMPROVEMENT PROJECT</b>  |                                                  |                |                                                   |                |              |
| 10/13/2022                                      | RICHARD FISHER ASSOCIATES                        | 4516           | Professional Services, CIP #237, Sep '22          | 600-000-490100 | (4,972.00)   |
| 10/13/2022                                      | RICHARD FISHER ASSOCIATES                        | 4516           | Professional Services, CIP #237, Sep '22          | 600-252-950237 | 4,972.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV033541      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (6,048.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV033541      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV033542      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (6,048.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV033542      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV033543      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (6,048.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV033543      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV033544      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (6,048.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV033544      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV033545      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (6,048.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV033545      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035811      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (6,048.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035811      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035812      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (6,048.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035812      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035813      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (6,048.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035813      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035814      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (6,048.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035814      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035815      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (6,048.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035815      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035832      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (6,048.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035832      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035833      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (6,048.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035833      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035834      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (6,048.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035834      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 6,048.00     |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035839      | Professional Svcs, CIP #238, Jul '22              | 600-000-490100 | (4,284.00)   |
| 10/13/2022                                      | WEST COAST TURF                                  | INV035839      | Professional Svcs, CIP #238, Jul '22              | 600-252-950238 | 4,284.00     |
| Fund 600 - CAPITAL IMPROVEMENT PROJECT Total:   |                                                  |                |                                                   |                | -            |
| Grand Total:                                    |                                                  |                |                                                   |                | 1,079,064.51 |

Attachment: Payables Detail Report - October 25, 2022 (2994 : Warrant Register, October 25, 2022)

## Report Summary

## Fund Summary

| Fund                              | Expense Amount      | Payment Amount      |
|-----------------------------------|---------------------|---------------------|
| 100 - GENERAL FUND                | 1,069,952.08        | 1,069,952.08        |
| 212 - MEASURE M                   | 163.27              | 163.27              |
| 307 - C & D FORFEITED DEPOSITS    | 8,949.16            | 8,949.16            |
| 600 - CAPITAL IMPROVEMENT PROJECT | -                   | -                   |
| <b>Grand Total:</b>               | <b>1,079,064.51</b> | <b>1,079,064.51</b> |

## Account Summary

| Account Number | Account Name                   | Expense Amount | Payment Amount |
|----------------|--------------------------------|----------------|----------------|
| 100-000-201001 | Accounts Payable - Retention   | 17,909.25      | 17,909.25      |
| 100-000-222000 | Refundable Deposits            | 1,500.00       | 1,500.00       |
| 100-000-227001 | SecurityDeposit-WasteRecycling | 4,807.50       | 4,807.50       |
| 100-000-451100 | Recreation Fees-Reservation    | (165.00)       | (165.00)       |
| 100-155-622000 | Operating Supplies             | 295.50         | 295.50         |
| 100-155-624001 | Advertising - Legal            | 191.08         | 191.08         |
| 100-155-625000 | Postage & Delivery             | 217.34         | 217.34         |
| 100-155-626000 | Subscriptions & Books          | 293.94         | 293.94         |
| 100-155-700030 | Professional Svcs- City Clerk  | 155.85         | 155.85         |
| 100-195-617000 | Recruitment                    | 100.00         | 100.00         |
| 100-195-620000 | Office Supplies                | 384.63         | 384.63         |
| 100-195-621000 | Computer Supplies              | 12.22          | 12.22          |
| 100-195-622000 | Operating Supplies             | 396.33         | 396.33         |
| 100-195-625000 | Postage & Delivery             | 1,042.99       | 1,042.99       |
| 100-195-630000 | Telephone & Communication      | 3,256.05       | 3,256.05       |
| 100-195-641200 | Rent/Lease - Copier            | 75.74          | 75.74          |
| 100-195-700090 | Computer Consulting Services   | 1,127.50       | 1,127.50       |
| 100-195-720050 | Contract Serv-Software Support | 9,650.24       | 9,650.24       |
| 100-225-613100 | Vehicle-Fuel                   | 257.50         | 257.50         |
| 100-310-620500 | Office Supplies - Comm Ctr     | 99.50          | 99.50          |
| 100-310-622005 | Operating Supplies Comm Ctr    | 78.12          | 78.12          |
| 100-310-641000 | Rent/Lease - Equipment         | 225.71         | 225.71         |
| 100-310-645500 | Maint&Repair-Facility Comm Ctr | 270.00         | 270.00         |
| 100-310-695500 | Special Events-Program Service | 5,205.33       | 5,205.33       |
| 100-310-695508 | July Fourth Celebration        | 2,600.00       | 2,600.00       |
| 100-310-695530 | City Anniversary Program       | 283.38         | 283.38         |
| 100-310-695531 | Heritage Day                   | 4,425.35       | 4,425.35       |
| 100-310-721500 | Contract Services-Program Svce | 3,010.00       | 3,010.00       |
| 100-355-635000 | Utilities - Water              | 55,949.68      | 55,949.68      |
| 100-355-720500 | Graffiti Removal               | 8,000.00       | 8,000.00       |
| 100-355-720701 | Parks Contract Repair          | 3,493.50       | 3,493.50       |
| 100-355-720702 | Tree Maintenance               | 26,756.00      | 26,756.00      |
| 100-356-613100 | MOE Vehicle Fuel               | 591.08         | 591.08         |
| 100-356-646100 | MOE Maintenance & Repairs      | 39.99          | 39.99          |
| 100-356-700100 | MOE City Engineer Services     | 3,125.00       | 3,125.00       |
| 100-356-700255 | MOE Improvement Inspection     | 2,600.00       | 2,600.00       |
| 100-356-720420 | MOE Traffic Signal Maintenance | 17,185.53      | 17,185.53      |
| 100-420-613100 | Vehicle-Fuel                   | 197.09         | 197.09         |
| 100-420-646100 | Maint & Repairs - Vehicles     | 992.60         | 992.60         |
| 100-420-720800 | General Law Enforcement        | 795,274.66     | 795,274.66     |
| 100-420-720822 | Crossing Guard Services        | 7,274.40       | 7,274.40       |
| 100-420-720823 | Parking Citation Processing    | 1,698.50       | 1,698.50       |
| 100-420-720835 | Fingerprint Identification Svc | 1,188.00       | 1,188.00       |
| 100-600-790600 | Transfers Out - Capital Imprv  | 87,880.00      | 87,880.00      |
| 212-355-720400 | Street Maintenance             | 163.27         | 163.27         |
| 307-355-700000 | Professional Services          | 8,949.16       | 8,949.16       |
| 600-000-490100 | Transfer In- General Fund      | (87,880.00)    | (87,880.00)    |
| 600-252-950237 | Parks Refurbishment Project    | 4,972.00       | 4,972.00       |
| 600-252-950238 | CommunityCtr&SportsFieldReno   | 82,908.00      | 82,908.00      |

Attachment: Payables Detail Report - October 25, 2022 (2994 : Warrant Register, October 25, 2022)

## Payables Detail Report

Payment Dates: 09/30/2022 - 10/13/2022

## Account Summary

| Account Number | Account Name                 | Expense Amount      | Payment Amount      |
|----------------|------------------------------|---------------------|---------------------|
| 600-252-950238 | CommunityCtr&SportsFieldReno |                     |                     |
|                | <b>Grand Total:</b>          | <u>1,079,064.51</u> | <u>1,079,064.51</u> |

## Project Account Summary

| Project Account Key | Expense Amount      | Payment Amount      |
|---------------------|---------------------|---------------------|
| **None**            | <u>1,079,064.51</u> | <u>1,079,064.51</u> |
| <b>Grand Total:</b> | <u>1,079,064.51</u> | <u>1,079,064.51</u> |

Attachment: Payables Detail Report - October 25, 2022 (2994 : Warrant Register, October 25, 2022)



# City of Laguna Hills

## City Council/Planning Agency

### Staff Report

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**DATE:** October 25, 2022

**TO:** Mayor and Council Members

**FROM:** Jarad Hildenbrand  
City Manager

**ISSUE:** Proposed Amendment No. 3 to the Consulting Services Agreement with Eco/Nomics, Inc., for Continued Solid Waste and Recycling Consulting Services

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**RECOMMENDATION:** That the City Council: 1) Waive formal competitive bidding requirements and procedures set forth in the City of Laguna Hills Municipal Code (LHMC) Section 3-08.150 pursuant to the exceptions set forth in LHMC Sections 3-08.110(I) and (J), for approval of the proposed Amendment No. 3 to the Consulting Services Agreement for Solid Waste and Recycling Consulting Services with Eco/Nomics, Inc.; 2) Approve proposed Amendment No. 3 to the Consulting Services Agreement with Eco/Nomics, Inc., increasing the maximum contract amount by \$150,000 from \$578,000 to \$728,000; and 3) Authorize the Mayor or the Mayor Pro Tempore to sign the proposed Amendment No. 3.

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#### **SUMMARY:**

The Consulting Services Agreement for Solid Waste Collection, Contracting and Recycling Consulting Services with Eco/Nomics ("Agreement") is set to expire on June 30, 2023. Due to a tremendous amount of work to implement and support the State's organic waste recycling mandates (i.e. SB 1383), staff estimates that payment expenditures for Eco/Nomics' services will be over the Agreement's Maximum Contract Amount ("MCA") by October 2022, well before the June 30, 2023, Agreement termination date (see Table 1. below). Consequently, Eco/Nomics consulting services under the Agreement will need to stop unless the Agreement is amended. Staff is requesting that the MCA be increased by \$150,000 from \$578,000 to \$728,000 in order

Eco/Nomics Amendment No. 3

October 25, 2022

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for Eco/Nomics to continue forward with work efforts that are currently underway for the remainder of the Agreement term. This will require the Council's approval and execution of the proposed Amendment No. 3 to the Agreement to increase the MCA by \$150,000 (see Attachment 1). There is no change to the Agreement's termination date which will remain as June 30, 2023. In early spring of next year, staff plans on conducting a competitive procurement process for solid waste and recycling consulting services under a multi-year contract. After a consulting firm is selected and awarded a contract by the Council, consulting services under the new contract will commence on July 1, 2023.

Additionally, Eco/Nomics is requesting an update to assigned consultants for the Agreement for the remainder of the Agreement term per their letter dated October 4, 2022 (letter is included as Attachment 1 to the proposed Amendment No. 3). The updates include the addition of one new employee and changes to consultants' titles and responsibilities. The hourly rates for the consulting positions, however, have not changed since the inception of the Agreement in 2016. The 2016 professional hourly rates will remain fixed and unchanged.

Staff further recommends that the City Council make findings and declare that it is appropriate to waive provisions of the Laguna Hills Municipal Code ("LHMC") Procurement Code Section 3-08.150 in order to approve and execute the proposed Amendment No. 3. The consulting services provided by Eco/Nomics are essential for uninterrupted and continued support to staff with the implementation of recycling programs and outreach as required under the recent Amendment No. 2 to CR&R's Franchise Agreement ("Franchise Agreement") and by the State. Eco/Nomics continued guidance and support through the numerous regulations and reporting requirements imposed by CalRecycle for the remainder of the Agreement term is very desirable for staff.

The Agreement, Amendment No. 1 to the Agreement, and Amendment No. 2 to the Agreement are attached to this report for reference.

#### **BACKGROUND:**

Staff issued an RFP and completed a formal competitive selection process in 2016 where Eco/Nomics was identified as the most qualified firm. On June 14, 2016, the City entered into the Agreement with Eco/Nomics. The Agreement called for consulting services to be provided during an initial three (3) year term ("Initial Term") ending June 30, 2019. On June 11, 2019, the City Council approved and entered into Amendment No. 1 to the

## Eco/Nomics Amendment No. 3

October 25, 2022

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Agreement for the purpose of extending the Initial Term of the Agreement for an additional two (2) year period ("Renewal Option") under the same terms and conditions set forth in the Agreement. Amendment No. 1 also increased the Maximum Contract Amount set forth in Section 2.1 of the Agreement by \$80,000, from \$250,000 to \$330,000.

Amendment No. 2 to the Agreement, which extended the Agreement for an additional two (2) years through June 30, 2023, and increased the maximum contract amount by \$248,000, from \$330,000 to \$578,000, was approved by the Council on February 23, 2021. The Council waived the formal competitive bidding requirements and procedures set forth in the LHMC and approved and entered into Amendment No. 2. The reason for waiving the competitive bid requirements at that time was the negative impact of COVID-19 pandemic on staff and the consultant on completing project assignments related to CalRecycle's diversion and recycling mandates.

Staff is now recommending another amendment to the Agreement to increase the MCA by \$150,000. Staff recommends that the City Council approve the attached proposed Amendment No. 3 to the Agreement and authorize the Mayor to execute the proposed amendment (see Attachment 1). As illustrated in the table below, staff estimates that the MCA of \$578,000 will be reached this month which necessitates an increase to that amount to ensure for continued and uninterrupted consulting service support for the remainder of the Agreement term (or until June 30, 2023).

| <b>Table 1. EcoNomics Maximum Contract Amount (MCA)<br/>&amp; Estimated Payments</b> |                                      |                               |                                     |
|--------------------------------------------------------------------------------------|--------------------------------------|-------------------------------|-------------------------------------|
| Agreement MCA is \$578,000                                                           |                                      |                               |                                     |
|                                                                                      | <b><u>Estimated<br/>Payments</u></b> | <b><u>MCA<br/>Balance</u></b> | <b><u>(Over)/<br/>Under MCA</u></b> |
| EcoNomics total payments ending Aug. 2022                                            |                                      | 563,922                       |                                     |
| September 2022                                                                       | 8,000                                | 571,922                       | 6,078                               |
| October 2022                                                                         | 8,000                                | 579,922                       | (1,922)                             |
| June 30, 2023 (Agreement Expiration Date)                                            |                                      |                               |                                     |

Typically, when a contract for professional services exceeds the amount of \$50,000, the City prepares a competitive selection process and issues a request for proposals (RFP) inviting qualified firms to submit proposals to provide consulting services. In this case,

staff is requesting an increase of \$150,000 to the Agreement's MCA. However, it is staff's opinion that such a formal competitive procurement process at this time is not in the City's best interest as it would result in an interruption to the necessary, ongoing recycling and solid waste franchise consulting services contracted for under the Agreement. This would negatively impact the City's ability to timely implement various CalRecycle regulations under CR&R's recently amended Franchise Agreement—and as mandated by State law—and most likely will not result in any significant cost savings to the City. Thus, the City Council is requested to waive the formal competitive bidding requirements set forth in LHMC Section 3-08.150, pursuant to the exceptions set forth in LHMC Sections 3-08.110 (I) and (J). For each of the exceptions, staff has provided justifications below for waiving the requirements of LHMC 3-08.150.

LHMC 3-08.110(I)

*When an unusual or unique situation exists, in that due to experience, specialized qualifications, particular expertise, performance history, and/or reputation, a particular company, vendor, consultant, or contractor is uniquely qualified for a particular task or project, which makes application of the requirements for competitive solicitation under this chapter contrary to either the intended purpose of the project or the public interest.*

Justification: Eco/Nomics assisted staff with the update to the LHMC Chapter 5-32 (Solid Waste and Recycling) which incorporated the regulations of SB 1383. Moreover, Eco/Nomics was instrumental in conducting the recent contract negotiations with CR&R to account for SB 1383 requirements such as the implementation of a residential food scraps recycling program. These negotiations resulted in Amendment No. 2 to CR&R's Franchise Agreement which was approved by Council on June 14, 2022, and was effectuated on July 1, 2022.

Eco/Nomics' particular expertise with the terms and conditions of the Franchise Agreement, and Chapter 5-32 of the LHMC, makes them uniquely qualified to continue consulting work for the remainder of the Agreement term to ensure for successful program implementation, education and outreach, and program monitoring and enforcement. Currently, Eco/Nomics is assisting the City with its monitoring of CR&R's roll-out of residential and multi-family organic waste recycling programs which began on July 1 of this year. The Franchise Agreement specifies certain delivery dates and programs are phased in throughout the remainder of this calendar year. Additionally, Eco/Nomic's developed a thirteen (13) step implementation process with CR&R, which is incorporated into the

Franchise Agreement. This implementation process will need to be followed and monitored to ensure 100% SB 1383 compliance with commercial and multi-family diversion programs throughout the term of the Agreement. Staff needs help with this work effort which will take several months.

Eco/Nomics is also in the process of developing the required reporting forms for compliance with SB 1383 such as organic waiver forms, and will also need to complete the comprehensive annual report that is submitted to CalRecycle. See Table 2 below for a summary of EcoNomics' work efforts for the month of August 2022.

At this juncture, staff believes that it is not in the City's best interest to conduct a competitive bid process for a solid waste and recycling consultant. This will interrupt the City's progress, already underway, to implement the programs and monitoring requirements of the Franchise Agreement, which when successfully implemented, will ensure the City's compliance with CalRecycle's recycling mandates.

LHMC 3-08.110(J)

*When, in the opinion of the City Council, it is determined that compliance with the procurement policies, procedures and/or requirements is not in the best interest of the city.*

Justification: Staff believes that the cost for solid waste and recycling consulting services will increase if a competitive bid process is initiated at this time. Since 2016, Eco/Nomics has not increased its hourly rates for service and a rate increase is not contemplated in Amendment No. 3.

It is in the City's best interest to secure Eco/Nomics' current hourly rates for consulting services for the remainder of the Agreement term through June 30, 2023.

Eco/Nomics assistance is very helpful to City staff because the City does not have the personnel to complete all the required tasks to ensure compliance with State mandated recycling requirements. Also, Eco/Nomics' technical expertise in regards to solid waste and recycling matters is of great assistance to City staff. The following table (Table 2) provides a summary of the tasks that Eco/Nomics completed and the hours worked for the month of August 2022. It is important to note that work on the next 10-year franchise agreement procurement under the Memorandum of Understanding (MOU)

with Lake Forest is not part of scope of work of this Agreement. Under the MOU, Lake Forest is the lead agency and has a separate agreement with Eco/Nomics for consulting services for the preparation of procurement documents for the next 10-year franchise agreement.

| <b>Table 2. Eco/Nomics' Tasks and Hours for August 2022</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <b><u>Task</u></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b><u>Hours</u></b> |
| <b>1. CalRecycle Support and Franchise Administration Assistance</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 28                  |
| <ul style="list-style-type: none"> <li>• Work on CalRecycle Annual Report to document all City diversion efforts and disposal (71 paged report that was submitted to State on 9/29/2022).</li> <li>• Compile CalRecycle buy back center data request for City.</li> <li>• Respond to questions on City's Construction and Demolition (C&amp;D) program.</li> <li>• Develop a SB 1383 waiver form.</li> <li>• OCW&amp;R Quarterly meeting attendance.</li> <li>• Review of Franchise agreement and Amendment No. 2 requirements.</li> </ul>                                                                                                                                                                                                                                                                                                                                                            |                     |
| <b>2. Outreach, Education, Monitoring</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 80                  |
| <ul style="list-style-type: none"> <li>• Compile list of accounts to be audited for general monitoring and organic program implementation.</li> <li>• Perform site visits to monitor existing programs. Site audits included the following actions: identify enclosure(s), identify organic, trash, and recycling containers, verify that bins on site match CR&amp;R commercial list, verify the quality of the material, note contamination, and photograph enclosures.</li> <li>• Engage with commercial business staff for organic program implementation, to provide organic program training, provide flyers, and to discuss service issues</li> <li>• Assist City with Organic Waste Virtual Town Hall meetings.</li> <li>• Preparation for Edible Food Recovery Organizations site inspections.</li> <li>• Schedule and conduct site visit for Edible Food Recovery Organizations.</li> </ul> |                     |
| <b>3. Meetings and Oversight</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 11                  |
| <ul style="list-style-type: none"> <li>• Senior review and oversight of all projects (phone calls/emails with City staff)</li> <li>• Prepare and conduct monthly status meetings with City Staff and CR&amp;R.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>119</b>          |

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**FISCAL IMPACT:**

Staff recommends that the Maximum Contract Amount be increased by \$150,000 from \$578,000 to \$728,000. Monies paid to Eco/Nomics have come from the City's recycling special revenue funds, such as funds received from CR&R. For instance, per the Franchise Agreement, CR&R is to pay the City in the amount of \$150,000 for 3<sup>rd</sup> party consulting services support this fiscal year and another \$150,000 next fiscal year. There is no anticipated general fund impact for Eco/Nomics' consulting services at this time.

**ATTACHMENTS:**

- Attachment 1 - Proposed Amendment No. 3 to EcoNomics Agreement, 2022
- Attachment 2 - Amendment No. 2 to EcoNomics Agreement, 2021
- Attachment 3 - Amendment No. 1 to EcoNomics Agreement, 2019
- Attachment 4 - EcoNomics Agreement, 2016

## ATTACHMENT 1

Proposed Amendment No. 3  
to Consulting Services Agreement

**AMENDMENT NO. 3**  
**TO CONSULTING SERVICES AGREEMENT**  
**Eco/Nomics, Inc., dba Ecal/Nomics, Inc.**  
*(Solid Waste and Recycling Consulting Services)*

THIS THIRD AMENDMENT to the Consulting Services Agreement with ECO/NOMICS, INC., (the “Amendment” or “Amendment No. 3”) is made and entered into to be effective the 25<sup>th</sup> day of October 2022, by and between the CITY OF LAGUNA HILLS, a municipal corporation organized and existing under the laws of the State of California (hereinafter referred to as the “City”), and ECO/NOMICS, INC., a Colorado corporation, doing business in the State of California as ECAL/NOMICS, INC., (hereinafter referred to as “Consultant”). City and Consultant are sometimes hereinafter individually referred to as “Party” and are hereinafter collectively referred to as “Parties.”

**RECITALS**

A. City and Consultant previously entered into a Consulting Services Agreement for the provision of certain solid waste and recycling consulting services to be performed for the Project, as defined in the Agreement, on as as-needed, on-call basis, which agreement was originally made and entered into on June 14, 2016 (the “Agreement”) and which may be duly amended, in writing, from time to time by the Parties. City does not have the personnel or technical expertise necessary to perform the work and services contracted for under the Agreement.

B. Sections 1.8 (Additional Services), 2.3 (Changes in Scope), and 10.2 (Amendment) of the Agreement provide that the Agreement may be amended in writing at any time by mutual consent of the Parties. Section 2.3 provides that the Parties may enter into an amendment to provide for additional services not included in the Agreement. Additionally, Section 1.8 (Additional Services) of the Agreement specifically provides that the City shall have the right at any time during the performance of the Services, without invalidating the Agreement, to order extra work beyond that specified in the Scope of Services or to make changes by altering, adding to, or deducting from such Work.

C. The initial term of the Agreement was scheduled to expire on June 30, 2019 (“Initial Term”), by operation of its own terms, unless extended by mutual written agreement of the Parties. Section 3.4 (Term) provides that the City had the option, at its sole discretion, to renew and extend the Initial Term of the Agreement for an additional two (2) year term (“Renewal Term”). On June 11, 2019, the Parties approved and entered into Amendment No. 1 to the Agreement for the purpose of extending the Term (“Initial Term”) of the Agreement for an additional two (2) year period (“Renewal Option”) in order to provide for continued, uninterrupted solid waste and recycling consulting services on as as-needed, on-call basis for the Project, as defined in the Agreement, under the same terms and conditions set forth in the Agreement, but with an updated listing of assigned and available consultants and same corresponding hourly rates. Amendment No. 1 also increased the Maximum Contract Amount set forth in Section 2.1 of the Agreement by \$80,000, from \$250,000 to \$330,000.

D. Thereafter, unless amended by mutual agreement of the Parties, the Term of the Agreement was scheduled to expire on June 30, 2021 by operation of its own terms.

E. On March 4, 2020, the Governor declared a state of emergency in California in response to the outbreak of the novel COVID-19 virus, and by March 11, 2020, the World Health Organization designated the outbreak of the virus as a pandemic. Subsequently on March 18, 2020, the City proclaimed a local emergency in order for the City to promptly address, prepare for, and take actions necessary to protect the public health, safety, and welfare within the City in response to the anticipated spread of the novel COVID-19 virus. In light of the COVID-19 pandemic, the declared local emergency, the statewide emergency declaration, the full and partial closures of City Hall, modified work schedules, work-from-home health orders, and reduced service levels, the City did not wish to rebid this contract or conduct bidder interviews at that time, and the Procurement Officer and City Council determined that such formal competitive procurement process at that time was not in the City's best interest as it would result in an interruption to the necessary, ongoing recycling and solid waste franchise consulting services contracted for under the Agreement, which could have negatively impacted City's ability to timely implement various CalRecycle regulations, as mandated by State law, and most likely would not have resulted in any significant cost savings to the City.

F. Based on emergency circumstances related to the COVID-19 pandemic, the City previously determined that there was a need to extend the term of the Agreement for two years in order to ensure continuity of these essential consulting services. The continuation of the level of services, under the same terms and conditions and at the same professional hourly rates, provided by the Agreement ensured the provision of continued cost-effective, uninterrupted solid waste and recycling consulting services on an as-needed, on-call basis.

G. Due to the COVID-19 pandemic and declared State and local emergencies which had been in effect since March 2020, as well as the negative impacts the ongoing pandemic had on Consultant's outreach efforts to businesses for the implementation of successful organic recycling programs, by way of correspondence from Consultant to City, dated January 18, 2021, Consultant previously requested that the City extend the term of the Agreement for an additional two (2) year period under the same terms and conditions and at the same professional hourly rates set forth in the Agreement, but with an updated listing of solid waste and recycling consultants, assigned and available personnel, and corresponding hourly rates from those established in Section 5.1 (Table of Fee Schedules) of Consultant's Proposal/Scope of Work, dated April 29, 2016, which is set forth in Exhibit "A" to the Agreement.

H. As such, on February 23, 2021, the Parties approved and entered into Amendment No. 2 to the Agreement for the purpose of extending the Term of the Agreement for an additional two (2) year period in order to provide for continued, uninterrupted solid waste and recycling consulting services on as as-needed, on-call basis for the Project, as defined in the Agreement, under the same terms and conditions set forth in the Agreement, but with an updated listing of assigned and available consultants and corresponding hourly rates. The additional two-year Term extension created the need to increase the Maximum Contract Amount set forth in Section 2.1 of the Agreement by \$248,000, from \$330,000 to \$578,000.

I. Unless amended by mutual agreement of the Parties, the Term of the Agreement is currently scheduled to expire on June 30, 2023 by operation of its own terms.

J. Due to a tremendous amount of work to implement and support the State's organic waste recycling mandates (i.e., SB 1383), the City estimates that payment expenditures for the Consultant's services will soon exceed the Maximum Contract Amount set forth in the Agreement within the next few months, well before the June 30, 2023 Agreement termination date. Consequently, the Consultant's services under the Agreement will need to stop prior to completion of the Project unless the Agreement is amended. As such, the City has determined that the Maximum Contract Amount set forth in the Agreement must now be increased by \$150,000 from \$578,000 to \$728,000 in order for the Consultant to continue to provide uninterrupted consulting services necessary to complete the Project for the remainder of the extended term of the Agreement.

K. Therefore, the Parties now desire to enter into this Amendment No. 3 to the Agreement for the purpose of increasing the Maximum Contract Amount by \$150,000 from \$578,000 to \$728,000 in order for the Consultant to continue to provide uninterrupted consulting services necessary to complete the Project during the remainder of the extended term of the Agreement under the same terms and conditions and at the same professional hourly rates as set forth in the Agreement, but with an updated listing of assigned and available consultants and corresponding hourly rates.

NOW THEREFORE, in consideration of the mutual promises and covenants herein, the Parties agree as follows:

### AGREEMENT

1. Amendment to Section 2.1, entitled "Maximum Contract Amount," of the Agreement. Section 2.1 of the Agreement is hereby amended and restated in its entirety to read as follows:

**2.1 Maximum Contract Amount.** For the Services and Work rendered pursuant to this Agreement, Consultant shall be compensated by City for the services performed, including authorized reimbursements, on a time and materials basis in accordance with the hourly rates and charges set forth in the Schedule of Compensation/Fees, which is attached hereto as Exhibit "A" and is incorporated herein by reference, but not exceeding the total maximum contract amount of Seven Hundred Twenty Eight Thousand Dollars (\$728,000.00) (hereinafter referred to as the "Maximum Contract Amount"), except as may be provided pursuant to Section 1.8 above. The method of compensation shall be as set forth in Exhibit "A". The maximum amount of City's payment obligation under this Agreement is the amount specified in this section.

2. Amendment to Section 5.1 (Table of Fee Schedules) of Consultant's Proposal/Scope of Work, dated April 29, 2016, Set Forth in Exhibit "A" to the Agreement. Pursuant to Consultant's October 4, 2022 letter request, Section 5.1 (Table of Fee Schedules) of Consultant's Proposal/Scope of Work, dated April 29, 2016, which is attached as Exhibit "A" to and incorporated by reference in the Agreement, as previously modified by Amendment

No. 2 to the Agreement, is hereby amended and restated in its entirety to reflect Consultant's updated listing of assigned and available consultants and corresponding hourly rates, a copy of which is attached hereto as **Attachment "1"** to this Amendment and is hereby incorporated by reference and made a part of the Agreement.

3. Amendment to Section 4.3, entitled "Prohibition Against Subcontracting or Assignments," of the Agreement. Section 4.3 of the Agreement is hereby amended in part to reflect the updated list of Consultant's personnel assigned to perform the Work and Services under the Agreement:

| <u>Name:</u>           | <u>Title:</u>                       |
|------------------------|-------------------------------------|
| William O'Toole        | President                           |
| Cerene St. John, J.D.  | Director                            |
| Trevor S. Blythe, MBA  | Vice President                      |
| Christy Hurlburt, MBA  | Vice President                      |
| Geiza Goulart da Silva | Vice President                      |
| Ian Beavan, MBA        | Program Implementation, Manager     |
| Kim Riley              | Program Implementation, Manager     |
| Kelly Cisneros, MS     | Program Implementation, Manager     |
| Valeria Ferrufino      | Program Implementation, Coordinator |

4. Full Force and Effect. This Amendment No. 3 is supplemental to the Agreement and is by reference made part of said Agreement. All of the terms, conditions, and provisions, thereof, unless specifically modified herein, shall continue in full force and effect. In the event of any conflict or inconsistency between the provisions of this Amendment and any provisions of the Agreement, the provisions of this Amendment shall in all respects govern and control.
5. Recitals. The above-referenced Recitals are hereby incorporated into this Amendment as though fully set forth herein and made part of the Agreement and each Party acknowledges and agrees that such Party is bound, for purposes of the Agreement, by the same.
6. Corporate Authority. Each of the undersigned represents and warrants that (i) the Party for which he/she is executing this Amendment is duly authorized and existing, (ii) he/she is duly authorized to execute and deliver this Amendment on behalf of the Party for which he/she is signing, (iii) by so executing this Amendment, the Party for which he/she is signing is formally bound to the provisions of this Amendment, and (iv) the entering into this Amendment does not violate any provision of any other agreement to which the Party for which he/she is signing is bound.

[SIGNATURES ON NEXT PAGE]

IN WITNESS WHEREOF, the Parties have executed and entered into this Amendment No. 3 as of the date first written above.

**"CITY"**

**City of Laguna Hills,**  
a California municipal corporation

\_\_\_\_\_  
DAVE WHEELER,  
Mayor

ATTEST:

\_\_\_\_\_  
(SEAL)  
JENNIFER LEE,  
City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
GREGORY E. SIMONIAN,  
City Attorney

**"CONSULTANT"**

**Eco/Nomics, Inc.,** a Colorado corporation,  
doing business in the State of California as  
Ecal/Nomics, Inc.

By:   
\_\_\_\_\_  
WILLIAM O'TOOLE, President

By:   
\_\_\_\_\_  
TREVOR S. BLYTHE, Secretary

## **ATTACHMENT "1"**

### **UPDATED LIST OF ASSIGNED AND AVAILABLE SOLID WASTE AND RECYCLING CONSULTANTS AND CORRESPONDING HOURLY RATES**

DATED: OCTOBER 4, 2022



October 4, 2022

David Reynolds  
Deputy City Manager  
City of Laguna Hills  
25555 Alicia Parkway  
Laguna Hills, California 92653

**RE: Request to Update Staffing**

Dear Mr. Reynolds:

EcoNomics, Inc. is pleased to submit our request to update our staffing to continue to meet your needs for solid waste and recycling consulting services. We have included an attachment to this letter with an updated listing of employees and their respective hourly rates. Please note, we have kept the hourly rates for all EcoNomics' staffing positions at the same levels as originally submitted in our 2016 proposal.

Please feel free to contact me directly at (805) 331-9591 or email [william@economicsinc.net](mailto:william@economicsinc.net) if you have any questions.

Best Regards,

A handwritten signature in blue ink, appearing to read "William O'Toole".

William O'Toole  
President  
EcoNomics, Inc.  
832 Camino del Mar, Suite 2  
Del Mar, California 92104

Attachment

**Table 1 Allocation/Fee Schedule**

| Name                                                                     | Position                            | Hourly Rate | Allocation | Areas of Expertise                                                                                                                                                                                           |
|--------------------------------------------------------------------------|-------------------------------------|-------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| William O'Toole                                                          | President                           | \$180       | 15%        | Project management, client interface, strategy, negotiations with haulers; contract management, council presentations, CalRecycle compliance, relevant industry analysis and projections                     |
| Cerene St. John, JD                                                      | Technical Consulting                | \$180       | 5%         | Assistance with hauler negotiations. Solid waste legislation tracking and interpretation                                                                                                                     |
| Trevor S. Blythe, MBA; Christy Hurlburt, MBA; Geiza Goulart da Silva, MS | Vice President                      | \$120       | 25%        | Oversight of field data quality, diversion program development and implementation, operations analysis, annual rate adjustment, performance monitoring, public outreach, SB 1383 strategy and implementation |
| Kim Riley; Ian Bevan, MBA; Kelly Cisneros, MS                            | Manager, Program Implementation     | \$90        | 25%        | Public outreach, educational programs, SB 1383 implementation, including edible food recovery and procurement, annual CalRecycle reporting                                                                   |
| Valeria Ferrufino                                                        | Coordinator, Program Implementation | \$80        | 30%        | SB 1383 generator identification, commercial list analysis, analysis, program implementation and monitoring,                                                                                                 |

**Updated Resumes of Assigned Staff****William O'Toole**

Mr. O'Toole will provide senior review and strategic direction on the project's implementation goals and results. Mr. O'Toole is a "hands-on visionary" working with cities and counties to anticipate legislative trends, shifts in secondary materials markets, and other factors that affect local collection contracts. He devises practical, cost effective methods for implementing diversion programs that benefit the customers and enable our clients to meet the requirements of both AB 939 and the evolving requirements of AB 341, AB 1826 and SB 1383 for now and over the course of their new collection contracts.

He founded EcoNomics, Inc. in 1977 and has 40+ years of experience in the recycling and solid waste industry. As one of the early pioneers in the recycling industry he worked to implement some of the first curbside recycling programs in California and then developed secondary materials markets to accept the materials collected. He then turned his attention to implementing commercial recycling programs, which, in most cities yield far more tons of diversion due to the size and composition of these waste streams. He is now heavily involved in continuing the transition from the traditional view of solid waste and recycling towards the more encompassing vision of a sustainable materials management industry.

During the process of developing recycling programs, it became clear that existing collection contracts were insufficient with respect to programs, reporting, and enforcement tools to handle the additional requirements of diversion mandates. In addition, the segmentation of wastes into subcomponents (i.e., E-waste, HHW, “big box” recyclable streams, etc.) also required a new development of contract language and management tools to meet the demands of a different approach to the handling of what used to be considered as Municipal Solid Waste (MSW). It was at this point that Mr. O’Toole became involved in overseeing the procurement of hauler services. The aim of his client cities was the development of contracts that are specifically tailored to maximize diversion, identify costs, and develop rate structures that are transparent.

Mr. O’Toole is one of the founders of the California Resource Recovery Association (CRRRA) as well as Californians Against Waste (CAW). He has worked on statewide legislation and has been a member of several committees and task forces for the California Integrated Waste Management Board (now known as CalRecycle) on AB 939 Diversion Calculations and Reporting Requirements for Material Recovery Facilities (MRF) and Transfer Stations.

Mr. O’Toole brings significant local knowledge about the Orange County solid waste and recycling system including familiarity with the recycling, materials recovery, construction and demolition waste processing facilities, the landfill system and all of the solid waste and recycling companies that are active in the Orange County area. Mr. O’Toole has worked with the City of Anaheim to assist with its AB 1826 commercial organics recycling program and compliance efforts.

### **Trevor Blythe, MBA**

Trevor Blythe has over 16 years of experience as a consultant in the sustainable materials management industry. Mr. Blythe works daily with local governments, private industry, and waste haulers to overcome operational and financial barriers to implementing sustainable materials management programs at the municipal scale. He is an expert on solid waste regulations, operations, and collection system optimization. Mr. Blythe holds a Master’s Degree in Business Administration/Sustainable Management from Presidio Graduate School in San Francisco (Received May 2014). During his coursework at Presidio, Trevor explored market-based solutions for returning key nutrients from organic waste back to the soil. He holds a Bachelor of Science in Environmental Sciences (awarded in 2006) from the University of California, Santa Barbara with an emphasis on Geographic Information Systems.

Mr. Blythe is based in the EcoNomics’ Dana Point office and is currently assisting the Cities of Anaheim, Newport Beach, Santa Ana, San Juan Capistrano, Laguna Niguel, Mission Viejo, Lake Forest, Laguna Hills, Tustin, and Buena Park with CalRecycle compliance and reporting, waste diversion program implementation and planning, program cost and rate impact analyses, and other tasks. Mr. Blythe also assists EcoNomics’ client cities with contract management oversight, including overseeing waste characterizations of the commercial and residential waste streams, monitoring diversion reports to assess hauler compliance with state laws, and leading meetings with cities and haulers to monitor contractual compliance and resolve outstanding contractual obligations.

Mr. Blythe has developed a comprehensive food scrap cost model that has been used in the City of Anaheim, Mission Viejo, Tustin, Santa Ana, Laguna Niguel, Rancho Mirage and Napa. The model

is used to project the cost of AB 1826 and SB 1383 compliance and to examine the impact of these costs on different components of the City's rate base. The model allows for real-time entry of generator participation assumptions, rate incentives, and service scenarios to predict the total cost of the program and the potential rate impact on residential and commercial accounts. The model is being used to illustrate the impacts of different funding scenarios for presentation to elected officials and senior City management. The model was developed with the franchise haulers to construct a rate that adequately compensates the hauler while still providing a rate incentive for the generator.

Mr. Blythe has worked over the last several years in bringing recycling services to multifamily apartments and HOAs throughout Orange County. This achievement has brought recycling services to over 17,500 units throughout the service areas. More recently, Mr. Blythe has focused on delivering cost-effective organic waste diversion solutions to large restaurants, venues, and hospitals in EcoNomics' client cities. To date, Mr. Blythe has actively directed the implementation of food scraps diversion programs at over 500 locations.

### **Cerene St. John, J.D.**

Ms. St. John began her solid waste career as a Deputy City Attorney for the City and County of San Francisco. Assigned to the Special Projects Division, she led a team in the Chief Administrator's Office to find a new landfill for the City when existing contracts were due to expire. She conducted a five-county negotiating effort that resulted in a contract and associated permits for the City's use of the Altamont Landfill located in Alameda County beginning in 1983.

Ms. St. John then served for six years as the Solid Waste Program Manager for the City of Sunnyvale. While there she conducted a Request for Proposals (RFP) process for solid waste and collection services resulting in a new contract with a detailed scope of work and performance standards. She conducted an RFP process for long-term landfill capacity for the City of Sunnyvale and 4 other cities resulting in a 30-year contract with the Kirby Canyon Landfill owned and operated by Waste Management. She also initiated work on the design and construction of the City-owned SMaRT Station, a transfer station/MRF that began operation in 1993.

Ms. St. John joined EcoNomics in 1990 and served as Vice President through June 2008, when she became a Director of EcoNomics and began providing a broader range of sustainability consulting services through her own company, It's A Natural Product, Inc. She also serves as outside legal counsel to several cities through the Law Office of Cerene St. John. In addition to solid waste and recycling consulting, Ms. St. John assists clients with food localization and food security projects. She is currently conducting a demonstration project to determine methodologies, actual costs and timeframes for sequestration of carbon in agricultural soils using compost, microbes and no-till growing methods. With regard to solid waste and recycling consulting service, she specializes in conducting procurements for solid waste and recycling collection services and the use of, or construction and operation of clean MRF's, transfer stations, and landfills. She also assists cities and counties with negotiations for these services and with contract amendments, SB 1383 ordinance revisions, and review of proposed legislation.

As a former City Attorney and an active member of the State Bar of California, Ms. St. John prepares draft contract amendments, draft contracts, and RFP language for review by City Attorneys and/or outside legal counsel. Ms. St. John is able to write precise and thorough scopes

of work for diversion programs and to craft contracts that protect the interest of the jurisdiction and its ratepayers. She is able to serve as a “bridge” between the technical requirements in these contracts and the legal language needed to enforce them. This generally saves our client's time and expense, as the City Attorney can senior review her work rather than spending time crafting the legal language, and the technical scope of work for the contract.

Ms. St. John’s unique understanding of the legal underpinnings of the RFP process, the political and financial realities of cities and her experience in negotiations with the solid waste industry allow her to create procurement processes and negotiations for contract amendments that are fair, public, and that anticipate potential pitfalls so problems can be avoided.

### **Christy Hurlburt, MBA**

Christy Hurlburt brings over 20 years of experience in the waste, sustainability and technology industries as both a consultant and marketing leader. Ms. Hurlburt has worked with a variety of clients including local government and corporations to advance their resource management goals. Ms. Hurlburt has also worked in the field performing waste audits and sorts, route efficiency assessments and hauler program verification.

Prior to EcoNomics, Ms. Hurlburt was the VP of Marketing for Enevo, a waste sensor technology company. At Enevo, she worked with haulers, cities, restaurants and multi-family complexes to increase their operational efficiency, increase recycling and reduce their overall waste costs.

Ms. Hurlburt was the Senior Director of Cascadia Consulting’s corporate sustainability practice area working on the planning and implementation of clients’ waste reduction and zero-waste goals. Ms. Hurlburt worked directly with large technology, food and outdoor apparel companies in the Bay Area. She has also held roles as the Director of Marketing for Bosch Solar Energy and District Manager for Medtronic. Ms. Hurlburt started off her career in sales and marketing at Agilent Technologies, a high-tech test equipment company.

### **Geiza Goulart da Silva, MS**

Mrs. Goulart da Silva joined the EcoNomics team in June 2015. Mrs. Goulart da Silva completed her Masters of Science in Economics from the University of Trento in Italy in October 2012 where she studied corporate social responsibility at large financial institutions. Mrs. Goulart da Silva has worked with the cities of Newport Beach, Tustin, Mission Viejo and Laguna Hills to assist with implementing organics diversion programs at restaurants to assist the cities obtain compliance with AB 1826. She has worked with hundreds of restaurants to design and implement cost-saving organics diversion programs. Early in her career, Mrs. Goulart also worked as an intern in the Public Works Department of the City of Rancho Santa Margarita and La Habra and understands how municipal government operates. In her native Brazil, she has 6 years of experience in human relations. She is fluent in Portuguese, Italian, and English and proficient in Spanish. She received certification in Irvine Valley College’s Sustainability and Resource Management program in 2014.

**Ian Bevan, MBA**

Mr. Bevan joined EcoNomics in June 2013. He has extensive experience with implementing commercial and multi-family recycling programs for several cities including Laguna Hills, Mission Viejo, and Tustin. Mr. Bevan specializes in developing cost-effective waste diversion programs that help businesses meet compliance requirements. He has conducted site audits at hundreds of commercial and multi-family properties to assess the feasibility of implementing recycling programs. Mr. Bevan uses information gathered at site audits to develop customized cost-saving waste reduction programs that fit the unique needs of each property, from split trash and recycling bins to specialized enclosure signage and outreach. Mr. Bevan has also worked with large retail operations to implement organics waste diversion programs and to manage increases in trash and recyclables during the holiday season using novel and innovative outreach and public education approaches. Most recently, Mr. Bevan has been involved in assisting the City of Mission Viejo with implementation of a green business certification program. To this end, he has coordinated closely with the California Green Business Network to attain access to the statewide network, assisted the City in engaging stakeholders from electric and water utilities to develop program criteria, researched incentive programs for specific energy and water saving programs, secured grant funding in the amount of \$20,000 from the Environmental Protection Agency, and has coordinated input from a multitude of stakeholders to move the process forward.

Mr. Bevan has experience working with the City of San Diego Environmental Department managing the construction and demolition ordinance. In this capacity, Mr. Bevan worked with contractors to ensure they met or exceeded the City's 50% diversion requirement for construction and demolition waste. Mr. Bevan leveraged his experience as an on-campus sustainability activist at University of San Diego to found a non-profit company committed to facilitating grassroots, student-led sustainability programs at colleges and universities. Mr. Bevan holds a Bachelor's Degree in Political Science from the University of San Diego. He received his Masters of Business Administration from the Presidio Graduate School in San Francisco in December 2012.

**Kim Riley**

Ms. Riley joined EcoNomics in February of 2020, has experience in program implementation and is the lead on managing Lake Forest, Laguna Niguel and Laguna Hills. Ms. Riley also has experience in developing and analyzing rate models to determine cost outcomes for individual generators. She also focuses on monitoring newly implemented organics and recycling programs in Mission Viejo, Laguna Hills, Newport Beach, and San Juan Capistrano; providing training to kitchen staff on how to incorporate organics recycling programs; and the analysis of organics program cost analytics. She holds a Bachelor of Science in Environmental Sciences from the University of California, Santa Barbara. Ms. Riley is a Certified Practitioner in Zero Waste Practices and Principles through a program that is jointly administered by California Resource Recovery Association (CRRRA) and Solid Waste Association of North America (SWANA). Ms. Riley also has experience with monitoring and troubleshooting newly implemented diversion programs in EcoNomics' client cities. Prior to joining EcoNomics, Ms. Riley worked for The Bay Foundation in the Los Angeles area as a community engagement coordinator. In this capacity, she worked with restaurants in the South Bay to implement organics recycling programs where all food scraps collected were processed at local schools as compost for school gardens.

**Kelly Cisneros, MS**

Kelly Cisneros joined the EcoNomics team in 2021 to manage field implementation for multiple clients including Santa Ana and Anaheim. She has extensive experience implementing programs and providing outreach and education to AB 341, AB 1826 and SB 1383 generators.

Prior to EcoNomics, Ms. Cisneros worked for Clements Environmental as a Zero Waste Specialist. She has the Bachelor of Arts in Communication Studies from Pace University in New York and her Master of Science in Environmental Studies from California State University, Fullerton.

**Valeria Ferrufino**

Valeria Ferrufino joined the EcoNomics team in January of 2020 to assist with field implementation. She has worked in the City of Mission Viejo to analyze commercial listings and restaurant listing to identify AB 1826 and AB 827 non-compliant generators. Ms. Ferrufino also conducts recurring audits of existing participants in the City's AB 1826 and SB 1383 program to assess participation and contamination levels.

Ms. Ferrufino led the sustainability efforts at Irvine Valley College as the Vice President of the on-campus Green Team and with frequent presentations of sustainability projects at the college's Environmental Leadership Task Force. Ms. Ferrufino holds a Bachelor's Degree in Geography from the California State University, Fullerton. Ms. Ferrufino has basic ArcGIS skills that have assisted in presenting field audit findings and optimizing recycling collection routes.

## ATTACHMENT 2

Amendment No. 2  
to EcoNomics Agreement

**AMENDMENT NO. 2**  
**TO CONSULTING SERVICES AGREEMENT**  
**Eco/Nomics, Inc., dba Ecal/Nomics, Inc.**  
*(Solid Waste and Recycling Consulting Services)*

THIS SECOND AMENDMENT to the Consulting Services Agreement with ECO/NOMICS, INC., (the "Amendment" or "Amendment No. 2") is made and entered into to be effective the 23<sup>rd</sup> day of February 2021, by and between the CITY OF LAGUNA HILLS, a municipal corporation organized and existing under the laws of the State of California (hereinafter referred to as the "City"), and ECO/NOMICS, INC., a Colorado corporation, doing business in the State of California as ECAL/NOMICS, INC., (hereinafter referred to as "Consultant"). City and Consultant are sometimes hereinafter individually referred to as "Party" and are hereinafter collectively referred to as "Parties."

**RECITALS**

A. City and Consultant previously entered into a Consulting Services Agreement for the provision of certain solid waste and recycling consulting services to be performed for the Project, as defined in the Agreement, on as as-needed, on-call basis, which agreement was made and entered into on June 14, 2016 (the "Agreement") and which may be duly amended, in writing, from time to time by the Parties. City does not have the personnel or technical expertise necessary to perform the work and services contracted for under the Agreement.

B. Sections 2.3 (Changes in Scope) and 10.2 (Amendment) of the Agreement provide that the Agreement may be amended in writing at any time by mutual consent of the Parties. Section 2.3 provides that the Parties may enter into an amendment to provide for additional services not included in the Agreement. Additionally, Section 1.8 (Additional Services) of the Agreement specifically provides that the City shall have the right at any time during the performance of the Services, without invalidating the Agreement, to order extra work beyond that specified in the Scope of Services or make changes by altering, adding to, or deducting from such Work.

C. The initial term of the Agreement was scheduled to expire on June 30, 2019, by operation of its own terms, unless extended by mutual written agreement of the Parties. Section 3.4 (Term) provides that the City had the option, at its sole discretion, to renew and extend the Initial Term of the Agreement for an additional two (2) year term ("Renewal Term"). On June 11, 2019, the Parties approved and entered into Amendment No. 1 to the Agreement for the purpose of extending the Term ("Initial Term") of the Agreement for an additional two (2) year period ("Renewal Option") in order to provide for continued, uninterrupted solid waste and recycling consulting services on as as-needed, on-call basis for the Project, as defined in the Agreement, under the same terms and conditions set forth in the Agreement, but with an updated listing of assigned and available consultants and same corresponding hourly rates. Amendment No. 1 also increased the Maximum Contract Amount set forth in Section 2.1 of the Agreement by \$80,000, from \$250,000 to \$330,000.

D. Unless amended by mutual agreement of the Parties, the Term of the Agreement is currently scheduled to expire on June 30, 2021 by operation of its own terms.

E. On March 4, 2020, the Governor declared a state of emergency in California in response to the outbreak of the novel COVID-19 virus, and by March 11, 2020, the World Health Organization designated the outbreak of the virus as a pandemic. Subsequently on March 18, 2020, the City proclaimed a local emergency in order for the City to promptly address, prepare for, and take actions necessary to protect the public health, safety, and welfare within the City in response to the anticipated spread of the novel COVID-19 virus. In light of the COVID-19 pandemic, the declared local emergency, the statewide emergency declaration, the partial closure of City Hall, modified work schedules, work-from-home health orders, and reduced service levels, the City does not wish to rebid this contract or conduct bidder interviews at this time, and the Procurement Officer and City Council have determined that such formal competitive procurement process at this time is not in the City's best interest as it would result in an interruption to the necessary, ongoing recycling and solid waste franchise consulting services contracted for under the Agreement, which could negatively impact City's ability to timely implement various CalRecycle regulations, as mandated by State law, and most likely will not result in any significant cost savings to the City.

F. Based on emergency circumstances related to the COVID-19 pandemic, the City has now determined that there is a need to extend the term of the Agreement for two years in order to ensure continuity of these essential consulting services. The continuation of the current level of services, under the same terms and conditions and at the same professional hourly rates, provided by the Agreement will ensure the provision of continued cost-effective, uninterrupted solid waste and recycling consulting services on an as-needed, on-call basis.

G. Due to the COVID-19 pandemic and declared State and local emergencies which have been in effect since March 2020, as well as the negative impacts the ongoing pandemic has had on Consultant's outreach efforts to businesses for the implementation of successful organic recycling programs, by way of correspondence from Consultant to City, dated January 18, 2021, Consultant has requested that the City now extend the term of the Agreement for an additional two (2) year period under the same terms and conditions and at the same professional hourly rates set forth in the Agreement (a copy of which is attached hereto as **Attachment "1"**), but with an updated listing of solid waste and recycling consultants, assigned and available personnel, and corresponding hourly rates from those established in Section 5.1 (Table of Fee Schedules) of Consultant's Proposal/Scope of Work, dated April 29, 2016, which is set forth in **Exhibit "A"** to the Agreement.

H. The Parties now desire to enter into this Amendment No. 2 to the Agreement for the purpose of extending the Term of the Agreement for an additional two (2) year period in order to provide for continued, uninterrupted solid waste and recycling consulting services on as as-needed, on-call basis for the Project, as defined in the Agreement, under the same terms and conditions set forth in the Agreement, but with an updated listing of assigned and available consultants and corresponding hourly rates. The proposed two-year Term extension creates a need to now increase the Maximum Contract Amount set forth in Section 2.1 of the Agreement by \$248,000, from \$330,000 to \$578,000.

NOW THEREFORE, in consideration of the mutual promises and covenants herein, the Parties agree as follows:

### AGREEMENT

1. Amendment to Section 3.4, entitled "Term," of the Agreement. Section 3.4 of the Agreement is hereby amended and restated in its entirety to read as follows:

**3.4 Term.** Unless earlier terminated as provided elsewhere in this Agreement, this Agreement shall commence upon the effective date of this Agreement and shall continue in full force and effect for a period of seven (7) years, commencing July 1, 2016, and ending on June 30, 2023.

2. Amendment to Section 5.1 (Table of Fee Schedules) of Consultant's Proposal/Scope of Work, dated April 29, 2016, Set Forth in Exhibit "A" to the Agreement. Pursuant to Consultant's January 18, 2021 letter request, Section 5.1 (Table of Fee Schedules) of Consultant's Proposal/Scope of Work, dated April 29, 2016, which is attached as Exhibit "A" to and incorporated by reference in the Agreement, as modified by Amendment No. 2 to the Agreement, is hereby amended and restated in its entirety to reflect Consultant's updated listing of assigned and available consultants and corresponding hourly rates, a copy of which is attached hereto as Attachment "1" to this Amendment and is hereby incorporated by reference and made a part of the Agreement.

3. Amendment to Section 2.1, entitled "Maximum Contract Amount," of the Agreement. Section 2.1 of the Agreement is hereby amended and restated in its entirety to read as follows:

**2.1 Maximum Contract Amount.** For the Services and Work rendered pursuant to this Agreement, Consultant shall be compensated by City for the services performed, including authorized reimbursements, on a time and materials basis in accordance with the hourly rates and charges set forth in the Schedule of Compensation/Fees, which is attached hereto as Exhibit "A" and is incorporated herein by reference, but not exceeding the total maximum contract amount of Five Hundred Seventy Eight Thousand Dollars (\$578,000) (hereinafter referred to as the "Maximum Contract Amount"), except as may be provided pursuant to Section 1.8 above. The method of compensation shall be as set forth in Exhibit "A". The maximum amount of City's payment obligation under this Agreement is the amount specified in this section.

4. Amendment to Section 4.3, entitled "Prohibition Against Subcontracting or Assignments," of the Agreement. Section 4.3 of the Agreement is hereby amended in part to reflect the updated list of Consultant's personnel assigned to perform the Work and Services under the Agreement:

Name:Title:

William O'Toole  
 Cerene St. John, J.D.  
 Trevor S. Blythe, MBA  
 Christy Hurlburt, MBA  
 Ian Beavan, MBA  
 Kim Riley  
 Geiza Goulart da Silva

President  
 Director  
 Senior Vice President  
 Vice President  
 Program Implementation Manager  
 Program Implementation Coordinator  
 Program Implementation Coordinator

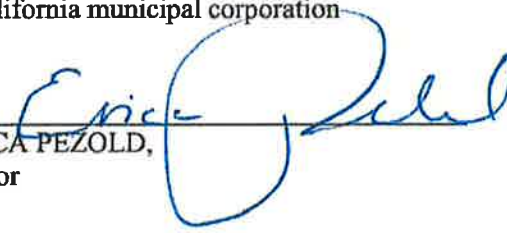
5. Full Force and Effect. This Amendment No. 2 is supplemental to the Agreement and is by reference made part of said Agreement. All of the terms, conditions, and provisions, thereof, unless specifically modified herein, shall continue in full force and effect. In the event of any conflict or inconsistency between the provisions of this Amendment and any provisions of the Agreement, the provisions of this Amendment shall in all respects govern and control.
6. Recitals. The above-referenced Recitals are hereby incorporated into this Amendment as though fully set forth herein and made part of the Agreement and each Party acknowledges and agrees that such Party is bound, for purposes of this Agreement, by the same.
7. Corporate Authority. Each of the undersigned represents and warrants that (i) the Party for which he/she is executing this Amendment is duly authorized and existing, (ii) he/she is duly authorized to execute and deliver this Amendment on behalf of the Party for which he/she is signing, (iii) by so executing this Amendment, the Party for which he/she is signing is formally bound to the provisions of this Amendment, and (iv) the entering into this Amendment does not violate any provision of any other agreement to which the Party for which he/she is signing is bound.

[SIGNATURES ON NEXT PAGE]

IN WITNESS WHEREOF, the Parties have executed and entered into this Amendment as of the date first written above.

**"CITY"**

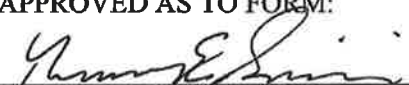
**City of Laguna Hills,**  
a California municipal corporation

  
ERICA PEZOLD,  
Mayor

ATTEST:

 (SEAL)  
MELISSA AU-YEUNG  
Deputy City Manager/ City Clerk

APPROVED AS TO FORM:

  
GREGORY E. SIMONIAN,  
City Attorney

**"CONSULTANT"**

**Eco/Nomics, Inc.,** a Colorado corporation,  
doing business in the State of California as  
Ecal/Nomics, Inc.

By:   
WILLIAM O'TOOLE, President

By:   
TREVOR S. BLYTHE, Secretary

**ATTACHMENT "1"**

CONSULTANT'S LETTER REQUEST FOR A TWO-YEAR  
CONTRACT TERM EXTENSION DUE TO COVID-19 PANDEMIC  
AND  
UPDATED LIST OF ASSIGNED AND AVAILABLE SOLID WASTE AND RECYCLING  
CONSULTANTS AND CORRESPONDING HOURLY RATES

DATE: JANUARY 18, 2021

## ATTACHMENT A



January 18, 2021

David Reynolds  
Deputy City Manager  
City of Laguna Hills  
25555 Alicia Parkway  
Laguna Hills, California 92653

**RE: Request to Extend the Term of Economics' Solid Waste and Recycling Consulting Services Contract**

Dear Mr. Reynolds:

As per your direction, EcoNomics Inc. is pleased to submit our request to extend our Contract, under the same terms and conditions, with the City for solid waste and recycling consulting services for an additional two years. As you are aware, COVID-19 negatively impacted our outreach efforts to businesses for the implementation of successful organic recycling programs. Commercial organic recycling is mandatory under AB 1826 and work still needs to be accomplished to bring businesses into compliance. Further, our help this year and next will ensure the City is in compliance with the State's momentous organic recycling requirements of SB 1383. These requirements include enforcement ordinances, food-recovery programs, and a residential organic recycling program by January 1, 2022.

Please note, we have kept the hourly rates at the same level for all EcoNomics staff that were originally included in our 2016 proposal (see Attachment A). We have included one additional staff member that may be assigned project work with prior consent from the City (Christy Hurlbert, MBA). The rate is at the same existing rate that Trevor Blythe and Gelza Goulart currently bill to the City. We have attached Ms. Hurlbert's resume for your review.

Please feel free to contact me directly at (805) 331-9591 or email [william@economicsinc.net](mailto:william@economicsinc.net) if you have any questions.

Best Regards,

William O'Toole  
President  
EcoNomics, Inc.  
832 Camino del Mar, Suite 2  
Del Mar, California 92104

Attachment

Attachment: Attachment 2 - Amendment No. 2 to EcoNomics Agreement, 2021 (2991 : EcoNomics Amendment No. 3)

## ATTACHMENT A

## ATTACHMENT A

## Extension

Table 1 Allocation/Fee Schedule

| Name                  | Position                           | Hourly Rate | Allocation | Areas of Expertise                                                                                                                                                                       |
|-----------------------|------------------------------------|-------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| William O'Toole       | President                          | \$180       | 20%        | Project management, client interface, strategy, negotiations with haulers; contract management, council presentations, CalRecycle compliance, relevant industry analysis and projections |
| Cerene St. John, JD   | Negotiation Support                | \$180       | 20%        | Assistance with hauler negotiations. Solid waste legislation tracking and interpretation                                                                                                 |
| Trevor S. Blythe, MBA | Sr. Vice President                 | \$120       | 5%         | Oversight of field data quality, diversion program development and implementation, operations analysis, annual rate adjustment                                                           |
| Christy Hurlburt, MBA | Vice President                     | \$120       | 20%        | Financial and program analysis, performance monitoring, public outreach,                                                                                                                 |
| Kim Riley             | Program Implementation Coordinator | \$80        | 25%        | AB 1826 generator identification, commercial list analysis, analysis, program implementation                                                                                             |
| Ian Bevan, MBA        | Manager, Program Implementation    | \$90        | 10%        | Annual Report, educational programs, waste audits, cost-saving diversion program proposal development                                                                                    |

## Updated Resumes of Staff

**William O'Toole****Title:** President & Founder**Time with EcoNomics, Inc.:** 40+ years**Education:** Bachelor of Science in Biology (Systems Ecology), University California, San Diego, 1976

Mr. O'Toole will provide senior review and strategic direction on the project's implementation goals and results. Mr. O'Toole is a "hands-on visionary" working with cities and counties to anticipate legislative trends, shifts in secondary materials markets, and other factors that affect local collection contracts. He devises practical, cost effective methods for implementing diversion programs that benefit the customers and enable our clients to meet the requirements of both AB 939 and the evolving requirements of AB 341 and AB 1826 for now and over the course of their new collection contracts.

He founded EcoNomics, Inc. in 1977 and has 40 years of experience in the recycling and solid waste industry. As one of the early pioneers in the recycling industry he worked to implement

## ATTACHMENT A

some of the first curbside recycling programs in California and then developed secondary materials markets to accept the materials collected. He then turned his attention to implementing commercial recycling programs, which, in most cities yield far more tons of diversion due to the size and composition of these waste streams. He is now heavily involved in continuing the transition from the traditional view of solid waste and recycling towards the more encompassing vision of a sustainable materials management industry.

During the process of developing recycling programs, it became clear that existing collection contracts were insufficient with respect to programs, reporting, and enforcement tools to handle the additional requirements of diversion mandates. In addition, the segmentation of wastes into subcomponents (i.e., E-waste, HHW, "big box" recyclable streams, etc.) also required a new development of contract language and management tools to meet the demands of a different approach to the handling of what used to be considered as Municipal Solid Waste (MSW). It was at this point that Mr. O'Toole became involved in overseeing the procurement of hauler services. The aim of his client cities was the development of contracts that are specifically tailored to maximize diversion, identify costs, and develop rate structures that are transparent.

Mr. O'Toole is one of the founders of the California Resource Recovery Association (CRRRA) as well as Californians Against Waste (CAW). He has worked on statewide legislation and has been a member of several committees and task forces for the California Integrated Waste Management Board (now known as CalRecycle) on AB 939 Diversion Calculations and Reporting Requirements for Material Recovery Facilities (MRF) and Transfer Stations.

Mr. O'Toole brings significant local knowledge about the Orange County solid waste and recycling system including familiarity with the recycling, materials recovery, construction and demolition waste processing facilities, the landfill system and all of the solid waste and recycling companies that are active in the Orange County area. Mr. O'Toole has worked with the City of Anaheim to assist with its AB 1826 commercial organics recycling program and compliance efforts.

### **Trevor Blythe MBA**

**Title:** Vice President, Principal

**Time with EcoNomics, Inc.:** 13 years

**Education:** BS in Environmental Science, University California, Santa Barbara, 2006

MBA in Sustainable Management from Presidio Graduate School, 2014

Trevor Blythe has over 13 years of experience as a consultant in the sustainable materials management industry. Mr. Blythe works daily with local governments, private industry, and waste haulers to overcome operational and financial barriers to implementing sustainable materials management programs at the municipal scale. He is an expert on solid waste regulations, operations, and collection system optimization. Mr. Blythe holds a Master's Degree in Business Administration/Sustainable Management from Presidio Graduate School in San Francisco (Received May 2014). During his coursework at Presidio, Trevor explored market-based solutions for returning key nutrients from organic waste back to the soil. He holds a Bachelor of Science in Environmental Sciences (awarded in 2006) from the University of California, Santa Barbara with an emphasis on Geographic Information Systems.

Mr. Blythe is based in the EcoNomics' San Juan Capistrano office and is currently assisting the Cities of Anaheim, Newport Beach, Santa Ana, San Juan Capistrano, Laguna Niguel, Mission Viejo,

## ATTACHMENT A

Lake Forest, Laguna Hills, Tustin, and Stanton with CalRecycle compliance and reporting, waste diversion program implementation and planning, program cost and rate impact analyses, and other tasks. Mr. Blythe also assists EcoNomics' client cities with contract management oversight, including overseeing waste characterizations of the commercial and residential waste streams, monitoring diversion reports to assess hauler compliance with state laws, and leading meetings with cities and haulers to monitor contractual compliance and resolve outstanding contractual obligations.

Mr. Blythe has developed a comprehensive food scrap cost model that has been used in the City of Anaheim, Mission Viejo, Tustin, Santa Ana, Laguna Niguel, and Napa. The model is used to project the cost of AB 1826 compliance and to examine the impact of these costs on different components of the City's rate base. The model allows for real-time entry of generator participation assumptions, rate incentives, and service scenarios to predict the total cost of the program and the potential rate impact on residential and commercial accounts. The model is being used to illustrate the impacts of different funding scenarios for presentation to elected officials and senior City management. The model was developed with the franchise haulers to construct a rate that adequately compensates the hauler while still providing a rate incentive for the generator.

Mr. Blythe has worked over the last several years in bringing recycling services to multifamily apartments and HOAs throughout three Orange County cities. This achievement has brought recycling services to over 7,500 units throughout the service areas. More recently, Mr. Blythe has focused on delivering cost-effective organic waste diversion solutions to large restaurants, venues, and hospitals in EcoNomics' client cities. To date, Mr. Blythe has actively directed the implementation of food scraps diversion programs at over 300 locations.

**Cerene St. John, J.D.**

**Position:** Director/Outside Legal Counsel (as subcontractor)

**Time with EcoNomics, Inc.:** 18 years as employee: additional 12 years as legal support (subcontractor)

**Education:** B.A. in Political Science from California State University, San Bernardino (1977)

J.D. degree from The University of Santa Clara School of Law (1980).

Ms. St. John began her solid waste career as a Deputy City Attorney for the City and County of San Francisco. Assigned to the Special Projects Division, she led a team in the Chief Administrator's Office to find a new landfill for the City when existing contracts were due to expire. She conducted a five-county negotiating effort that resulted in a contract and associated permits for the City's use of the Altamont Landfill located in Alameda County beginning in 1983.

Ms. St. John then served for six years as the Solid Waste Program Manager for the City of Sunnyvale. While there she conducted a Request for Proposals (RFP) process for solid waste and collection services resulting in a new contract with a detailed scope of work and performance standards. She conducted an RFP process for long-term landfill capacity for the City of Sunnyvale and 4 other cities resulting in a 30-year contract with the Kirby Canyon Landfill owned and operated by Waste Management. She also initiated work on the design and construction of the City-owned SMaRT Station, a transfer station/MRF that began operation in 1993.

## ATTACHMENT A

Ms. St. John joined EcoNomics in 1990 and served as Vice President through June 2008, when she became a Director of EcoNomics and began providing a broader range of sustainability consulting services through her own company, It's A Natural Product, Inc. She also serves as outside legal counsel to several cities through the Law Office of Cerene St. John. In addition to solid waste and recycling consulting, Ms. St. John assists clients with food localization and food security projects. She is currently conducting a demonstration project to determine methodologies, actual costs and timeframes for sequestration of carbon in agricultural soils using compost, microbes and no-till growing methods. With regard to solid waste and recycling consulting service, she specializes in conducting procurements for solid waste and recycling collection services and the use of, or construction and operation of MRF's, transfer stations, and landfills. She also assists cities and counties with negotiations for these services and with contract amendments, ordinance revisions, and review of proposed legislation.

As a former City Attorney and an active member of the State Bar of California, Ms. St. John prepares draft contract amendments, draft contracts, and RFP language for review by City Attorneys and/or outside legal counsel. Ms. St. John is able to write precise and thorough scopes of work for diversion programs and to craft contracts that protect the interest of the jurisdiction and its ratepayers. She is able to serve as a "bridge" between the technical requirements in these contracts and the legal language needed to enforce them. This generally saves our client's time and expense, as the City Attorney can senior review her work rather than spending time crafting the legal language, and the technical scope of work for the contract.

Ms. St. John's unique understanding of the legal underpinnings of the RFP process, the political and financial realities of cities and her experience in negotiations with the solid waste industry allow her to create procurement processes and negotiations for contract amendments that are fair, public, and that anticipate potential pitfalls so problems can be avoided.

**Christy Hurlburt MBA**

**Title:** Vice President

**Time with EcoNomics, Inc.:** 3 months

**Education:** BS in Electrical Engineering, University California, Berkeley, 2000

MBA in Sustainable Management from Presidio Graduate School, 2011

**Specializations:** Implementation Diversion Technology, Program Management

Christy Hurlburt brings over 20 years of experience in the waste, sustainability and technology industries as both a consultant and marketing leader. Ms. Hurlburt has worked with a variety of clients including local government and corporations to advance their resource management goals. Ms. Hurlburt has also worked in the field performing waste audits and sorts, route efficiency assessments and hauler program verification.

Prior to EcoNomics, Ms. Hurlburt was the VP of Marketing for Enevo, a waste sensor technology company. At Enevo, she worked with haulers, cities, restaurants and multi-family complexes to increase their operational efficiency, increase recycling and reduce their overall waste costs.

Ms. Hurlburt was the Senior Director of Cascadia Consulting's corporate sustainability practice area working on the planning and implementation of clients' waste reduction and zero-waste goals. Ms. Hurlburt worked directly with large technology, food and outdoor apparel companies in the Bay Area. She has also held roles as the Director of Marketing for Bosch Solar Energy and

## ATTACHMENT A

District Manager for Medtronic. Ms. Hurlburt started off her career in sales and marketing at Agilent Technologies, a high-tech test equipment company.

## ATTACHMENT 3

Amendment No. 1  
to EcoNomics Agreement

**AMENDMENT NO. 1**  
**TO CONSULTING SERVICES AGREEMENT**  
**Eco/Nomics, Inc., dba Ecal/Nomics, Inc.**  
*(Solid Waste and Recycling Consulting Services)*

THIS FIRST AMENDMENT to the Consulting Services Agreement with ECO/NOMICS, INC., (the "Amendment" or "Amendment No. 1") is made and entered into to be effective the 11<sup>th</sup> day of June 2019, by and between the CITY OF LAGUNA HILLS, a municipal corporation organized and existing under the laws of the State of California (hereinafter referred to as the "City"), and ECO/NOMICS, INC., a Colorado corporation, doing business in the State of California as ECAL/NOMICS, INC., (hereinafter referred to as "Consultant"). City and Consultant are sometimes hereinafter individually referred to as "Party" and are hereinafter collectively referred to as "Parties."

**RECITALS**

A. City and Consultant previously entered into a Consulting Services Agreement for the provision of certain solid waste and recycling consulting services to be performed for the Project, as defined in the Agreement, on as as-needed, on-call basis, which was made and entered into on June 14, 2016 (the "Agreement") and which may be duly amended, in writing, from time to time by the Parties. City does not have the personnel, specialized equipment, or technical expertise able to perform the work or services contracted for under the Agreement.

B. Unless amended by mutual written agreement of the Parties, the Agreement is scheduled to expire on June 30, 2019, by operation of its own terms, unless extended by mutual written agreement of the Parties. Sections 2.3 (Changes in Scope) and 10.3 (Amendment) of the Agreement provide that the Agreement may be amended in writing at any time by mutual consent of the Parties. Additionally, Section 3.4 (Term) provides that the City has the option, at its sole discretion, to renew and extend the Initial Term of the Agreement for no more than one additional two (2) year term ("Renewal Term").

C. By way of correspondence from Consultant to City dated May 30, 2019, Consultant has requested that the City extend the term of the Agreement for two (2) additional years under the same terms and conditions set forth in the Agreement (a copy of which is attached hereto as **Attachment "1"**), but with an updated listing of solid waste and recycling consultants, assigned and available personnel, and corresponding hourly rates from those established in Section 5.1 (Table of Fee Schedules) of Consultant's Proposal/Scope of Work, dated April 29, 2016, which is set forth in Exhibit "A" to the Agreement.

D. The Parties now desire to enter into this Amendment No. 1 to the Agreement for the purpose of extending the Term ("Initial Term") of the Agreement for an additional two (2) year period ("Renewal Option") in order to provide for continued, uninterrupted solid waste and recycling consulting services on as as-needed, on-call basis for the Project, as defined in the Agreement, under the same terms and conditions set forth in the Agreement, but with an updated listing of assigned and available consultants and corresponding hourly rates. The proposed two (2) year Term extension

creates a need to now increase the Maximum Contract Amount set forth in Section 2.1 of the Agreement by \$80,000, from \$250,000 to \$330,000.

NOW THEREFORE, in consideration of the mutual promises and covenants herein, the Parties agree as follows:

### AGREEMENT

1. Amendment to Section 3.4, entitled "Term," of the Agreement. Section 3.4 of the Agreement is hereby amended and restated in its entirety to read as follows:

**3.4 Term.** Unless earlier terminated as provided elsewhere in this Agreement, this Agreement shall commence upon the effective date of this Agreement and shall continue in full force and effect for a period of five (5) years, commencing July 1, 2016, and ending on June 30, 2021.

2. Amendment to Section 5.1 (Table of Fee Schedules) of Consultant's Proposal/Scope of Work, dated April 29, 2016, Set Forth in Exhibit "A" to the Agreement. Pursuant to Consultant's May 30, 2019 letter request, Section 5.1 (Table of Fee Schedules) of Consultant's Proposal/Scope of Work, dated April 29, 2016, which is attached as Exhibit "A" to, and incorporated by reference in, the Agreement, is hereby amended and restated in its entirety to reflect Consultant's updated listing of assigned and available consultants and corresponding hourly rates, a copy of which is attached hereto as **Attachment "1"** to this Amendment and is hereby incorporated by reference and made a part of the Agreement.
3. Amendment to Section 2.1, entitled "Maximum Contract Amount," of the Agreement. Section 2.1 of the Agreement is hereby amended and restated in its entirety to read as follows:

**2.1 Maximum Contract Amount.** For the Services and Work rendered pursuant to this Agreement, Consultant shall be compensated by City for the services performed, including authorized reimbursements, on a time and materials basis in accordance with the hourly rates and charges set forth in the Schedule of Compensation/Fees, which is attached hereto as Exhibit "A" and is incorporated herein by reference, but not exceeding the total maximum contract amount of Three Hundred Thirty Thousand Dollars and No Cents (\$330,000.00) (hereinafter referred to as the "Maximum Contract Amount"), except as may be provided pursuant to Section 1.8 above. The method of compensation shall be as set forth in Exhibit "A". The maximum amount of City's payment obligation under this Agreement is the amount specified in this section.

4. Full Force and Effect. This Amendment No. 1 is supplemental to the Agreement and is by reference made part of said Agreement. All of the terms, conditions, and provisions, thereof, unless specifically modified herein, shall continue in full force and effect. In the event of any conflict or inconsistency between the provisions of this Amendment and any provisions of the Agreement, the provisions of this Amendment shall in all respects govern and control.
5. Recitals. The above-referenced Recitals are hereby incorporated into this Amendment as though fully set forth herein and made part of the Agreement and each Party acknowledges and agrees that such Party is bound, for purposes of this Agreement, by the same.
6. Corporate Authority. Each of the undersigned represents and warrants that (i) the Party for which he/she is executing this Amendment is duly authorized and existing, (ii) he/she is duly authorized to execute and deliver this Amendment on behalf of the Party for which he/she is signing, (iii) by so executing this Amendment, the Party for which he/she is signing is formally bound to the provisions of this Amendment, and (iv) the entering into this Amendment does not violate any provision of any other agreement to which the Party for which he/she is signing is bound.

[SIGNATURES ON NEXT PAGE]

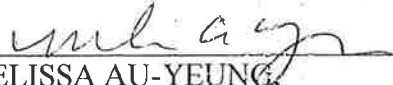
IN WITNESS WHEREOF, the Parties have executed and entered into this Amendment as of the date first written above.

**"CITY"**

**City of Laguna Hills,**  
a California municipal corporation

  
\_\_\_\_\_  
DON SEDGWICK,  
Mayor

ATTEST:

 (SEAL)  
\_\_\_\_\_  
MELISSA AU-YEUNG,  
City Clerk

APPROVED AS TO FORM:

  
\_\_\_\_\_  
GREGORY E. SIMONIAN,  
City Attorney

**"CONSULTANT"**

**Eco/Nomics, Inc.,** a Colorado corporation,  
doing business in the State of California as  
Ecal/Nomics, Inc.

By:   
\_\_\_\_\_  
WILLIAM O'TOOLE, President

By:   
\_\_\_\_\_  
TREVOR S. BLYTHE, Secretary

Attachment: Attachment 3 - Amendment No. 1 to EcoNomics Agreement, 2019 (2991 : Eco/Nomics Amendment No. 3)

## ATTACHMENT "1"

CONSULTANT'S LETTER REQUEST FOR A TWO-YEAR  
CONTRACT TERM EXTENSION

AND

UPDATED LIST OF ASSIGNED AND AVAILABLE SOLID WASTE AND RECYCLING  
CONSULTANTS AND CORRESPONDING HOURLY RATES

DATED: MAY 30, 2019





**EcoNomics**

May 30, 2019

David Reynolds  
Deputy City Manager  
City of Laguna Hills  
25555 Alicia Parkway  
Laguna Hills, California 92653

**RE: Request to Exercise Section 3.4 for an Additional Two (2) Year Term of EcoNomics Solid Waste and Recycling Consulting Services Contract**

Dear Mr. Reynolds

As per your direction, EcoNomics Inc. is pleased to submit our request to exercise our two (2) year term extension in accordance with Section 3.4 of our Contract with the City for solid waste and recycling consulting services. We have also included an attachment to this letter with an updated listing of employees and their respective billing rates. Please note, we have kept the hourly rates the same for all EcoNomics staff that were originally included in the 2016 proposal, but have modified some staff assignment allocations based on the past two years of project experience. We have also included two staff members that may be assigned project work with prior consent from the City (Lisa Robles and Tina Nguyen). Lastly, we have included updated staff resumes for all proposed EcoNomics' team members that will be available to work with the City.

Please feel free to contact me directly at (805) 331-9591 or email [william@economicsinc.net](mailto:william@economicsinc.net) if you have any questions.

Best Regards,

William O'Toole  
President  
EcoNomics, Inc.  
832 Camino del Mar, Suite 2  
Del Mar, California 92104

Attachment

Attachment: Attachment 3 - Amendment No. 1 to EcoNomics Agreement, 2019 (2991 : EcoNomics Amendment No. 3)

## ATTACHMENT A

### Two (2) Year Extension

**Table 1 Fee Schedule**

| Name                       | Position                            | Hourly Rate | Allocation | Areas of Expertise                                                                                                                                                                                                        |
|----------------------------|-------------------------------------|-------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| William O'Toole            | President                           | \$180       | 10%        | Project management, client interface, strategy, negotiations with haulers; contract management, oversight of field data quality, council presentations, CalRecycle compliance, relevant industry analysis and projections |
| Cerene St. John, JD        | Technical Consulting                | \$180       | 5%         | Solid waste legislation tracking and interpretation, assistance with hauler negotiations.                                                                                                                                 |
| Trevor S. Blythe, MBA      | Vice President                      | \$120       | 15%        | Financial and program analysis, diversion program development and implementation, performance monitoring, operations analysis                                                                                             |
| Ian Bevan, MBA             | Manager, Program Implementation     | \$90        | 5%         | Public outreach, Annual Report, educational programs, waste audits, cost-saving diversion program proposal development                                                                                                    |
| Geiza Goulart da Silva, MS | Coordinator, Program Implementation | \$80        | 55%        | AB 1826 generator identification, commercial list analysis, analysis, program implementation                                                                                                                              |

**Table 1.2 Rates and Responsibilities for Staff Hired after EcoNomics 2016 Proposal Submittal**

| Name                  | Position                        | Hourly Rate | Allocation | Areas of Expertise                                                                                                                                                                                                        |
|-----------------------|---------------------------------|-------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| William O'Toole       | President                       | \$180       | 15%        | Project management, client interface, strategy, negotiations with haulers; contract management, oversight of field data quality, council presentations, CalRecycle compliance, relevant industry analysis and projections |
| Cerene St. John, JD   | Technical Consulting            | \$180       | 5%         | Solid waste legislation tracking and interpretation, assistance with hauler negotiations.                                                                                                                                 |
| Trevor S. Blythe, MBA | Vice President                  | \$120       | 15%        | Financial and program analysis, diversion program development and implementation, performance monitoring, operations analysis                                                                                             |
| Ian Bevan, MBA        | Manager, Program Implementation | \$90        | 5%         | Public outreach, educational programs, waste audits, cost-saving diversion program proposal development                                                                                                                   |
| Geiza Goulart da      | Coordinator, Program            | \$80        | 20%        | AB 1826 generator identification, commercial list analysis, analysis, program                                                                                                                                             |

|                |                                     |      |     |                                                                                              |
|----------------|-------------------------------------|------|-----|----------------------------------------------------------------------------------------------|
| Silva, MS      | Implementation                      |      |     | implementation                                                                               |
| Yvonne Lau     | Coordinator, Program Implementation | \$80 | 30% | AB 1826 generator identification, commercial list analysis, analysis, program implementation |
| Winley Durham  | Database Development Assistant      | \$80 | TBD | Develop GIS maps                                                                             |
| Winley Durham  | Assistant, Program Implementation   | \$45 | TBD | Site audits, AB 1826 and AB341 generator identification, implementation                      |
| Sergio Escobar | Assistant, Program Implementation   | \$45 | 10% | Site audits, AB 1826 and AB341 generator identification, implementation                      |

**Table 1.3 Additional EcoNomics, Inc. Staff Available on an As-needed Basis with Prior City Consent**

| Name        | Position                            | Hourly Rate | Allocation |
|-------------|-------------------------------------|-------------|------------|
| Lisa Robles | Manager, Program Implementation     | \$90        | 10%        |
| Tina Nguyen | Coordinator, Program Implementation | \$80        | 25%        |

## Updated Resumes of Staff

### William O'Toole

**Title:** President & Founder

**Time with EcoNomics, Inc.:** 40+ years

**Education:** Bachelor of Science in Biology (Systems Ecology), University California, San Diego, 1976

Mr. O'Toole will provide senior review and strategic direction on the project's implementation goals and results. Mr. O'Toole is a "hands-on visionary" working with cities and counties to anticipate legislative trends, shifts in secondary materials markets, and other factors that affect local collection contracts. He devises practical, cost effective methods for implementing diversion programs that benefit the customers and enable our clients to meet the requirements of both AB 939 and the evolving requirements of AB 341 and AB 1826 for now and over the course of their new collection contracts.

He founded EcoNomics, Inc. in 1977 and has 40 years of experience in the recycling and solid waste industry. As one of the early pioneers in the recycling industry he worked to implement some of the first curbside recycling programs in California and then developed secondary materials markets to accept the materials collected. He then turned his attention to implementing commercial recycling programs, which, in most cities yield far more tons of diversion due to the size and composition of these waste streams. He is now heavily involved in continuing the transition from the traditional view of solid waste and recycling towards the more encompassing vision of a sustainable materials management industry.

During the process of developing recycling programs, it became clear that existing collection contracts were insufficient with respect to programs, reporting, and enforcement tools to handle the additional requirements of diversion mandates. In addition, the segmentation of wastes into subcomponents (i.e. E-waste, HHW, "big box" recyclable streams, etc.) also required a new development of contract language and management tools to meet the demands of a different approach to the handling of what used to be considered as Municipal Solid Waste (MSW). It was at this point that Mr. O'Toole became involved in overseeing the procurement of hauler services. The aim of his client cities was the development of contracts that are specifically tailored to maximize diversion, identify costs, and develop rate structures that are transparent.

Mr. O'Toole is one of the founders of the California Resource Recovery Association (CRRA) as well as Californians Against Waste (CAW). He has worked on statewide legislation and has been a member of several committees and task forces for the California Integrated Waste Management Board (now known as CalRecycle) on AB 939 Diversion Calculations and Reporting Requirements for Material Recovery Facilities (MRF) and Transfer Stations.

Mr. O'Toole brings significant local knowledge about the Orange County solid waste and recycling system including familiarity with the recycling, materials recovery, construction and demolition waste processing facilities, the landfill system and all of the solid waste and recycling companies that are active in the Orange County area. Mr. O'Toole has worked with the City of Anaheim to assist with its AB 1826 commercial organics recycling program and compliance efforts.

**Trevor Blythe MBA****Title:** Vice President, Principal**Time with EcoNomics, Inc.:** 13 years**Education:** BS in Environmental Science, University California, Santa Barbara, 2006

MBA in Sustainable Management from Presidio Graduate School, 2014

Trevor Blythe has over 13 years of experience as a consultant in the sustainable materials management industry. Mr. Blythe works daily with local governments, private industry, and waste haulers to overcome operational and financial barriers to implementing sustainable materials management programs at the municipal scale. He is an expert on solid waste regulations, operations, and collection system optimization. Mr. Blythe holds a Master's Degree in Business Administration/Sustainable Management from Presidio Graduate School in San Francisco (Received May 2014). During his coursework at Presidio, Trevor explored market-based solutions for returning key nutrients from organic waste back to the soil. He holds a Bachelor of Science in Environmental Sciences (awarded in 2006) from the University of California, Santa Barbara with an emphasis on Geographic Information Systems.

Mr. Blythe is based in the EcoNomics' San Juan Capistrano office and is currently assisting the Cities of Anaheim, Newport Beach, Santa Ana, San Juan Capistrano, Laguna Niguel, Mission Viejo, Lake Forest, Laguna Hills, Tustin, and Stanton with CalRecycle compliance and reporting, waste diversion program implementation and planning, program cost and rate impact analyses, and other tasks. Mr. Blythe also assists EcoNomics' client cities with contract management oversight, including overseeing waste characterizations of the commercial and residential waste streams, monitoring diversion reports to assess hauler compliance with state laws, and leading meetings with cities and haulers to monitor contractual compliance and resolve outstanding contractual obligations.

Mr. Blythe has developed a comprehensive food scrap cost model that has been used in the City of Anaheim, Mission Viejo, Tustin, Santa Ana, Laguna Niguel, and Napa. The model is used to project the cost of AB 1826 compliance and to examine the impact of these costs on different components of the City's rate base. The model allows for real-time entry of generator participation assumptions, rate incentives, and service scenarios to predict the total cost of the program and the potential rate impact on residential and commercial accounts. The model is being used to illustrate the impacts of different funding scenarios for presentation to elected officials and senior City management. The model was developed with the franchise haulers to construct a rate that adequately compensates the hauler while still providing a rate incentive for the generator.

Mr. Blythe has worked over the last several years in bringing recycling services to multifamily apartments and HOAs throughout three Orange County cities. This achievement has brought recycling services to over 7,500 units throughout the service areas. More recently, Mr. Blythe has focused on delivering cost-effective organic waste diversion solutions to large restaurants, venues, and hospitals in EcoNomics' client cities. To date, Mr. Blythe has actively directed the implementation of food scraps diversion programs at over 300 locations.

**Cerene St. John, J.D.****Position:** Director/Outside Legal Counsel (as subcontractor)**Time with EcoNomics, Inc.:** 18 years as employee: additional 11 years as subcontractor**Education:** B.A. in Political Science from California State University, San Bernardino (1977)

J.D. degree from The University of Santa Clara School of Law (1980).

Ms. St. John began her solid waste career as a Deputy City Attorney for the City and County of San Francisco. Assigned to the Special Projects Division, she led a team in the Chief Administrator's Office to find a new landfill for the City when existing contracts were due to expire. She conducted a five-county negotiating effort that resulted in a contract and associated permits for the City's use of the Altamont Landfill located in Alameda County beginning in 1983.

Ms. St. John then served for six years as the Solid Waste Program Manager for the City of Sunnyvale. While there she conducted a Request for Proposals (RFP) process for solid waste and collection services resulting in a new contract with a detailed scope of work and performance standards. She conducted an RFP process for long-term landfill capacity for the City of Sunnyvale and 4 other cities resulting in a 30-year contract with the Kirby Canyon Landfill owned and operated by Waste Management. She also initiated work on the design and construction of the City-owned SMaRT Station, a transfer station/MRF that began operation in 1993.

Ms. St. John joined EcoNomics in 1990 and served as Vice President through June 2008, when she became a Director of EcoNomics and began providing a broader range of sustainability consulting services through her own company, It's A Natural Product, Inc. She also serves as outside legal counsel to several cities through the Law Office of Cerene St. John. In addition to solid waste and recycling consulting, Ms. St. John assists clients with food localization and food security projects. She is currently conducting a demonstration project to determine methodologies, actual costs and timeframes for sequestration of carbon in agricultural soils using compost, microbes and no-till growing methods. With regard to solid waste and recycling consulting service, she specializes in conducting procurements for solid waste and recycling collection services and the use of, or construction and operation of MRF's, transfer stations, and landfills. She also assists cities and counties with negotiations for these services and with contract amendments, ordinance revisions, and review of proposed legislation.

As a former City Attorney and an active member of the State Bar of California, Ms. St. John prepares draft contract amendments, draft contracts, and RFP language for review by City Attorneys and/or outside legal counsel. Ms. St. John is able to write precise and thorough scopes of work for diversion programs and to craft contracts that protect the interest of the jurisdiction and its ratepayers. She is able to serve as a "bridge" between the technical requirements in these contracts and the legal language needed to enforce them. This generally saves our client's time and expense, as the City Attorney can senior review her work rather than spending time crafting the legal language, and the technical scope of work for the contract.

Ms. St. John's unique understanding of the legal underpinnings of the RFP process, the political and financial realities of cities and her experience in negotiations with the solid waste industry allow her to create procurement processes and negotiations for contract amendments that are fair, public, and that anticipate potential pitfalls so problems can be avoided.

**Lisa Robles MS****Title:** Manager, Project Implementation**Time with EcoNomics, Inc.:** 1 year**Education:** BS in Communications, California State Polytechnic University, Pomona, 2011  
Masters in Environmental Studies (MS), California State University Fullerton, 2018

Ms. Robles joined the EcoNomics team in April 2018 and has been managing the AB 341/AB 1826 compliance implementation efforts in the City of Santa Ana as well as the CalGreen C&D program revision and development in the City of Lake Forest. Ms. Robles has also assisted the City of Anaheim with implementing the OC Waste and Recycling grant, and has experience drafting grant reports, developing CRM systems, and managing a competitive procurement process for PR firms. Ms. Robles has six years of experience developing and managing solid waste and recycling programs in both the both private and public sector. Ms. Robles worked as Republic Services recycling coordinator based out of the Anaheim facility for over four years and gained valuable experience in the operational and outreach components of the materials management industry. At Republic, Ms. Robles assisted client cities with designing and implementing waste diversion programs, ranging from food scrap recycling programs to HHW collection events. She was also the main liaison point with client cities to assist with diversion tonnage and compliance reporting. At Republic, Ms. Robles developed key partnerships through involvement in community groups such as MUZEO and Anaheim Beautiful. As an intern in the Public Works Department at the City of Laguna Beach, Ms. Robles managed the City's CalGreen Construction and Demolition recycling program and worked to continuously improve compliance and diversion rates. At Laguna Beach, Ms. Robles assisted the City with its hauler contract management and oversight as well as overseeing CalRecycle compliance reporting. During her Master's program coursework, Ms. Robles gained experience in Geographic Information Systems (GIS) as well as an in depth understanding of how sustainable waste management at a municipal scale can result in desirable environmental outcomes. Ms. Robles is proficient in the Microsoft Office suite, the Adobe design platform, ARCGIS, and is a native speaker of Spanish.

### **Geiza Goulart da Silva MS**

**Title:** Program Implementation Manager

**Time with EcoNomics, Inc.:** 4 years

**Education:** BS in Economics, University of Joinville Region, Joinville, Brazil, 2005

Masters in Economics (MS) in Corporate and Social Responsibility, University of Trento, Trento, Italy, 2012

Irvine Valley College's Sustainability and Resource Management Certification Program, 2014.

Mrs. Goulart da Silva joined the EcoNomics team in June 2015. Mrs. Goulart da Silva completed her Master's of Science in Economics from the University of Trento in Italy in October 2012 where she studied corporate social responsibility at large financial institutions. Mrs. Goulart assists Mission Viejo and Huntington Beach with certifying sustainable businesses for the cities' green business certification programs. Mrs. Goulart, who is proficient in Spanish, specializes in working to certify businesses within Spanish-speaking communities who have not been previously exposed to the concept of sustainability. Mrs. Goulart da Silva also works with the cities of Anaheim, Mission Viejo, Tustin, Laguna Hills, San Juan Capistrano, and Newport Beach, to implement organics diversion programs at restaurants to assist the cities in complying with AB 1826. She has worked with over 100 restaurants to design and implement cost-saving organics diversion programs. Recently, she has assisted the cities of Anaheim and Mission Viejo with analysis to determine the projected cost impact of a full-scale food scrap recycling program on the ratepayers using multiple different program-funding scenarios. Mrs. Goulart also worked as an intern in the Public Works Department of the City of Rancho Santa Margarita and Brea and understands how municipal government operates. In her native Brazil, she has 7 years of experience in human relations. She is fluent in Portuguese, Italian, and English and proficient in Spanish.

### **Ian Bevan MBA**

**Title:** Senior Program Implementation Coordinator

**Time with EcoNomics, Inc.:** 6 years

**Education:** BA in Political Science, San Diego State University, 2008

MBA in Sustainable Management from Presidio Graduate School, 2012

Mr. Bevan joined EcoNomics in June 2013. He has extensive experience with implementing commercial and multi-family recycling programs for several cities including Anaheim, Laguna Hills, Mission Viejo, San Juan Capistrano, and Tustin. For the past 3 years, Mr. Bevan has been involved in assisting the Cities of Huntington Beach and Mission Viejo with implementation of a green business certification program. To this end, he has coordinated closely with the California Green Business Network to attain access to the statewide network, assisted the Cities in engaging stakeholders from electric and water utilities to develop program criteria, researched incentive programs for specific energy and water saving programs, secured grant funding in the amount of \$20,000 from the Environmental Protection Agency, and has coordinated input from a multitude of stakeholders to move the certification process forward in both cities.

Mr. Bevan specializes in developing cost-effective waste diversion programs that help businesses meet compliance requirements. He has conducted site audits at hundreds of commercial and multi-family properties to assess the feasibility of implementing diversion programs. Mr. Bevan uses information gathered at site audits to develop customized cost-saving

waste reduction programs that fit the unique needs of each property, from split trash and recycling bins to specialized enclosure signage and outreach. Mr. Bevan has also worked with large retail operations to implement organics waste diversion programs and to manage increases in trash and recyclables during the holiday season using novel and innovative outreach and public education approaches.

Mr. Bevan has experience working with the City of San Diego Environmental Department managing the construction and demolition ordinance. In this capacity, Mr. Bevan worked with contractors to ensure they met or exceeded the City's 50% diversion requirement for construction and demolition waste. Mr. Bevan leveraged his experience as an on-campus sustainability activist at the University of San Diego to found a non-profit company committed to facilitating grassroots, student-led sustainability programs at colleges and universities.

### **Tina Nguyen**

**Title:** Program Implementation Coordinator

**Time with EcoNomics, Inc.:** 2 months

**Education:** BA in Geography with Emphasis on Geographic Information Systems (GIS) and Spanish, University of California, Santa Barbara, 2012

Masters in Sustainability from University of Cape Town, South Africa, 2018

Ms. Nguyen joined EcoNomics in 2019 to assist with AB 341 and AB 1826 program verification and compliance implementation in the City of Santa Ana. Ms. Nguyen studied the implementation of sustainability programs extensively during her Masters' coursework in South Africa and during her undergraduate course work at UC Santa Barbara. Ms. Nguyen has experience implementing sustainable waste management and waste reduction programs at large-scale surf competitions and in Hawaii and South Africa. Further, she has applied her GIS skillset to develop interactive maps of pollution run-off as an intern for Heal the Bay in Santa Monica. Ms. Nguyen is fluent in Vietnamese and proficient in Spanish.

### **Yvonne Lau**

**Title:** Program Implementation Coordinator

**Time with EcoNomics, Inc.:** 2 years

**Education:** Dual BA in Social Ecology and Public Health Policy, University of California, Irvine, 2013

Ms. Lau joined EcoNomics in February of 2017. She is focused on monitoring newly implemented organics and recycling programs in Mission Viejo, Laguna Hills, Newport Beach, San Juan Capistrano, and Tustin; providing training to kitchen staff on how to incorporate organics recycling programs; and the analysis of organics program cost analytics for the City of Laguna Niguel. Ms. Lau is currently in the process of obtaining certification in Irvine Valley College's Sustainability and Resource Management program. Ms. Lau has extensive experience with monitoring and troubleshooting newly implemented diversion programs in EcoNomics' client cities. In February 2018, Ms. Lau oversaw the implementation of a property-wide organics program at The Tustin District, which will ultimately divert an estimated 400 tons of organics per year. Ms. Lau coordinated with all food service tenants, the solid waste hauler, and The District corporate management team to provide training, technical assistance, and monitoring services to over 40 restaurants on-site.

**Winley Durham**

**Title:** GIS Analyst and Database Management Associate

**Time with EcoNomics, Inc.:** 5 months

**Education:** BA in Geographic Information System from California State University Fullerton (in progress – expected graduation June 2019)

Ms. Durham joined the EcoNomics team in August of 2018 and has assisted the City of Santa Ana with applying tools from Geographic Information Systems (GIS) to geocode and optimize AB 341 and AB 1826 compliance implementation efforts. If selected, Ms. Durham's extensive GIS skills will be utilized to assist the City in selecting optimal routes and neighborhoods for pilot-scale residential and multi-family organics diversion programs. GIS tools will also be used to confirm hauler-provided productivity assumptions during cost development negotiations.

**Sergio Escobar Palacios**

**Title:** Field Coordinator

**Time with EcoNomics, Inc.:** 6 months

**Education:** AA in Environmental Studies from Palomar College (in progress – expected graduation June 2019)

Mr. Escobar-Palacios joined EcoNomics in October 2018 and has provided data entry and field assistance to the City of Santa Ana as a means to comply with AB 341. To demonstrate compliance with AB 341, Mr. Escobar-Palacios has conducted numerous site audits to Santa Ana businesses to verify and document informal recycling programs and to educate businesses about the requirements of AB 341. Mr. Escobar-Palacios has also assisted the City of Newport Beach with AB 1826 compliance audits and generator education and outreach. Mr. Escobar-Palacios is a native speaker of Spanish. If selected, he would provide critical program monitoring for newly implemented pilot and full-scale organics recycling programs as well as Spanish-language training to restaurants.

ATTACHMENT 4

EcoNomics Agreement

## CONSULTING SERVICES AGREEMENT

Eco/Nomics, Inc., dba Ecal/Nomics, Inc.

*(Professional Solid Waste and Recycling Consulting Services)*

THIS CONSULTING SERVICES AGREEMENT (hereinafter "Agreement") is made and entered into, to be effective this 14<sup>th</sup> day of June 2016, by and between the CITY OF LAGUNA HILLS, a municipal corporation organized and existing under the laws of the State of California (hereinafter referred to as "City"), and ECO/NOMICS, INC., a Colorado corporation, doing business in the State of California as ECAL/NOMICS, INC. (hereinafter referred to as "Consultant"). City and Consultant are sometimes hereinafter individually referred to as "Party" and are hereinafter collectively referred to as the "Parties."

### RECITALS

A. City has determined that there is a need to retain the professional services of a qualified solid waste collection, contracting and recycling firm to continue to provide City with consulting services on an as-needed basis related to the administration of the City's solid waste and recycling services franchise agreement, ordinance, and related programs, as well as with ensuring compliance with all applicable solid waste collection, contracting and recycling laws promulgated by the State of California and with regarding to CalRecycle compliance and reporting (the "Project").

B. Consultant has submitted to City a formal written proposal, dated April 29, 2016, in response to City's Request for Proposals (RFP) for "Solid Waste and Recycling Consulting Services," dated March 29, 2016, to provide City with consulting services on an as-needed basis related to the administration of the City's solid waste and recycling services franchise agreement, ordinance, and related programs, as well as with ensuring compliance with all applicable solid waste collection, contracting and recycling laws promulgated by the State of California and with regarding to CalRecycle compliance and reporting for the Project pursuant to the terms of this Agreement.

C. Consultant represents and maintains that it is uniquely qualified by virtue of its experience, training, education, reputation, and expertise to provide these services to City for the Project and has agreed to provide such services as provided herein. City does not have the personnel, specialized equipment, or technical expertise able to perform the work and services contracted for herein.

D. City desires to retain Consultant to provide such professional services for the Project.

NOW, THEREFORE, in consideration of the promises and mutual obligations, covenants, and conditions contained herein, and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

## AGREEMENT

### 1. SERVICES OF CONSULTANT

**1.1 Scope of Services and Standard of Performance.** In compliance with all terms and conditions of this Agreement, Consultant agrees to provide and perform solid waste collection, contracting and recycling consulting services to City on an as-needed basis related to the administration of the City's solid waste and recycling services franchise agreement, ordinance, and related programs, as well as with ensuring compliance with all applicable solid waste collection, contracting and recycling laws promulgated by the State of California and with regarding to CalRecycle compliance and reporting for the Project as described and as set forth in Consultant's Proposal/Scope of Work, dated April 29, 2016, which is attached hereto as Exhibit "A" and is incorporated herein by reference (hereinafter referred to as the "Scope of Services," the "Services" or "Work"). As a material inducement to the City entering into this Agreement, Consultant acknowledges and understands that the Services and Work contracted for under this Agreement require specialized skills and abilities and that, consistent with this understanding, Consultant's Services and Work shall be performed in a skillful and competent manner and shall be held to a standard of quality and workmanship prevalent in the industry for such Services and Work and with the standards recognized as being employed by professionals in the same discipline in the State of California. Consultant represents and warrants that it is skilled in the professional discipline necessary to perform the Services and Work and that it holds the necessary skills and abilities to satisfy the standard of work as set forth in this Agreement. Consultant represents and warrants that it and all of its employees, subconsultants and subcontractors providing any Work or Services under this Agreement shall have sufficient skill and experience to perform the Work or Services assigned to them. All Services and Work shall be completed to the reasonable satisfaction of the City.

**1.2 Contract Documents.** The Agreement between the Parties shall consist of the following: (1) this Agreement; and, (2) the Consultant's signed, original April 29, 2016 Proposal/Scope of Work submitted to the City ("Consultant's Proposal") in response to City's March 29, 2016 Request for Proposals for Solid Waste and Recycling Consulting Services, which shall both be referred to collectively hereinafter as the "Contract Documents." The Consultant's Proposal, attached hereto as Exhibit "A," is hereby incorporated by reference and is made a part of this Agreement. All provisions of the Contract Documents shall be binding on the Parties. Should any conflict or inconsistency exist in the Contract Documents, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority: (1<sup>st</sup>) the terms of this Agreement; and, (2<sup>nd</sup>) the provisions of the Consultant's Proposal.

**1.3 Compliance with Law.** Consultant shall comply at all times during the term of this Agreement with all applicable federal, state, and local laws, statutes, and ordinances and all lawful orders, rules, and regulations promulgated thereunder, including without limitation all applicable fair labor standards and Cal/OSHA requirements. Consultant shall keep itself fully informed of and in compliance with all local, state, and federal laws, rules, and regulations in any manner affecting the performance of the Work and Services, including all Cal/OSHA requirements, and shall give all notices required by law. Consultant shall be liable for all

violations of such laws and regulations in connection with performing the Work and Services. If Consultant performs any Work or Services in violation of such laws, rules, and regulations, Consultant shall be solely responsible for all penalties and costs arising therefrom. Consultant shall defend, indemnify, and hold City, its officials, officers, employees, agents and volunteers, free and harmless from any claim or liability arising out of any failure or alleged failure to comply with such laws, rules, or regulations.

**1.4 Licenses, Permits, Fees, and Assessments.** Prior to performing any Services or Work hereunder Consultant shall obtain all licenses, permits, qualifications, and approvals of whatever nature that are legally required to practice its profession and perform the Work and Services required by this Agreement. Consultant represents and warrants to City that Consultant shall, at its sole cost and expense, keep in effect at all times during the term of this Agreement and any extension, any license, permit, qualification, or approval that is legally required for Consultant to perform the Work and Services under this Agreement. Consultant shall have the sole obligation to pay for any fees, assessments, and taxes, plus applicable penalties and interest, which may be imposed by law and arise from or are necessary for the Consultant's performance of the Work and Services required by this Agreement, and shall defend, indemnify, and hold the City, its officials, officers, employees, agents and volunteers, free and harmless from and against any claim or liability arising out of any failure or alleged failure to obtain such license, permits, and approvals of whatever nature that are legally required to perform the Work or Services.

**1.5 Familiarity with Work.** By executing this Agreement, Consultant represents and warrants that it (a) has thoroughly investigated and considered the Scope of Work or Services to be performed, (b) has carefully considered how the Services should be performed and has carefully examined the location or locations at or with respect to where such Services or Work is to be performed, and (c) fully understands the facilities, difficulties, and restrictions attending performance of the Services under this Agreement.

**1.6 Care of Work.** Consultant shall adopt reasonable methods during the term of the Agreement to furnish continuous protection to the Work and the equipment, materials, papers, documents, plans, studies, and/or other components thereof to prevent losses or damages, and shall be responsible for all such damages, to persons or property, until acceptance of the Work by the City, except such losses or damages as may be caused by City's own negligence.

**1.7 Further Responsibilities of Parties.** Both Parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both Parties agree to act in good faith to execute all instruments, prepare all documents, and take all actions as may be reasonably necessary to carry out the purposes of this Agreement.

**1.8 Additional Services.** City shall have the right at any time during the performance of the Services, without invalidating this Agreement, to order extra work beyond that specified in the Scope of Services (Exhibit "A") or make changes by altering, adding to, or deducting from such Work. No such extra work may be undertaken unless a written order is first given by the City to the Consultant, incorporating therein any adjustment in (i) the Maximum Contract Amount, as defined below, and/or (ii) the time to perform this Agreement, which adjustments are subject to the written approval of the Consultant. It is expressly understood by Consultant that

the provisions of this section shall not apply to the Work and Services specifically set forth in the Scope of Services or reasonably contemplated therein, regardless of whether the time or materials required to complete any Work or Service identified in the Scope of Services exceeds any time or material amounts or estimates provided therein.

**1.9 Non-Exclusive Agreement.** Consultant acknowledges that City may enter into agreements with other contractors, consultants, or vendors for services similar to the services that are the subject of this Agreement. Consultant further acknowledges that City may have its own employees perform services similar to the services that are the subject of this Agreement.

## **2. COMPENSATION**

**2.1 Maximum Contract Amount.** For the Services and Work rendered pursuant to this Agreement, Consultant shall be compensated by City for the services performed, including authorized reimbursements, on a time and materials basis in accordance with the professional hourly rates and charges set forth in the Schedule of Compensation/Fees, which is attached hereto as Exhibit "A" and is incorporated herein by reference, but not exceeding the total maximum contract amount of Two Hundred Fifty Thousand Dollars and No Cents (\$250,000.00) (hereinafter referred to as the "Maximum Contract Amount"), except as may be provided pursuant to Section 1.8 above. The method of compensation shall be as set forth in Exhibit "A". The maximum amount of City's payment obligation under this Agreement is the amount specified in this section.

**2.2. Method of Payment.** Unless some other method of payment is specified in the Schedule of Compensation/Fees (Exhibit "A"), in any month in which Consultant wishes to receive payment, no later than the tenth (10<sup>th</sup>) working day of such month, Consultant shall submit to the City, in a form approved by the City's Finance Manager, an invoice for services rendered prior to the date of the invoice. Such requests shall be based upon the amount and value of the services performed by Consultant and accompanied by such reporting data including an itemized breakdown of all costs incurred and tasks performed during the period covered by the invoice, as may be required by the City. City shall use reasonable efforts to make payments to Consultant within forty-five (45) days after receipt of the invoice or a soon thereafter as is reasonably practical.

**2.3 Changes in Scope.** In the event any change or changes in the Scope of Services is requested by the City, the Parties shall execute a written amendment to this Agreement, setting forth with particularity all terms of such amendment, including, but not limited to, any additional professional fees. An amendment may be entered into: (a) to provide for revisions or modifications to documents or other work product or work when documents or other work product or work is required by the enactment or revision of law subsequent to the preparation of any documents, other work product, or work; and/or (b) to provide for additional services not included in this Agreement or not customarily furnished in accordance with generally accepted practice in Consultant's profession.

**2.4 Appropriations.** This Agreement is subject to and contingent upon funds being appropriated therefore by the Laguna Hills City Council for each fiscal year covered by the

Agreement. If such appropriations are not made, this Agreement shall automatically terminate without penalty to the City.

### 3. SCHEDULE OF PERFORMANCE

**3.1 Time of Essence.** Time is of the essence in the performance of this Agreement. The time for completion of the services to be performed by Consultant is an essential condition of this Agreement. Consultant shall prosecute regularly and diligently the Work of this Agreement according to the agreed upon Schedule of Performance.

**3.2 Schedule of Performance.** Consultant shall commence the Services pursuant to this Agreement upon receipt of a written notice to proceed and shall perform all Services within the time period(s) established in the Schedule of Performance, which is attached hereto as Exhibit "A" and is incorporated herein by reference. When requested by Consultant, extensions to the time period(s) specified in the Schedule of Performance may be approved in writing by the Contract Officer; however, the City shall not be obligated to grant such an extension.

**3.3 Force Majeure.** The time period(s) specified in the Schedule of Performance for performance of the Services rendered pursuant to this Agreement shall be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of the Consultant (financial inability excepted), including, but not limited to, acts of God or of the public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes, freight embargoes, wars, and/or acts of any governmental agency, including the City, if Consultant, within ten (10) days of the commencement of such delay, notifies the City Manager in writing of the causes of the delay. The City Manager shall ascertain the facts and the extent of delay, and extend the time for performing the Services for the period of the enforced delay when and if in the judgment of the City Manager such delay is justified. The City Manager's determination shall be final and conclusive upon the Parties to this Agreement. In no event shall Consultant be entitled to recover damages against the City for any delay in the performance of this Agreement, however caused, Consultant's sole remedy being extension of the Agreement pursuant to this section.

**3.4 Term.** Unless earlier terminated as provided elsewhere in this Agreement, this Agreement shall continue in full force and effect for an initial period of three (3) years, commencing on July 1, 2016, and ending on June 30, 2019 ("Initial Term"). The City shall have the unilateral option, at its sole discretion, to renew and extend the term of this Agreement for no more than one additional two (2) year term ("Renewal Term").

### 4. COORDINATION OF WORK

**4.1 Representative of Consultant.** The following principal of Consultant is hereby designated as being the principal and representative of Consultant authorized to act in its behalf with respect to the Services to be performed under this Agreement and make all decisions in connection therewith: William O'Toole, President. It is expressly understood that the experience, knowledge, education, capability, expertise, and reputation of the foregoing principal is a substantial inducement for City to enter into this Agreement. Therefore, the foregoing

principal shall be responsible during the term of this Agreement for directing all activities of Consultant and devoting sufficient time to personally supervise the Work or Services performed hereunder. The foregoing principal may not be changed by Consultant without prior written approval of the Contract Officer.

**4.2 Contract Officer.** The Contract Officer shall be such person as may be designated by the City Manager of City, and is subject to change by the City Manager. It shall be the Consultant's responsibility to ensure that the Contract Officer is kept fully informed of the progress of the performance of the Services, and the Consultant shall refer any decisions which must be made by City to the Contract Officer. Unless otherwise specified herein, any approval of City required hereunder shall mean the approval of the Contract Officer. The Contract Officer shall have authority to sign all documents on behalf of the City required hereunder to carry out the terms of this Agreement.

**4.3 Prohibition Against Subcontracting or Assignments.** The experience, knowledge, capability, expertise, and reputation of Consultant, its principals and employees, were a substantial inducement for City to enter into this Agreement. Therefore, Consultant shall not assign the performance of this Agreement, nor any part thereof, nor any monies due hereunder, voluntarily or by operation of law, without the prior written consent of City. Consultant shall not contract with any other entity to perform the Services required without prior written consent of City. If Consultant is permitted to subcontract any part of this Agreement by City, Consultant shall be responsible to City for the acts and omissions of its subcontractor(s) in the same manner as it is for persons directly employed. Nothing contained in this Agreement shall create any contractual relationships between any subcontractor and City. All persons engaged in the Work will be considered employees of Consultant. City will deal directly with and will make all payments to Consultant. Consultant further agrees to assign the following individuals, based on their education, experience, and qualifications, to perform the Work and Services set forth herein; and Consultant agrees to not alter the assignment of the following consultants without the prior written approval of the Contract Officer:

Name:

Title:

William O'Toole

President

Cerene St. John

Director

Trevor Blythe

Vice President

Ian Bevan

Program Implementation Manager

Geiza Goulart da Silva

Program Implementation Coordinator

**4.4 Independent Contractor.**

A. The legal relationship between the Parties is that of an independent contractor, and nothing herein shall be deemed to make Consultant a City employee. During the performance of this Agreement, Consultant and its officers, employees, and agents shall act in an independent capacity and shall not act as City officers or employees. Consultant will determine the means, methods and details of performing the Services subject to the requirements of this Agreement. The personnel performing the Services under this Agreement on behalf of

Consultant shall at all times be under Consultant's exclusive direction and control. Neither City nor any of its officials, officers, employees, agents or volunteers shall have control over the conduct of Consultant or any of its officers, employees, or agents, except as set forth in this Agreement. Consultant, its officers, employees or agents, shall not maintain a permanent office or fixed business location at City's offices. City shall have no voice in the selection, discharge, supervision, or control of Consultant's officers, employees, representatives or agents or in fixing their number, compensation, or hours of service. Consultant shall pay all wages, salaries, and other amounts due its employees in connection with the performance of Services under this Agreement and shall be responsible for all reports and obligations respecting them, including but not limited to social security income tax withholding, unemployment compensation, workers' compensation, and other similar matters. City shall not in any way or for any purpose be deemed to be a partner of Consultant in its business or otherwise a joint venturer or a member of any joint enterprise with Consultant.

B. Consultant shall not incur or have the power to incur any debt, obligation, or liability against City, or bind City in any manner.

C. No City benefits shall be available to Consultant, its officers, employees, or agents, in connection with the performance of any Work or Services under this Agreement. Except for professional fees paid to Consultant as provided for in this Agreement, City shall not pay salaries, wages, or other compensation to Consultant for the performance of any Work or Services under this Agreement. City shall not be liable for compensation or indemnification to Consultant, its officers, employees, or agents, for injury or sickness arising out of performing any Work or Services hereunder. If for any reason any court or governmental agency determines that the City has financial obligations, other than pursuant to Section 2 and Subsection 1.8 herein, of any nature relating to salary, taxes, or benefits of Consultant's officers, employees, representatives, agents, or subconsultants or subcontractors, Consultant shall defend, indemnify, and hold harmless City from and against all such financial obligations.

#### **4.5 PERS Eligibility Indemnification.**

A. In the event that Consultant or any employee, agent, or subcontractor of Consultant providing any Work or Services under this Agreement claims or is determined by a court of competent jurisdiction or the California Public Employee Retirement System (PERS) to be eligible for enrollment in PERS as an employee of the City, Consultant shall indemnify, defend, and hold harmless City for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant or its employees, agents or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of the City.

B. Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, Consultant and any of its employees, agents, and subcontractors providing any Work or Services under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any claims to, any compensation, benefit, or any incident of employment by City, including but not limited to eligibility to enroll in PERS as an employee of City and entitlement to any contribution to be paid by City for employer contribution and/or

employee contributions for PERS benefits.

## 5. INSURANCE

**5.1 Compliance with Insurance Requirements.** Consultant shall obtain, maintain, and keep in full force and effect during the term of this Agreement, at its sole cost and expense, and in a form and content satisfactory to City, all insurance required under this section. Consultant shall not commence any Work or Services under this Agreement unless and until it has provided evidence satisfactory to City that it has secured all insurance required under this section. In addition, Consultant shall not allow any subconsultant or subcontractor to commence any Work or Services until it has provided evidence satisfactory to City that the subconsultant or subcontractor has secured all insurance required under this section. If Consultant's existing insurance policies do not meet the insurance requirements set forth herein, Consultant agrees to amend, supplement or endorse the policies to do so.

**5.2 Types of Insurance Required.** As a condition precedent to the effectiveness of this Agreement, and without limiting the indemnity provisions set forth in this Agreement, Consultant shall obtain and maintain in full force and effect during the term of this Agreement, including any extension thereof, the following policies of insurance:

A. **Commercial General Liability Insurance.** Consultant shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Commercial General Liability Insurance written on an occurrence basis with limits of at least one million dollars (\$1,000,000.00) per occurrence, two million dollars (\$2,000,000.00) in the general aggregate, and one million dollars (\$1,000,000.00) for products and completed operations. Defense costs shall be paid in addition to the limits. The policy shall contain no endorsements or provisions limiting coverage for (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; or (3) contain any other exclusion contrary to the Agreement.

B. **Automobile Liability Insurance.** Consultant shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Automobile Liability Insurance written on a per occurrence basis with limits of at least one million dollars (\$1,000,000.00) combined limit for each occurrence covering bodily injury and property damage. The policy shall specifically include coverage for owned, non-owned, leased, and hired automobiles.

C. **Workers' Compensation Insurance.** Consultant shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Workers' Compensation Insurance in at least the minimum statutory amounts, and in compliance with all other statutory requirements, as required by the State of California. Consultant agrees to waive and obtain endorsements from its workers' compensation insurer waiving all subrogation rights under its workers' compensation insurance policy against the City, its officials, officers, employees, agents and volunteers, and to require each of its subconsultants and subcontractors, if any, to do likewise under their workers' compensation insurance policies. Consultant shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of

Employer's Liability Insurance written on a per occurrence basis with limits of at least one million dollars (\$1,000,000.00) per accident for bodily injury or disease.

**5.3 Acceptability of Insurers.** Insurance required by this section shall be issued by a licensed company authorized to transact business in the state by the Department of Insurance for the State of California with a current rating of A-:VII or better (if an admitted carrier), or a current rating of A:X or better (if offered by a non-admitted insurer listed on the State of California List of Eligible Surplus Lines Insurers (LESLI), by the latest edition of A.M. Best's Key Rating Guide, except that the City will accept workers' compensation insurance from the State Compensation Fund. In the event the City determines that the Work or Services to be performed under this Agreement creates an increased or decreased risk of loss to the City, the Consultant agrees that the minimum limits of the insurance policies may be changed accordingly upon receipt of written notice from the City. Consultant shall immediately substitute any insurer whose A.M. Best rating drops below the levels specified herein.

**5.4 Insurance Endorsements.** Required insurance policies shall not be in compliance if they include any limiting provision or endorsement that has not been submitted to the City for written approval. Required insurance policies shall contain the following provisions, or Consultant shall provide endorsements on forms approved by the City to add the following provisions to the insurance policies:

A. The policy or policies of insurance required by this section for Commercial General Liability and Automobile Liability Insurance shall be endorsed to provide the following:

1. Additional Insured: The City, its officials, officers, employees, agents and volunteers, shall be additional insureds with regard to liability and defense of suits or claims arising out of the performance of the Agreement; and

2. Additional Insured Endorsements: Additional insured endorsements shall not (1) be restricted to "ongoing operations", (2) exclude "contractual liability", (3) restrict coverage to "sole" liability of Consultant, or (4) contain any other exclusions contrary to the Agreement; and, the coverage shall contain no special limitations on the scope of protection afforded to additional insureds.

3. Notice: The policy or policies of insurance required by this section for Commercial General Liability and Automobile Liability Insurance shall be endorsed to state that coverage shall not be suspended, voided, cancelled, or modified, or reduced in coverage or in limits, except after thirty (30) days prior written notice by First Class U.S. Mail, postage-prepaid, has been provided to the City. Notwithstanding the foregoing, if coverage is to be suspended, voided, or cancelled because of Consultant's failure to pay the insurance premium, the notice provided to City shall be by ten (10) days prior written notice.

B. For all policies of Commercial General Liability Insurance, Consultant shall provide endorsements for ongoing operations and completed operations to effectuate this requirement.

**5.5 Deductibles and Self-Insured Retentions.** Any deductible or self-insured retention must be approved in writing by the City in advance and shall protect the City, its officials, officers, employees, agents and volunteers, in the same manner and to the same extent as they would have been protected had the policy or policies not contained a deductible or self-insured retention.

**5.6 Primary and Non-Contributing Insurance.** All policies of Commercial General Liability Insurance and Automobile Liability Insurance shall be primary and any other insurance, deductible, or self-insurance maintained by the City, its officials, officers, employees, agents or volunteers, shall not contribute with this primary insurance. Policies shall contain or be endorsed to contain such provisions.

**5.7 Waiver of Subrogation.** All policies of Commercial General Liability and Automobile Liability Insurance shall contain or be endorsed to waive subrogation against the City, its officials, officers, employees, agents and volunteers, or shall specifically allow Consultant or others providing insurance evidence in compliance with the requirements set forth in this section to waive their right to recovery prior to a loss. Consultant hereby agrees to waive its own right of recovery against the City, its officials, officers, employees, agents and volunteers, and Consultant hereby agrees to require similar written express waivers and insurance clauses from each of its subconsultants or subcontractors.

**5.8 Evidence of Coverage.** Concurrently with the execution of the Agreement, Consultant shall deliver certificates of insurance together with original endorsements affecting each of the insurance policies required by this section. Required insurance policies shall not be in compliance if they include any limiting provision or endorsement that has not been submitted to the City for written approval. The certificates of insurance and original endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. At least fifteen (15) days prior to the expiration of any such policy, evidence of insurance showing that such insurance coverage has been renewed or extended shall be filed with the City. If such coverage is cancelled or reduced and not replaced immediately so as to avoid a lapse in the required coverage, Consultant shall, within ten (10) days after receipt of written notice of such cancellation or reduction of coverage, file with the City evidence of insurance showing that the required insurance has been reinstated or has been provided through another insurance company or companies. Consultant shall promptly furnish, at City's request, copies of actual policies including all declaration pages, endorsements, exclusions and any other policy documents City requires to verify coverage.

**5.9 Requirements Not Limiting.** Requirement of specific coverage or minimum limits contained in this section are not intended as a limitation on coverage, limits, or other requirements, or a waiver of any coverage normally provided by any insurance. Nothing in this section shall be construed as limiting in any way the indemnification provision contained in this Agreement, or the extent to which Consultant may be held responsible for payments of damages to persons or property.

**5.10 Enforcement of Agreement (Non-Estoppel).** Consultant acknowledges and agrees that actual or alleged failure on the part of the City to inform Consultant of any non-

compliance with any of the insurance requirements set forth in this section imposes no additional obligation on the City nor does it waive any rights hereunder.

**5.11 Insurance for Subconsultants.** Consultant shall include all subconsultants or subcontractors engaged in any Work or Services for Consultant relating to this Agreement as additional insureds under the Consultant's insurance policies, or Consultant shall be responsible for causing its subconsultants or subcontractors to procure and maintain the appropriate insurance in compliance with the terms of the insurance requirements set forth in this section, including adding the City, its officials, officers, employees, agents and volunteers, as additional insureds to their respective policies. All policies of Commercial General Liability Insurance provided by Consultant's subconsultants or subcontractors performing any Work or Services related to this Agreement shall be endorsed to name the City, its officials, officers, employees, agents and volunteers, as additional insureds. Consultant shall not allow any subconsultant or subcontractor to commence any Work or Services relating to this Agreement unless and until it has received satisfactory evidence of their compliance with all insurance requirements under this Agreement, to the extent applicable. Consultant agrees to provide satisfactory evidence of compliance with this subsection upon request of the City.

**5.12 Other Insurance Requirements.** The following terms and conditions shall apply to the insurance policies required of Consultant pursuant to this Agreement:

A. Consultant shall provide immediate written notice to City if (1) any of the insurance policies required herein are terminated, cancelled or suspended, (2) the limits of any of the insurance coverages required herein are reduced, or (3) the deductible or self-insured retention is increased.

B. All insurance coverage and limits provided by Consultant and available or applicable to this Agreement are intended to apply to each insured, including additional insureds, against whom a claim is made or suit is brought to the full extent of the policies. Nothing contained in this Agreement or any other agreement relating to the City or its operations shall limit the application of such insurance coverage.

C. None of the insurance coverages required herein will be in compliance with the requirements of this section if they include any limiting endorsement which substantially impairs the coverages set forth herein (e.g., elimination of contractual liability or reduction of discovery period), unless the endorsement has first been submitted to the City and approved in writing.

D. Certificates of insurance will not be accepted in lieu of required endorsements, and submittal of certificates without required endorsements may delay commencement of the Project. It is Consultant's obligation to ensure timely compliance with all insurance submittal requirements as provided herein.

E. Consultant agrees to ensure that subconsultants and subcontractors, if any, and any other parties involved with the Project who are brought onto or involved in the Project by Consultant, provide the same minimum insurance coverage required of Consultant. Consultant agrees to monitor and review all such coverage and assumes all responsibility for

ensuring that such coverage is provided in conformity with the requirements of this section. Consultant agrees that upon request, all agreements with subcontractors and others engaged in the Project will be submitted to the City for review.

F. Consultant agrees to provide immediate written notice to City of any claim, demand or loss against Consultant arising out of the Work or Services performed under this Agreement and for any other claim, demand or loss which may reduce the insurance available to pay claims, demands or losses arising out of this Agreement.

## 6. INDEMNIFICATION

To the fullest extent permitted by law, Consultant shall defend (at Consultant's sole cost and expense with legal counsel reasonably acceptable to City), indemnify, protect, and hold harmless City, its officials, officers, employees, agents and volunteers (collectively the "Indemnified Parties"), from and against any and all liabilities, actions, suits, claims, demands, losses, costs, judgments, arbitration awards, settlements, damages, demands, orders, penalties, and expenses including legal costs and attorney fees (collectively "Claims"), including but not limited to Claims arising from injuries to or death of persons (Consultant's employees included), for damage to property, including property owned by City, or from any violation of any federal, state, or local law or ordinance, which Claims arise out of, pertain to, or are related to Consultant's performance under this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit Consultant's indemnification obligation or other liability hereunder.

## 7. REPORTS AND RECORDS

7.1 Accounting Records. Consultant shall keep complete, accurate, and detailed accounts of all time, costs, expenses, and expenditures pertaining in any way to this Agreement. Consultant shall keep such books and records as shall be necessary to properly perform the Services required by this Agreement and to enable the Contract Officer to evaluate the performance of such Services. The Contract Officer shall have full and free access to such books and records at all reasonable times, including the right to inspect, copy, audit, and make records and transcripts from such records.

7.2 Reports. Consultant shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the Services required by this Agreement as the Contract Officer shall require.

7.3 Ownership of Documents. All drawings, specifications, reports, records, documents, memoranda, correspondence, computations, and other materials prepared by Consultant, its employees, subcontractors, and agents in the performance of this Agreement shall be the property of City and shall be promptly delivered to City upon request of the Contract Officer or upon the termination of this Agreement, and Consultant shall have no claim for further employment or additional compensation as a result of the exercise by City of its full rights of ownership of the documents and materials hereunder.

**7.4 Release of Documents.** All drawings, specifications, reports, records, documents, and other materials prepared by Consultant in the performance of services under this Agreement shall not be released publicly without the prior written approval of the Contract Officer. All information gained by Consultant in the performance of this Agreement shall be considered confidential and shall not be released by Consultant without City's prior written authorization.

**7.5 Audit and Inspection of Records.** After receipt of reasonable notice and during the regular business hours of City, Consultant shall provide City, or other agents of City, such access to Consultant's books, records, payroll documents, and facilities as City deems necessary to examine, copy, audit, and inspect all accounting books, records, work data, documents, and activities directly related to Consultant's performance under this Agreement. Consultant shall maintain such books, records, data, and documents in accordance with generally accepted accounting principles and shall clearly identify and make such items readily accessible to such parties during the term of this Agreement and for a period of three (3) years from the date of final payment by City hereunder.

## **8. ENFORCEMENT OF AGREEMENT**

**8.1 California Law and Venue.** This Agreement shall be construed and interpreted both as to validity and as to performance of the Parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim, or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Orange, State of California, or any other appropriate court in such County, and Consultant covenants and agrees to submit to the personal jurisdiction of such court in the event of such action.

**8.2 Interpretation.** This Agreement shall be construed as a whole according to its fair language and common meaning to achieve the objectives and purposes of the Parties. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code Section 1654) that ambiguities are to be construed against the drafting Party, shall not be employed in the interpretation of this Agreement. The caption headings of the various sections and paragraphs of this Agreement are for convenience and identification purposes only and shall not be deemed to limit, expand, or define the contents of the respective sections or paragraphs.

**8.3 Termination.** City may terminate this Agreement for any reason, with or without cause, upon giving Consultant thirty (30) days written notice. Upon such notice, City shall pay Consultant for Services performed through the date of termination. Upon receipt of such notice, Consultant shall immediately cease all work under this Agreement, unless the notice provides otherwise. Thereafter, Consultant shall have no further claims against the City under this Agreement. Upon termination of the Agreement pursuant to this section, Consultant shall submit to the City an invoice for work and services performed prior to the date of termination. In addition, Consultant reserves the right to terminate this Agreement at any time upon sixty (60) days written notice to the City, except that where termination is due to material default by the City, the period of notice may be such shorter time as the Consultant may determine.

**8.4 Waiver.** No waiver of any provision of this Agreement shall be effective unless in writing and signed by a duly authorized representative of the Party against whom enforcement of a waiver is sought. Any waiver by the Parties of any default or breach of any covenant, condition, or term contained in this Agreement, shall not be construed to be a waiver of any subsequent or other default or breach, nor shall failure by the Parties to require exact, full, and complete compliance with any of the covenants, conditions, or terms contained in this Agreement be construed as changing the terms of this Agreement in any manner or preventing the Parties from enforcing the full provisions hereof.

**8.5 Rights and Remedies Cumulative.** Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the Parties are cumulative and the exercise by either Party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other Party.

**8.6 Legal Action.** In addition to any other rights or remedies, either Party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement.

**8.7 Attorneys' Fees.** In the event any dispute between the Parties with respect to this Agreement results in litigation or any non-judicial proceeding, the prevailing Party shall be entitled, in addition to such other relief as may be granted, to recover from the non-prevailing Party all reasonable costs and expenses, including but not limited to reasonable attorneys' fees, expert consultant fees, court costs and all fees, costs, and expenses incurred in any appeal or in collection of any judgment entered in such proceeding. To the extent authorized by law, in the event of a dismissal by the plaintiff or petitioner of the litigation or non-judicial proceeding within thirty (30) days of the date set for trial or hearing, the other Party shall be deemed to be the prevailing Party in such litigation or proceeding.

## **9. CITY OFFICERS AND EMPLOYEES: NON-DISCRIMINATION**

**9.1 Non-liability of City Officers and Employees.** No officer or employee of the City shall be personally liable to the Consultant, or any successor-in-interest, in the event of any default or breach by the City or for any amount which may become due to the Consultant or to its successor, or for breach of any obligation of the terms of this Agreement.

**9.2 Conflict of Interest.** No officer or employee of the City shall have any financial interest, direct or indirect, in this Agreement nor shall any such officer or employee participate in any decision relating to the Agreement which effects his or her financial interest or the financial interest of any corporation, partnership, or association in which they are, directly or indirectly, interested in violation of any state statute or regulation. Consultant represents and warrants that it has not paid or given and will not pay or give any third party any money or other consideration in exchange for obtaining this Agreement.

**9.3 Covenant Against Discrimination.** In connection with its performance under

this Agreement, Consultant shall not discriminate against any employee or applicant for employment because of race, disability, medical condition, religion, color, sex, sexual orientation, age, marital status, ancestry, or national origin. Consultant shall ensure that applicants are employed, and that employees are treated during their employment, without regard to their race, disability, medical condition, religion, color, sex, sexual orientation, age, marital status, ancestry, or national origin. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

## 10. MISCELLANEOUS PROVISIONS

**10.1 Notices.** All notices or other communications required or permitted hereunder shall be in writing, and shall be personally delivered, sent by registered or certified mail, postage prepaid, return receipt requested, or delivered or sent by facsimile with attached evidence of completed transmission, and shall be deemed received upon the earlier of (i) the date of delivery to the address of the person to receive such notice if delivered personally or by messenger or overnight courier; (ii) five (5) business days after the date of posting by the United States Post Office if by mail; or (iii) when sent if given by facsimile. Notices or other communications shall be addressed as follows:

To City:

City of Laguna Hills  
Attention: City Manager  
24035 El Toro Road  
Laguna Hills, California 92653  
Telephone: (949) 707-2600  
Facsimile: (949) 707-2633

To Consultant:

Eco/Nomics, Inc., dba Ecal/Nomics, Inc.  
Attention: William O'Toole, President  
P.O. Box 2790  
Del Mar, California 92014  
Telephone: (805) 331-9591  
E-mail: william@economicsinc.net

**10.2 Entire Agreement.** This Agreement constitutes the entire agreement between the Parties and supersedes all prior negotiations, arrangements, agreements, representations, and understandings, if any, made by or among the Parties with respect to the subject matter hereof. No amendments or other modifications of this Agreement shall be binding unless executed in writing by both Parties hereto, or their respective successors, assigns, or grantees.

**10.3 Severability.** Whenever possible, each provision of this Agreement shall be interpreted in such a manner as to be effective and valid under applicable law, but if any provision of this Agreement shall be determined to be invalid by a final judgment or decree of a court of competent jurisdiction, such provision shall be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of that provision, or the remaining

provisions of this Agreement unless the invalid provision is so material that its invalidity deprives either Party of the basic benefit of their bargain or renders this Agreement meaningless.

**10.4 Successors in Interest.** This Agreement shall be binding upon and inure to the benefit of the Parties' successors and assignees.

**10.5 Third Party Beneficiary.** Nothing contained in this Agreement is intended to confer, nor shall this Agreement be construed as conferring, any rights, including, without limitation, any rights as a third-party beneficiary or otherwise, upon any entity or person not a party hereto.

**10.6 Recitals.** The above-referenced Recitals are hereby incorporated into the Agreement as though fully set forth herein and each Party acknowledges and agrees that such Party is bound, for purposes of this Agreement, by the same.

**10.7 Corporate Authority.** Each of the undersigned represents and warrants that (i) the Party for which he/she is executing this Agreement is duly authorized and existing, (ii) he/she is duly authorized to execute and deliver this Agreement on behalf of the Party for which he/she is signing, (iii) by so executing this Agreement, the Party for which he/she is signing is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which the Party for which he/she is signing is bound.

[SIGNATURES ON NEXT PAGE]

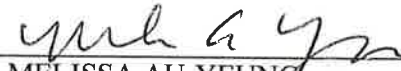
Attachment: Attachment 4 - EcoNomics Agreement, 2016 (2991 : EcoNomics Amendment No. 3)

IN WITNESS WHEREOF, the Parties have executed and entered into this Agreement as of the date first written above.

**"CITY"**  
**City of Laguna Hills,**  
**a California municipal corporation**

  
 BARBARA KOGERMAN, Mayor

ATTEST:

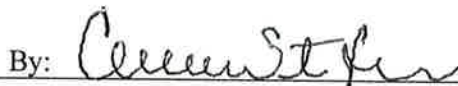
 (SEAL)  
 MELISSA AU-YEUNG,  
 Assistant to the City Manager/City Clerk

APPROVED AS TO FORM:

  
 GREGORY E. SIMONIAN,  
 City Attorney

**"CONSULTANT"**  
**Eco/Nomics, Inc., doing business in the**  
**State of California as Ecal/Nomics, Inc.**

By:   
 WILLIAM O'TOOLE, President

By:   
 CERENE ST. JOHN, Secretary

Attachment: Attachment 4 - Eco/Nomics Agreement, 2016 (2991 : Eco/Nomics Amendment No. 3)

**EXHIBIT "A"****CONSULTANT'S PROPOSAL/ SCOPE OF WORK****DATED: APRIL 29, 2016**

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**SCOPE OF SERVICES FOR PROJECT  
INCLUDING,  
SCHEDULE OF PERFORMANCE  
AND  
SCHEDULE OF COMPENSATION/ FEES**

Attachment: Attachment 4 - EcoNomics Agreement, 2016 (2991 : EcoNomics Amendment No. 3)



## **Response to the City of Laguna Hills' Request for Proposals for Solid Waste and Recycling Consulting Services**



**Submitted by EcoNomics, Inc.  
April 29, 2016**

**24682 Del Prado, Suite 230  
Dana Point, California 92629**

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## Section 1: Executive Summary



April 29, 2016

David Reynolds  
Deputy City Manager  
City of Laguna Hills  
25555 Alicia Parkway  
Laguna Hills, California 92653

**RE: Response to the City of Laguna Hills March 29, 2016 Request for Proposals for Solid Waste and Recycling Consulting Services**

Dear Mr. Reynolds

EcoNomics Inc. is pleased to submit the attached proposal to assist the City with solid waste and recycling consulting services. The proposal includes descriptions of our relevant experience, an introduction to our management team, references from current clients on similar projects, a scope of work based on our understanding of the project, hourly rates and resumes for the members of our team assigned to this project.

EcoNomics experienced team brings the following unique set of skills and local knowledge to this project:

- EcoNomics has overseen the City's AB 939 compliance efforts since the year 2004 and is uniquely familiar with the City's diversion programs. Economics has gained a deep insight into the City's compliance efforts from its experiences drafting the City's SRRE, managing the RFP process to ensure the selected hauler implemented diversion programs, conducting the 2005 base year study that increased the City's diversion rate by nearly 20 percentage points, interfacing annually with CalRecycle in its annual review for the past eight years, and by drafting the City's Electronic Annual Report for the past 10 years.
- Over the past decade, EcoNomics has worked with nearly every business and multi-family property in the City to notify them of changes in recycling legislation and, in many cases, to implement cost-saving recycling and organics programs.
- EcoNomics wrote the hauler contract that is currently in place and knows where the City can leverage key provisions to achieve desired programmatic and compliance outcomes.
- Recent experience gained while working with the Community Development Department on the Five Lagunas project to ensure adequate infrastructure and conditions of approval to ensure 75% diversion at the City's largest generator.
- Our core strength is the design, implementation, and procurement of recycling and waste diversion services. This has been our specialty for over 30 years. With AB 341 and AB 1826 mandating higher levels of diversion from the City's commercial and

multifamily waste stream by 2020, Laguna Hills' diversion programs will need to be thoughtfully managed to achieve this diversion in the most cost-effective manner possible.

- Extensive field experience implementing food scrap diversion programs in the City. EcoNomics has just implemented four additional organics (restaurant) diversion programs in Laguna Hills in the first three months of 2016.
- The team members assigned to this project have years of relevant experience. Mr. O'Toole is a recognized industry leader active since 1976 and was central in the development of recent innovative and diversion-centric contracts (Lake Forest 2014). He worked with Ms. Cerene St. John JD, a Director of EcoNomics, who has written groundbreaking contracts for over 12 cities. She is an active member of the California bar and is familiar with Propositions 218 and 26 as well as CalRecycle regulations. Mr. Blythe has 9 years of experience implementing diversion programs throughout Orange County and holds a degree from one of only two schools offering a Masters of Business Administration (MBA) in sustainability.
- Local Orange County office in Dana Point.
- Local Orange County specific knowledge on issues with ADC and costs of processing food scraps and green waste (Anaerobic Digestion versus Composting)
- Currently working for eight cities in Orange County on a wide range of implementation and contract management projects and are very familiar with the solid waste and recycling issues in the local area.
- No conflict of interest. EcoNomics works exclusively for cities, counties, and other public agencies. We do not work for refuse haulers.
- EcoNomics is in sound financial condition with potential revenue from secured contracts in excess of overhead and administrative costs.
- There are no filed, pending or threatened claims or litigation by clients (current or past) during the last five years against EcoNomics, Inc.

We have included in the Scope of Work seven additional areas that we believe will need to be addressed during the term of the City's consulting contract. In brief they are:

- Assistance with assessing rate impacts and developing solutions for organics (food scraps) and green waste
- Assistance with 75% Diversion Goal Planning and Attainment
- Assessing the impacts on Laguna Hills existing rate structure as the overall diversion levels increase from 50% to 75%
- Assess the need and/or desirability, for negotiation/revision of the City's existing hauler contract in order to handle the provisions of AB 1826, AB 1594, lack of organics handling infrastructure in Orange County, and other structural changes impacting diversion and solid waste handling options
- Overseeing the C&D diversion of the construction of Five Lagunas and the implementation of the CUPs for diversion during the malls startup phase
- Identification of technological developments in truck routing, collection equipment, and processing that can provide cost savings to Laguna Hills
- Research into the value of Green Business Certification, as being utilized in other Orange County cities, as a way to increase positive outcomes in the retail and business community

Per the RFP, you will find the following exhibits demonstrating EcoNomics' ability to effectively execute the scope associated with this project:

- Exhibit 1: Statement of EcoNomics' Sound Financial Condition
- Exhibit 2: EcoNomics' Completed "Certificate of Non-Discrimination" (also included as Attachment 1 to Executive Summary)
- Exhibit 3: EcoNomics' Litigation
- Exhibit 4: EcoNomics Completed 'Certificate of Employment Relationships and Financial Interest' (also included as Attachment 2 to Executive Summary)
- Exhibit 5: Signed Consulting Agreement
- Exhibit 6: Certificates of Insurance

Please feel free to contact me directly at (805) 331-9591 or email [william@economicsinc.net](mailto:william@economicsinc.net) if you have any questions.

Sincerely,



William O'Toole  
President  
EcoNomics, Inc.  
832 Camino del Mar, Suite 1  
Del Mar, California 92104

**Attachments:**

Attachment 1 to Executive Summary: Signed Certificate of Non-discrimination

Attachment 2 to Executive Summary: Signed Certificate of Employment Relationships and Financial Interest

Response to the City of Laguna Hills March 29, 2016 Request for Proposals for Solid Waste and Recycling Consulting Services (Sections 2 – 5)

### Attachment 1 to Executive Summary: Signed Certificate of Non-discrimination

Please note: a signed, wet copy of this form was submitted to the City in EcoNomics paper copy of the proposal.

Exhibit B

CITY OF LAGUNA HILLS  
CERTIFICATE OF NON-DISCRIMINATION

I hereby certify on behalf of EcoNomics Inc that all persons employed by EcoNomics Inc are, and shall be treated fairly without regard to race, creed, color, national origin, political affiliation, marital status, sex, age, or disability, and in compliance with all Federal and State laws prohibiting discrimination in employment, including, but not limited to, the Civil rights Act of 1964, the Unruh Civil Rights Acts, and the Americans With Disabilities Act.

Name: William O'Toole  
Signature: [Signature]  
Title: President

## Attachment 2 to Executive Summary: Signed Certificate of Certificate of Employment Relationships and Financial Interest

Please note: a signed, wet copy of this form was submitted to the City in EcoNomics paper copy of the proposal.

CITY OF LAGUNA HILLS  
CERTIFICATE OF  
EMPLOYMENT RELATIONSHIPS  
AND FINANCIAL INTERESTS

NAME OF ENTITY: EcoNomics Inc

EMPLOYMENT RELATIONSHIPS WITH CITY OFFICIALS OR CITY EMPLOYEES:  
None

FINANCIAL INTERESTS OF CITY OFFICIALS OR CITY EMPLOYEES IN THE ENTITY:  
(If known and applicable, please state the percentage ownership interest)  
None

I declare, under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Signed this 29<sup>th</sup> day of April, 2016, at  
Dana Point, California.

Name: William O'Toole  
Signature: [Signature]  
Title: President

Attachment: Attachment 4 - EcoNomics Agreement, 2016 (2991 : EcoNomics Amendment No. 3)

## Section 2: Scope and Approach

EcoNomics structured its response to the City's scope of work into three sections. The first section (Section 2.1) is a direct response to the tasks requested by the City in its Request for Proposals. Section 2.2. is a response to the City's invitation to provide insight on what can be done beyond the City's general scope of work. Finally, Section 2.3 includes resumes of personnel.

## **Section 2.1. Response to City's Scope**

### **2.1.1. Task B1. CalRecycle Support**

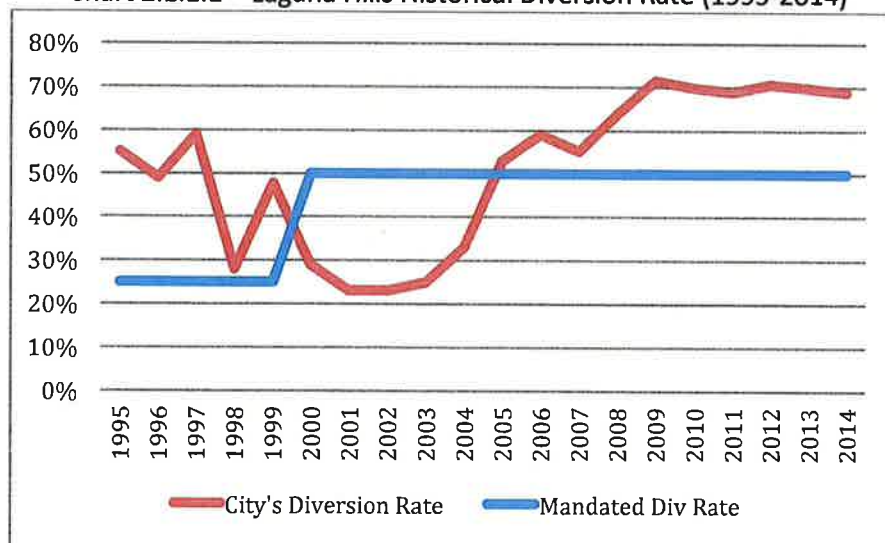
#### **2.1.1.1 Assistance with CalRecycle Compliance and Annual Site Assessments**

*a. From the City's RFP: Work with CalRecycle staff to answer and document any questions or concerns in regards to both residential and non-residential programs. Consultant shall respond to City's request to contact CalRecycle for any issue or concern.*

Since 2004 EcoNomics has assisted the City with successfully working with CalRecycle and its staff in meeting mandated diversion and reporting goals. In 2004 and 2005 EcoNomics worked with CalRecycle to get a SB 1066 time extension approved and developed an RFP for a new franchise that incorporated the needed new diversion and contract reporting provisions. EcoNomics developed an innovative contract that incorporated strong diversion performance metrics and had powerful disincentives for a hauler's non-attainment of a 50% diversion rate. The contract was awarded to CR&R in 2005 and was effective in 2006. Within the first year of the contract, CR&R achieved a 50% diversion rate.

Since 2005, Laguna Hills has achieved and maintained compliance with AB 939 for the past decade. EcoNomics has worked with the City in developing a proactive approach to all new diversion regulations and has experience in interacting with CalRecycle both at its site visits as well as in preparing and submitting the City's mandated Annual Report.

Chart 2.1.1.1 – Laguna Hills Historical Diversion Rate (1995-2014)



Since 2008, EcoNomics has assisted the City with conducting nine CalRecycle site visits. Senate Bill 1016, among other provisions, required that CalRecycle conduct annual site visits to each jurisdiction to assess the degree in which programs selected in the jurisdictions SRRE were implemented. EcoNomics' in-depth knowledge of the City's diversion programs translates into communicating a clear and coherent picture of the City's diversion efforts in any and all compliance interfaces with CalRecycle. For example, at CalRecycle's most recent site visit in February 2016, EcoNomics provided extensive documentation of work completed by CR&R, the City, and EcoNomics on identifying and notifying food service establishments of the provisions of Assembly Bill 1826 that require the diversion of organics from the landfill. At the same meeting, EcoNomics provided an overview of recent work efforts in building adequate diversion infrastructure at the Five Lagunas as a means to achieve a 75% property-wide diversion rate at the City's largest and most high-profile generator. In previous visits, EcoNomics in collaboration with CR&R, has facilitated tours of properties that showcase innovative and cost-saving diversion programs. If selected, EcoNomics will continue to facilitate these tours as they are an effective means to showcase the City's compliance efforts. Historically, EcoNomics has anticipated most questions from CalRecycle at the annual site visit, but any unanswered questions from CalRecycle have been provided in writing by EcoNomics within a 48-hour period from the conclusion of the site visit.

#### **2.1.1.2 Assistance with CalRecycle Compliance Reporting**

*From the City's RFP: Assist in the preparation of any required CalRecycle reports for City review including the CalRecycle annual report (EAR report). Assistance shall include the collection of all required data from the franchise holder and the operators of any other recycling programs in the City (e.g. supermarket back hauling of organics and cardboard)*

*and from local recycling facilities, other private recyclers, and any other data collection required for CalRecycle reports.*

EcoNomics has assisted the City with filing its Annual Report since 2005. We believe our existing database on the Laguna Hills diversion, disposal, and reporting is unmatched by any other firm.

The annual reporting process is an important opportunity for the City to showcase its diversion programs and to demonstrate its compliance with state diversion mandates. As part of its preparation of the Laguna Hills' annual report, EcoNomics takes the following actions and gathers the following data points to provide CalRecycle a holistic picture of the City's diversion programs:

- Review CR&R tonnage reports for the reporting year to determine diversion quantities for commercial, residential, and special event sectors
- Review of City's SRRE to determine implementation progress to date
- Contact the CalRecycle to obtain exact California Redemption Value recycling activity at buyback centers within the City limits.
- Review County of Orange reports to obtain self-haul and salvage figures from County landfills
- Review CalRecycle reports to determine amount of Alternate Daily Cover (ADC) that Stanton can claim as diversion for reporting year
- Contact local scrap yards and auto centers to determine amount of tires and scrap metal recycled in reporting year
- Review hauler tonnage reports, contact local construction and demolition (C&D) processing facilities, and review City records of C&D ordinance compliance forms to determine the amount of C&D materials diverted during reporting year.
- Contact hauler and review City records to obtain information on outreach used to inform residents and businesses of recycling programs
- Coordinate with County of Orange to obtain quantities of hazardous materials and electronic waste taken to County facilities by Stanton residents
- Coordinate with local school district to identify recycling programs and quantify their diversion during reporting year
- Contact local grocery stores and restaurants to quantify existing internal rendering and composting programs for the reporting year
- Contact local golf courses, schools, and parks to determine acreage turf in which mulching mowers were used to cut grass
- Coordinate with State government agencies to quantify internal diversion activities
- Analyze the City's Capital Improvement Project (CIP) bid sheets to quantify the diversion of materials crushed and reused as road base and to determine the tons of rubberized asphalt used in the City

- Conduct analysis of the City's Waste Reduction and Recycling Plan's submitted by contractors to determine tonnage diverted through C&D projects
- Coordination with local food banks to determine the weight of edible materials donated
- Coordinate with Sharps Compliance to determine weight of sharps dropped off at City's participating pharmacy
- Coordinate with Mercury Disposal Systems to determine CFL and battery diversion tonnage
- Coordinate with landscaping contractors to determine tons of landscaping waste diverted from the landfill

Over the last decade, EcoNomics have established a database and a preparation schedule for assembling the necessary data and entering it into Laguna Hills CalRecycle's required Electronic Annual Report. The database and the schedule for obtaining the data are provided in Exhibit 6. The data collection process has been refined over the past 10 years and has allowed EcoNomics to collect and report diverse tonnage data efficiently and precisely, leading to a thorough annual report that provides CalRecycle with a compelling narrative that clearly demonstrate the City's compliance with diversion mandates.

#### **2.1.2. Task B2. Provide Technical and Field Support for the Administration of the City's Solid Waste and Recycling Franchise Agreement.**

*a. From the City's RFP: Maintain a checklist of all contract requirements and due dates contained in the contract. Support the City in periodic meetings with CR&R to review the contract requirements and to coordinate with CR&R concerning public education items, writing of brochures and public education materials, placement of customer communications on the CR&R web site, implementation and enhancement of programs, and other coordination issues. Attend monthly solid waste and recycling meetings held with CR&R and City staff. Perform additional work items as assigned by the City.*

As the author of the City's core franchise agreement, EcoNomics has an in-depth understanding of the various contractual mechanisms that can be used to compel the City's contractor to expand diversion programs, provide reports, verify data, etc. Further, EcoNomics is familiar with deliverables required by the contract and when these should be provided to the City by CR&R. With a ten-year comparative database, EcoNomics has been monitoring CR&R's diversion reports to evaluate progress in implementing state-mandated diversion programs and is familiar with the format of the reports, the source of the data provided, and where data can be manipulated. Monthly meetings with the City, the hauler, and the City's consultant are crucial in keeping an open line of communication between all parties and to clearly communicate the City's expectations. In order to track time sensitive contractual obligations, EcoNomics has developed a tracking document that has aggregated these items in a spreadsheet that

allows for quick reference of pending deliverables. This tracking document is helpful when developing agendas for monthly meetings with the City and the hauler to ensure all parties are aware of upcoming deliverables.

*b. From the City's RFP: Coordinate with City and CR&R staff to accompany CR&R representatives at meetings with local businesses to assist in implementation of recycling programs at each business. Provide technical support to City staff and perform site visits to local businesses to discuss recycling programs.*

Since Craig Dibley has been assigned to the City, EcoNomics has developed an effective working relationship with CR&R's sustainability coordinator. EcoNomics often utilizes Mr. Dibley to conduct site visits to implement new diversion programs at businesses, multi-family properties, and restaurants and he, in turn, has reached out to EcoNomics for joint implementation actions.

EcoNomics has worked with the City's assigned staff to discuss, and develop, appropriate actions and strategies to implement and maintain franchise contract compliance. When necessary, contract administrative advice has been provided as well as in-depth industry insights into rate and operational discrepancies that have appeared over the years.

*c. From the City's RFP: Review reports and correspondence submitted by CR&R, track recycling program implementation for reporting purposes of state mandated recycling programs such as AB 939, AB 341, and AB 1826. Perform additional work items as assigned by the City.*

EcoNomics is familiar with all of CR&R's reporting requirements. Each month, EcoNomics reviews CR&R's submitted reports and identifies areas of inquiry that are reviewed at the monthly meetings. This monthly format was established by EcoNomics and has proven its worth in maintaining accurate reporting and program oversight.

For commercial account issues, we have CR&R's account listing which can be used to access key account service information needed to implement diversion programs. With minimal effort, the commercial list can be sorted to identify the City's compliance status with AB 341 and AB 1826. CR&R submits the commercial list to the City monthly, which can be sorted to provide the City with real-time compliance updates. EcoNomics also works with Mr. Dibley to assist with delivering needed equipment such as new recycling bins, exchanging out trash and recycling equipment, and receptacles for organics diversion.

Over the years, CR&R has submitted correspondence to the City on a variety of issues with respect to franchise compliance interpretations. EcoNomics has worked with City staff to resolve these items and continues to provide the City with information and

trends that assists the City in successfully maintaining a high quality of contract oversight.

*d. From the City's RFP: Conduct waste audits of CR&R recycling facilities and the residential and business communities as requested by the City.*

The City's contract requires CR&R to conduct annual waste characterizations to assess the quantity and types of materials found in the different waste streams collected by CR&R. In EcoNomics' experience, waste characterizations can be used to assess contamination levels of single-stream recycling routes, identify additional diversion opportunities, and to assess the impact of the City's or the hauler's educational outreach efforts. Also, the City's entire diversion tonnage is calculated from the results of the annual characterization. In the past, EcoNomics has audited the City's waste characterization studies to assess the degree in which CR&R's characterization methodology complies with the methodology set forth in Attachment N. In addition, these audits allowed EcoNomics to identify non-recyclable contaminants and trace them back to specific generators and different parts of the City in an effort to provide targeted educational outreach. In addition to the required annual waste characterization studies, the City has the right to request additional characterizations in order to monitor the evolving nature of its waste stream. EcoNomics will assist the City in targeting key routes and developing a sampling methodology that ensures the annual waste characterizations are representative of the entire City. These characterizations may be needed to true up diversion tonnage when apparent program results do not seem to match reported diversion results. It is also likely that targeted "spot" audits will be required to resolve organics (restaurant) contamination issues.

*e. From the City's RFP: Assist the City in reviewing OC Disposal Recording System to resolve any errors in assignment of tonnage to the City of Laguna Hills.*

As part of its consulting services to the City, EcoNomics conducts annual analyses of the disposal tonnage attributed to the City by CR&R. This tonnage is compared to the annual tonnage attributed to the City by CR&R's accounts in the Orange County Disposal Reporting System (DRS). Consistently, there has been a sizable annual discrepancy between the tons of disposal attributed to the City by CR&R in its monthly reports and the tons attributed to the City in the DRS system. In previous years, EcoNomics has worked with the City and CR&R to determine the reasons for these discrepancies. Going forward, EcoNomics will track these discrepancies monthly or quarterly in order to avoid a large tonnage reconciliation effort at the end of each calendar year. In its annual review of CR&R's diversion rate in 2015, EcoNomics identified additional areas of concern with Alternative Daily Cover (ADC) allocations and A/B routing systems that it brought to the City's attention. The areas of concern identified can have significant impact on the City's overall diversion rate and need to be addressed in a timely manner through a letter agreement, contract amendment, or memorandum of understanding to avoid any future diversion impacts. If selected by the City, these items will be one of

EcoNomics top priority items to resolve in FY 2016/2017.

*f. From the City's RFP: Assist the City with processing any request for a rate increase or other requests pursuant to the contract requirements.*

EcoNomics expects that this task will be a significant emerging focus of attention in the next few years. The expansion of food scrap diversion in Laguna Hills is occurring without a clear accompanying rate. In the paragraphs below we identify what we feel are the important rate developments that Laguna Hills will meet in 2016 and beyond.

As part of its current contract management services to the City, EcoNomics provides recycling and solid waste rate analysis on an as needed basis. Since the first approved rate adjustment in 2008, EcoNomics has conducted in-depth analysis of all proposed rate increases on an annual basis to ensure the hauler has applied the contractually approved methodology in Attachment J to calculate the rate adjustment. EcoNomics is familiar with the rate adjustment workbook used by CR&R to adjust rates annually as well as the PPI indices used to calculate inflation applied to the various rate components. The nomenclature for the PPI index for Finished Goods less Food and Energy, a key PPI index used to adjust the collection and processing components of the rates, have been recently changed by the Bureau of Labor Statistics (BLS). This change in nomenclature will impact the upcoming October 2016 rate adjustment and a letter of understanding will need to be signed between the City and CR&R to memorialize the change.

EcoNomics has also assisted client cities with developing rate analyses for expansion of diversion programs. For example, EcoNomics assisted the City of Napa in assessing the rate revenue impacts of expanding a commercial food scrap collection program from a pilot program to a full-scale program. The City of Napa owns its own composting facility and collects rate revenue from its customers, therefore EcoNomics was required to project the revenue impacts of an additional 200 restaurants implementing food scrap diversion programs over a 2 year period. EcoNomics' rate analysis included the increased cost of processing an estimated 2,000 tons of food scraps per year, the reduced rate revenue for participating restaurants reducing their MSW service levels, the increase in revenue from the sale of finished compost, etc. Although Laguna Hills will not have as many factors impacting its food rate, there will still be significant collection and processing costs that are likely to be large and ongoing. Please see Exhibit 7 for a copy of the Napa food rate study to see what the main components of establishing a food rate are in practice.

*g. From the City's RFP: Consultant will periodically perform site visits to determine the condition of bins. Bins will be checked for missing lids, broken wheels, graffiti, condition of paint, and placement of appropriate decal(s) and signage. In addition, bins will be checked for floors that are rusted and/or leaking, damaged arm sleeves, or dented sides.*

EcoNomics assisted the City in 2006 to conduct a bin audit to assess the conditions of

the bins provided by CR&R during its takeover of the City's hauling operations from the previous hauler, Waste Management. EcoNomics audited nearly every bin in the City to assess the condition of the container, to note if graffiti is present, and to confirm the contractually required markings were included on the bins. The audit found many bins in a state of disrepair, lacking key signage, or marked up with graffiti. The audit results were used by the City to repair or replace the containers. Since this project was completed 10 years ago, the City may consider re-assessing the condition of its commercial and residential bins.

### **2.1.3. Task B3. Provide Technical Recycling Assistance to Local Restaurants and Businesses to Maintain and Develop Recycling Programs.**

*From the City's RFP: In addition to the work in Task B2, Consultant shall provide technical recycling assistance to individual restaurants and businesses in the City to implement and/or expand recycling programs, training materials and employee training, assistance with recyclables storage container selection, assistance in identifying which materials can be recycled, and technical recycling assistance to business groups as directed by the City.*

In an effort to prepare the City for compliance with AB 341, EcoNomics has, in the prior year, conducted waste audits throughout the City. The analysis of the audits identified that over 80 businesses in the City did not have source-separated recycling programs in place. Using the data obtained from the commercial waste audits, EcoNomics developed diversion programs to implement single-stream recycling programs. Since single-stream recycling programs are offered at a 50% the cost of equivalent trash service, the proposals include the estimated disposal cost reductions that the business would realize if they implemented a recycling program. These proposals were mailed to all commercial generators not in compliance with AB 341 along with a letter from the City notifying them of the law. A significant number of properties implemented recycling programs as a result of the letter and the business specific diversion proposal that accompanied the letter. This approach provided the businesses with a compelling business case to implement a recycling program (i.e. cost-savings), which proved to be effective and is in line with the City's intent to be 'business-friendly'. EcoNomics implemented a similar program with the multi-family sector. If selected for this proposal, EcoNomics will continue with its successful track record of working with the City's businesses and the franchised hauler in moving the City to its mandated compliance goals.

EcoNomics has extensive experience in the City working directly with businesses to implement cost-effective diversion programs. Beginning in 2008, EcoNomics has worked with the City's largest generators, the Laguna Hills Mall and Saddleback Hospital, to expand existing diversion programs or implement new programs. EcoNomics provided direct technical assistance to these and many other generators to develop 'turn-key' diversion programs that are cost-effective and helped the City comply with state

diversion mandates. EcoNomics has a decade of "on-the-street" knowledge of the businesses in Laguna Hills that is unmatched by any other firm.

*a. From City's RFP: Provide assistance to the Five Lagunas (Laguna Hills Mall project) and the Saddleback Memorial Medical Center with its recycling programs.*

In 2015 and 2016, EcoNomics worked with the City's Community Development Department throughout the review phase of the Five Lagunas mall to incorporate all the laws and provisions pertinent to recycling and solid waste for the project. Tasks completed included writing the CEQA language and establishing all the key conditions that needed to be addressed in the Five Lagunas development plan to achieve a project-wide 75% diversion level. The Five Lagunas, when completed, will be the largest generator of waste in the City and therefore it was a high priority to ensure that there was the infrastructure for a 75% property-wide diversion rate. In order to ensure a 75% property diversion rate, EcoNomics worked closely with the architects for the multi-family portion of the development and the builder's solid waste consultants for the retail component of the project. The design review of the project required EcoNomics to 1) calculate expected retail generation volumes; 2) ensure that adequate enclosure space to house these materials was included in the site drawings and; 3) verify that the methods to move the materials and process them onsite were within industry standards and the aesthetic standards of the City.

The final conditions of use for Five Lagunas were finalized in March 2016. These conditions provide detailed guidance for enclosure dimensions, estimated recyclable and organics generation volumes, established the requirements for recycling and organics receptacles in the public right-of-way, required the use of compostable or durable service-ware for food service tenants, and require diversion reporting to the City. These conditions will ensure that the City's largest and highest profile generator will have been built and be managed to meet current and future diversion mandates.

EcoNomics worked with Saddleback Hospital beginning in 2008. The hospital had developed a 'green team' to implement sustainability programs at the hospital. EcoNomics assisted the green team in securing CalRecycle grant funding to implement CRV recycling receptacles throughout the entire hospital. Further, EcoNomics worked with the Orange County Conservation Corps (OCCC) to service the CRV receptacles weekly at no cost to the hospital. The OCCC employs at-risk youth to collect recyclables, cleanup litter, and conduct other environmental tasks to provide vocation skills. EcoNomics also worked the nutrition director at the hospital to implement a food scrap diversion program that diverts both pre- and post-consumer food scraps from the hospital's cafeteria and from patient trays. EcoNomics has developed key relationships with senior management at the hospital that can be leveraged to implement future diversion programs, as needed.

*b. From City's RFP: Assist with the implementation and support of the City's organic waste recycling program.*

Assembly Bill 1826 requires large food service establishments to make arrangements to divert organic waste away from the landfill on or before April 1, 2016. Large generators are defined as establishments that generate 8 or more cubic yards of organics per week. In 2015, using its CalRecycle-approved AB 1826 generator identification methodology, EcoNomics identified 10 Tier 1 generators within Laguna Hills. Of these 10 generators, three already had an organics program in place (Ralph's, King's Fish House, and Saddleback Memorial Care). EcoNomics worked directly with two establishments (The Hills Hotel and The Willows) to implement AB 1826 compliant organics diversion programs utilizing a supporting letter from the City. EcoNomics notified the other five AB 1826 non-compliant generators of the requirements of AB 1826. EcoNomics also developed cost-saving proposals for these five generators to demonstrate the business case for organics recycling programs. AB 1826 requires that 1) jurisdictions provide a commercial organics program on or before January 2016; 2) that the City identify generators that fall within the different generation-based compliance tiers, 3) that the City notify these generators of the requirements of AB 1826; and 4) that the City report to CalRecycle on its compliance efforts in its 2016 annual report. The organics program outreach and implementation actions detailed above satisfy the City's AB 1826 compliance obligation for the 2016 reporting year. Working with EcoNomics, the City demonstrated to CalRecycle, in its February 2016 site audit, that it is taking a proactive approach to AB 1826 compliance.

Going forward, beginning in January 2017, the next compliance tier of AB 1826 is effective and will require all restaurants that generate 4 yards of organics per week to implement an organics diversion program. EcoNomics has identified 35 restaurants that meet the Tier 2 generation threshold. If EcoNomics is selected for the project, it will begin the next phase of restaurant outreach in early FY 2016-2017 to ensure adequate time for the restaurant community to respond to the new mandate.

#### **2.1.4. Task B4. Attend Progress Meetings and Prepare Monthly**

##### **Progress Reports.**

*From City's RFP: Consultant shall attend a monthly progress meeting with City staff to discuss the status of all tasks in progress, problems encountered, schedules, etc. Prepare a written monthly progress report to the City for submittal with each month's invoice.*

EcoNomics established the format, the reporting documentation, and currently facilitates recurring hauler meetings with the City. There are several levels of project status tracking required for this program. These meetings serve the following purposes: 1) Establish where the City is with respect to satisfying each of its overall AB 939 SRRE program requirements; 2) provide a monthly tracking of individual numbers of

businesses with commercial programs (AB 341), restaurant food scrap diversion (AB 1826), and tonnage diverted from each group; 3) provide a comparison of the number of individual businesses and restaurants with programs versus the schedule of implementation required to meet the various yearly targets contained in the regulations; 4) provide a running month-to-month report that allows all the information to be understood and be seen in relationship to the City's overall compliance. EcoNomics runs efficient meetings with clear objectives that hold all parties involved accountable. Before a meeting, EcoNomics provides all attendees with an agenda to allow for adequate time to prepare for items. EcoNomics frequently holds an internal meeting with city staff to discuss and strategize about sensitive agenda items before meeting with the hauler.

#### **2.1.5. Task B5. Perform Other Duties As Assigned by the City.**

*From City's RFP: Consultant shall perform other duties as assigned by the City to ensure for successful support of existing recycling programs and the successful implementation of new recycling programs, compliance with state solid waste and recycling mandates, and administration of the City's waste hauling franchise agreement*

EcoNomics is confident that it will continue to be responsive to the City's requests for any, and all, additional duties that the City may require over the term of the contract. We have taken the opportunity to provide a detailed identification of additional tasks that we anticipate will be needed in the near future. Section 2.2 below is a response to the City's invitation to provide insight on what can be done beyond the City's general scope of work.

### **Section 2.2. Recommendations Beyond the City's general scope**

#### **2.2.1. Assistance with assessing rate impacts and developing solutions for organics (food scraps) and green waste**

We noted in our response to Task B2.f (*f. From the City's RFP: Assist the City with processing any request for a rate increase or other requests pursuant to the contract requirements.*) that EcoNomics believes that the rates surrounding organics diversion are likely to require significant attention. There are two components that comprise the organics waste stream of Laguna Hills: food scraps and green waste (shrubs, grass, landscape materials). The regulatory requirements applicable to these materials are AB 1826 (food scraps) and AB 1594 (prohibits use of green waste for Alternative Daily Cover (ADC)). In addition to these two current laws, based on a recently released report, 90% of organic materials will likely be banned from landfills by the California Air Resource Board (CARB) in 2025 as a means to reduce short-term climate pollutants (SLCPs) such as methane to achieve ambitious AB 32 greenhouse gas reduction goals.

The only diversion options currently available to Laguna Hills for organics processing are composting and anaerobic digestion (AD). Due to lack of action by the County of

Orange, there are currently no available composting sites within the County of a size that can handle the flow of AB 1826 food scraps. Waste Management of Orange is currently transporting food scraps from their Orange facility to the sewage digestion treatment plant in Los Angeles County. CR&R is currently delivering some of their cities' food scraps to Waste Management.

CR&R is currently delivering Laguna Hills food scraps to a composting facility. It was originally being delivered to Athen's composting in Apple Valley, however, recent conversations with CR&R indicate that the food material is being delivered to another composting site in Corona, CA.

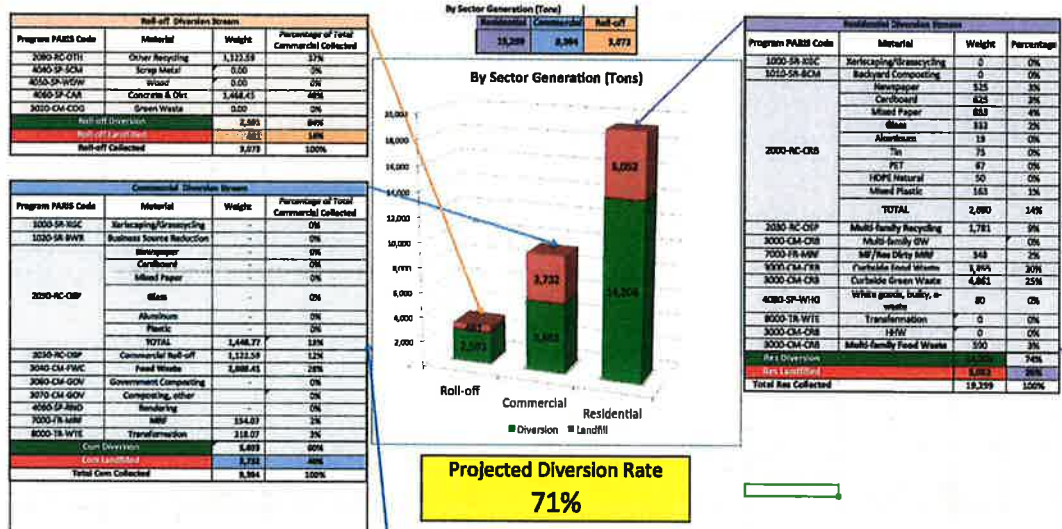
CR&R has indicated that their AD facility in Perris will be open by mid 2016. The transportation distance is 50+ miles to the facility from Orange County. The charge for processing the food scraps with anaerobic digestion ranges from \$80 to \$120 per ton.

The City's organics diversion program currently services eight restaurants and diverts between 8 -15 tons per month. In analyzing Laguna Hills organics flow for our current work while implementing AB 1826 programs, EcoNomics estimates that as AB 1826 continues to require more restaurants to divert organics, the City's organics route will expand to an estimated 100 organics generators by 2019 and will be diverting 150-200 tons per month. Using a mid-figure of \$100/ton cost for organics processing that is a projected annual cost of \$180,000 to \$240,000 or \$15,000 to \$20,000 per month. In summary, using a conservative processing cost for sending these materials to an AD facility, the impact would range from \$15,000 to \$20,000 per month. That is a significant impact considering that CR&R's entire monthly rate revenue is approximately \$250,000.

The cost for green waste would also go from \$0 to at least \$40 per ton at the Orange County landfill, but, if disposed at the landfill, it would no longer count as diversion. If the diversion option were AD, all generators of green waste would feel a similar dramatic cost impact.

#### **2.2.2. Assessing the impacts on Laguna Hills existing rate structure as the overall diversion levels increase from 50% to 75%**

In order to cost effectively reach 75% diversion, a balancing of program diversion options and cost will be required. The figure below shows all the City's SRRE programs, along with the various diversion impacts of each program, both in terms of tons and expressed as a percentage on the bar charts.



Other relevant factors that will impact 75% Diversion Goal planning are:

The resolution of CalRecycle's definition of a Super MRF, which is a MRF that is capable of achieving recovery/diversion levels from the commercial waste stream at the comparable level of a source separation program. We know from the audits done at CR&R's Stanton Dirty MRF that the maximum recovery rate is in the low 60% range, with an overall average recovery rate of 52% to 54%. A comparable source separation rate at their Clean MRF is 75 to 85%. It is likely this issue will be raised within the term of CR&R's existing contract.

Given that the current contract with CR&R expires on 6/30/2024 there will likely be additional regulation and/or legislation impacting diversion and solid waste. For example, CARB organic landfill ban has regulations in process for adoption in 2018 and a ban on organics going in to effect in 2025.

### 2.2.3. Impact of 75% diversion on current rate structure

The rate structure that was originally developed to pay for the collection and disposal of MSW has been modified through the last 20 years for recycling. It somewhat worked up to a 50% diversion level. It is struggling to work for a 75%+ franchise.

Haulers traditionally see that the way to increase their net margins by increasing the top operating line through rate increases (i.e. collection revenue). Thus, the hauling industry has traditionally favored top-line incentive structures, i.e. revenue from rate increases, to increase profit margins. These additional monies always come from the rates (rate payers). The collection companies, whether consciously or unconsciously, tends to see any bottom line margin-enhancing savings from operational efficiencies as "their money".

However, as the amount of material being diverted increases to 75% or more, significant rate impacts will come from the switch of operational focus from collecting and disposing of MSW to increasingly broader diversion actions. The cost reductions/increases from this switch will, therefore, become the focus of new rate structures.

A significant question arises for a jurisdiction such as Laguna Hills when the potential of non-rate payer revenues is factored into the total costs of the franchise structure. How will non-rate-generated monies from MSW collection to diversion revenue (such as CR&R's carbon credits from AD processing) be factored into the overall cost/revenue structure? It will create a more complex distribution of monies, some of which will come from ratepayers, while other parts will come from alternative revenue sources such as: carbon credits; the reduction of equipment capital costs; secondary material sales; and the introduction of telemetric "big data" into the collection and diversion infrastructure. EcoNomics believes that in the next few years, as AD organics processing costs are introduced into Laguna Hills' rate structure, routing and equipment changes are adopted, and Alternative Daily Cover is eliminated, concepts of how the new rate structures can be constructed will go from "theoretical" to important in reducing the impact to the ratepayers.

**2.2.4. Assess the need and/or desirability, for negotiation/revision of the City's existing hauler contract in order to handle the provisions of AB 1826, AB 1594, lack of organics handling infrastructure in Orange County, and other structural changes impacting diversion and solid waste handling options**

With the unknowns surrounding organics processing, MRFing capabilities and regulatory definitions, the addition of cost saving technologies, and the potential cost reduction in collection vehicles of 20% to 35%, the current contract may need to be updated. If so, rather than imposing tonnage diversion requirements on CR&R, the City may want to look towards modifying their contract towards setting diversion performance standards and asking CR&R to respond with concepts and costs of how to meet the standard. Once the standards are agreed upon and the impacts of technology and regulation are more certain, this approach could be more effective programmatically and more cost effective.

**2.2.5. Overseeing the C&D diversion of the construction of Five Lagunas and the implementation of the CUPs for diversion during the malls startup phase**

As the City's urban core continues to be developed, significant amounts of C&D materials will be generated by the demolition of the Laguna Hills Mall and the excavation of the parking lots to build parking structures and multi-family properties. The project is large enough that, if not closely supervised to ensure diligent construction and demolition diversion efforts; the City may experience a sizable increase in landfill

disposal. EcoNomics is recommending that the City track closely the tonnage being diverted from the demolition phase of this project to ensure maximum landfill diversion. Additionally, as the Five Lagunas begins operations, it would be prudent to monitor enclosure configurations and lease agreement language to ensure the Conditions of Approval are actually being implemented after the construction phase of the project.

#### **2.2.6. Identification of technological developments in truck routing, collection equipment, and processing that can provide cost savings to Laguna Hills**

The waste management industry is currently benefiting from breakthroughs in technology that enable the 'internet of things' to greatly increase routing efficiencies and reduce instances of over-servicing. An example of this emerging technology is Enevo, a Finnish company founded in 2010, has developed a device that can be attached to dumpsters to wirelessly broadcast the fullness of the bin to the hauler. By incorporating the fullness of the bin into its routes, the hauler can implement dynamic routes that only service bins that are full. In November 2015, EcoNomics worked with Waste Management of Orange County as an agent of the City of Mission Viejo to implement the Enevo technology for over 440 recycling bins within the City. Waste Management offers commercial recycling for free in Mission Viejo, which has resulted in decreasing revenue as more customers downsize their trash service and increase their recycling service to comply with state laws. The Enevo technology allows Waste Management to continue to provide free recycling to Mission Viejo customers in a more efficient manner, since drivers only service bins that are full and do not waste time and fuel on collecting bins that are partially full or empty. The City benefits from the arrangement because Waste Management is less resistant to implementing state-mandated, fee recycling programs as recycling service can be executed more cost-effectively.

In Laguna Hills, compliance with AB 341 and AB 1826 may require a significant expansion of existing single-stream recycling programs. The Enevo system, or some other emerging technology, may be a means to efficiently comply with state-mandated programmatic obligations without an outsized financial impact on the haulers collection costs or the rate-payers monthly bill.

Another development that could have cost reduction impacts is the Wrightspeed hybrid collection vehicle. Designed and built by the Tesla engineer partner of Elon Musk, the vehicle is currently undergoing 12 truck fleet evaluation by a small refuse company. Results to date indicate a savings of over 40% in fuel cost and over 20% reduction in maintenance costs. This is pointing to an overall reduction of 15+% in collection costs.

### **2.2.7. Research into the value of Green Business Certification, as being utilized in other Orange County cities, as a way to increase positive outcomes in the retail and business community**

Recently, EcoNomics has worked with the Cities of Mission Viejo and Huntington Beach to develop green business certification programs that helps businesses to be in compliance with environmental laws, reduce operational costs, and to attract new customers. EcoNomics has assisted its client Cities in developing specific criteria for waste reduction, energy management, water management, and pollution prevention. Additionally, EcoNomics has acted as a liaison between the many stakeholder groups involved in the program, including the business community, the California Green Business Network, waste haulers, and utilities. As of April 2016, five businesses have been certified through Mission Viejo's Green Business Certification program with several more pending. EcoNomics is also engaged with the City of Huntington Beach to implement a turnkey Sustainable Business Certification Program similar to Mission Viejo's. EcoNomics has received grant funding through the EPA to target low-income communities for the green business certification program. In Laguna Hills, a green business certification program may allow the City to expand the concept, where appropriate, that was developed and proven at The Willows in terms of incentives and voluntary nature of program implementation to other businesses.

## **Section 2.3. Resumes**

### **2.3.1. William O'Toole**

**President**

Mr. O'Toole founded EcoNomics, Inc. in 1977 and has extensive experience in the recycling and solid waste industry. As one of the early pioneers in the recycling industry he worked to implement some of the first curbside recycling programs in California and then developed secondary materials markets to accept the materials collected. He then turned his attention to implementing commercial recycling programs, which, in most cities yield far more tons of diversion due to the size and composition of these waste streams. He is now heavily involved in continuing the transition from the traditional view of solid waste and recycling towards the more encompassing vision of a sustainable materials management industry.

During the process of developing recycling programs, it became clear that existing collection contracts were insufficient with respect to programs, reporting, and enforcement tools to handle the additional requirements of diversion mandates. In addition, the segmentation of wastes into subcomponents (i.e. E-waste, HHW, "big box" recyclable streams, etc.) also required a new development of contract language and management tools to meet the demands of a different approach to the handling of what used to be considered as Municipal Solid Waste (MSW). It was at this point that Mr. O'Toole became involved in overseeing the procurement of hauler services. The aim

of his client cities was the development of contracts that are specifically tailored to maximize diversion, identify costs, and develop rate structures that are transparent.

Mr. O'Toole is one of the founders of the California Resource Recovery Association (CRRRA) as well as Californians Against Waste (CAW). He has worked on statewide legislation and has been a member of several committees and task forces for the California Integrated Waste Management Board (now known as CalRecycle) on AB 939 Diversion Calculations and Reporting Requirements for Material Recovery Facilities (MRF) and Transfer Stations.

Mr. O'Toole brings significant local knowledge about the Orange County solid waste and recycling system including familiarity with the recycling, materials recovery, construction and demolition waste processing facilities, the landfill system and all of the solid waste and recycling companies that are active in the Orange County area.

Mr. O'Toole is a "hands-on visionary" working with cities and counties to anticipate legislative trends, shifts in secondary materials markets, and other factors that affect local collection contracts. He devises practical, cost effective methods for implementing diversion programs that benefit the customers and enable our clients to meet the requirements of both AB 939 and the evolving requirements of AB 341 for now and over the course of their new collection contracts.

### **2.3.2. Cerene St. John J.D.**

**Director**

Ms. St. John began her solid waste career as a Deputy City Attorney for the City and County of San Francisco. Assigned to the Special Projects Division, she led a team in the Chief Administrator's Office to find a new landfill for the City when existing contracts were due to expire. She conducted a five-county negotiating effort that resulted in a contract and associated permits for the City's use of the Altamont Landfill located in Alameda County beginning in 1983.

Ms. St. John then served for six years as the Solid Waste Program Manager for the City of Sunnyvale. While there she conducted a Request for Proposals (RFP) process for solid waste and collection services resulting in a new contract with a detailed scope of work and performance standards. She conducted an RFP process for long-term landfill capacity for the City of Sunnyvale and 4 other cities resulting in a 30-year contract with the Kirby Canyon Landfill owned and operated by Waste Management. She also initiated work on the design and construction of the City-owned SMaRT Station, a transfer station/MRF that began operation in 1993.

Ms. St. John joined EcoNomics in 1990 and served as Vice President through June 2008, when she became a Director of EcoNomics and began providing a broader range of sustainability consulting services through her own company, It's A Natural Product, Inc.

In addition to solid waste and recycling consulting, Ms. St. John assists clients with food localization and food security projects. She is currently conducting a demonstration project to determine methodologies, actual costs and timeframes for sequestration of carbon in agricultural soils using compost, microbes and no-till growing methods. With regard to solid waste and recycling consulting service, she specializes in conducting procurements for solid waste and recycling collection services and the use of, or construction and operation of MRF's, transfer stations, and landfills. She also assists cities and counties with negotiations for these services and with contract amendments, ordinance revisions, and review proposed legislation.

As a former City Attorney and an active member of the State Bar of California, Ms. St. John prepares draft contract amendments, draft contracts, and RFP language for review by City Attorneys and/or outside legal counsel. Ms. St. John is able to write precise and thorough scopes of work for diversion programs and to craft contracts that protect the interest of the jurisdiction and its ratepayers. She is able to serve as a "bridge" between the technical requirements in these contracts and the legal language needed to enforce them. This generally saves our client's time and expense, as the City Attorney can senior review her work rather than spending time crafting the legal language, and the technical scope of work for the contract.

Ms. St. John's unique understanding of the legal underpinnings of the RFP process, the political and financial realities of cities and her experience in negotiations with the solid waste industry allow her to create procurement processes and negotiations for contract amendments that are fair, public, and that anticipate potential pitfalls so problems can be avoided.

Ms. St. John holds a B.A. in Political Science from California State University, San Bernardino (1977) and a J.D. degree from The University of Santa Clara School of Law (1980).

### **2.3.3. Trevor S. Blythe, MBA**

**Vice-President**

Trevor Blythe has over 9 years of experience as a consultant in the sustainable materials management industry. Mr. Blythe works daily with local governments, private industry, and waste haulers to overcome operational and financial barriers to implementing sustainable materials management programs at the municipal scale. He is an expert on solid waste regulations, operations, and collection system optimization. Mr. Blythe holds a Masters Degree in Business Administration/Sustainable Management from Presidio Graduate School in San Francisco. (Received May 2014.) During his coursework at Presidio, Trevor explored market-based solutions for returning key nutrients from organic waste back to the soil. He holds a Bachelor of Science in Environmental Sciences (awarded in 2006) from the University of California, Santa Barbara with an emphasis on Geographic Information Systems.

Mr. Blythe is based in the EcoNomics' Dana Point office and provides field services to implement commercial, industrial, school and special event recycling programs for EcoNomics' clients in Orange County. In Orange County, Mr. Blythe is currently assisting the Cities of Mission Viejo, Laguna Hills, Tustin, Stanton with the design, implementation and monitoring of waste diversion programs at a variety of businesses ranging from large shopping malls, hospitals, industrial generators, stand alone office buildings, and office parks. Mr. Blythe also assists EcoNomics' client cities with contract management oversight, including overseeing audits of the commercial and residential waste streams, monitoring diversion reports to assess hauler compliance with state laws.

Mr. Blythe has worked over the last several years in bringing recycling services to 100% of the multifamily apartments and HOAs in Mission Viejo. This achievement has brought recycling services to over 4,500 units throughout Mission Viejo. More recently, Mr. Blythe has focused on delivering cost-effective organic waste diversion solutions to large restaurants and hospitals in EcoNomics' client cities.

Mr. Blythe recently created a comprehensive food scrap cost model for the City of Napa. Elements of the model include incentives to the restaurants, impacts on rate revenues, predictions of service migration as the program expands, and refinement of density factors used in projecting overall program impacts on diversion and operational costs.

#### **2.3.4. Ian Bevan, MBA Manager, Program Implementation**

Mr. Bevan joined EcoNomics in June 2013. He has extensive experience with implementing commercial and multi-family recycling programs for several cities including Laguna Hills, Mission Viejo, and Tustin. Mr. Bevan specializes in developing cost-effective waste diversion programs that help businesses meet compliance requirements. He has conducted site audits at hundreds of commercial and multi-family properties to assess the feasibility of implementing recycling programs. Mr. Bevan uses information gathered at site audits to develop customized cost-saving waste reduction programs that fit the unique needs of each property, from split trash and recycling bins to specialized enclosure signage and outreach. Mr. Bevan has also worked with large retail operations to implement organics waste diversion programs and to manage increases in trash and recyclables during the holiday season using novel and innovative outreach and public education approaches. Most recently, Mr. Bevan has been involved in assisting the City of Mission Viejo with implementation of a green business certification program. To this end, he has coordinated closely with the California Green Business Network to attain access to the statewide network, assisted the City in engaging stakeholders from electric and water utilities to develop program criteria, researched incentive programs for specific energy and water saving programs, secured grant funding in the amount of \$20,000 from the Environmental Protection Agency, and has coordinated input from a multitude of stakeholders to move the process forward.

Mr. Bevan has experience working with the City of San Diego Environmental Department managing the construction and demolition ordinance. In this capacity, Mr. Bevan worked with contractors to ensure they met or exceeded the City's 50% diversion requirement for construction and demolition waste. Mr. Bevan leveraged his experience as an on-campus sustainability activist at University of San Diego to found a non-profit company committed to facilitating grassroots, student-led sustainability programs at colleges and universities. Mr. Bevan holds a Bachelor's Degree in Political Science from the University of San Diego. He received his Masters of Business Administration from the Presidio Graduate School in San Francisco in December 2012.

#### **2.3.5. Geiza Goulart, MS**

##### **Program Implementation Coordinator**

Mrs. Goulart da Silva joined the EcoNomics team in June 2015. Mrs. Goulart da Silva completed her Masters of Science in Economics from the University of Trento in Italy in October 2012 where she studied corporate social responsibility at large financial institutions. Mrs. Goulart da Silva works with the cities of Mission Viejo and Laguna Hills to assist with implementing organics diversion programs at restaurants to assist the cities obtain compliance with AB 1826. She has worked with over 20 restaurants to design and implement cost-saving organics diversion programs. Mrs. Goulart also worked as an intern in the Public Works Department of the City of Rancho Santa Margarita and La Habra and understands how municipal government operates. In her native Brazil, she has 6 years of experience in human relations. She is fluent in Portuguese, Italian, and English and proficient in Spanish. She received certification in Irvine Valley College's Sustainability and Resource Management program in 2014.

## Section 3: Agreement

EcoNomics is taking no exceptions to the agreement as presented in the City's RFP.

EcoNomics can meet the insurance requirements of this agreement.

See Exhibit 5 for EcoNomics' current Insurance Certificates.

## Section 4: References

Table 4.1. Table of References

| Name of Project Manager at City | Position                             | Affiliation           | Contact Information                                                                                                           | Completion Date | Project Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------|--------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Doug Stack                      | Director of Public Works             | City of Tustin        | <b>Address:</b> 300 Centennial Way<br><b>Telephone:</b> 714.573.3037<br><b>Email:</b> dstack@cityoftustin.org                 | On-going        | Develop organics rate for commercial businesses; Prop 218 notification assistance for rate adjustments; assist with contract extension negotiations; assist city in compliance with AB 939, AB 341, AB 1826; analysis of annual rate adjustment; develop and implement commercial, restaurant, and multi-family diversion programs; diversion tonnage report analysis; RFP for collection contract including diversion program design, writing of new contract, writing RFP; managing RFP process, proposal evaluation, contract award, contract monitoring. |
| Kevin Miller                    | Materials Diversion Administrator    | City of Napa          | <b>Address:</b> 1600 First St.<br><b>Telephone:</b> 707.257.9291<br><b>Email:</b> kmiller@cityofnapa.org                      | On-going        | Develop organics rate and staff report for commercial businesses; Prop 218 notification assistance for rate adjustments; assist with contract extension negotiations; assist city in compliance with AB 939, AB 341, AB 1826; develop and implement commercial and multi-family recycling programs                                                                                                                                                                                                                                                           |
| Randy Viegas                    | Project Manager                      | City of Rancho Mirage | <b>Address:</b> 69825 Hwy 111<br><b>Telephone:</b> 760.770.3224 ext242<br><b>Email:</b> randyv@RanchoMirageCA.gov             | On-going        | Draft contract and manage RFP process for 2000 and 2006. Negotiate new post AB 341 contract 2013-14. Develop food scrap rate structure and expand restaurant organics diversion program; develop performance metrics pegged to AB 341 and AB 1826 mandates; assist in waste and route audits; provide CalRecycle compliance and reporting assistance; assist City with AB 1826 compliance; assist City with Burretec contract management; develop staff reports to inform AB 1826 organics program implementation and optimal rate structure.                |
| Denise Matson                   | Environmental Programs Administrator | City of Mission Viejo | <b>Address:</b> 200 Civic Center Dr.<br><b>Telephone:</b> 949.470.3010<br><b>Email:</b> DMatson@cityofmissionviejo.org        | On-going        | Develop and implement commercial and multi-family recycling programs; implement sustainability programs at schools; develop and implement AB 1826 organic waste diversion programs; disposal report analysis; develop and implement green business certification program; assist with CalRecycle compliance; and monthly meetings with city and its hauler Waste Management.                                                                                                                                                                                 |
| Thomas Wheeler                  | Director of Public Works             | City of Lake Forest   | <b>Address:</b> 25550 Commercentre, Suite 100<br><b>Telephone:</b> 949.461.3481<br><b>Email:</b> twheeler@lakeforestca.gov    | On-going        | RFP for collection contract including diversion program design, writing of new contract, writing RFP; managing RFP process, proposal evaluation, contract award, contract monitoring; Prop 218 notification assistance for rate adjustments; design and rollout of AB 341 and AB 1826 compliance programs including commercial food scrap program.                                                                                                                                                                                                           |
| Dora Delgadillo                 | Solid Waste Programs Administrator   | City of Anaheim       | <b>Address:</b> 400 E Vermont<br><b>Telephone:</b> 714.765.6860<br><b>Email:</b> ddelgadillo@anaheim.net                      | On-going        | Identify 154 Tier 1 generators for AB 1826 implementation; develop letter for AB 1826 notification; manage compliance notification effort and provide direct technical assistance to 60+ Tier 1 generators; actively enroll generators into Republic organics pilot program; track implementation progress in cloud-based collaborative document.                                                                                                                                                                                                            |
| Nasser Abbaszadeh               | Public Works Director                | City of Laguna Niguel | <b>Address:</b> 30111 Crown Valley Pkwy<br><b>Telephone:</b> 949.362.4377<br><b>Email:</b> NAbbaszadeh@cityoflagunaniguel.org | On-going        | Manage negotiation and write interim amendment between City and CR&R; develop diversion program performance metrics in alignment with new legislation AB 1826, 1594 and 341; develop assessment tools; assist in field implementation                                                                                                                                                                                                                                                                                                                        |

## Section 5: Fee Schedule and Cost Controls

### 5.1. Table of Fee Schedules

| Name                       | Position                            | Hourly Rate | Allocation | Areas of Expertise                                                                                                                                                                                                        |
|----------------------------|-------------------------------------|-------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| William O'Toole            | President                           | \$180       | 20%        | Project management, client interface, strategy, negotiations with haulers; contract management, oversight of field data quality, council presentations, CalRecycle compliance, relevant industry analysis and projections |
| Cerene St. John, JD        | Technical Consulting                | \$180       | 5%         | Solid waste legislation tracking and interpretation, assistance with hauler negotiations.                                                                                                                                 |
| Trevor S. Blythe, MBA      | Vice President                      | \$120       | 25%        | Financial and program analysis, diversion program development and implementation, performance monitoring, operations analysis                                                                                             |
| Ian Bevan, MBA             | Manager, Program Implementation     | \$90        | 15%        | Public outreach, educational programs, waste audits, cost-saving diversion program proposal development                                                                                                                   |
| Geiza Goulart da Silva, MS | Coordinator, Program Implementation | \$80        | 35%        | AB 1826 generator identification, commercial list analysis, analysis, program implementation                                                                                                                              |

### 5.2. Cost Controls

The main reasons a project falls behind schedule and over budget are: unanticipated complexity, delay in obtaining key information from a third party source, inadequate internal staffing resources, delays in one or more projects which cause the projects timelines to begin to overlap and overstrain the resources needed for completion. The best strategy to overcome any of the above issues is close monitoring of each project to catch the schedule drift as soon as possible. This is achieved by internal weekly project/client updates and the use of scheduling software which tracks Gantt charts set up at the beginning of projects. In addition, we schedule each individual at 120 hours per month of billable time. This allows a buffer of 15 hours per month for additional effort or a reallocation of one person to assist another team member. The coordination of billable hours to project execution internally reinforces team adherence to budget to avoid having to "work for free".

## List of Exhibits

- Exhibit 1: Statement of EcoNomics' Sound Financial Condition
- Exhibit 2: EcoNomics' Completed "Certificate of Non-Discrimination"
- Exhibit 3: EcoNomics' Litigation
- Exhibit 4: EcoNomics Completed 'Certificate of Employment Relationships and Financial Interest'
- Exhibit 5: Certificates of Insurance
- Exhibit 6: Excerpt of EcoNomics Annual Report Tracking Database
- Exhibit 7: City Of Napa Staff Report Detailing Rate Impact Of Full-Scale Citywide Commercial Organics Program

## **Exhibit 1: Statement of EcoNomics' Sound Financial Condition**

EcoNomics is in sound financial condition with potential revenue from secured contracts in excess of overhead and administrative costs.

## Exhibit 2: EcoNomics' Completed "Certificate of Non-Discrimination"

Please note: a signed, wet copy of this form was submitted to the City in EcoNomics paper copy of the proposal.

Exhibit B

CITY OF LAGUNA HILLS  
CERTIFICATE OF NON-DISCRIMINATION

I hereby certify on behalf of EcoNomics Inc that all persons employed by EcoNomics Inc are, and shall be treated fairly without regard to race, creed, color, national origin, political affiliation, marital status, sex, age, or disability, and in compliance with all Federal and State laws prohibiting discrimination in employment, including, but not limited to, the Civil rights Act of 1964, the Unruh Civil Rights Acts, and the Americans With Disabilities Act.

Name: William O'Toole  
 Signature: [Signature]  
 Title: President

### **Exhibit 3: EcoNomics' Litigation**

There are no filed, pending or threatened claims or litigation by clients (current or past) during the last five years against EcoNomics, Inc.

## Exhibit 4: EcoNomics Completed 'Certificate of Employment Relationships and Financial Interest'

Please note: a signed, wet copy of this form was submitted to the City in EcoNomics paper copy of the proposal.

CITY OF LAGUNA HILLS  
CERTIFICATE OF  
EMPLOYMENT RELATIONSHIPS  
AND FINANCIAL INTERESTS

NAME OF ENTITY: EcoNomics Inc

EMPLOYMENT RELATIONSHIPS WITH CITY OFFICIALS OR CITY EMPLOYEES:  
None

FINANCIAL INTERESTS OF CITY OFFICIALS OR CITY EMPLOYEES IN THE ENTITY:  
(If known and applicable, please state the percentage ownership interest)  
None

I declare, under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Signed this 29th day of April, 2016, at  
Dana Point, California.

Name: William O Toole  
Signature: [Signature]  
Title: President

## Exhibit 5: Certificates of Insurance

### 5.1 Workers Compensation



IN REPLY REFER TO

APRIL 27, 2016

CITY OF LAGUNA HILLS  
CITY MANAGER  
24035 EL TORO RD  
LAGUNA HILLS CA 92653-3103

CERTIFICATE OF WORKERS'  
-----  
COMPENSATION INSURANCE  
-----  
CANCELLATION WITHDRAWAL NOTICE  
-----

RE: CERTIFICATE DATED OCTOBER 1, 2015

THE CANCELLATION HAS BEEN WITHDRAWN FOR THE WORKERS' COMPENSATION  
INSURANCE POLICY FOR THE EMPLOYER NAMED BELOW. THIS LETTER SUPERSEDES  
THE NOTICE OF CANCELLATION SENT TO YOU ON APRIL 20, 2016.

THIS EMPLOYER'S WORKERS' COMPENSATION INSURANCE COVERAGE CONTINUED  
UNINTERRUPTED.

**EMPLOYER:**

ECO/NOMICS, INC  
PO BOX 2790  
DEL MAR, CA 92014  
POLICY 1397885-15

CUSTOMER SERVICE REPRESENTATIVE  
CUSTOMER SERVICE CENTER  
(888) 782-8338

5860 Owens Drive • Pleasanton, CA 94588-3900  
Mailing Address: P.O. Box 8192 • Pleasanton, CA 94588-9682

SCIF 18102

Attachment: Attachment 4 - EcoNomics Agreement, 2016 (2991 : EcoNomics Amendment No. 3)

## 5.2. General Liability and Automobile

| <b>ACORD<sup>TM</sup> CERTIFICATE OF LIABILITY INSURANCE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                       |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | DATE (MM/DD/YYYY)<br>04/20/2016 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| <b>PRODUCER (858) 569-8100</b><br><b>Network One Insurance &amp; Financial Services, Inc</b><br><b>3914 Murphy Canyon Rd., Suite</b>                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                       |                   | THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.                                                                                                                                                                                                                                                                    |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                 |
| <b>San Diego CA 92123-</b><br><b>Economic's Inc.</b><br><b>832 Camino del Mar Ste. 1</b>                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                       |                   | <b>INSURERS AFFORDING COVERAGE</b><br>INSURER A <b>Liberty Mutual</b>                                                                                                                                                                                                                                                                                                                                                                                                          |                                     | <b>NAIC #</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                 |
| <b>Del Mar CA 92014-</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                       |                   | INSURER B<br>INSURER C<br>INSURER D<br>INSURER E                                                                                                                                                                                                                                                                                                                                                                                                                               |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                 |
| <b>COVERAGES</b><br>THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. |                                                                                                                                                                                                                                                                                                                       |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                 |
| POLICY NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | TYPE OF INSURANCE                                                                                                                                                                                                                                                                                                     | POLICY NUMBER     | POLICY EFFECTIVE DATE (MM/DD/YYYY)                                                                                                                                                                                                                                                                                                                                                                                                                                             | POLICY EXPIRATION DATE (MM/DD/YYYY) | LIMITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                 |
| A X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | GENERAL LIABILITY<br><input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY<br><input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR<br>GEN'L AGGREGATE LIMIT APPLIES PER<br><input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO- <input type="checkbox"/> LOC | BKS (16) 57048355 | 12/09/2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 12/09/2016                          | EACH OCCURRENCE \$ 1,000,000<br>DAMAGE TO RENTED PREMISES (EA OCCUR) \$ 500,000<br>MED EXP (Any one person) \$ 15,000<br>PERSONAL & ADV INJURY \$ 1,000,000<br>GENERAL AGGREGATE \$ 2,000,000<br>PRODUCTS - COMPROP AGG \$ 2,000,000<br>BOWED                                                                                                                                                                                                                                                                                                                                        |                                 |
| A X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | AUTOMOBILE LIABILITY<br><input checked="" type="checkbox"/> ANY AUTO<br><input checked="" type="checkbox"/> ALL OWNED AUTOS<br><input checked="" type="checkbox"/> SCHEDULED AUTOS<br><input checked="" type="checkbox"/> HIRED AUTOS<br><input checked="" type="checkbox"/> NON-OWNED AUTOS                          | BKS (16) 57048355 | 12/09/2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 12/09/2016                          | COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000<br>BODILY INJURY (1-Per person) \$<br>BODILY INJURY (Per accident) \$<br>PROPERTY DAMAGE (Per accident) \$<br>GARAGE LIABILITY<br><input type="checkbox"/> ANY AUTO<br>EXCESS/UMBRELLA LIABILITY<br><input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE<br><input type="checkbox"/> DEDUCTIBLE \$<br><input type="checkbox"/> RETENTION \$<br>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY<br>ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/OWNER EXCLUDED?<br>If yes, describe under SPECIAL PROVISIONS below<br>OTHER |                                 |
| DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENTS/SPECIAL PROVISIONS<br>The City, it's officials, officers, employees, agents, volunteers, shall be additional insureds with regard to liability and defense of suits or claims arising out of the performance agreement.<br>Coverage subject to terms and conditions of the policy.<br>*Except 10 days if non-payment cancellation.                                                                                |                                                                                                                                                                                                                                                                                                                       |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                 |
| <b>CERTIFICATE HOLDER</b><br>( ) - ( ) -<br>City of Laguna Hills<br>240 El Toro Road<br>Laguna Hills CA 92653-                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                       |                   | <b>CANCELLATION</b><br>SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL *30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.<br>AUTHORIZED REPRESENTATIVE:  |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                 |

 ACORD 25 (2001/08)  
 INS025 (01/08) 05

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 Page 1 of 2

**IMPORTANT**

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

**DISCLAIMER**

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing Insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

**COMMERCIAL GENERAL LIABILITY  
CG 88 10 04 13**

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**COMMERCIAL GENERAL LIABILITY EXTENSION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

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With respect to coverage afforded by this endorsement, the provisions of the policy apply unless modified by the endorsement.

**A. NON-OWNED AIRCRAFT**

Under Paragraph 2. Exclusions of Section I – Coverage A - Bodily Injury And Property Damage Liability, exclusion g. Aircraft, Auto Or Watercraft does not apply to an aircraft provided:

1. It is not owned by any insured;
2. It is hired, chartered or loaned with a trained paid crew;
3. The pilot in command holds a currently effective certificate, issued by the duly constituted authority of the United States of America or Canada, designating her or him a commercial or airline pilot; and
4. It is not being used to carry persons or property for a charge.

However, the insurance afforded by this provision does not apply if there is available to the insured other valid and collectible insurance, whether primary, excess (other than insurance written to apply specifically in excess of this policy), contingent or on any other basis, that would also apply to the loss covered under this provision.

**B. NON-OWNED WATERCRAFT**

Under Paragraph 2. Exclusions of Section I – Coverage A – Bodily Injury And Property Damage Liability, Subparagraph (2) of exclusion g. Aircraft, Auto Or Watercraft is replaced by the following:

This exclusion does not apply to:

- (2) A watercraft you do not own that is:
  - (a) Less than 52 feet long; and
  - (b) Not being used to carry persons or property for a charge.

**C. PROPERTY DAMAGE LIABILITY – ELEVATORS**

1. Under Paragraph 2. Exclusions of Section I – Coverage A – Bodily Injury And Property Damage Liability, Subparagraphs (3), (4) and (6) of exclusion j. Damage To Property do not apply if such "property damage" results from the use of elevators. For the purpose of this provision, elevators do not include vehicle lifts. Vehicle lifts are lifts or hoists used in automobile service or repair operations.
2. The following is added to Section IV – Commercial General Liability Conditions, Condition 4. Other Insurance, Paragraph b. Excess Insurance:

The insurance afforded by this provision of this endorsement is excess over any property insurance, whether primary, excess, contingent or on any other basis.

**D. EXTENDED DAMAGE TO PROPERTY RENTED TO YOU (Tenant's Property Damage)**

If Damage To Premises Rented To You is not otherwise excluded from this Coverage Part:

1. Under Paragraph 2. Exclusions of Section I - Coverage A - Bodily Injury and Property Damage Liability:
  - a. The fourth from the last paragraph of exclusion j. Damage To Property is replaced by the following:
 

Paragraphs (1), (3) and (4) of this exclusion do not apply to "property damage" (other than damage by fire, lightning, explosion, smoke, or leakage from an automatic fire protection system) to:

    - (i) Premises rented to you for a period of 7 or fewer consecutive days; or
    - (ii) Contents that you rent or lease as part of a premises rental or lease agreement for a period of more than 7 days.

Paragraphs (1), (3) and (4) of this exclusion do not apply to "property damage" to contents of premises rented to you for a period of 7 or fewer consecutive days.

A separate limit of insurance applies to this coverage as described in Section III – Limits of Insurance.

- b. The last paragraph of subsection 2. **Exclusions** is replaced by the following:
- Exclusions c. through n. do not apply to damage by fire, lightning, explosion, smoke or leakage from automatic fire protection systems to premises while rented to you or temporarily occupied by you with permission of the owner. A separate limit of insurance applies to Damage To Premises Rented To You as described in **Section III – Limits Of Insurance**.
2. Paragraph 6. under **Section III – Limits Of Insurance** is replaced by the following:
6. Subject to Paragraph 5. above, the Damage To Premises Rented To You Limit is the most we will pay under Coverage A for damages because of "property damage" to:
- a. Any one premise:
- (1) While rented to you; or
  - (2) While rented to you or temporarily occupied by you with permission of the owner for damage by fire, lightning, explosion, smoke or leakage from automatic protection systems; or
- b. Contents that you rent or lease as part of a premises rental or lease agreement.
3. As regards coverage provided by this provision **D. EXTENDED DAMAGE TO PROPERTY RENTED TO YOU (Tenant's Property Damage)** - Paragraph 9.a. of **Definitions** is replaced with the following:
- 9.a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by fire, lightning, explosion, smoke, or leakage from automatic fire protection systems to premises while rented to you or temporarily occupied by you with the permission of the owner, or for damage to contents of such premises that are included in your premises rental or lease agreement, is not an "insured contract".
- E. MEDICAL PAYMENTS EXTENSION**
- If Coverage C Medical Payments is not otherwise excluded, the Medical Payments provided by this policy are amended as follows:
- Under Paragraph 1. **Insuring Agreement of Section I – Coverage C – Medical Payments**, Subparagraph (b) of Paragraph a. is replaced by the following:
- (b) The expenses are incurred and reported within three years of the date of the accident; and
- F. EXTENSION OF SUPPLEMENTARY PAYMENTS – COVERAGES A AND B**
1. Under **Supplementary Payments – Coverages A and B**, Paragraph 1.b. is replaced by the following:
- b. Up to \$3,000 for cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which the Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.
2. Paragraph 1.d. is replaced by the following:
- d. All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or "suit", including actual loss of earnings up to \$500 a day because of time off from work.
- G. ADDITIONAL INSURED - BY CONTRACT, AGREEMENT OR PERMIT**
1. Paragraph 2. under **Section II – Who Is An Insured** is amended to include as an insured any person or organization whom you have agreed to add as an additional insured in a written contract, written agreement or permit. Such person or organization is an additional insured but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused in whole or in part by:
- a. Your acts or omissions, or the acts or omissions of those acting on your behalf, in the performance of your on going operations for the additional insured that are the subject of the written contract or written agreement provided that the "bodily injury" or "property damage" occurs, or the "personal and advertising injury" is committed, subsequent to the signing of such written contract or written agreement; or

- b. Premises or facilities rented by you or used by you; or
- c. The maintenance, operation or use by you of equipment rented or leased to you by such person or organization; or
- d. Operations performed by you or on your behalf for which the state or political subdivision has issued a permit subject to the following additional provisions:
  - (1) This insurance does not apply to "bodily injury", "property damage", or "personal and advertising injury" arising out of the operations performed for the state or political subdivision;
  - (2) This insurance does not apply to "bodily injury" or "property damage" included within the "completed operations hazard".
  - (3) Insurance applies to premises you own, rent, or control but only with respect to the following hazards:
    - a) The existence, maintenance, repair, construction, erection, or removal of advertising signs, awnings, canopies, cellar entrances, coal holes, driveways, manholes, marquees, hoist way openings, sidewalk vaults, street banners, or decorations and similar exposures; or
    - (b) The construction, erection, or removal of elevators; or
    - (c) The ownership, maintenance, or use of any elevators covered by this insurance.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

With respect to Paragraph 1.a. above, a person's or organization's status as an additional insured under this endorsement ends when:

- (1) All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
- (2) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

With respect to Paragraph 1.b. above, a person's or organization's status as an additional insured under this endorsement ends when their written contract or written agreement with you for such premises or facilities ends.

With respects to Paragraph 1.c. above, this insurance does not apply to any "occurrence" which takes place after the equipment rental or lease agreement has expired or you have returned such equipment to the lessor.

The insurance provided by this endorsement applies only if the written contract or written agreement is signed prior to the "bodily injury" or "property damage".

We have no duty to defend an additional insured under this endorsement until we receive written notice of a "suit" by the additional insured as required in Paragraph b. of Condition 2. **Duties In The Event Of Occurrence, Offense, Claim Or Suit** under Section IV – Commercial General Liability Conditions.

2. With respect to the insurance provided by this endorsement, the following are added to Paragraph 2. Exclusions under Section I - Coverage A - Bodily Injury And Property Damage Liability:

This insurance does not apply to:

- a. "Bodily Injury" or "property damage" arising from the sole negligence of the additional insured.
- b. "Bodily injury" or "property damage" that occurs prior to you commencing operations at the location where such "bodily injury" or "property damage" occurs.
- c. "Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:
  - (1) The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
  - (2) Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of, or the failure to render, any professional architectural, engineering or surveying services.

- d. "Bodily injury" or "property damage" occurring after:
  - (1) All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
  - (2) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.
- e. Any person or organization specifically designated as an additional insured for ongoing operations by a separate **ADDITIONAL INSURED - OWNERS, LESSEES OR CONTRACTORS** endorsement issued by us and made a part of this policy.

3. With respect to the insurance afforded to these additional insureds, the following is added to Section III - Limits Of Insurance:

If coverage provided to the additional Insured is required by a contract or agreement, the most we will pay on behalf of the additional Insured is the amount of Insurance:

- a. Required by the contract or agreement; or
- b. Available under the applicable Limits of Insurance shown in the Declarations; whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

#### H. PRIMARY AND NON-CONTRIBUTORY ADDITIONAL INSURED EXTENSION

This provision applies to any person or organization who qualifies as an additional insured under any form or endorsement under this policy.

Condition 4. Other Insurance of SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS is amended as follows:

- a. The following is added to Paragraph a. Primary Insurance:

If an additional insured's policy has an Other Insurance provision making its policy excess, and you have agreed in a written contract or written agreement to provide the additional insured coverage on a primary and noncontributory basis, this policy shall be primary and we will not seek contribution from the additional insured's policy for damages we cover.

b. The following is added to Paragraph b. **Excess Insurance:**

When a written contract or written agreement, other than a premises lease, facilities rental contract or agreement, an equipment rental or lease contract or agreement, or permit issued by a state or political subdivision between you and an additional insured does not require this insurance to be primary or primary and non-contributory, this Insurance is excess over any other insurance for which the additional insured is designated as a Named Insured.

Regardless of the written agreement between you and an additional insured, this insurance is excess over any other insurance whether primary, excess, contingent or on any other basis for which the additional insured has been added as an additional insured on other policies.

I. **ADDITIONAL INSURED - EXTENDED PROTECTION OF YOUR "LIMITS OF INSURANCE"**

This provision applies to any person or organization who qualifies as an additional insured under any form or endorsement under this policy.

1. The following is added to Condition 2. **Duties In The Event Of Occurrence, Offense, Claim or Suit:**

An additional insured under this endorsement will as soon as practicable:

- a. Give written notice of an "occurrence" or an offense that may result in a claim or "suit" under this insurance to us;
- b. Tender the defense and indemnity of any claim or "suit" to all insurers whom also have insurance available to the additional insured; and
- c. Agree to make available any other insurance which the additional insured has for a loss we cover under this Coverage Part.
- d. We have no duty to defend or indemnify an additional insured under this endorsement until we receive written notice of a "suit" by the additional insured.

2. The limits of insurance applicable to the additional insured are those specified in a written contract or written agreement or the limits of insurance as stated in the Declarations of this policy and defined in Section III - Limits of Insurance of this policy, whichever are less. These limits are inclusive of and not in addition to the limits of insurance available under this policy.

J. **WHO IS AN INSURED - INCIDENTAL MEDICAL ERRORS / MALPRACTICE  
WHO IS AN INSURED - FELLOW EMPLOYEE EXTENSION - MANAGEMENT EMPLOYEES**

Paragraph 2.a.(1) of Section II - **Who Is An Insured** is replaced with the following:

(1) "Bodily injury" or "personal and advertising injury":

- (a) To you, to your partners or members (if you are a partnership or joint venture), to your members (if you are a limited liability company), to a co-"employee" while in the course of his or her employment or performing duties related to the conduct of your business, or to your other "volunteer workers" while performing duties related to the conduct of your business;
- (b) To the spouse, child, parent, brother or sister of that co-"employee" or "volunteer worker" as a consequence of Paragraph (1) (a) above;
- (c) For which there is any obligation to share damages with or repay someone else who must pay damages because of the injury described in Paragraphs (1) (a) or (b) above; or
- (d) Arising out of his or her providing or failing to provide professional health care services. However, if you are not in the business of providing professional health care services or providing professional health care personnel to others, or if coverage for providing professional health care services is not otherwise excluded by separate endorsement, this provision (Paragraph (d)) does not apply.

Paragraphs (a) and (b) above do not apply to "bodily injury" or "personal and advertising injury" caused by an "employee" who is acting in a supervisory capacity for you. Supervisory capacity as used herein means the "employee's" job responsibilities assigned by you, includes the direct supervision of other "employees" of yours. However, none of these "employees" are insureds for "bodily injury" or "personal and advertising injury" arising out of their willful conduct, which is defined as the purposeful or willful intent to cause "bodily injury" or "personal and advertising injury", or caused in whole or in part by their intoxication by liquor or controlled substances.

The coverage provided by provision J, is excess over any other valid and collectable insurance available to your "employee".

**K. NEWLY FORMED OR ADDITIONALLY ACQUIRED ENTITIES**

Paragraph 3. of Section II - Who Is An Insured is replaced by the following:

3. Any organization you newly acquire or form and over which you maintain ownership or majority interest, will qualify as a Named Insured if there is no other similar insurance available to that organization. However:
  - a. Coverage under this provision is afforded only until the expiration of the policy period in which the entity was acquired or formed by you;
  - b. Coverage A does not apply to "bodily injury" or "property damage" that occurred before you acquired or formed the organization; and
  - c. Coverage B does not apply to "personal and advertising injury" arising out of an offense committed before you acquired or formed the organization.
  - d. Records and descriptions of operations must be maintained by the first Named Insured.

No person or organization is an insured with respect to the conduct of any current or past partnership, joint venture or limited liability company that is not shown as a Named Insured in the Declarations or qualifies as an insured under this provision.

**L. FAILURE TO DISCLOSE HAZARDS AND PRIOR OCCURRENCES**

Under Section IV - Commercial General Liability Conditions, the following is added to Condition 6. Representations:

Your failure to disclose all hazards or prior "occurrences" existing as of the inception date of the policy shall not prejudice the coverage afforded by this policy provided such failure to disclose all hazards or prior "occurrences" is not intentional.

**M. KNOWLEDGE OF OCCURRENCE, OFFENSE, CLAIM OR SUIT**

Under Section IV - Commercial General Liability Conditions, the following is added to Condition 2. Duties In The Event Of Occurrence, Offense, Claim Or Suit:

Knowledge of an "occurrence", offense, claim or "suit" by an agent, servant or "employee" of any insured shall not in itself constitute knowledge of the insured unless an insured listed under Paragraph 1. of Section II - Who Is An Insured or a person who has been designated by them to receive reports of "occurrences", offenses, claims or "suits" shall have received such notice from the agent, servant or "employee".

**N. LIBERALIZATION CLAUSE**

If we revise this Commercial General Liability Extension Endorsement to provide more coverage without additional premium charge, your policy will automatically provide the coverage as of the day the revision is effective in your state.

**O. BODILY INJURY REDEFINED**

Under Section V - Definitions, Definition 3. is replaced by the following:

3. "Bodily Injury" means physical injury, sickness or disease sustained by a person. This includes mental anguish, mental injury, shock, fright or death that results from such physical injury, sickness or disease.

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**P. EXTENDED PROPERTY DAMAGE**

Exclusion a. of **COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY** is replaced by the following:

**a. Expected Or Intended Injury**

"Bodily injury" or "property damage" expected or intended from the standpoint of the insured. This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

**Q. WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US – WHEN REQUIRED IN A CONTRACT OR AGREEMENT WITH YOU**

Under **Section IV – Commercial General Liability Conditions**, the following is added to **Condition 8. Transfer Of Rights Of Recovery Against Others To Us**:

We waive any right of recovery we may have against a person or organization because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard" provided:

1. You and that person or organization have agreed in writing in a contract or agreement that you waive such rights against that person or organization; and
2. The injury or damage occurs subsequent to the execution of the written contract or written agreement.

## Exhibit 6: Excerpt of EcoNomics Annual Report Tracking Database

[illegible]

## Exhibit 7: City Of Napa Staff Report Detailing Rate Impact Of Full-Scale Citywide Commercial Organics Program

### M E M O R A N D U M

DATE: January 12, 2015

TO: Kevin Miller  
City of Napa  
Materials Diversion Administrator

FROM: Trevor S Blythe  
Vice-President, Project Implementation

RE: Cost and Revenue Impact Analysis on City's Materials Diversion and Solid Waste Enterprise Fund of Expanding Pilot Food Scrap Diversion Program to a Full Scale Program

#### Background:

In July 2011, the City directed NRWS to implement a pilot food scrap diversion program. The program aimed to divert food scraps generated by food service establishments away from the landfill. Food scrap materials are taken to the City's Materials Diversion Facility (MDF) where they are composted and converted into a soil amendment. The program benefits the City by reducing the amount of tons delivered to the Devlin Road Transfer Station, which costs approximately \$64 per ton, and by increasing the revenue of materials sold the City receives through the sale of finished compost. The cost of the pilot program (paid to NRWS for collection services) ranged from \$5,430.67 per month for 20 stops to \$7,972 per month for 55 stops. Current pilot participants receive food scrap collection service at no charge provided they do not reduce their baseline garbage service levels. As of November 2014, the program has 45 participating restaurants.

In September 2014, Governor Brown signed Assembly Bill 1826 into law. AB 1826 makes it mandatory for large generators of food waste, such as restaurants and hospitals, to divert these materials away from the landfill by April 1, 2016. By the year 2020, nearly every food service establishment, including small generators, will be required to divert their food waste from landfills. In addition, Assembly Bill 341 passed in October 2011 set a statewide goal of 75% landfill diversion by the year 2020. To comply with AB 341 and to encourage waste reduction, the City Council established a 75% diversion goal for the year 2020 in its Disposal Reduction Policy (Resolution R2012 -100) on July 24, 2012. By expanding the number of restaurants that participate in the food scrap diversion program, the City will achieve compliance with state laws and meet the disposal reduction goals of the City Council. Staff anticipates that nearly 5,000 tons of additional diversion could result from expanding the current food scrap diversion program to the

remaining 200 non-participating restaurants, increasing the City's diversion rate by 6%, from approximately 65% to 71%.

The following analysis calculates the projected net fiscal impact on the City's Materials Diversion and Solid Waste enterprise fund ("enterprise fund") of the expanded food scrap diversion program. The City's consultant, EcoNomics, was the lead on developing the revenue impact analysis. Per the City's direction, EcoNomics also assessed the impact of charging a rate for food scrap collection at commercial premises and special events (both services are currently provided for free). This analysis included performing sensitivity analysis on what this rate should be, given:

1. The costs for the program and
2. The need to incentivize the food scrap generators to participate in the program.

Various potential rates were compared to the existing rates for collection of Municipal Solid Waste (MSW) from existing restaurants. EcoNomics also studied the impact of reducing food scrap compactor collection rates. The impact on the enterprise fund from the expanded food scrap collection program for each rate year can be broken into the following four categories, which are described in detail in this report and include references to Excel worksheets as supporting documentation when noted:

**Net Projected Impact on the City's Rate Fund of the Expanded Food Scrap Collection Program**

|                                                                                                                 | RY 2015              | RY 2016              |
|-----------------------------------------------------------------------------------------------------------------|----------------------|----------------------|
| Section 1. Impact of increased food scrap program collection rate revenue and decreased garbage service revenue | -\$116,349.87        | -\$288,770.48        |
| Section 2. Impact of increased collection payment to NRWS                                                       | -\$189,118.24        | -\$232,615.44        |
| Section 3. Impact of increased food scrap processing costs and decreased landfill disposal costs                | \$29,124.49          | \$121,802.92         |
| Section 4. Impact of increased material sales revenue                                                           | \$6,313.14           | \$25,954.02          |
| <b>Total</b>                                                                                                    | <b>-\$270,030.50</b> | <b>-\$373,628.98</b> |

NOTE: Please refer to Exhibit 1: Rate Year 2015 and 2016 Net Revenue Impact Analysis for additional information about how the net impact analysis was calculated for rate years 2015 and 2016.

The total net cost to the City's enterprise fund of the expanded food scrap collection program is projected to be as follows:

- Rate Year 2015 (April 1 – December 31, 2015): -\$270,030.50
- Rate Year 2016 (January 1 – December 31, 2016): -\$373,628.98

The cost increase would require the following approximate rate increases:

- Rate Year 2015: 1.6% increase

- Rate Year 2016: 2.2% increase

### **Section 1. Impact of Increased Food Scrap Program Collection Rate Revenue and Decreased Garbage Revenue**

The rate structure for food scrap collection service was designed to provide a cost incentive for participating restaurants. The current pilot program is offered at no charge provided the restaurant does not reduce their garbage service. Therefore, the current participating restaurants are not realizing a disposal cost reduction since they have not been able to reduce their garbage collection service to accommodate the decrease in garbage volume resulting from the food scraps being collected. When the full-scale commercial food scrap collection program begins on April 1, 2015, EcoNomics is recommending that food scrap collection service be offered at a 25% savings when compared to equivalent MSW service.

To arrive at a cost for food scrap carts, EcoNomics examined (1) the level of incentive required to motivate food scrap generators to participate and (2) the projected reduction in MSW cart and bin revenue to arrive at a net cost of the total food waste program. As a result of that analysis, EcoNomics confirmed that the discrepancy between the rates for wheeled cart service compared to the rates for the equivalent per-gallon cost of commercial bin service exists and presents a problem for implementing the food scrap collection program. Further analysis determined that the cost for commercial cart service is understated by approximately 25% in the current Napa rate structure.

One goal of the food scrap collection rate is to provide a sufficient economic benefit for food scrap collection service to incentivize customers to utilize the program, versus continuing to dispose of food scraps as MSW at the current MSW rate. If the existing commercial cart rate is artificially low compared to the cost of providing the service, this will skew the relationship between commercial food composting cart rates and commercial garbage cart rates.

In discussions with City staff, it was decided that correcting the discrepancy in a single rate year could create too large an economic impact for existing commercial cart customers. A 5-year phase-in plan (as was employed previously for a similar situation involving 65-gallon residential cart service) could be utilized to correct the discrepancy and arrive at a more equitable and linear cost distribution for commercial MSW cart rates.

Customers currently pay an average of \$0.75 per gallon for commercial MSW cart service and an average of \$1.02 per gallon for commercial MSW bin service. The five-year rate levelization plan would increase commercial MSW cart rates by 5% each year to bring the per-gallon cart rates in alignment with equivalent per-gallon bin service rates. The 5% per year increase would be in addition to any council-approved rate

adjustments needed to cover changes in costs of service and inflation. The impact of the 5% commercial MSW cart rate increase on all commercial customers for rate year 2015 is projected to be an increase of \$33,477 and an increase of \$46,868 in rate year 2016 (see Exhibit 12: Levelized Commercial MSW Cart Rate Impact). The most common MSW cart service is the 95-gallon serviced 1 day per week. The current commercial cart rate for monthly MSW service of a 95-gallon cart emptied one time per week is \$73.95. A 5% increase (independent of any overall increase the City Council chooses to adopt) would increase the monthly cost to \$77.65 (an increase of \$3.70). The rate impact of the 5% per year increase in MSW cart service on the restaurant community is discussed below.

EcoNomics projects that restaurants currently participating in the food scrap diversion program will pay an average rate increase of \$5.67 per month in rate year 2015 and an additional \$5.95 per month in rate year 2016 as a result of the 5% per year increase in commercial garbage cart service rates (see Exhibit 7: Average Impact Analysis of 5% MSW Commercial Cart Rate Increase on Participating Restaurants). Restaurants that are not currently enrolled in the food scrap diversion program will see a monthly increase of \$2.14 per month in rate year 2015 and \$2.25 per month in rate year 2016 as a result of the 5% per year increase in garbage cart service rates (see Exhibit 5: Average Impact Analysis of 5% MSW Commercial Cart Rate Increase on Non-Participating Restaurants).

To identify the rate impact of charging customers a food scrap collection rate that provides a savings of roughly 25% compared to the rate for comparable MSW service, EcoNomics developed a “calculator” (Excel spreadsheet) that projects and analyzes the rates of different service and inventory scenarios for MSW, recycling, and food scrap collection and diversion programs. The calculator automatically compares a baseline service scenario with a service scenario that includes food scrap collection to calculate the rate impact on the restaurants’ monthly bill and on the City’s rate revenue.

Using the rate calculator described above, EcoNomics ran service cost simulations for 45 restaurants currently participating in the pilot program as well as 111 non-participating restaurants to accomplish the following:

- 1) Assess if the restaurants could reduce their disposal costs by implementing a food scrap diversion program using the proposed economic incentive of approximately 25% for collection of food scraps compared to non-participation and continuing to put food scraps in the MSW container and pay the MSW rate for this material;
- 2) Calculate the aggregate reduction in rate revenue the City would realize as a result of each restaurant participating in the program if a 25% economic incentive was used.

### 1a. Revenue impact results for currently participating restaurants

Table 1.1 shows an example of the rate impact calculations for a common service scenario for current restaurants participating in the pilot food scrap collection program.

**Table 1.1. Service Levels for Common Restaurant Service Scenario**

| Service Line | Number of Container(s) | Size of Container(s) in Cubic Yards | Collection Frequency (days per week) | Cubic Yards Per Week | Generator Savings | Cost Per Month    |
|--------------|------------------------|-------------------------------------|--------------------------------------|----------------------|-------------------|-------------------|
| Garbage      | 1                      | 3                                   | 2                                    | 6                    | -                 | \$1,222.25        |
| Recycling    | 1                      | 3                                   | 2                                    | 6                    | 100%              | \$-               |
| Food Scraps  | 3                      | 65-gallon                           | 2                                    | 2                    | 100%              | \$-               |
| <b>Total</b> | <b>5</b>               | <b>-</b>                            | <b>-</b>                             | <b>14</b>            | <b>-</b>          | <b>\$1,222.25</b> |

The scenario above represents a restaurant that has one 3-yard MSW bin picked-up two days per week, one 3-yard recycling bin serviced 2 days per week, and three 65-gallon food scrap carts collected 2 days per week. The property currently has a total of 14 cubic yards of materials being collected by NRWS. The restaurants' garbage is likely being over-served in this scenario because restaurants that participate in the pilot program were instructed by the City not to reduce the level of their trash service regardless of the amount of food scraps that were diverted.

The City requested that businesses not reduce garbage service in order to avoid negative rate impacts during the pilot program, in exchange for the pilot program being provided at no charge to the participants. This particular restaurant is diverting 2 cubic yards of food scraps per week through the food scrap diversion program and can reduce its trash service accordingly. If the proposed food scrap rate is approved by the City Council and becomes effective on April 1, 2015, this restaurant will be charged for food scrap collection at new food scrap rate which represents a 25% savings compared to equivalent garbage service, and the restaurant will also be able to reduce its garbage service. Table 1.2 shows the rate impact of these actions on the restaurant.

**Table 1.2. Impact of Proposed New Rates on Restaurant Currently Enrolled in the Pilot Food Scrap Collection Program – Cost Savings of \$268.32 per month (a 22% reduction)**

| Service Line | Number of Container(s) | Size of Container(s) in Cubic Yards | Collection Frequency (days per week) | Cubic Yards Per Week | Generator Savings | Cost Per Month  |
|--------------|------------------------|-------------------------------------|--------------------------------------|----------------------|-------------------|-----------------|
| Garbage      | 1                      | 4                                   | 1                                    | 4                    | -                 | \$731.74        |
| Recycling    | 1                      | 3                                   | 2                                    | 6                    | 100%              | \$0             |
| Food Scraps  | 3                      | 65-gallon                           | 2                                    | 2                    | 25%               | \$222.19        |
| <b>Total</b> | <b>5</b>               | <b>-</b>                            | <b>-</b>                             | <b>12</b>            | <b>-</b>          | <b>\$953.93</b> |

As Table 1.2 shows, the restaurant has diverted 2-cubic yards of food scraps per week, and therefore can reduce the volume of MSW being collected by NRWS by 2 cubic yards. To accomplish this, the restaurant can replace its 3-yard trash bin picked-up 2 days per

week with a larger 4-yard trash bin collected only 1 day per week. Downsizing the trash service by 2 cubic yards per week results in a cost reduction of \$490 per month for the restaurant. The cost of food scrap collection service increases from \$0 per month to \$222.19. Therefore, this restaurant can save \$268.32 per month by reducing its garbage service and by continuing to participate in the food scrap collection program.

Of the restaurants currently participating in the food scrap diversion program, half will realize cost savings by “right-sizing” their trash service if the proposed food scrap rate is approved by the City Council and becomes effective on April 1, 2015. These cost savings range from to \$24 per month to \$742 per month. The remaining 50% of the currently participating restaurants will realize a rate *increase* if the proposed food scrap rates become effective even assuming these restaurants downsize their trash service. However, these restaurants may have the option to downsize their current inventory and collection frequency of food scrap carts. During “ride alongs” with the food scrap driver conducted in May and June of 2014, EcoNomics noted that restaurants utilized only about 40% of the total food scrap cart capacity they had on site. EcoNomics anticipates that restaurants can and should scale back food scrap service significantly as a cost-cutting measure if the new food scrap rate is approved and becomes effective. NRWS and City staff will assist these restaurants in implementing these service level reductions as the full-scale program is rolled out.

When the above simulation was applied to all 45 restaurants currently participating in the pilot food scrap program, EcoNomics found that using the 25% economic incentive would save restaurants that are currently part of the pilot program an average of \$61.68 per month during rate year 2015. Please refer to Exhibit 6: Service and Inventory List of Currently Participating Accounts for the details of the aggregate rate impact analysis for participating restaurants. If the currently participating restaurant also decided to “right-size” its food scrap collection service, each restaurant would save on average over \$100 per month (see Exhibit 9: Impact of Right-sizing Carts). EcoNomics expects that 90% of current restaurant participants will reduce the inventory or frequency of collection of their current food scrap cart inventory if and when the collection rate for this service line is initiated on April 1, 2015. The assumption used by EcoNomics in calculating these rate revenue impact projections, is that the “right-sizing” of food scrap collection service among currently participating restaurants would take place gradually over the first rate year. Similarly, in EcoNomics’ projections, it anticipated that the “right-sizing” of garbage service among participating restaurants would take place over the course of the second quarter of 2015. This is based upon EcoNomics’ experience implementing commercial food scrap collection service in other cities. The aggregate rate impact of currently participating restaurants right-sizing their garbage service and their food scrap collection service during rate years 2015 and 2016 is included as Table 1.3 below.

**Table 1.3: Aggregate Annual Revenue Impact of Currently Participating Restaurants Right-sizing their Garbage and Food Scrap Service**

|                                                                                                                | RY2015              | RY2016               |
|----------------------------------------------------------------------------------------------------------------|---------------------|----------------------|
| Revenue Impact of Participating Restaurants <b>Right-sizing MSW Service (includes new FW rate revenue)</b>     | -\$24,641.69        | -\$33,436.01         |
| Revenue Impact of Participating Restaurants <b>Right-sizing Food Scrap Cart Inventory</b> when Rate is Enacted | -\$28,947.48        | -\$174,008.35        |
| <b>Net Impact on City Rate Fund</b>                                                                            | <b>-\$53,589.17</b> | <b>-\$207,444.36</b> |

#### 1b. Revenue impact results for non-participating restaurants

To identify restaurants that are currently not participating in the food scrap diversion program, EcoNomics obtained a list of all permitted food service establishments from the County of Napa Health Department. The list included all permitted food service establishments within the City, broken into 3 risk categories by the County: high, medium, and low. The categorizations, which were based on the frequency of inspections and the nature of the food service establishment, were useful in determining which restaurants would be likely participants in the food scrap program. In using the County list of permitted food service establishments, EcoNomics noted that the risk categories roughly corresponded to the size of the restaurant, cafeteria, etc. It also allowed for the identification of coffee shops, pizza outlets, bars, and other types of food service establishments. Table 1.4 below provides a directory of the County's risk based categorization system as modified for purposes of this study. It shows the number of non-participating restaurants that belong to each category, and the expected amount of restaurants that will subscribe to the food scrap diversion program based on the modified food service category.

**Table 1.4: Modified Categorization Directory and Expected Participation**

| Modified "Risk" Category                                                          | High                                                                                                                                                                                                                                                                                     | Medium                                                                                                                                                                    | Low                                                                                                                                                                             |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Type of Food Service Facilities (FSE)</b>                                      | Hospitals, full-prep restaurants, fast food restaurants, retirement centers, schools, caterers, delicatessens with extensive food preparation, full grocery stores, wineries that conduct full food preparation (i.e. using their kitchen more than once per week), and jail facilities. | Delicatessens that prepare sandwiches and salads, pizza places, butcher shops, convenience stores with prepared food, commissaries, bakeries, medium risk winery kitchens | Bars that only prepare beverages, gas stations without food prep, coffee houses, convenience stores without prepared foods, bakeries, low risk caterers, and low-risk wineries. |
| <b>Number of Non-participating FSE in Napa</b>                                    | 152                                                                                                                                                                                                                                                                                      | 88                                                                                                                                                                        | 87                                                                                                                                                                              |
| <b>Anticipated Number of Food Scrap Diversion Participants from Risk Category</b> | 152                                                                                                                                                                                                                                                                                      | 33                                                                                                                                                                        | 18                                                                                                                                                                              |

The total number of non-participating restaurants that are expected to participate in the food scrap diversion program is 203. Of these 203 accounts, 111 had their own trash accounts through NRWS. To determine the rate impact and the potential cost-savings if these restaurants subscribed to the food scrap diversion program, EcoNomics entered service data for 111 non-participating restaurants that had their own trash account into the incentive calculator. Please refer to Exhibit 4: Service and Inventory List of Non-Participating Accounts for the details of the aggregate rate impact analysis for all non-participating restaurants.

Table 1.5 shows an example of the rate impact calculations for a common service scenario among restaurants that are not currently participating in the food scraps collection program.

**Table 1.5. Common Service Levels for Restaurant Not Participating in the Food Scrap Diversion Pilot Program**

| Service Line | Number of Container(s) | Size of Container(s) in Cubic Yards | Collection Frequency (days per week) | Cubic Yards Per Week | Generator Savings | Cost Per Month    |
|--------------|------------------------|-------------------------------------|--------------------------------------|----------------------|-------------------|-------------------|
| Garbage      | 1                      | 4                                   | 2                                    | 8                    | -                 | \$1,607.07        |
| Recycling    | 1                      | 4                                   | 2                                    | 8                    | 100%              | \$0               |
| <b>Total</b> | <b>2</b>               | <b>-</b>                            | <b>-</b>                             | <b>16</b>            | <b>-</b>          | <b>\$1,607.07</b> |

The scenario above represents a restaurant that has 1 4-yard trash bin picked-up two days per week, 1 4-yard recycling bin serviced 2 days per week, and no food scrap service. The property currently has a total 16 cubic yards of volume being collected by NRWS. This particular restaurant is probably generating over 3-yards of food scraps per week. This projection uses data from five of EcoNomics' client food diversion programs and CalRecycle estimates that 40% of the garbage generated by restaurants is food scraps. If the proposed food scrap collection rate is approved by the City Council and becomes effective on April 1, 2015, this restaurant will be able to implement a food scrap collection program using a rate that provides a 25% savings compared to equivalent garbage service. Table 1.6 shows the rate impact of the restaurant implementing a food scrap diversion program.

**Table 1.6. Impact of New Rates on Restaurant Currently Enrolled in the Pilot Food Scrap Collection Program – Cost Savings of \$162.63 per month (a 10% reduction)**

| Service Line | Number of Container(s) | Size of Container(s) in Cubic Yards | Collection Frequency (days per week) | Cubic Yards Per Week | Generator Savings | Cost Per Month    |
|--------------|------------------------|-------------------------------------|--------------------------------------|----------------------|-------------------|-------------------|
| Garbage      | 1                      | 3                                   | 2                                    | 6                    | -                 | \$1,222.25        |
| Recycling    | 1                      | 4                                   | 2                                    | 8                    | 100%              | \$0               |
| Food Scraps  | 3                      | 65-gallon                           | 2                                    | 2                    | 25%               | \$222.19          |
| <b>Total</b> | <b>5</b>               | <b>-</b>                            | <b>-</b>                             | <b>16</b>            | <b>-</b>          | <b>\$1,444.44</b> |

As Table 1.6 shows, the restaurant has diverted 2-cubic yards of food scraps per week and can therefore reduce the volume of garbage being collected by NRWS by 2 cubic yards per week. To accomplish this, the restaurant can replace its 4-yard trash bin picked-up 2 days per week with a smaller 3-yard trash bin being collected 2 days per week. Downsizing the trash service by 2 cubic yards per week results in a cost reduction of \$384 per month for the restaurant. The cost of food scrap collection service increases from \$0 per month to \$222.19. Therefore, this restaurant can save \$162.63 per month by right-sizing its garbage service through participation in the food scrap collection program.

After calculating incentives for all 111 non-participating restaurants that have their own accounts through NRWS, EcoNomics found that restaurants not currently participating in the food scrap program save an average of \$96.31 per month by implementing a food scrap diversion program with the 25% economic incentive for food scraps and by reducing their garbage service. EcoNomics found that 82% of non-participating restaurants could realize cost-savings by participating in the food scrap collection program and downsizing their garbage service. The cost savings that can be realized by restaurants ranges from \$12.27 per month to \$1,023 per month. Table 1.7 shows the aggregate rate impact for rate years 2015 and 2016 of new restaurants implementing a food scrap diversion program at a pace of 10 per month beginning April 1, 2015 and ending December 31, 2016. The analysis assumes that each new restaurant implementing a food scrap diversion program reduces its MSW cost by an average of \$96.31 per month.

**Table 1.7: Net Revenue Impact to City Fund of New Restaurants Implementing Food Scrap Service**

|                                                                          | RY 2015      | RY 2016       |
|--------------------------------------------------------------------------|--------------|---------------|
| Net Revenue Impact of Implementing Food Waste Program at New Restaurants | -\$43,339.62 | -\$174,008.35 |

Table 1.8 shows the total expected revenue impact for rate years 2015 and 2016 for current restaurants right-sizing their garbage and food waste inventory and for new restaurants initiating food scrap programs.

**Table 1.8: Projected Rate Revenue Impact of Expanded Food Scrap Diversion Program**

|                                                                                                                                                   | RY 2015      | RY 2016       |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|
| Revenue Impact of Participating Restaurants <b>Right-sizing MSW Service (includes new FW rate revenue)</b>                                        | -\$24,641.69 | -\$33,436.01  |
| Revenue Impact of Participating Restaurants <b>Right-sizing FW Cart Inventory</b> when Rate is Enacted                                            | -\$28,947.48 | -\$55,431.34  |
| Net Revenue Impact of Implementing Food Waste Program at <b>New Restaurants</b> (assumes implementation pace of <u>10 restaurants per month</u> ) | -\$43,339.62 | -\$174,008.35 |

|                                            |                     |                      |
|--------------------------------------------|---------------------|----------------------|
| <b>Total Net Revenue Change from Rates</b> | <b>-\$96,928.79</b> | <b>-\$262,875.70</b> |
|--------------------------------------------|---------------------|----------------------|

### 1c. Revenue impacts from special events collection

EcoNomics calculated the revenue impact of initiating a rate for special event collection of food scraps. Special event food scrap collection service is currently being offered at no charge to event organizers. In 2013, NRWS provided food scrap collection service at 46 events and collected nearly 90 tons of food scraps. Using the City's high-end average weight per food scrap cart of 250 lbs., EcoNomics estimated approximately 700 food scrap carts are deployed at special events per year. In order to provide an economic incentive for event organizers, EcoNomics is recommending that food scrap collection service be offered at a customer savings of 50% compared to equivalent trash service. This would result in a rate of \$11.07 per 65-gallon food scrap cart. Using this rate for each 65-gallon food cart deployed at a special event, the City of Napa will receive an estimated \$7,745.50 per year in additional revenue from special event food scrap service. Table 1.9 shows the projected rate impacts for rate years 2015 and 2016 of charging a rate for food scrap collection at special events. Additional analysis can be found in Exhibit 11: Special Event Analysis.

**Table 1.9: Revenue Impact from Charging 50% the Cost of Equivalent Garbage Service Rate for Special Event Food Scrap Collection**

|                                                                                                                          | <b>RY 2015</b>    | <b>RY 2016</b>    |
|--------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|
| <b>Net Revenue Impact of Providing Special Event Food Scrap Service at 50% the Cost of Garbage Special Event Service</b> | <b>\$5,809.13</b> | <b>\$7,745.50</b> |

### 1d. Revenue impacts from food scrap compactor rate decrease

EcoNomics analyzed the revenue impacts of creating an economic incentive for customers who currently subscribe to compactor collection service for food scraps. There is currently one customer in the City with compactor service for food scraps and it pays the MSW rate for this service. This customer currently generates over \$11,200 in rate revenue per month from food scrap compactor service. Applying the same economic incentive (resulting in a 25% savings over MSW service) that is recommended for the full-scale cart and bin food scrap collection program to food scrap compactor service, the City would lose approximately \$2,800 per month from this customer. Table 1.10 shows the revenue impact of providing a 25% savings to customers subscribing to food scrap compactor service in rate years 2015 and 2016. Additional analysis can be found in Exhibit 10: Food Scrap Compactor Analysis.

**Table 1.10: Revenue Impact from Charging 25% the Cost of Equivalent Garbage Service Rate for Food Scrap Compactor Service**

|                                                                                                                                                 | <b>RY 2015</b>      | <b>RY 2016</b>      |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|
| <b>Net Revenue Impact of Providing Food Scrap Compactor Service at 25% economic incentive compared to the Cost of Garbage Compactor Service</b> | <b>-\$25,230.21</b> | <b>-\$33,640.28</b> |

Table 1.11 shows the projected net revenue impact of all the rate-related changes detailed in tables 1.1-1.10.

**Table 1.11: Net Revenue Impact of Implementing an Expanded Food Scrap Program Rate**

|                                                                                                                                                             | RY 2015              | RY 2016              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|
| 1a. Revenue Impact of Participating Restaurants <b>Right-sizing MSW Service (includes new FW rate revenue)</b>                                              | -\$24,641.69         | -\$33,436.01         |
| 1a. Revenue Impact of Participating Restaurants <b>Right-sizing FW Cart Inventory</b> when Rate is Enacted                                                  | -\$28,947.48         | -\$55,431.34         |
| 1b. Net Revenue Impact of Implementing Food Waste Program at <b>New</b> Restaurants (assumes implementation pace of 10 restaurants per month)               | -\$43,339.62         | -\$174,008.35        |
| 1c. Net Revenue Impact of Providing Special Event Food Scrap Service with economic incentive roughly equal to 50% the Cost of Garbage Special Event Service | \$5,809.13           | \$7,745.50           |
| 1d. Net Revenue Impact of Providing Food Scrap Compactor Service with economic incentive roughly equal to 50% the Cost of Garbage Compactor Service         | -\$25,230.21         | -\$33,640.28         |
| <b>Net Rate Revenue Impact</b>                                                                                                                              | <b>-\$116,349.87</b> | <b>-\$288,770.48</b> |

Please refer to Table 1 in Exhibit 2: Rate Year 2015 Revenue Impacts of Expanded Food Scrap Diversion Program and Exhibit 3: Rate Year 2016 Revenue Impacts of Expanded Food Scrap Diversion Program for additional information about how the rate revenue impact was calculated for rate years 2015 and 2016.

## Section 2. Impact of Increased Collection Payment to NRWS

NRWS currently provides food scrap collection services for the 45 restaurants participating in the pilot program. NRWS receives \$7,972.95 per month from the City to provide food scrap collection services two days per week for up to 60 restaurants. On May 28, 2014, NRWS submitted a cost proposal for a full-scale food scrap diversion program that could service up to 100 restaurants per day, 5 days per week. The proposal would cost the City \$226,941.89 per year or \$18,911.82 per month, an increase of 237% compared to the current monthly collection payment to NRWS. The general cost components of the proposal are included as Table 2.1 below.

**Table 2.1. Cost Components of NRWS Full Scale Food Scrap Collection Proposal**

| Cost Component                | Proposed Cost       | Percent of Total |
|-------------------------------|---------------------|------------------|
| Direct Labor                  | \$99,884.41         | 44%              |
| Direct Truck                  | \$38,159.49         | 17%              |
| Direct Equipment              | \$695.94            | 0%               |
| Container Delivery & Cleaning | \$24,950.24         | 11%              |
| Shop                          | \$3,225.17          | 1%               |
| Administrative                | \$1,952.03          | 1%               |
| Capital                       | \$51,464.65         | 23%              |
| Profit                        | \$6,609.96          | 3%               |
| <b>Total</b>                  | <b>\$226,941.89</b> | <b>100%</b>      |

SOURCE: NRWS Cost Proposal

Based on EcoNomics' analysis, the route capacity of 100 restaurants per day serviced up to 5 days per week is sufficient to service all 250 restaurants in the City that are expected to participate in the food scrap program when fully implemented. EcoNomics found that the average restaurant requires two 65-gallon food scrap carts serviced 2 days per week. Using this average, NRWS will need to make 500 stops per week, which is what it has proposed. NRWS' proposed route capacity of 500 stops per week might be insufficient if additional restaurants open in the City or restaurants contribute more food scraps to the program than expected. NRWS' detailed cost proposal is included as Exhibit 8: NRWS Cost Proposal for Expanded Food Scrap Collection Service. Table 2.2 below shows the impact of the increased collection payments to NRWS for rate year 2015 and 2016.

**Table 2.2. Impact of Increased Collection Payments to NRWS for Rate Years 2015 and 2016**

|                                                        | RY 2015              | RY 2016              |
|--------------------------------------------------------|----------------------|----------------------|
| <b>Impact of Increased Collection Payments to NRWS</b> | <b>-\$189,118.24</b> | <b>-\$232,615.44</b> |

### Section 3. Impact of Increased Food Scrap Processing Costs and Decreased Landfill Disposal Costs

To calculate the expected tonnage of food scraps collected from a full-scale food scrap diversion program, EcoNomics analyzed the average monthly weight contribution for each restaurant participating in the pilot program. Initially, EcoNomics analyzed NRWS' monthly food scrap collection productivity reports from August 2011 to October 2014. The NRWS productivity reports included monthly data collected from the pilot program, including average number of stops on the route, the number of carts serviced per month (known as 'lifts'), the monthly tons collected, etc. By dividing the total number of tons collected per month by the total number of lifts reported by NRWS, EcoNomics calculated the average weight of a cart at the time of service. Using the NRWS reports, the average weight per cart at time of service was approximately 135 lbs. per lift.

This weight per lift of 135 lbs. conflicted with data gathered by EcoNomics in its work with several other cities to implement food scrap diversion programs. For example, the City of Rancho Mirage has had a food scrap program in place for over 6 years and the average cart weight per service is 268 lbs. EcoNomics also conducted a field weight audit for the City of Laguna Hills in 2009 and actually weighed a 65-gallon cart full of post-consumer food scraps. The cart weighed approximately 330 lbs. when full. Comparatively, the cart weights calculated using the NRWS food scrap productivity reports appeared to be light. The reasoning for the lighter-than-expected food scrap carts may be that the service is offered at no charge to restaurants, therefore the restaurants have no incentive to fully utilize their cart inventory if there is no marginal cost to having additional, unused carts. The City would charge a rate for food scrap collection service when the full-scale food scrap program is initiated in April 2015, therefore the cart weight projections should be adjusted to reflect optimal capacity utilization by the participating restaurant. In other words, when the restaurant has to pay for each food scrap cart, it will be more likely to use only the carts that are needed and remove unused carts. Both Laguna Hills and Rancho Mirage charge a rate for food scrap collection and have higher cart weights than Napa's pilot program.

To field check the data, EcoNomics conducted two "ride-alongs" with the NRWS food scrap collection route driver in May and June of 2014 to assess the fullness of the food scrap carts at the time of collection and the number of carts collected per account. The ride along found that the average fullness of the carts serviced was 37%. Using 37% fullness, EcoNomics extrapolated that the average weight per full cart would be closer to 260 lbs., which is in-line with the cart weights observed in other cities. To further confirm the weight of a full cart, EcoNomics coordinated with the City to conduct field cart weight audits. The results of the cart weight audits found that the average weight of a full cart ranged between 215 lbs. for primarily pre-consumer food scrap materials (i.e. produce trimmings) and 250 lbs. for primarily post-consumer food scrap materials (i.e. plate scrapings), averaging out to 235 lbs. per full cart.

EcoNomics used data from its field observations conducted in May and June of 2014 to determine the average food scrap generation rate for participating restaurants was four full carts per week. Using the average cart weight of 235 lbs., the expected tonnage contribution per restaurant was calculated to be approximately 2 tons of food scraps per month. Per the City's direction, EcoNomics' participation projections assumed that 10 new restaurants per month would initiate participation in the food scrap diversion program beginning April 1, 2015. Using these projections, EcoNomics developed the quarterly food scrap diversion collection tonnage assumptions shown in Table 3.1 below:

**Table 3.1: Quarterly Restaurant Participation and Food Scrap Generation Projections**

| Rate Year      | Quarter | Number of Participating Restaurants | Expected Tons of Food Scraps per Quarter |
|----------------|---------|-------------------------------------|------------------------------------------|
| Rate Year 2015 | Q2 2015 | 30                                  | 60                                       |
|                | Q3 2015 | 60                                  | 121                                      |
|                | Q4 2015 | 90                                  | 181                                      |
| Rate Year 2016 | Q1 2016 | 120                                 | 242                                      |
|                | Q2 2016 | 150                                 | 302                                      |
|                | Q3 2016 | 180                                 | 362                                      |
|                | Q4 2016 | 200                                 | 403                                      |

To assess the impact of processing the additional tonnage collected from the restaurants, EcoNomics multiplied the tons of organics collected by the following processing costs:

1. Yardwaste processing cost of \$22.48 per ton in 2015 and \$22.98 in 2016.
2. Aerated Static Pile (ASP) processing cost premium of \$6.09 until July 2015 and \$3.05 until Feb 2016 when it increases to \$3.11.

Using the cost per ton assumptions above, Economics projected the following negative revenue impacts during rate year 2015 and rate year 2016 due to increased processing costs for the expanded organics program:

**Table 3.2: Fiscal Impact of Increased Food Scrap Processing Costs for Expanded Program**

|                                                   | RY 2015             | RY 2016             |
|---------------------------------------------------|---------------------|---------------------|
| Baseline Yard Waste Processing Costs for Organics | -\$20,371.68        | -\$85,592.76        |
| Aerated Static Pile Premium Processing Cost       | -\$3,127.36         | -\$11,579.09        |
| <b>Total Increased Processing Costs</b>           | <b>-\$23,499.04</b> | <b>-\$97,171.85</b> |

However, the increased cost of processing the additional food scraps is offset by the avoided cost of disposing of the food scraps at the Devlin Road Transfer Station (DRTS). The cost of disposal at DRTS is \$64 per ton. This cost will escalate by \$1 per ton effective October 1, 2015 and by an additional \$1 per ton effective October 1, 2016. The avoided transfer station and disposal cost of the expanded food scrap diversion program is included below for Rate Year 2015 and 2016:

**Table 3.3: Avoided Disposal Cost Impacts of Expanded Food Scrap Diversion Program**

|                                                       | RY 2015       | RY 2016      |
|-------------------------------------------------------|---------------|--------------|
| Avoided Disposal Costs of Expanded Food Waste Program | \$52,623.5292 | \$218,974.77 |

When the costs of increased processing shown in Table 3.2 and the avoided disposal costs shown in Table 3.3 are combined, the net rate impacts can be seen in Table 3.4.

**Table 3.4: Net Impact of Increased Processing Costs and Avoided Disposal Costs of Expanded Food Scrap Diversion Program**

|                                                          | RY 2015            | RY 2016             |
|----------------------------------------------------------|--------------------|---------------------|
| Increased Processing Cost of Expanded Food Scrap Program | -\$23,499.04       | -\$97,171.85        |
| Avoided Disposal Costs of Expanded Food Waste Program    | \$52,623.53        | \$218,974.77        |
| <b>Net Benefit to City Rate Fund</b>                     | <b>\$29,124.49</b> | <b>\$121,802.92</b> |

#### **Section 4. Impact of Increased Material Sales Revenue**

A result of the expanded food scrap collection program is that more tons of organics will be processed through the City's composting facility. The City projects that it will sell finished compost to customers for \$10 per cubic yard beginning in 2015. By increasing the tonnage of organics processed, the City will also increase its revenue from the sale of compost. The impact of the increase in revenue from the sale of composting was calculated using the following assumptions:

1. Price per cubic yard of finished compost: \$10
2. Contamination rate of food scraps (i.e. the percent of the food scraps collected that could not be composted): 30%
3. Volume reduction of composting process (i.e. the amount of water that evaporates during the decomposition process): 50%

The assumptions above are conservative so as not to overstate the additional revenue projected from the sale of finished compost. Table 4.1 below shows the projected increase in revenue from the sale of finished compost if the food scrap program were expanded to 200 additional restaurants.

**Table 4.1: Projected Increase in Revenue from the Sale of Finished Compost**

|                                                      | RY 2015    | RY 2016     |
|------------------------------------------------------|------------|-------------|
| Additional Revenue from the sale of finished compost | \$6,313.14 | \$25,954.02 |

## Section 5. Net Impact on Rates

The total expected impact on the City's enterprise fund of the expanded food scrap collection program can be seen in Table 5.1 below. It shows the projected net impact of the expanded program to cost the City rate fund \$270,030.50 in rate year 2015 and \$373,628.98 in rate year 2016. This increase would require a rate increase of approximately 1.6% for 2015 and 2.2% in 2016 to cover the projected shortfall.

**Table 5.1. Net Projected Impact on The City's Rate Fund of the Expanded Food Scrap Collection Program**

|                                                                                                         | RY 2015              | RY 2016              |
|---------------------------------------------------------------------------------------------------------|----------------------|----------------------|
| 1. Impact of increased food scrap program collection rate revenue and decreased garbage service revenue | -\$116,349.87        | -\$288,770.48        |
| 2. Impact of increased collection payment to NRWS                                                       | -\$189,118.24        | -\$232,615.44        |
| 3. Impact of increased food scrap processing costs and decreased landfill disposal costs                | \$29,124.49          | \$121,802.92         |
| 4. Impact of increased material sales revenue                                                           | \$6,313.14           | \$25,954.02          |
| <b>Total</b>                                                                                            | <b>-\$270,030.50</b> | <b>-\$373,628.98</b> |

NOTE: Please refer to Exhibit 1: Rate Year 2015 and 2016 Net Revenue Impact Analysis for additional information about how the net impact analysis was calculated for rate years 2015 and 2016.

### List of Exhibits

- Exhibit 1: Rate Year 2015 and 2016 Net Revenue Impact Analysis
- Exhibit 2: Rate Year 2015 Revenue Impacts of Expanded Food Scrap Diversion Program
- Exhibit 3: Rate Year 2016 Revenue Impacts of Expanded Food Scrap Diversion Program
- Exhibit 4: Service and Inventory List of Non-Participating Accounts
- Exhibit 5: Average Impact Analysis of 5% MSW Commercial Cart Rate Increase on Non-Participating Restaurants
- Exhibit 6: Service and Inventory List of Currently Participating Accounts
- Exhibit 7: Average Impact Analysis of 5% MSW Commercial Cart Rate Increase on Participating Restaurants
- Exhibit 8: NRWS Cost Proposal for Expanded Food Scrap Collection Service
- Exhibit 9: Impact of Right-sizing Carts
- Exhibit 10: Food Scrap Compactor Analysis
- Exhibit 11: Special Event Analysis
- Exhibit 12: Levelized Commercial MSW Cart Rate Impact



## City of Laguna Hills

### City Council/Planning Agency

### Staff Report

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**DATE:** October 25, 2022  
**TO:** Mayor and Council Members  
**FROM:** David Reynolds  
Deputy City Manager/Community Services Director  
**ISSUE:** 2022 Holiday Season Events Schedule

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**RECOMMENDATION:** That the City Council receive and file the report.

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#### **SUMMARY:**

The City hosted a Holiday Events Series for the first few weeks in December 2021. The purpose of the holiday events was to promote holiday and community spirit and to encourage people to visit and enjoy the Community Center while the holiday lights decorations were on display. To determine the interest in hosting another Holiday Events Series this year, staff brought a report to the Parks and Recreation Commission at its June 1, 2022, meeting. At this meeting, staff also requested from the Commission any recommendations on improving or modifying the event series. The Parks and Recreation Commission was in favor of hosting another Holiday Events Series in December 2022, and suggested that the events be limited to two events to maximize public attendance. A report was brought to the City Council on June 28, 2022, to provide the Council with staff's tentative plans for the event. The Events, Communication, and Beautification Committee reviewed staff's plans for this year's Holiday Event Series on October 12, 2022, and provided feedback to staff including the importance of a tree lighting ceremony and the addition of more events than what staff proposed to the City Council on June 28, 2022. Staff is in the process of finalizing plans for this year's Holiday Events Series and wanted to update the Council on the planning progress.

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**BACKGROUND:**

City Council previously suggested the City host certain entertainment activities at the Community Center Plaza area during the 2021 holiday season while the holiday lights and decorations were displayed. In response to this suggestion, staff planned for a series of events and the City hosted its first Holiday Events Series with four (4) events in the first few weeks of December 2022, in addition to the City's traditional Breakfast with Santa event. Approximately 180 individuals attended the event series last year (not including Breakfast with Santa). Collection containers for food donations were provided by South County Outreach and toy donations were accepted to benefit the charitable cause of Toys for Tots. The 2021 Holiday Event Series schedule is attached to this report for the City Council's reference.

A staff report was presented to the City Council on June 28, 2022, which summarized staff's tentative plans for the event series which included reducing the event series to two (2) events as was the recommendation of the Parks and Recreation Commission. On October 12, 2022, the Events, Communication, and Beautification Committee (ECBC) discussed the importance of including a tree lighting ceremony in this year's Holiday Event Series and adding more events to the series.

### 2022 Holiday Event Series

Staff recommends hosting some of the Holiday Event Series in the outdoor area (or Plaza) of the Community Center, as was the case last year, to maximize the enjoyment of the holiday decorations and lighting at the Community Center. Other events will be hosted inside the Community Center. Similar to last year's events, staff will work with local non-profit organizations for the collection of food and toy donations.

#### **1<sup>st</sup> Event: December 8, 2022 (Thursday, 6pm – 8pm)**

"Herald in the Holidays and Tree Lighting"

Location: Heritage Room

- Tree lighting ceremony. A 5' boxed tree (Pinus Eldarica) has already been selected for the ceremony. The tree stands 18' feet tall (21.5' tall including the tree box). A crane will need to be scheduled to place the tree. The ECBC will be discussing the final location of the tree at its November 9, 2022, meeting and will make recommendations to the Council at its November 15, meeting. Lighting and decorations for the tree will need to be arranged.

- 
- Consider the formal burial of the time capsule as part of the tree lighting ceremony.
  - South Orange County Brass Ensemble composed of 15 brass instrument musicians will provide holiday musical entrainment.
  - Staff is in the process of working with a local hand bell choir to also provide holiday musical entertainment.
  - Refreshments such as coffee, hot coca, cookies, and pastries will once again be provided. Staff will work with our local non-profits such as the Chamber of Commerce or the OC Sheriff's Department to help with refreshments.
  - A children's craft booth will be offered at this event by the OC Public Library or Community Services staff.

**2<sup>nd</sup> Event: December 10, 2022 (Saturday, 9am – 11am)**

"Breakfast with Santa"

Location: Heritage Room

- The City's traditional Breakfast with Santa event will be hosted in the Heritage Room from 9am to 11am. Santa Claus has already been booked to attend this event.

**3<sup>rd</sup> Event: December 10, 2022 (Saturday, 6pm – 9pm)**

Location: Heritage Room

- Staff is looking into establishing a holiday entertainment night in the Heritage Room for dance presentations and possibly entertainment by the Laguna Hills High School (i.e. choir).
- Refreshments could be provided by local restaurants during the event.
- Alternatively, the Heritage Room could be used for a holiday movie for kids for a "Parent's Night Out" event instead of a holiday entertainment night.

---

Location: Gymnasium

- Use the Gymnasium as a kid's activity area during the Heritage Room entertainment (i.e. bounce houses and other activity).
- Alternatively, both the Heritage Room and the Gymnasium can both be used for kid's activities for a "Parent's Night Out."

**4<sup>th</sup> Event: December 14, 2022 (Wednesday, 6pm – 8pm)**

"Visit from Santa Claus"

Location: Heritage Room

- Santa's visit at the Community Center Plaza area is a great opportunity for pictures with Santa with the holiday lights and decorations in the background. Santa Claus is already booked for this event.
- Professional carolers are already booked for this event and will provide musical entertainment.
- Refreshments such as coffee, hot coca, cookies, and pastries will once again be provided. Staff will work with our local non-profits such as the Chamber of Commerce or the OC Sheriff's Department to help with refreshments.
- A children's craft booth will be offered at this event by the OC Public Library or Community Services staff.

**5<sup>th</sup> Event: December 16, 2022 (Wednesday, 6pm – 9pm)**

"Parents Night Out"

Location: Gymnasium

- Use the Gymnasium as a kid's activity area (i.e. bounce houses and other activity). Staff recommends that children of ages 6 – 12 can participate in this drop off program. This will provide parents with the opportunity for a date night or time to do some holiday shopping.

**FISCAL IMPACT:**

Expenses for the event series last year, not including staff time, totaled approximately \$2,300. This included the cost of refreshments, heater rentals, and a visit from Santa Claus. The music entertainment was provided by volunteer musicians and by the Laguna Hills High School Drama and Choir Departments.

Staff estimates expenses for this year's event series to be approximately \$20K. With the recent City Council mid-year budget amendment approval, expenses for this year's event series can be absorbed into the Community Services budget.

**ATTACHMENTS:**

- 2021 Holiday Event Series

## **2021 Holiday Event Series**

In addition to these following events, the City also hosted its traditional Breakfast with Santa event on December 4, 2021. Collection containers for food donations were provided by South County Outreach and toy donations were accepted to benefit the charitable cause of Toys for Tots.

### **December 8, 2021 (Wednesday)**

- South Orange County Brass Ensemble composed of 15 brass instrument musicians provided holiday musical entrainment.
- Refreshments were provided by the Laguna Hills Chamber of Commerce.
- Children's crafts were arranged by OC Public Library.

### **December 10, 2021 (Friday)**

- Santa Claus visited the Community Center Plaza area and was available for pictures inside the giant walkthrough Holiday Ornament.
- A string ensemble from the Global Harmony Symphony played holiday music during Santa Claus' visit.
- Refreshments were provided by the OC Sheriff's Department and the Laguna Hills Chamber of Commerce.
- Children's crafts were arranged by the Community Services Department.

### **December 15, 2021 (Wednesday)**

- Violinist Donna K. Cho and Violist Julia Scholtes performed holiday music with a series of string duets.
- Refreshments were provided by the Laguna Hills Chamber of Commerce.
- Children's crafts were arranged by OC Public Library.

### **December 17, 2021 (Friday)**

- The Laguna Hills High School Drama Department performed scenes from their winter musical, "Elf the Musical."
- Laguna Hills High School Choir sang Christmas carols to conclude the City of Laguna Hills Holiday Events Series.
- Refreshments were provided by the Community Services Department and the Laguna Hills Chamber of Commerce.



# City of Laguna Hills

## City Council/Planning Agency

### Staff Report

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**DATE:** October 25, 2022

**TO:** Mayor and Council Members

**FROM:** Larry Longenecker  
Community Development Director

**ISSUE:** 2022 Building and Fire Codes Adoption

---

**RECOMMENDATION:** That the City Council take the following actions:

- 1) Introduce for first reading, read by title only, and waive further reading of an Ordinance entitled: "An Ordinance of the City of Laguna Hills, California, amending Title 10 (Buildings And Construction) of the Laguna Hills Municipal Code and adopting by reference the 2022 Edition of the California Building Standards Code (California Code of Regulations, Title 24), consisting of the 2022 California Building Code, the 2022 California Residential Code, the 2022 California Electrical Code, the 2022 California Mechanical Code, the 2022 California Plumbing Code, the 2022 California Energy Code, the 2022 California Historical Building Code, the 2022 California Existing Building Code, the 2022 California Green Building Standards Code, and the 2022 California Referenced Standards Code, together with certain amendments, additions, and deletions thereto; and adopting by reference the 2021 International Property Maintenance Code."
  
  - 2) Introduce for first reading, read by title only, and waive further reading of an Ordinance entitled: "An Ordinance of the City of Laguna Hills, California, amending Chapter 5-16 (Fire Code) of Title 5 (Health and Sanitation) of the Laguna Hills Municipal Code and adopting by reference the 2022 Edition of the California Fire Code including Appendices B, BB, C, and CC, together with certain amendments, additions, and deletions thereto."
  
  - 3) Direct staff to place the Ordinances on the November 15, 2022, meeting agenda for a Public Hearing and second reading, and to publish the hearing notice.
-

**SUMMARY:**

Every three years the State of California Building Standards Commission updates the State's building and construction regulations to promote safe building construction, energy efficiency, and sustainability. These State regulations, published in Title 24 of the California Code of Regulations, are commonly referred to as the California Building Standards Code. Individual parts of the Title 24 California Building Standards Code include the following:

- California Administrative Code
- California Building Code
- California Residential Code
- California Electrical Code
- California Mechanical Code
- California Plumbing Code
- California Energy Code
- California Historical Building Code
- California Existing Building Code
- California Green Building Standards Code
- California Referenced Standards Code
- California Fire Code

The Building Standards Code establishes the minimum requirements for new construction. Staff also recommends adopting by reference the 2021 International Property Maintenance Code, providing requirements for continued use and maintenance of building elements, site conditions, swimming pools, plumbing, mechanical, electrical and fire protection systems in existing residential and nonresidential structures.

**BACKGROUND:**

This item represents the triennial code adoption to update the City's Building and Fire Codes. The State of California Health and Safety Code (Section 17958) mandates that the California Building Standards Commission adopt and publish the California Building Standards Code (California Code of Regulations, Title 24) every three years. The 2022 Edition of the California Building Standards Code ("State Codes") automatically becomes effective statewide on January 1, 2023. State law permits local jurisdictions to make

## 2022 Building and Fire Codes Adoption

October 25, 2022

Page 3

modifications, referred to as “local amendments”, that may be more, but in no event less, stringent than the requirements adopted by the State. To incorporate local amendments, jurisdictions must adopt the corresponding code and local amendments and make findings that the local amendments are reasonably necessary due to local climatic, geological or topographical conditions. The City has adopted local amendments during each of the prior triennial code adoption cycles, and local amendments must be re-adopted with each triennial code update.

Title 10 and Chapter 5-16 of the Laguna Hills Municipal Code (LHMC) contain the City’s Building and Fire Codes respectively. The proposed Ordinances would amend Title 10 and Chapter 5-16 of the LHMC by repealing references to prior editions of the Building and Fire Codes and replacing references with the newly established State Codes.

### Proposed Local Amendments

Consistent with State Health and Safety Code Section 17958.5, City staff and the Orange County Fire Authority’s (OCFA) Fire Chief recommend local amendments to the 2022 State Codes. The proposed local amendments consist of administrative provisions to provide clarification for the implementation of the State Codes as well as technical provisions to customize the codes for local use. The proposed Ordinances contain the required findings for the local amendments in response to local climatic, geological or topographical conditions, and carry forward local amendments from the prior code adoption cycles including other minor amendments and clarifications.

The 2022 edition of the California Building Standards Code contains 12 separate parts. No action is recommended related to the California Administrative Code because this part contains no substantive building regulations applicable to the City mandating adoption by reference or local amendments. Table 1 (next page) lists each part of the Building Standards Code, the recommended action for this code adoption cycle, and its proposed location within the LHMC.

**Table 1-  
 California Building Standards Code**

| Code                          | Recommended Action          | LHMC Chapter |
|-------------------------------|-----------------------------|--------------|
| Administrative Code           | N/A                         | N/A          |
| Building Code                 | Adopt with local amendments | 10-28        |
| Residential Code              | Adopt with local amendments | 10-32        |
| Electrical Code               | Adopt with no amendments    | 10-36        |
| Mechanical Code               | Adopt with no amendments    | 10-40        |
| Plumbing Code                 | Adopt with no amendments    | 10-48        |
| Energy Code                   | Adopt with no amendments    | 10-52        |
| Historical Building Code      | Adopt with no amendments    | 10-60        |
| Existing Building Code        | Adopt with no amendments    | 10-64        |
| Green Building Standards Code | Adopt with no amendments    | 10-68        |
| Referenced Standards Code     | Adopt with no amendments    | 10-76        |
| Fire Code                     | Adopt with local amendments | 5-16         |

The above-referenced State codes are available in the Community Development Department for review as well as on line at the California Building Standards Commission website ([www.bsc.ca.gov](http://www.bsc.ca.gov)).

#### Building Codes Ordinance

Proposed Ordinance No. 2022-X (Attachment 1) has been prepared for City Council consideration to adopt the 2022 Building Standards Code with certain amendments, additions and deletions. A total of 37 amendments are proposed to the California Building Standards Code (16 Building Code Amendments, and 21 Residential Code Amendments). Several of the proposed amendments are administrative or procedural in nature and mostly ensure consistency with the standards previously adopted during the 2019 Code cycle. A summary of the proposed Building Codes amendments is listed in Attachment 3 of this report. Tables identifying each proposed amendment to the 2022 California Building Standards Code and the specific finding(s) supporting the amendments are included in the proposed Ordinance.

## 2022 Building and Fire Codes Adoption

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For this code adoption cycle, staff also recommends adopting by reference the 2021 International Property Maintenance Code, to be codified as LPMC Chapter 10-80. The Property Maintenance Code provides requirements for continued use and maintenance of building elements, site conditions, swimming pools, plumbing, mechanical, electrical and fire protection systems in existing residential and nonresidential structures. This section of Code provides tools for City staff, primarily the Building Official and Code Enforcement staff, to ensure public health, safety, and welfare insofar as they are affected by the continued occupancy and maintenance of structures and premises.

### Fire Code Ordinance

Proposed Ordinance No. 2022-x (Attachment 2) has been prepared for City Council consideration to adopt the 2022 California Fire Code with certain amendments, additions and deletions. A total of 60 amendments are proposed to the California Fire Code, as recommended by OCFA. Most of the 2022 Code cycle amendments provide further clarification for existing amendments already incorporated as part of the California Fire Code. A summary of OCFA's proposed Fire Code amendments are listed in Attachment 4. The attachment summarizes the proposed Fire Code amendments and identifies which amendments are being carried forward from the previous code adoption cycle, noted as "existing", and also identifies new, revised or deleted amendments. Tables identifying each proposed amendment to the 2022 California Fire Code and the specific finding(s) supporting the amendments are included in the proposed Ordinance.

### **CEQA FINDINGS:**

The City Council finds that the proposed Ordinances are not subject to the California Environmental Quality Act (CEQA) pursuant to California Code of Regulations Title 14, Chapter 3, Sections 15060(c)(2) (the activity will not result in a direct or reasonably foreseeable indirect physical change in the environment) and 15060(c)(3) (the activity is not a project as defined in Section 15371), because it has no potential for resulting in physical change to the environment, directly or indirectly.

### **ATTACHMENTS:**

- Attachment 1 - Ord. No. 2022-X, Building Codes Update
- Attachment 2 - Ord. No. 2022-X, Fire Code Update
- Attachment 3 - Building Codes Amendment Summary
- Attachment 4 - Fire Code Amendment Summary

## ORDINANCE NO. 2022-X

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING TITLE 10 (BUILDINGS AND CONSTRUCTION) OF THE LAGUNA HILLS MUNICIPAL CODE AND ADOPTING BY REFERENCE THE 2022 EDITION OF THE CALIFORNIA BUILDING STANDARDS CODE (CALIFORNIA CODE OF REGULATIONS, TITLE 24), CONSISTING OF THE 2022 CALIFORNIA BUILDING CODE, THE 2022 CALIFORNIA RESIDENTIAL CODE, THE 2022 CALIFORNIA ELECTRICAL CODE, THE 2022 CALIFORNIA MECHANICAL CODE, THE 2022 CALIFORNIA PLUMBING CODE, THE 2022 CALIFORNIA ENERGY CODE, THE 2022 CALIFORNIA HISTORICAL BUILDING CODE, THE 2022 CALIFORNIA EXISTING BUILDING CODE, THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, AND THE 2022 CALIFORNIA REFERENCED STANDARDS CODE, TOGETHER WITH CERTAIN AMENDMENTS, ADDITIONS, AND DELETIONS THERETO; AND ADOPTING BY REFERENCE THE 2021 INTERNATIONAL PROPERTY MAINTENANCE CODE

THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA, HEREBY FINDS AND DETERMINES AS FOLLOWS:

WHEREAS, pursuant to California Government Code Section 50022.1 *et seq.*, the City of Laguna Hills ("City") may adopt by reference the California Building Standards Code, 2022 Edition, as provided in Title 24 of the California Code of Regulations, and the 2021 International Property Maintenance Code; and

WHEREAS, the California Building Standards Commission recently adopted new amendments to the California Building Standards Code; and

WHEREAS, California Health & Safety Code Section 17958.5 *et seq.*, and 18941.5 authorize cities to modify the California Building Standards Code by adopting the same or modified requirements as are contained in the regulations adopted by the State pursuant to Health and Safety Code Section 17922, if such modifications are accompanied by express findings that they are reasonably necessary because of local climatic, geological, or topographical conditions; and

WHEREAS, based upon the recommendations of the Building Official, the City Council finds the proposed amendments to the 2022 California Building Standards Code set forth in this Ordinance, which are more restrictive than the standards adopted by the California Building Standards Commission, would decrease the potential incidence of property damage, injury, and death due to fires and earthquakes, and are reasonable and necessary to mitigate local climatic, geological, or topographical conditions; and

WHEREAS, on October 25, 2022, the City Council introduced this Ordinance for first reading at a regular meeting of the City Council, and set a public hearing and second reading of the Ordinance for November 8, 2022; and

WHEREAS, the City Council held a public hearing on November 8, 2022, at which time all interested persons had the opportunity to appear and be heard on the matter of adopting the 2022 California Building Standards Code as amended herein, as well as, the adoption of the 2021 International Property Maintenance Code; and

WHEREAS, the Community Development Department recommended that changes and modifications be made to the codes and have advised that certain said changes and modifications to the California Building Code, 2022 Edition, and the California Residential Code, 2022 Edition, are reasonably necessary due to local conditions in the City of Laguna Hills and have further advised that the remainder of said changes and modifications are of an administrative or procedural nature, or concern themselves with subjects not covered by the codes or are reasonably necessary to safeguard life and property within the City of Laguna Hills; and

WHEREAS, amendments related to life and fire safety contained in Table 1505.1, Sections 1505.1.2, 1807.1.6, 3109.2 of the 2022 Edition of the California Building Code, and Table R301.2, Sections R902.1, R902.1.3, R902.2, and Appendix AX of the 2022 Edition of the California Residential Code as recommended by the Community Development Department are hereby found to be reasonably necessary due to the local conditions described in Section 1 of this Ordinance, below; and

WHEREAS, pursuant to California Government Code Section 6066, the City published notice of the aforementioned public hearing; and

WHEREAS, any and all other legal prerequisites relating to the adoption of this Ordinance have occurred.

THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA,  
DOES ORDAIN AS FOLLOWS:

**SECTION 1.** Findings. The City Council hereby finds that the amendments to the 2022 California Building Code and 2022 California Residential Code are reasonably necessary because of local climatic, geological, or topographic conditions, and adopts the findings provided below to support the modifications to the 2022 California Building Code and 2022 California Residential Code.

#### **I. Climatic Conditions**

- A. Orange County and the City of Laguna Hills are located in a semi-arid Mediterranean type climate. It annually experiences extended periods of high temperatures with little or no precipitation. Hot, dry (Santa Ana) winds, which may reach speeds of 70 M.P.H. or greater, are also common to the area. These climatic conditions cause extreme drying of vegetation and common building materials. Frequent periods of drought and low humidity add

to the fire danger. This predisposes the area to large destructive fires (conflagration). In addition to directly damaging or destroying buildings, these fires are also prone to disrupt utility services throughout the County. Obstacles generated by a strong wind, such as fallen trees, street lights and utility poles greatly impact the response time to reach an incident scene. This necessitates the need for an increased level of fire protection. This added protection will supplement normal fire department response available and provide immediate protection for life and safety during fire occurrences.

- B. The climate alternates between extended periods of drought and brief flooding conditions. Flood conditions may affect the Orange County Fire Authority's ability to respond to a fire or emergency condition. Floods also disrupt utility services to buildings and facilities within the County. This necessitates the need for additional fire protection features.
- C. Water demand in this densely populated area far exceeds the quantity supplied by natural precipitation; and although the population continues to grow, the already-taxed water supply does not. Due to storage capacities and consumption, and a limited amount of rainfall, particularly during extended periods of drought, future water allocation is not fully dependable. This necessitates the need for additional fire protection features.
- D. Dry climatic conditions and winds contribute to the rapid spread of even small fires originating in high-density housing, including fuels such as wood shingles, or vegetation. These fires spread very quickly and create a need for increased levels of fire protection. The added protection of fire sprinkler systems and other fire protection features will supplement normal fire department response by providing immediate protection for the building occupants and by containing and controlling the fire spread to the area of origin. Fire sprinkler systems will also reduce the use of water for firefighting by as much as 50 to 75 percent.
- E. The warm, dry climate is conducive to swimming pools which creates a higher probability of child drowning where pools are unprotected, necessitating the need for additional fire protection features.

## II. Topographical Conditions

- A. Natural slopes of 15 percent or greater generally occur throughout the foothills of Orange County. The elevation change caused by the hills creates the geological foundation on which communities within Orange County are built and will continue to build. With much of the populated flatlands already built upon, future growth will likely occur on steep slopes and with greater constraints in terrain.
- B. Traffic and circulation congestion is an artificially created, obstructive topographical condition, which is common throughout Orange County.
- C. Topographical conditions combine to create a situation that places fire department response time to fire occurrences at risk, and makes it necessary to

provide automatic on-site fire-extinguishing systems and other protection measures to protect occupants and property.

### III. Geological Conditions

- A. The Orange County region is a densely populated area in a high seismically active area that has buildings constructed over and near a vast and complex network of faults that are believed to be capable of producing future earthquakes similar or greater in size than the 1994 Northridge and the 1971 Sylmar earthquakes. Earthquake faults run along the northeast and southwest boundaries of Orange County. The Newport-Inglewood Fault. Located within Orange County was the source of the destructive 1933 Long Beach earthquake (6.3 magnitude) which took 120 lives and damaged buildings in an area from Laguna Beach to Marina Del Rey to Whittier. In December 1989, another earthquake occurred in the jurisdiction of Irvine at an unknown fault line. Regional planning for reoccurrence of earthquakes is recommended by the state of California, Department of Conservation.
- B. Previous earthquakes have been accompanied by disruption of traffic flow and fires. A severe seismic event has the potential to negatively impact any rescue or fire suppression activities because it is likely to create obstacles similar to those indicated under the high wind section above. The October 17, 1989, Santa Cruz earthquake resulted in one major fire in the Marina District (San Francisco). When combined with the 34 other fires locally and over 500 responses, the department was taxed to its fullest capabilities. The Marina fire was difficult to contain because mains supplying water to the district burst during the earthquake. This situation creates the need for both additional fire protection and automatic on-site fire protection for building occupants. State Department of Conservation noted in their 1988 report (Planning Scenario on a Major Earthquake on the Newport-Inglewood Fault Zone, page 59), "unfortunately, barely meeting the minimum earthquake standards of building codes places a building on the verge of being legally unsafe."
- C. Road circulation features located throughout the County also make amendments reasonably necessary. Located through the County are major roadways, highways and flood control channels that create barriers and slow response times. Hills, slopes, street and storm drain design, accompanied by occasional heavy rainfall, causes roadway flooding and landslides and at times may make an emergency access route impassable.
- D. Soils throughout the County possess corrosive properties that reduce the expected usable life of water services when metallic pipes are in contact with soils.
- E. Due to the topographical conditions of sprawling development separated by waterways and narrow and congested streets and the expected infrastructure damage inherent in seismic zones described above, it is prudent to rely on automatic fire sprinkler systems to mitigate extended fire department response time and keep fires manageable with reduced fire flow (water) resources

available for a given structure. Additional fire protection is also justified to match the current resources of firefighting equipment and personnel within the Orange County Fire Authority

Additional amendments have been made to the 2022 California Building Standards Code. Such amendments are hereby found to be either administrative or procedural in nature or concern themselves with subjects not covered in such codes. The changes made include provisions making each of said codes compatible with other codes enforced by the City.

The findings above are applicable to amendments to the 2022 California Building Code and 2022 California Residential Code as follows:

| <b><u>Code Section</u></b> | <b><u>Findings in Section 1</u></b> |
|----------------------------|-------------------------------------|
| Chap 1, Div II             | Administrative                      |
| Table 1505.1 CBC           | 1-A,D, 3-A,B,C,D,E                  |
| 1505.1.2 CBC               | 1-A,D, 3- A,B,C,D,E                 |
| 1807.1.6 CBC               | 3-A                                 |
| 3109.2 CBC                 | 1-E, 3-B,C                          |
| Table R301.2 CRC           | Administrative                      |
| R902.1 CRC                 | 1-A,D, 3- A,B,C,D,E                 |
| R902.1.3 CRC               | 1-1,2, 3- A,B,C,D,E                 |
| R902.2 CRC                 | 1-1,2, 3- A,B,C,D,E                 |
| Appendix AX CRC            | 1-E, 3-B,C                          |

**SECTION 2.** Chapter 10-28 of the Laguna Hills Municipal Code is hereby amended and restated in its entirety to read as follows:

### **Chapter 10-28 BUILDING CODE**

#### **10-28.010 Adoption of the California Building Code.**

The California Building Code, 2022 Edition, including Chapter 1, Division II, based on the 2021 Edition of the International Building Code as published by the International Code Council, together with the amendments provided in this chapter, is hereby adopted and incorporated by reference, as if set forth at length herein, as the Building Code of the City of Laguna Hills, regulating the construction, alteration, movement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures in the City. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection.

**10-28.030 Amendments to the California Building Code.**

Chapter 1, Division II – Scope and Administration.

Section 101.1, Title, is revised to read as follows:

**101.1 Title.** These regulations shall be known as the Building Code of the City of Laguna Hills, hereinafter referred to as “this code.”

Section 101.4, Referenced codes, is hereby revised to read as follows:

**101.4. Referenced codes.** The California Codes specified in Sections 101.1.1 through 101.4.7 and referenced elsewhere in this code shall be understood to mean and refer to those codes as adopted and amended by the City of Laguna Hills and set forth in Title 10 Buildings and Construction of the Laguna Hills Municipal Code.

Section 105.2, Work exempt from permit, is revised to read as follows:

(a) Section 105.2, Building exemption 2, is revised to read as follows:

2. Fences not over 6 feet (2134 mm) high.

(b) Section 105.2, Building exemption 9, is revised to read as follows:

9. Prefabricated swimming pools accessory to a Group R-3 occupancy that are less than 18 inches (457.2 mm) deep, do not exceed 5,000 gallons (18,927.059L) and are installed entirely above ground.

Section 113.1, General, is revised to read as follows:

**113.1 General.** Board of Appeals when used in the Building Standards Codes shall mean the City Council/Planning Agency. The Board of Appeals is hereby established for each of the Building Standards Codes. Depending on the subject of the appeal, specialized expertise may be solicited for the purpose of providing input to the Board of Appeals.

Chapter 15 – Roof Assemblies and Rooftop Structures.

Table 1505.1 is revised to read as follows:

**TABLE 1505.1<sup>a</sup>**  
**MINIMUM ROOF COVERING CLASSIFICATIONS**  
**TYPES OF CONSTRUCTION**

| IA | IB | IIA | IIB | IIIA | IIIB | IV | VA | VB |
|----|----|-----|-----|------|------|----|----|----|
| A  | A  | A   | A   | A    | A    | A  | A  | A  |

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m<sup>2</sup>.

a. Unless otherwise required in accordance with Chapter 7A.

Section 1505.1.2, Roof coverings within all other areas, is revised to read as follows:

**1505.1.2 Roof coverings within all other areas.** The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class A.

Chapter 18 – Soils and Foundations.

Section 1807.1.6, Prescriptive design of concrete and masonry foundation walls, is revised to read as follows:

**1807.1.6 Prescriptive design of concrete and masonry foundation walls.** Concrete and masonry foundation walls that are laterally supported at the top and bottom shall be permitted to be designed and constructed in accordance with this section. Prescriptive design of foundation walls shall not be used for structures assigned to Seismic Design Category D<sub>2</sub>, or E.

Chapter 31 – Special Construction.

Section 3109.2, California swimming pool safety act (statewide) is revised to read as follows:

**3109.2 California swimming pool safety act (statewide).**

**115922** (a) Except as provided in Section 115925, when a building permit is issued for the construction of a new swimming pool or spa or the remodeling of an existing swimming pool or spa, at a private, single-family home the respective swimming pool or spa shall be equipped with item #1 and at least one additional of the following seven drowning prevention safety features:

1. An enclosure that meets the requirements of Section 115923 and isolates the swimming pool or spa from the private single-family home. Any walls of the single-family structure or accessory structures used to complete the isolation enclosure must have door openings equipped with protection as required in item #4 or #5. Any such door protection device provided for this purpose may not be used to comply with the second drowning prevention feature.
2. Removable mesh pool fencing that meets American Society for Testing and Materials (ASTM) Specifications F2286 standards in conjunction with a gate that is self-closing and self-latching and can accommodate a key lockable device. The mesh fencing setback shall be not less than 20 inches from the water's edge.
3. An approved safety pool cover, as defined in subdivision (d) of Section 115921.
4. Exit alarms on the private single-family home's doors that provide direct access to the swimming pool or spa. The exit alarm may cause either an alarm noise or a verbal warning, such as repeating notification that "the door to the pool is open".
5. A self-closing, self-latching device with a release mechanism placed no lower than 54 inches (1372mm) above the floor on the private single-family home's doors providing direct access to the pool or spa.
6. An alarm that, when placed in a swimming pool or spa, will sound upon detection of accidental or unauthorized entrance into the water. These pool alarms shall meet and be independently certified to the ASTM Standard F2208 "Standard Safety Specification for Residential Pool Alarms" which includes surface motion, pressure, sonar, laser and infrared type alarms. A swimming protection alarm feature designed for individual use, including an alarm attached to a child that sounds when the child exceeds a certain distance or becomes submerged in water, is not a qualifying drowning safety prevention feature.
7. Other means of protection, if the degree of protection afforded is equal to or greater than that afforded by any of the features set forth above and have been independently verified by an approved testing laboratory as meeting standards for those devices established by the ASTM or the American Society of Testing Mechanical Engineers (ASME).

Prior to the issuance of any final approval for the completion of permitted construction or remodeling work, the local building code official shall inspect the drowning safety prevention devices required by this act and if no violations are found, shall give final approval.

**SECTION 3.** Chapter 10-32 of the Laguna Hills Municipal Code is hereby amended and restated in its entirety to read as follows:

### Chapter 10-32 RESIDENTIAL CODE

#### 10-32.010 Adoption of the California Residential Code.

The California Residential Code, 2022 Edition, based on the 2021 International Residential Code as published by the International Code Council together with the amendments provided in this chapter, is hereby adopted and incorporated by reference, as if set forth at length herein, as the Residential Code of the City of Laguna Hills regulating the construction, alteration, movement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures in the City. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection.

#### 10-32.020 Amendments to the Residential Code.

Chapter 3 – Building Planning.

Table R301.2 is revised to read as follows:

**TABLE R301.2 CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA**

| Ground snow load <sup>d</sup> | WIND DESIGN                 |                               |                                     |                                    | Seismic design category <sup>f</sup> | SUBJECT TO DAMAGE FROM  |                               |                      | Ice barrier underlayment required <sup>h</sup> | Flood hazards <sup>g</sup> | Air freezing index <sup>i</sup> | Mean annual temp <sup>j</sup> |
|-------------------------------|-----------------------------|-------------------------------|-------------------------------------|------------------------------------|--------------------------------------|-------------------------|-------------------------------|----------------------|------------------------------------------------|----------------------------|---------------------------------|-------------------------------|
|                               | Speed <sup>d</sup><br>(mph) | Topo.<br>effects <sup>k</sup> | Special<br>wind region <sup>l</sup> | Windborne debris zone <sup>m</sup> |                                      | Weathering <sup>a</sup> | Frost line depth <sup>b</sup> | Termite <sup>c</sup> |                                                |                            |                                 |                               |
| Zero                          | 95                          | No                            | No                                  | No                                 | D <sub>2</sub> or E                  | Negligible              | 12-24"                        | Very Heavy           | No                                             | Yes/No                     | 0                               | 60                            |

Chapter 9 – Roof Assemblies.

Section R902.1, Roof covering materials, is revised to read as follows:

**R902.1 Roofing covering materials.** Roofs shall be covered with materials as set forth in Sections R904 and R905. Class A roofing shall be installed in areas designated by this section. Class A roofing required by this section to be listed shall be tested in accordance with UL 790 or ASTM E 108.

**Exceptions:**

1. Class A roof assemblies include those with coverings of brick, masonry and exposed concrete roof deck.
2. Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile, or slate installed on noncombustible decks.

Section R902.1.2, Roof coverings in all other areas, is revised to read as follows

**R902.1.2 Roof coverings within all other areas.** The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class A.

Section R902.2, Fire-retardant-treated shingles and shakes, is revised to read as follows:

**R902.2 Fire-retardant-treated shingles and shakes.** Fire-retardant-treated wood shakes and shingles are wood shakes and shingles complying with UBC Standard 15-3 or 15-4 which are impregnated by the full-cell vacuum-pressure process with fire-retardant chemicals, and which have been qualified by UBC Standard 15-2 for use on Class A roofs.

(The remainder of this section is unchanged)

Appendix AX – Swimming Pool Safety Act.

Section 115922 is revised to read as follows:

**115922.**

(a) Except as provided in Section 115925, when a building permit is issued for the construction of a new swimming pool or spa or the remodeling of an existing swimming pool or spa at a private single-family home, the respective swimming pool or spa shall be equipped with an enclosure as specified in item (1) below AND at least one of the following additional drowning prevention safety features:

- (1) An enclosure that meets the requirements of Section 115923 and isolates the swimming pool and spa from the private single-family home. Any walls of the residential structure or accessory structures used to complete the isolation enclosure must have door openings equipped with protection as required in Section 115922 (a) (4) or (5). Any such door protection device provided for this purpose may not be used to comply with the second drowning prevention feature requirement.

(The remainder of this section is unchanged)

**SECTION 4.** Chapter 10-36 of the Laguna Hills Municipal Code is hereby amended and restated in its entirety to read as follows:

**Chapter 10-36  
ELECTRICAL CODE**

**10-36.010 Adoption of the California Electrical Code.**

The California Electrical Code, 2022 Edition, based on the 2020 National Electrical Code as published by the National Fire Protection Association, is hereby adopted and incorporated by reference, as if set forth at length herein, as the Electrical Code of the City of Laguna Hills, regulating all installation, arrangement, alteration, repair, use and other operation of electrical wiring, connections, fixtures and other electrical appliances on premises within the City. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection.

**SECTION 5.** Chapter 10-40 of the Laguna Hills Municipal Code is hereby amended and restated in its entirety to read as follows:

**Chapter 10-40  
MECHANICAL CODE**

**10-40.010 Adoption of the California Mechanical Code.**

The California Mechanical Code, 2022 Edition, based on the 2021 Uniform Mechanical Code as published by the International Association of Plumbing and Mechanical Officials, is hereby adopted and incorporated by reference, as if set forth at length herein, as the Mechanical Code of the City of Laguna Hills, regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance of heating, ventilating, cooling, refrigeration systems, incinerators and other miscellaneous heat producing appliances. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection.

**SECTION 6.** Chapter 10-48 of the Laguna Hills Municipal Code is hereby amended and restated in its entirety to read as follows:

**Chapter 10-48  
PLUMBING CODE**

**10-48.010 Adoption of the California Plumbing Code.**

The California Plumbing Code, 2022 Edition, based on the 2021 Uniform Plumbing Code as published by the International Association of Plumbing and Mechanical Officials, is hereby adopted and incorporated by reference, as if set forth at length herein, as

the Plumbing Code of the City of Laguna Hills, regulating erection, installation, alteration, repair, relocation, replacement, maintenance or use of plumbing systems within the City. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection.

**SECTION 7.** Chapter 10-52 of the Laguna Hills Municipal Code is hereby amended and restated in its entirety to read as follows:

**Chapter 10-52  
ENERGY CODE**

**10-52.010 Adoption of the California Energy Code.**

The California Energy Code, 2022 Edition, is hereby adopted and incorporated by reference, as if set forth at length herein, as the Energy Code of the City of Laguna Hills regulating the construction, alteration, movement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures in the City. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection.

**SECTION 8.** Chapter 10-60 of the Laguna Hills Municipal Code is hereby amended and restated in its entirety to read as follows:

**Chapter 10-60  
HISTORICAL BUILDING CODE**

**10-60.010 Adoption of the California Historical Building Code.**

The California Historical Building Code, 2022 Edition, as published by the International Code Council is hereby adopted and incorporated by reference, as if set forth at length herein, as the City of Laguna Hills Historical Building Code regulating the construction, alteration, movement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures in the City. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection.

**SECTION 9.** Chapter 10-64 of the Laguna Hills Municipal Code is hereby amended and restated in its entirety to read as follows:

## Chapter 10-64 EXISTING BUILDING CODE

### 10-64.010 Adoption of the California Existing Building Code.

The California Existing Building Code, 2022 Edition, based on the 2019 International Existing Building Code as published by the International Code Council is hereby adopted and incorporated by reference, as if set forth at length herein, as the City of Laguna Hills Existing Building Code regulating the construction, alteration, movement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures in the City. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection.

**SECTION 10.** Chapter 10-68 of the Laguna Hills Municipal Code is hereby amended and restated in its entirety to read as follows:

## Chapter 10-68 GREEN BUILDING STANDARDS CODE

### 10-68.010 Adoption of the California Green Building Standards Code.

The California Green Building Standards Code, 2022 Edition, is hereby adopted and incorporated by reference, as if set forth at length herein, as the Green Building Standards Code of the City of Laguna Hills regulating the construction, alteration, movement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures in the City. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection.

**SECTION 11.** Chapter 10-76 of the Laguna Hills Municipal Code is hereby amended and restated in its entirety to read as follows:

## Chapter 10-76 REFERENCED STANDARDS CODE

### 10-76.010 Adoption of the California Referenced Standards Code.

The California Referenced Standards Code, 2022 Edition, is hereby adopted and incorporated by reference, as if set forth at length herein, as the referenced standards code of the City of Laguna Hills regulating the construction, alteration, movement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures in the City. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection.

**SECTION 12.** Chapter 10-80 of the Laguna Hills Municipal Code is hereby added to read as follows:

**Chapter 10-80  
INTERNATIONAL PROPERTY MAINTENANCE CODE**

**10-80.010 Adoption of the International Property Maintenance Code.**

The 2021 International Property Maintenance Code, as published by the International Code Council, is hereby adopted and incorporated by reference, as if set forth at length herein, as the property maintenance code of the City of Laguna Hills regulating. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection.

**SECTION 13.** The City Council finds that this Ordinance is not subject to the California Environmental Quality Act (CEQA) pursuant to California Code of Regulations Title 14, Chapter 3, Sections 15060(c)(2) (the activity will not result in a direct or reasonably foreseeable indirect physical change in the environment) and 15060(c)(3) (the activity is not a project as defined in Section 15371), because it has no potential for resulting in physical change to the environment, directly or indirectly.

**SECTION 14.** If any section, subsection, subdivision, sentence, clause, phrase, or portion of this Ordinance is, for any reason, held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more section, subsection, subdivision, sentence, clause, phrase, or portion thereof be declared invalid or unconstitutional.

**SECTION 15.** The City Clerk shall certify as to the adoption of this Ordinance and cause a summary thereof to be published within (15) days of the adoption and shall post a Certified copy of this Ordinance, including the vote for and against the same, in the Office of the City Clerk, in accordance with Government Code Section 36933.

PASSED, APPROVED, AND ADOPTED this xx day of November 2022.

\_\_\_\_\_  
DAVE WHEELER, MAYOR

ATTEST:

\_\_\_\_\_  
JENNIFER LEE, CITY CLERK

STATE OF CALIFORNIA )  
COUNTY OF ORANGE ) ss  
CITY OF LAGUNA HILLS )

I, Jennifer Lee, City Clerk of the City of Laguna Hills, California, DO HEREBY CERTIFY that the foregoing Ordinance No. 2022-X was duly introduced and placed upon its first reading at a Regular Meeting of the City Council on the 25<sup>th</sup> day of October 2022, and that thereafter, said Ordinance was duly adopted and passed at a Regular Meeting of the City Council held on the X<sup>th</sup> day of November 2022, by the following vote, to wit:

AYES:

NOES

ABSENT:

ABSTAIN:

(SEAL)

\_\_\_\_\_  
JENNIFER LEE, CITY CLERK

STATE OF CALIFORNIA )  
COUNTY OF ORANGE ) ss  
CITY OF LAGUNA HILLS )

AFFIDAVIT OF POSTING  
AND PUBLICATION

Attachment: Attachment 1 - Ord. No. 2022-X, Building Codes Update (2096 : 2022 Building and Fire Codes Adoption)

JENNIFER LEE, being first duly sworn, deposes and says:

That she is the duly appointed and qualified City Clerk of the City of Laguna Hills;

That in compliance with State Laws of the State of California, ORDINANCE NO. 2022-X, being:

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING TITLE 10 (BUILDINGS AND CONSTRUCTION) OF THE LAGUNA HILLS MUNICIPAL CODE AND ADOPTING BY REFERENCE THE 2022 EDITION OF THE CALIFORNIA BUILDING STANDARDS CODE (CALIFORNIA CODE OF REGULATIONS, TITLE 24), CONSISTING OF THE 2022 CALIFORNIA BUILDING CODE, THE 2022 CALIFORNIA RESIDENTIAL CODE, THE 2022 CALIFORNIA ELECTRICAL CODE, THE 2022 CALIFORNIA MECHANICAL CODE, THE 2022 CALIFORNIA PLUMBING CODE, THE 2022 CALIFORNIA ENERGY CODE, THE 2022 CALIFORNIA HISTORICAL BUILDING CODE, THE 2022 CALIFORNIA EXISTING BUILDING CODE, THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, AND THE 2022 CALIFORNIA REFERENCED STANDARDS CODE, TOGETHER WITH CERTAIN AMENDMENTS, ADDITIONS, AND DELETIONS THERETO; AND ADOPTING BY REFERENCE THE 2021 INTERNATIONAL PROPERTY MAINTENANCE CODE

on the X<sup>th</sup> day of October 2022, and on the X<sup>th</sup> day of November 2022, was published in the Saddleback Valley News; and was, in compliance with City Resolution No. 2004-05-25-2, on the X<sup>th</sup> day of October 2022, and the X<sup>th</sup> day of November 2022 caused to be posted in three places in the City of Laguna Hills, to wit:

Laguna Hills City Hall  
Laguna Hills Community Center  
La Paz Center

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JENNIFER LEE, CITY CLERK  
Laguna Hills, California

## ORDINANCE NO. 2022-X

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING CHAPTER 5-16 (FIRE CODE) OF TITLE 5 (HEALTH AND SANITATION) OF THE LAGUNA HILLS MUNICIPAL CODE AND ADOPTING BY REFERENCE THE 2022 EDITION OF THE CALIFORNIA FIRE CODE INCLUDING APPENDICES B, BB, C, AND CC, TOGETHER WITH CERTAIN AMENDMENTS, ADDITIONS, AND DELETIONS THERETO

THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA, HEREBY FINDS AND DETERMINES AS FOLLOWS:

WHEREAS, pursuant to California Government Code Section 50022.1 *et seq.* the City of Laguna Hills ("City") may adopt by reference the 2022 California Fire Code, based on the International Fire Code, 2021 Edition (including appendices), published by the International Code Council (ICC), as adopted by the State of California as Title 24, Part 9, of the California Code of Regulations; and

WHEREAS, California Health & Safety Code Section 17958.5 authorizes cities to adopt the codes contained in Title 24 of the California Code of Regulations with changes and modifications determined to be reasonably necessary because of local climatic, topographic or geologic conditions; and

WHEREAS, the City desires to adopt the 2022 California Fire Code including Appendices B, BB, C, and CC, based on the International Fire Code, 2021 Edition, published by International Code Council (ICC), as set forth in Title 24, Part 9 of the California Code of Regulations ("Fire Code") with necessary amendments to assure the Code is tailored to the particular fire protection needs of the City as required by local climatic, topographic and geologic conditions and assure that a maximum level of fire protection is provided to residents, businesses and other occupants; and

WHEREAS, on October 25, 2022, the City Council introduced this Ordinance for first reading at a regular meeting of the City Council, and set a public hearing and second reading of the Ordinance for November xx, 2022; and

WHEREAS, the City Council held a public hearing on November xx, 2022, at which time all interested persons had the opportunity to appear and be heard on the matter of adopting the 2022 California Building Standards Code as amended herein; and

WHEREAS, pursuant to California Government Code Section 6066, the City published notice of the aforementioned public hearing; and

WHEREAS, any and all other legal prerequisites relating to the adoption of this Ordinance have occurred.

THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA,  
DOES ORDAIN AS FOLLOWS:

**SECTION 1.** Findings. The City Council hereby finds that the proposed amendments to the 2022 California Fire Code are reasonably necessary because of local climatic, geologic or topographic conditions, and adopts the findings provided below to support the modifications to the 2022 California Fire Code.

## **I. Climatic Conditions**

A. Orange County is located in a semi-arid Mediterranean type climate. It annually experiences extended periods of high temperatures with little or no precipitation. Hot, dry (Santa Ana) winds, which may reach speeds of 70 M.P.H. or greater, are also common to the area. These climatic conditions cause extreme drying of vegetation and common building materials. Frequent periods of drought and low humidity add to the fire danger. This predisposes the area to large destructive fires (conflagration). In addition to directly damaging or destroying buildings, these fires are also prone to disrupt utility services throughout the County. Obstacles generated by a strong wind, such as fallen trees, street lights and utility poles will greatly impact the response time to reach an incident scene.

B. The climate alternates between extended periods of drought and brief flooding conditions. Flood conditions may affect the Orange County Fire Authority's ability to respond to a fire or emergency condition. Floods also disrupt utility services to buildings and facilities within the County.

C. Water demand in this densely populated area far exceeds the quantity supplied by natural precipitation; and although the population continues to grow, the already-taxed water supply does not. California is projected to increase in population by nearly 10 million over the next quarter of a century with 50 percent of that growth centered in Southern California. Due to storage capacities and consumption, and a limited amount of rainfall future water allocation is not fully dependable. This necessitates the need for additional and on-site fire protection features.

D. These dry climatic conditions and winds contribute to the rapid spread of even small fires originating in high-density housing or vegetation. These fires spread very quickly and create a need for increased levels of fire protection. The added protection of fire sprinkler systems and other fire protection features will supplement normal fire department response by providing immediate protection for the building occupants and by containing and controlling the fire spread to the area of origin. Fire sprinkler systems will also reduce the use of water for firefighting by as much as 50 to 75 percent.

## **II. Topographical Conditions**

A. Natural; slopes of 15 percent or greater generally occur throughout the foothills of Orange County. The elevation change caused by the hills creates the geological foundation on which communities with Orange County is built and will continue to build. With much of the populated flatlands already built upon, future growth will occur on steeper slopes and with greater constraints in terrain.

B. Traffic and circulation congestion is an artificially created, obstructive topographical condition, which is common throughout Orange County.

C. These topographical conditions combine to create a situation that places fire department response time to fire occurrences at risk and makes it necessary to provide automatic on-site fire-extinguishing systems and other protection measures to protect occupants and property.

### III. Geological Conditions

The Orange County region is a densely populated area that has buildings constructed over and near a vast and complex network of faults that are believed to be capable of producing future earthquakes similar or greater in size than the 1994 Northridge and the 1971 Sylmar earthquakes. Earthquake faults run along the northeast and southwest boundaries of Orange County. The Newport-Inglewood Fault, located within Orange County was the source of the destructive 1933 Long Beach earthquake (6.3 magnitude) which took 120 lives and damaged buildings in an area from Laguna Beach to Marina Del Rey to Whittier. In December 1989, another earthquake occurred in the jurisdiction of Irvine at an unknown fault line. Regional planning for reoccurrence of earthquakes is recommended by the state of California, Department of Conservation.

A. Previous earthquakes have been accompanied by disruption of traffic flow and fires. A severe seismic event has the potential to negatively impact any rescue or fire suppression activities because it is likely to create obstacles similar to those indicated under the high wind section above. The October 17, 1989, Santa Cruz earthquake resulted in one major fire in the Marina District (San Francisco). When combined with the 34 other fires locally and over 500 responses, the department was taxed to its fullest capabilities. The Marina fire was difficult to contain because mains supplying water to the district burst during the earthquake. This situation creates the need for both additional fire protection and automatic on-site fire protection for building occupants. State Department of Conservation noted in their 1988 report (Planning Scenario on a Major Earthquake on the Newport-Inglewood Fault Zone, page 59), "unfortunately, barely meeting the minimum earthquake standards of building codes places a building on the verge of being legally unsafe."

B. Road circulation features located throughout the County also make amendments reasonably necessary. Located through the County are major roadways, highways and flood control channels that create barriers and slow response times. Hills, slopes, street and storm drain design, accompanied by occasional heavy rainfall, causes roadway flooding and landslides and at times may make an emergency access route impassable. There are areas in Orange County that naturally have extended emergency response times that exceed the 5-minute goal.

C. Soils throughout the County possess corrosive properties that reduce the expected usable life of water services when metallic pipes are in contact with soils.

D. Due to the topographical conditions of sprawling development separated by waterways and narrow and congested streets and the expected infrastructure damage inherent in seismic zones described above, it is prudent to rely on automatic fire sprinkler systems to mitigate extended fire department response time and keep fires manageable with reduced fire flow (water) resources available for a given structure. Additional fire protection is also justified to match the current resources of firefighting equipment and personnel within the Orange County Fire Authority.

### 2022 California Fire Code Amendment Findings Legend

| CODE SECTION | TITLE (Clarification)                                                           | FINDINGS                    |
|--------------|---------------------------------------------------------------------------------|-----------------------------|
| 112.4        | Violation penalties                                                             | Administrative              |
| 110.4.2      | Infraction & Misdemeanor                                                        | Administrative              |
| 202          | General definitions                                                             | Administrative              |
| 304.1.2      | OCFA Vegetation Management                                                      | I                           |
| 305.6        | Hazardous conditions                                                            | I & II                      |
| 305.7        | Disposal of rubbish                                                             | I & II                      |
| 307          | Open burning, recreational fires, fire pits, fire rings, and outdoor fireplaces | Administrative              |
| 307.6        | Fire Pits, Fire Rings, & Outdoor Fireplaces                                     | Administrative              |
| 307.6.1      | Gas-fueled devices                                                              | I & II                      |
| 307.6.2      | Devices using wood or fuels other than natural gas or LPG                       | I & II                      |
| 307.6.2.1    | Where prohibited                                                                | I & II                      |
| 324          | Fuel modification requirements for new construction                             | I                           |
| 325          | Clearance of brush or vegetation growth from roadways                           | I                           |
| 326          | Unusual circumstances                                                           | Administrative              |
| 327          | Use of equipment                                                                | I                           |
| 327.1        | Use of equipment and devices generating heat, sparks or open flames             | I                           |
| 324.2        | Spark arresters                                                                 | I                           |
| 407.5        | Hazardous material inventory statement                                          | I & II                      |
| 501.1        | Scope                                                                           | Administrative, I, II & III |

|            |                                                     |                |
|------------|-----------------------------------------------------|----------------|
| 510.1      | Emergency responder radio coverage                  | Administrative |
| 903.2      | Where required (Sprinklers)                         | I, II & III    |
| 903.2.8    | Group R (Sprinklers)                                | I, II & III    |
| 903.3.5.3  | Hydraulically calculated systems                    | I & II         |
| 2801.2     | Permit                                              | Administrative |
| 2808.2     | Storage site                                        | Administrative |
| 2808.3     | Size of piles                                       | I              |
| 2808.4     | Pile separation                                     | I              |
| 2808.7     | Pile fire protection                                | I              |
| 2808.9     | Material-handling equipment                         | I              |
| 2808.11    | Temperature control                                 | I              |
| 2808.11.1  | Pile temperature control                            | I              |
| 2808.11.2  | New material temperature control                    | I              |
| 2808.12    | Water availability for piles                        | I              |
| 2808.13    | Tipping area                                        | I              |
| 2808.14    | Emergency contact                                   | Administrative |
| 2808.15    | Maximum Grid of Piles and Rows                      | I              |
| 2808.16    | Push-out/Clear area                                 | I              |
| 4903.3     | Fuel modification requirements for new construction | I              |
| 5001.5.2   | Hazardous materials inventory statement             | Administrative |
| 5003.1.1.1 | Extremely hazardous substances                      | I & III        |
| 5608.2     | Retail fireworks                                    | Administrative |
| 5608.3     | Application for permit                              | Administrative |
| Chapter    | Reference Standards                                 | N/A            |

|    |                                                  |                          |
|----|--------------------------------------------------|--------------------------|
| 80 |                                                  |                          |
|    | 2016 NFPA 13 (Sprinkler Systems)                 | Administrative, II & III |
|    | 2016 NFPA 13-D (Single Family Sprinkler Systems) | I & II                   |
|    | 2013 NFPA 14 (Standpipe Systems)                 | Administrative           |
|    | 2016 NFPA 24 (Underground Water Supply Systems)  | Administrative & III     |

**SECTION 2** Chapter 5-16 of the Laguna Hills Municipal Code is hereby amended and restated in its entirety to read as follows:

### **Chapter 5-16 FIRE CODE**

#### **5-16.010 Adoption of the California Fire Code**

The 2022 California Fire Code, including Appendices B, BB, C, and CC, based on the International Fire Code, 2019 Edition, published by the International Code Council, together with the amendments provided in this chapter, is hereby adopted and incorporated by reference, as if set forth at length herein, as the Fire Code of the City of Laguna Hills for the purpose of prescribing regulations governing conditions hazardous to life and property from fire, explosions. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection.

#### **5-16.020 Enforcement and inspections.**

The Fire Code of the City of Laguna Hills shall be enforced by the Orange County Fire Authority, which shall be operated under the Director of Fire Services of the Orange County Fire Authority. The Director of Fire Services of the Fire Authority may detail such members of the Fire Authority as inspectors as shall be necessary from time to time.

#### **5-16.030 Amendments to the California Fire Code.**

Chapter 1, Division II – Scope and Administration is adopted in its entirety, with the following amendments:

Section 112.4, Violation penalties, is hereby revised to read as follows:

**112.4 Violation penalties.** Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or shall fail to comply with any issued orders or notices or who shall erect, install, alter, repair or do work in violation

of the approved construction documents or directive of the fire code official, or of a permit or certificate used under provisions of this code, shall be subject to penalties assessed as prescribed in the OCFA Prevention Field Services adopted fee schedule. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

Section 112.4.2, Infraction and misdemeanor, is hereby added to read as follows:

**112.4.2 Infraction and misdemeanor.** Persons operating or maintaining any occupancy, premises or vehicle subject to this code that shall permit any fire or life safety hazard to exist on premises under their control shall be guilty of an infraction. Chapter 2 – Definitions is adopted in its entirety as amended by SFM with the following amendments:

Sections 202, General Definitions, is hereby revised by adding “OCFA” and “Spark Arrester” as follows:

**OCFA.** Orange County Fire Authority, authority having jurisdiction.

**SPARK ARRESTER.** A listed device constructed of noncombustible material specifically for the purpose of meeting one of the following conditions:

1. Removing and retaining carbon and other flammable particles/debris from the exhaust flow of an internal combustion engine in accordance with California Vehicle Code Section 38366.
2. Fireplaces that burn solid fuel in accordance with California Building Code Chapter 28.

Chapter 3 – General Requirements is adopted in its entirety with the exception of Sections 308.1.4, 311.5 through 311.5.5, 318, and 319, and with the following amendments:

Section 304.1.2, Vegetation, is hereby revised to read as follows:

**304.1.2 Vegetation.** Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises. Vegetation clearance requirement in urban-wildland interface areas shall be in accordance with Chapter 49. Type, amount, arrangement, and maintenance of vegetation in a fuel modification area, interior slope, or similarly hazardous area shall be in accordance with OCFA Guideline C-05 “Vegetation Management Guideline—Technical Design for New Construction, Fuel Modification Plans, and Maintenance Program.”

Section 305.6, Hazardous Conditions, is hereby added to read as follows:

**305.6 Hazardous conditions.** Outdoor fires burning wood or other solid fuel are not allowed when any of the following conditions applies:

1. when predicted sustained winds exceed 8 MPH and relative humidity is less than 25%, or a red flag condition has been declared
2. when an official sign was caused to be posted by the fire code official, or a public announcement is made

No outdoor fires using any fuel type are permitted when predicted sustained winds exceed 20 MPH or when such fires present a hazard as determined by the fire code official.

Section 305.7, Disposal of rubbish, is hereby added to read as follows:

**305.7 Disposal of rubbish.** Rubbish, trash or combustible waste material shall be burned only within an approved incinerator and in accordance with Section 307.2.1.

Section 307, Open Burning, Recreational Fires and Portable Outdoor Fireplaces, is hereby revised to read as follows:

### **SECTION 307 OPEN BURNING, RECREATIONAL FIRES, FIRE PITS, FIRE RINGS, AND PORTABLE OUTDOOR FIREPLACES**

Section 307.6, Outdoor Fireplaces, Fire Pits, Fire Rings, or similar devices used at Group R Occupancies, is hereby added to read as follows:

**307.6 Outdoor Fireplaces, Fire Pits, Fire Rings, or similar devices used at Group R Occupancies.** Outdoor fireplaces, fire pits, fire rings, or similar exterior devices used at Group R occupancies shall comply with this section.

**Exception:** Barbeques, grills, and other portable devices intended solely for cooking.

Section 307.6.1, Gas-fueled devices, is hereby added to read as follows:

**307.6.1 Gas-fueled devices.** Outdoor fireplaces, fire pits and similar devices fueled by natural gas or liquefied-petroleum gas are allowed when approved by the Building Department and the device is designed to only burn a gas flame and not wood or other solid fuel. At R-3 occupancies, combustible construction and vegetation shall not be located within three feet of an atmospheric column that extends vertically from the perimeter of the device. At other R occupancies, the minimum distance shall be ten feet. Where a permanent Building Department approved hood and vent is installed, combustible construction may encroach upon this column between the bottom of the hood and the vent opening. Where chimneys or vents are installed, they shall have a spark arrester as defined in Section 202.

Section 307.6.2, Devices using wood or fuels other than natural gas or liquefied-petroleum gas, is hereby added to read as follows:

**307.6.2 Devices using wood or fuels other than natural gas or liquefied-petroleum gas.** Permanent outdoor fireplaces burning wood or other solid fuel shall

be constructed in accordance with the California Building Code with clearance from combustible construction and building openings as required therein. Fires in a fireplace shall be contained within a firebox with an attached chimney. The opening in the face of the firebox shall have an installed and maintained method of arresting sparks.

The burning of wood or other solid fuel in a device is not allowed within 25 feet of combustible structures unless within an approved permanent fireplace, Conditions which could cause a fire to spread within 25 feet of a structure or to vegetation shall be eliminated prior to ignition. Fires in devices burning wood or solid fuel shall be in accordance with Sections 305, 307, and 308.

**Exceptions:**

1. Portable fireplaces and fire rings/pits equipped with a device to arrest sparks shall be located at least 3' from combustible construction at R-3 occupancies,
2. Portable fireplaces, and fire pits/rings equipped with a device to arrest sparks, shall be located at least 15 feet from combustible structures at other R occupancies.

Section 307.6.2.1, Where prohibited, is hereby added to read as follows:

**307.6.2.1 Where prohibited.** The burning of wood and other solid fuels shall not be conducted within a fuel modification zone, Wildfire Risk Area (WRA), Wildland-Urban Interface Area (WUI), or in locations where conditions could cause the spread of fire to the WRA or WUI.

**Exceptions:**

1. Permanent fireplaces that are not located in a fuel modification zone
2. Where determined by the Fire Code Official that the location or design of the device should reasonably prevent the start of a wildfire.

Section 324, Fuel Modification Requirements for New Construction, is hereby added to read as follows:

**324 Fuel Modification Requirements for New Construction.** All new structures and facilities adjoining land containing hazardous combustible vegetation shall be approved and in accordance with the requirements of OCFA Guideline C-05 "Vegetation Management Guideline – Technical Design for New Construction Fuel Modification Plans and Maintenance Program."

Section 325, Clearance of brush or vegetation growth from roadways, is hereby added to read as follows:

**325 Clearance of brush or vegetation growth from roadways.** The fire code official is authorized to cause areas within 10 feet (3048 mm) on each side of portions of highways and private streets which are improved, designed or ordinarily used for

vehicular traffic, to be cleared of flammable vegetation and other combustible growth. Measurement shall be from the flow-line or the end of the improved edge of the roadway surfaces.

**Exception:** Single specimens of trees, ornamental shrubbery or cultivated ground cover such as green grass, ivy, succulents or similar plants used as ground covers, provided that they do not form a means of readily transmitting fire.

Section 326, Unusual circumstances, is hereby added to read as follows:

**326 Unusual circumstances.** The fire code official may suspend enforcement of the vegetation management requirements and require reasonable alternative measures designed to advance the purpose of this code if determined that in any specific case that any of the following conditions exist:

1. Difficult terrain.
2. Danger of erosion.
3. Presence of plants included in any state and federal resources agencies, California Native Plant Society and county-approved list of wildlife, plants, rare, endangered and/or threatened species.
4. Stands or groves of trees or heritage trees.
5. Other unusual circumstances that make strict compliance with the clearance of vegetation provisions undesirable or impractical.

Section 327, Use of equipment, is hereby added to read as follows:

**327 Use of equipment.** Except as otherwise provided in this section, no person shall use, operate, or cause to be operated in, upon or adjoining any hazardous fire area any internal combustion engine which uses hydrocarbon fuels, unless the engine is equipped with a spark arrester as defined in Section 202 maintained in effective working order, or the engine is constructed, equipped and maintained for the prevention of fire.

**Exceptions:**

1. Engines used to provide motor power for trucks, truck tractors, buses, and passenger vehicles, except motorcycles, are not subject to this section if the exhaust system is equipped with a muffler as defined in the Vehicle Code of the State of California.
2. Turbocharged engines are not subject to this section if all exhausted gases pass through the rotating turbine wheel, there is no exhaust bypass to the atmosphere, and the turbocharger is in good mechanical condition

Section 327.1, Use of equipment and devices generating heat, sparks or open flames is hereby added to read as follows:

**327.1 Use of equipment and devices generating heat, sparks or open flames.** During any time of the year within Wildfire Risk Areas, within or immediately adjacent

to any forest- or brush-covered land or non-irrigated grass-covered land, no person shall use or operate any welding equipment, cutting torches, tar pots, grinding devices, or other tools or equipment that may produce a spark, fire, or flame that could result in a wildfire without doing the following:

1. First clearing away all flammable material, including snags, from the area around such operation for a distance of 30 feet or other approved method to reduce fire spread into the wildlands. If 30-foot clearing cannot be achieved, then an alternate method shall be approved by the AHJ prior to work starting.
2. Maintain one serviceable round point shovel with an overall length of not less than forty-six (46) inches and one backpack pump water-type fire extinguisher fully equipped and ready for use at the immediate area during the operation.
3. Stop work when winds are 8 MPH or greater during periods when relative humidity is less than 25%, or a red flag condition has been declared or public announcement is made, when an official sign was caused to be posted by the fire code official, or when such fires present a hazard as determined by the fire code official.
4. Keep a cell phone nearby and call 911 immediate in case of fire.

Section 327.2, Spark arresters, is hereby added to read as follows:

**327.2 Spark arresters.** Spark arresters shall comply with Section 202, and when affixed to the exhaust system of engines or vehicles subject to Section ~~324~~327 shall not be placed or mounted in such a manner as to allow flames or heat from the exhaust system to ignite any flammable material.

Chapter 4 – Emergency Planning and Preparedness is adopted with only those sections and subsections adopted by SFM with the following amendment.

Section 407.5, Hazardous Materials Inventory Statement, is revised to read as follows:

**407.5 Hazardous Materials Inventory Statement.** Where required by the fire code official, each application for a permit shall OCFA's Chemical Classification Guideline in accordance with Section 5001.5.2.

Chapter 5 – Fire Service Features is adopted in its entirety as amended by SFM with the following amendments:

Section 501.1, Scope, is revised to read as follows:

**501.1 Scope.** Fire service features for buildings, structures and premises shall comply with this chapter and, where required by the fire code official, with OCFA Guideline B-01, "Fire Master Plan for Commercial & Residential Development."

Section 510.1, Emergency responder radio coverage in new buildings, is revised to read as follows:

**510.1 Emergency responder radio coverage in new buildings.** All new buildings shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems. The Emergency Responder Radio Coverage System shall comply with the requirements of the Orange County Sheriff's Department, Communications and Technology Division, and where the functionality of performance requirements in the California Fire Code are more stringent, this code.

**Exceptions:**

1. In buildings or structures where it is determined by the fire code official that the radio coverage system is not needed, including but not limited to the following:
  - a. Existing buildings or structures, unless required by the Building Official and OCFA for buildings and structures undergoing extensive remodel and/or expansion.
  - b. Elevators.
  - c. Structures that meet all of the following:
    - i. Three stories or less, and
    - ii. Do not have subterranean storage or parking, and
    - iii. Do not exceed 50,000 square feet on any single story.
  - d. Structures that meet all of the following:
    - i. Residential structures four stories or less, and
    - ii. Constructed of wood, and
    - iii. Do not have subterranean storage or parking, and
    - iv. Are not built integral to an above ground multi-story parking structure.

Should a structure that is three stories or less and 50,000 square feet or smaller on any single story include subterranean storage or parking, then this ordinance shall apply only to the subterranean areas.
2. In facilities where emergency responder radio coverage is required and such systems, components or equipment required could have a negative impact on the normal operations of the facility, the fire code official shall have the authority to accept an automatically activated emergency radio coverage system.

Chapter 6– Building Services and Systems is adopted in its entirety as amended by SFM.

Chapter 7 – Fire and Smoke Protection Features is adopted in its entirety as amended by SFM.

Chapter 8 – Interior Finish, Decorative Materials and Furnishings is adopted in its entirety as amended by SFM.

Chapter 9 – Fire Protection and Life Safety Systems is adopted in its entirety as amended by SFM with the following amendments:

Section 903.2, Where required, is hereby revised to read as follows:

**903.2 Where required.** Approved automatic fire sprinkler systems in buildings and structures shall be provided when one of the following conditions exists:

**New buildings:** Notwithstanding any applicable provisions of Sections 903.2.1 through 903.2., an automatic fire sprinkler system shall also be installed in all occupancies when the total building area exceeds 5,000 square feet as defined in Section 202, regardless of fire areas or allowable area, or is more than two stories in height.

**Exception:** Subject to approval by the Fire Code Official, open parking garages in accordance with Section 406.5 of the California Building Code that are smaller than the area specified in section 903.2.10 (3) or 903.2.10.1 of the California Fire Code.

1. **Existing Buildings:** Notwithstanding any applicable provisions of this code, an automatic fire sprinkler system shall be provided in an existing building when an addition occurs and one of the following conditions exists:
  - a. When an addition is 33% or more of the existing building area, and the resulting building area exceeds 5000 square feet
  - b. When an addition exceeds 2000 square feet, and the resulting building area exceeds 5000 square feet.
  - c. An additional story is added above the second floor regardless of fire areas or allowable area.

Exception: Additions to Group R-3 occupancies shall comply with Section 903.2.8 (2).

Section 903.2.8, Group R, is hereby revised to read as follows:

**903.2.8 Group R.** An automatic fire sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area as follows:

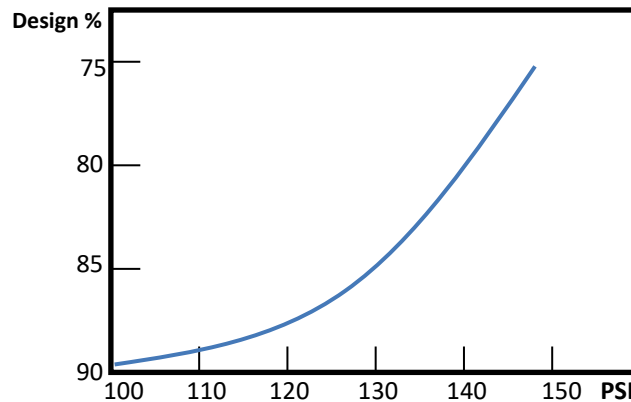
1. **New Buildings:** An automatic fire sprinkler system shall be installed throughout all new buildings.
2. **Existing R-3 Buildings:** An automatic fire sprinkler system shall be installed throughout when one of the following conditions exists:
  - a. When the floor area of alterations within any two-year period exceeds 50 percent of gross floor area of the existing structure and the building gross floor area exceeds 5,500 square feet; or:
  - b. When an existing Group R Occupancy is being substantially renovated, and where the scope of the renovation is such that the Building Code Official determines that the complexity of installing a sprinkler system would be similar as in a new building.

Section 903.3.5.3, Hydraulically calculated systems, is hereby added to read as follows:

**903.3.5.3 Hydraulically calculated systems.** The design of hydraulically calculated fire sprinkler systems shall not exceed 90% of the water supply capacity.

**Exception:** When static pressure exceeds 100 psi, and when required by the fire code official, the fire sprinkler system shall not exceed the water supply capacity specified by Table 903.3.5.3.

**TABLE 903.3.5.3**  
**Hydraulically Calculated Systems**



Chapter 10 – Means of Egress is adopted in its entirety as amended by SFM.

Chapter 11 – Construction Requirements for Existing Buildings. Adopt only those sections and subsections adopted by SFM.

Chapter 12 – Energy Systems is adopted in its entirety as amended by SFM.

Chapter 20 – Aviation Facilities is adopted in its entirety.

Chapter 21 – Dry Cleaning is adopted in its entirety as amended by SFM.

Chapter 22 – Combustible Dust-Producing Operations is adopted in its entirety as amended by SFM.

Chapter 23 – Motor Fuel-Dispensing Facilities and Repair Garages is adopted in its entirety as amended by SFM.

Chapter 24 – Flammable Finishes is adopted in its entirety as amended by SFM.

Chapter 25 – Fruit and Crop Ripening is not adopted.

Chapter 26 – Fumigation and Insecticidal Fogging is not adopted.

Chapter 27 – Semiconductor Fabrication Facilities is adopted in its entirety.

Chapter 28 – Lumber Yards and Agro-Industrial, Solid Biomass and Woodworking Facilities is adopted in its entirety with the following amendments:

Section 2801.2, Permit, is hereby revised to read as follows:

**2801.2 Permit.** Permits shall be required as set forth in Section 105.6 and 105.6.29.

Section 2808.2, Storage site, is hereby revised to read as follows:

**2808.2 Storage site.** Storage sites shall be level and on solid ground, elevated soil lifts or other all-weather surface. Sites shall be thoroughly cleaned, and approval obtained from the fire code official before transferring products to the site.

Section 2808.3, Size of piles, is hereby revised to read as follows:

**2808.3 Size of piles.** Piles shall not exceed 15 feet in height, 50 feet in width and 100 feet in length.

**Exception:** The fire code official is authorized to allow the pile size to be increased where a fire protection plan is provided for approval that includes, but is not limited to, the following:

1. Storage yard areas and materials-handling equipment selection, design and arrangement shall be based upon sound fire prevention and protection principles.
2. Factor that lead to spontaneous heating shall be identified in the plan, and control of the various factors shall be identified and implemented, including provisions for monitoring the internal condition of the pile.
3. The plan shall include means for early fire detection and reporting to the public fire department; and facilities needed by the fire department for fire extinguishment including a water supply and fire hydrants.
4. Fire apparatus access roads around the piles and access roads to the top of the piles shall be established, identified, and maintained.
5. Regular yard inspections by trained personnel shall be included as part of an effective fire prevention maintenance program.

Additional fire protection called for in the plan shall be provided and shall be installed in accordance with this code. The increase of the pile size shall be based upon the capabilities of the installed fire protection system and features.

Section 2808.4, Pile Separation, is hereby revised to read as follows:

**2808.4. Pile separation.** Piles shall be separated from adjacent piles by a minimum distance of 20 feet. Additionally, piles shall have a minimum separation of 100 feet from combustible vegetation.

Section 2808.7, Pile fire protection, is hereby revised to read as follows:

**2808.7 Pile fire protection.** Automatic sprinkler protection shall be provided in conveyor tunnels and combustible enclosures that pass under a pile. Combustible conveyor systems and enclosed conveyor systems shall be equipped with an approved automatic sprinkler system. Oscillating sprinklers with a sufficient projectile reach are required to maintain a 40% to 60% moisture content and wet down burning/smoldering areas.

Section 2808.9, Material-handling equipment, is hereby revised to read as follows:

**2808.9 Material-handling equipment.** All material-handling equipment operated by an internal combustion engine shall be provided and maintained with an approved spark arrester. Approved material-handling equipment shall be available for moving wood chips, hogged material, wood fines and raw product during fire-fighting operations.

Section 2808.11, Temperature control, is hereby added to read as follows:

**2808.11 Temperature control.** The temperature shall be monitored and maintained as specified in Sections 2808.11.1 and 2808.11.2.

Section 2808.11.1, Pile temperature control, is hereby added to read as follows:

**2808.11.1 Pile temperature control.** Piles shall be rotated when internal temperature readings are in excess of 165 degrees Fahrenheit.

Section 2808.11.2, New material temperature control, is hereby added to read as follows:

**2808.11.2 New material temperature control.** New loads delivered to the facility shall be inspected and tested at the facility entry prior to taking delivery. Material with temperature exceeding 165 degrees Fahrenheit shall not be accepted on the site. New loads shall comply with the requirements of this chapter and be monitored to verify that the temperature remains stable.

Section 2808.12, Water availability, is hereby added to read as follows:

**2808.12 Water Availability.** Facilities with over 2500 cubic feet shall provide a water supply. The minimum fire flow shall be no less than 500 GPM @ 20 psi for a minimum of 1 hour duration for pile heights up to 6 feet and 2-hour duration for pile heights over 6 feet. If there is no water purveyor, an alternate water supply with storage tank(s) shall be provided for fire suppression. The water supply tank(s) shall provide a minimum capacity of 2500 gallons per pile (maximum 30,000 gallons) for piles not exceeding 6 feet in height and 5000 gallons per pile (maximum 60,000) for piles exceeding 6 feet in height. Water tank(s) shall not be used for any other purpose unless the required fire flow is left in reserve within the tank at all times. An approved method shall be provided to maintain the required amount of water within the tank(s).

Section 2808.13, Tipping area, is hereby added to read as follows:

**2808.13 Tipping areas** shall comply with the following:

1. Tipping areas shall not exceed a maximum area of 50 feet by 50 feet.
2. Material within a tipping area shall not exceed 5 feet in height at any time.
3. Tipping areas shall be separated from all piles by a 20-foot-wide fire access lane.
4. A fire hydrant or approved fire water supply outlet shall be located within 150 feet of all points along the perimeter of the tipping area.
5. All material within a tipping area shall be processed within 5 days of receipt.

Section 2808.14, Emergency Contact, is hereby added to read as follows:

**2808.14 Emergency Contact.** The contact information of a responsible person or persons shall be provided to the Fire Department and shall be posted at the entrance to the facility for responding units. The responsible party should be available to respond to the business in emergency situation.

Section 2808.15, Maximum Grid of Piles and Rows, is hereby added to read as follows:

**2808.15 Maximum Grid of Piles and Rows,** Rows of Piles shall not exceed 500 feet by 500 feet. Grids shall be separated by a minimum 50 foot clear space used for no other purpose.

2808.16, Push-out / Clear area, is hereby added as follows:

**2808.16 Push-out / Clear Area,** Piles exceeding 20 cubic yards shall be provided with push-out areas. Push-out areas shall be maintained clear at all times to allow for the largest pile to be spread out to a depth of 2 feet in height. Push-out areas shall be located within 250 feet of all edges of any pile and shall be located a minimum of 20 feet from any building.

Chapter 29 – Manufacture of Organic Coatings is adopted in its entirety.

Chapter 30 – Industrial Ovens is adopted in its entirety.

Chapter 31 – Temporary Special Event Structures and Other Membrane Structures is adopted in its entirety as amended by SFM.

Chapter 32 – High-Piled Combustible Storage is adopted in its entirety as amended by SFM.

Chapter 33 – Fire Safety During

Chapter 34 – Tire Rebuilding and Tire Storage is adopted in its entirety as amended by SFM.

Chapter 35 – Welding and Other Hot Work is adopted in its entirety.

Chapter 36 – Marinas is adopted in its entirety.

Chapter 37 – Combustible Fibers is adopted in its entirety.

Chapter 39 – Processing and Extraction Facilities is adopted in its entirety.

Chapter 40 – Storage of Distilled Spirits and Wines is adopted in its entirety.

Chapter 48 – Motion Picture and Television Production Studio Sound Stages, Approved Production Facilities and Production Locations is adopted in its entirety.

Chapter 49 – Requirements for Wildland-Urban Interface Fire Areas is adopted in its entirety with the following amendment:

Section 4903.3, Fuel Modification Plans, is hereby added to read as follows:

**4903.3 Fuel Modification Plans.** Fuel modification plans shall be reviewed and approved by OCFA for all new buildings to be built or installed in a wildfire risk area. Plans shall meet the criteria set forth in OCFA Guideline C-05 “Vegetation Management Guideline – Technical Design for New Construction Fuel Modification Plans and Maintenance Program.”

Chapter 50 – Hazardous Materials – General Provisions is adopted in its entirety as amended by SFM with the following amendments.

Section 5001.5.2, Hazardous Materials Inventory Statement (HMIS), is hereby revised to read as follows:

**5001.5.2 Hazardous Materials Inventory Statement (HMIS).** Where required by the fire code official, an application for a permit shall include. Orange County Fire Authority’s—Chemical Classification Guideline, which shall be completed and approved prior to approval of plans, and/or the storage, use or handling of chemicals on the premises.

Section 5003.1.1.1, Extremely Hazardous Substances, is hereby added to read as follows:

**5003.1.1.1 Extremely Hazardous Substances.** No person shall use or store any amount of extremely hazardous substances (EHS) in excess of the disclosable amounts (see Health and Safety Code Section 25500 et al) in a residential zoned or any residentially developed property.

Chapter 51 – Aerosols is adopted in its entirety.

Chapter 53 – Compressed Gases is adopted in its entirety.

Chapter 54 – Corrosive materials is adopted in its entirety as amended by SFM.

Chapter 55 – Cryogenic Fluids is adopted in its entirety.

Chapter 56 – Explosives and Fireworks is adopted in its entirety as amended by SFM with the following amendments:

Section 5608.2, Firing, is hereby added to read as follows:

**5608.2 Firing.** All fireworks display, regardless of mortar, device, or shell size, shall be electrically fired.

Section 5608.3, Application for Permit, is hereby added to read as follows:

**Section 5608.3 Application for Permit.** A diagram of the grounds on which the display is to be held showing the point at which the fireworks are to be discharged, the fallout area based on 100 feet per inch of shell size, the location of all buildings, roads, and other means of transportation, the lines behind which the audience will be restrained, the location of all nearby trees, telegraph or telephone line, or other overhead obstructions shall be provided to OCFA.

Chapter 57 – Flammable and Combustible Liquids. is adopted as amended by SFM.

Chapter 58 – Flammable Gases and Flammable Cryogenic Fluids is adopted as amended by SFM.

Chapter 59 – Flammable Solids is adopted in its entirety.

Chapter 60 – Highly Toxic and Toxic Materials is adopted in its entirety.

Chapter 61 – Liquefied Petroleum Gases is adopted in its entirety.

Chapter 62 – Organic Peroxides is adopted in its entirety.

Chapter 63 – Oxidizers, Oxidizing Gases, and Oxidizing Cryogenic Fluids is adopted in its entirety.

Chapter 64 – Pyrophoric Materials is adopted in its entirety.

Chapter 65 – Pyroxylin (Cellulose Nitrate) Plastics is adopted in its entirety.

Chapter 66 – Unstable (Reactive) Materials is adopted in its entirety.

Chapter 67 – Water-Reactive Solids and Liquids is adopted in its entirety.

Chapter 80 – Referenced Standards is adopted in its entirety with the following amendments:

NFPA 13, 2022 Edition, Standard for the Installation of Sprinkler Systems is hereby amended as follows:

Section 16.12.3.3 is hereby revised to read as follows:

**16.12.3.3** Fire department connections (FDC) shall be of an approved type. The location shall be approved and be no more than 150 feet from a public hydrant. The FDC may be located within 150 feet of a private fire hydrant when approved by the fire

code official. The size of piping and the number of 2½" inlets shall be approved by the fire code official. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red or as approved. When the fire sprinkler density design requires more than 500 gpm (including inside hose stream demand), or a standpipe system is included, four 2½" inlets shall be provided.

Section 9.4.3.1 is hereby revised to read as follows:

**9.4.3.1** When fire sprinkler systems are installed in shell buildings of undetermined use (Spec Buildings) other than warehouses (S occupancies), fire sprinklers of the quick-response type shall be used. Use is considered undetermined if a specific tenant/occupant is not identified at the time the fire sprinkler plan is submitted. Sprinklers in light hazard occupancies shall be one of the following:

1. Quick-response type as defined in 3.6.4.8
2. Residential sprinklers in accordance with the requirements of 8.4.5
3. Quick response CMSA sprinklers
4. ESFR sprinklers
5. Standard-response sprinklers used for modifications or additions to existing light hazard systems equipped with standard-response sprinklers
6. Standard-response sprinklers used where individual standard-response sprinklers are replaced in existing light hazard systems

Section 9.2.1.7 is hereby revised to read as follows:

**9.2.1.7** Concealed spaces filled with noncombustible insulation shall not require sprinkler protection when approved by fire code official.

NFPA 13D 2022 Edition, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes is hereby amended as follows:

Section 7.1.2 is hereby revised to read as follows:

**7.1.2** The sprinkler system piping shall not have separate control valves installed unless supervised by a central station, proprietary, or remote station alarm service.

NFPA 14, 2019 Edition, Installation of Standpipe and Hose Systems is hereby amended to read as follows:

Section 7.3.1.1 is hereby deleted in its entirety.

NFPA 24, 2019 Edition, Standard for the Installation of Private Fire Service Mains and Their Appurtenances is hereby amended to read as follows:

Section 6.2.8.1 is hereby added to read as follows:

**6.2.8.1** All indicating valves controlling fire suppression water supplies shall be painted OSHA red.

**Exceptions:**

1. Brass or bronze valves on sprinkler risers mounted to the exterior of the building may be left unpainted.
2. Where OS&Y valves on the detector check assembly are the only control valves, at least one OS&Y valve shall be painted red.

Section 6.2.9 is hereby amended to read as follows:

All connections to private fire service mains for fire protection systems shall be arranged in accordance with one of the following so that they can be isolated:

1. A post indicator valve installed not less than 40 ft (12 m) from the building
  - (a) For buildings less than 40 ft (12 m) in height, a post indicator valve shall be permitted to be installed closer than 40 ft (12 m) but at least as far from the building as the height of the wall facing the post indicator valve.
- (2) A wall post indicator valve
- (3) An indicating valve in a pit, installed in accordance with Section 6.4
- (4) A backflow preventer with at least one indicating valve not less than 40 ft (12 m) from the building
  - (a) For buildings less than 40 ft (12 m) in height, a backflow preventer with at least one indicating valve shall be permitted to be installed closer than 40 ft (12 m) but at least as far from the building as the height of the wall facing the backflow preventer.
- (5) Control valves installed in a fire-rated room accessible from the exterior
- (6) Control valves in a fire-rated stair enclosure accessible from the exterior

Section 10.1.5 is hereby added to read as follows:

**10.1.5** All ferrous pipe and joints shall be polyethylene encased per AWWA C150, Method A, B, or C. All fittings shall be protected with a loose 8-mil polyethylene tube or sheet. The ends of the tube or sheet shall extend past the joint by a minimum of 12 inches and be sealed with 2-inch-wide tape approved for underground use. Galvanizing does not meet the requirements of this section.

**Exception:** 304 or 316 Stainless Steel pipe and fittings

Section 10.4.1.1 is hereby revised to read as follows:

**10.4.1.1** All bolted joint accessories shall be cleaned and thoroughly coated with asphalt or other corrosion-retarding material after installation.

**Exception:** Bolted joint accessories made from 304 or 316 stainless steel.

Section 10.4.1.1.1 is hereby added to read as follows:

**10.4.1.1.1** All bolts used in pipe-joint assembly shall be 316 stainless steel.

Section 10.4.3.2 is hereby added to read as follows:

**10.4.3.2.** Where fire service mains enter the building adjacent to the foundation, the pipe may run under a building to a maximum of 24 inches, as measured from the interior face of the exterior wall to the center of the vertical pipe. The pipe under the building or building foundation shall be 304 or 316 stainless steel and shall not contain mechanical joints or it shall comply with 10.4.3.2.1 through 10.4.3.2.4.

## Appendices

**Appendix A** is deleted in its entirety.

**Appendix B** is adopted in its entirety.

**Appendix BB** is adopted in its entirety.

**Appendix C** is adopted in its entirety.

**Appendix CC** is adopted in its entirety.

**Appendix D** is deleted in its entirety.

**Appendix E** is deleted in its entirety.

**Appendix F** is deleted in its entirety.

**Appendix G** is deleted in its entirety.

**Appendix H** is deleted in its entirety.

**Appendix I** is deleted in its entirety.

**Appendix J** is deleted in its entirety.

**Appendix K** is deleted in its entirety.

**Appendix L** is deleted in its entirety.

**Appendix M** is deleted in its entirety.

**Appendix N** is deleted in its entirety.

**Appendix O** is deleted in its entirety.

**SECTION 3.** The City Council finds that this Ordinance is not subject to the California Environmental Quality Act (CEQA) pursuant to California Code of Regulations Title 14, Chapter 3, Sections 15060(c)(2) (the activity will not result in a direct or reasonably foreseeable indirect physical change in the environment) and 15060(c)(3) (the activity is not a project as defined in Section 15371), because it has no potential for resulting in physical change to the environment, directly or indirectly.

**SECTION 4.** If any section, subsection, subdivision, sentence, clause, phrase, or portion of this Ordinance is, for any reason, held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more section, subsection, subdivision, sentence, clause, phrase, or portion thereof be declared invalid or unconstitutional.

**SECTION 5.** The City Clerk shall certify as to the adoption of this Ordinance and cause a summary thereof to be published within (15) days of the adoption and shall post a Certified copy of this Ordinance, including the vote for and against the same, in the Office of the City Clerk, in accordance with Government Code Section 36933.

PASSED, APPROVED, AND ADOPTED this xx day of November 2022.

\_\_\_\_\_  
DAVE WHEELER, MAYOR

ATTEST:

\_\_\_\_\_  
JENNIFER LEE, CITY CLERK

STATE OF CALIFORNIA )  
COUNTY OF ORANGE ) ss  
CITY OF LAGUNA HILLS )

I, Jennifer Lee, City Clerk of the City of Laguna Hills, California, DO HEREBY CERTIFY that the foregoing Ordinance No. 2022-X was duly introduced and placed upon its first reading at a Regular Meeting of the City Council on the 25<sup>th</sup> day of October 2022, and that thereafter, said Ordinance was duly adopted and passed at a Regular Meeting of the City Council held on the X<sup>th</sup> day of November 2022, by the following vote, to wit:

AYES:

NOES

ABSENT:

ABSTAIN:

(SEAL)

\_\_\_\_\_  
JENNIFER LEE, CITY CLERK

STATE OF CALIFORNIA )  
COUNTY OF ORANGE ) ss  
CITY OF LAGUNA HILLS )

AFFIDAVIT OF POSTING  
AND PUBLICATION

JENNIFER LEE, being first duly sworn, deposes and says:

That she is the duly appointed and qualified City Clerk of the City of Laguna Hills;

That in compliance with State Laws of the State of California, ORDINANCE NO. 2022-X, being:

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING CHAPTER 5-16 (FIRE CODE) OF TITLE 5 (HEALTH AND SANITATION) OF THE LAGUNA HILLS MUNICIPAL CODE AND ADOPTING BY REFERENCE THE 2022 EDITION OF THE CALIFORNIA FIRE CODE INCLUDING APPENDICES B, BB, C, AND CC, TOGETHER WITH CERTAIN AMENDMENTS, ADDITIONS, AND DELETIONS THERETO

on the X<sup>th</sup> day of October 2022, and on the X<sup>th</sup> day of November 2022, was published in the Saddleback Valley News; and was, in compliance with City Resolution No. 2004-05-25-2, on the X<sup>th</sup> day of October 2022, and the X<sup>th</sup> day of November 2022 caused to be posted in three places in the City of Laguna Hills, to wit:

Laguna Hills City Hall  
Laguna Hills Community Center  
La Paz Center

---

JENNIFER LEE, CITY CLERK  
Laguna Hills, California

**EXHIBIT "A"**

**Guideline B-01**

**Fire Master Plans for Commercial & Residential Development**

Orange County Fire Authority  
Community Risk Reduction

1 Fire Authority Road, Building A, Irvine, CA 92602 www.ocfa.org 714-573-6100

# Fire Master Plans for Commercial & Residential Development



## Guideline B-01

Serving the Cities of Aliso Viejo • Buena Park • Cypress • Dana Point • Garden Grove • Irvine • Laguna Hills • Laguna Niguel • Laguna Woods  
Lake Forest • La Palma • Los Alamitos • Mission Viejo • Rancho Santa Margarita • San Clemente • San Juan Capistrano  
Seal Beach • Santa Ana • Stanton • Tustin • Villa Park • Westminster • Yorba Linda • and Unincorporated Areas of Orange County

# Fire Master Plans for Commercial & Residential Development

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## Fire Master Plans for Commercial & Residential Development

### PURPOSE

The effectiveness of emergency response and firefighting operations is directly related to the proper installation and maintenance of fire access roadways, proper location of hydrants, adequate water supply, and access to buildings and facilities. This document is a general guideline pertaining to the creation and maintenance of fire department access roadways, access walkways to and around buildings, and hydrant quantity and placement as required by the 2022 California Fire and Building Codes (also known as CFC and CBC, respectively) and as amended by local ordinance.

### SCOPE

This guideline applies to fire apparatus access roads which provide access to new, reconstructed, relocated residential or commercial structures, developments, and facilities.

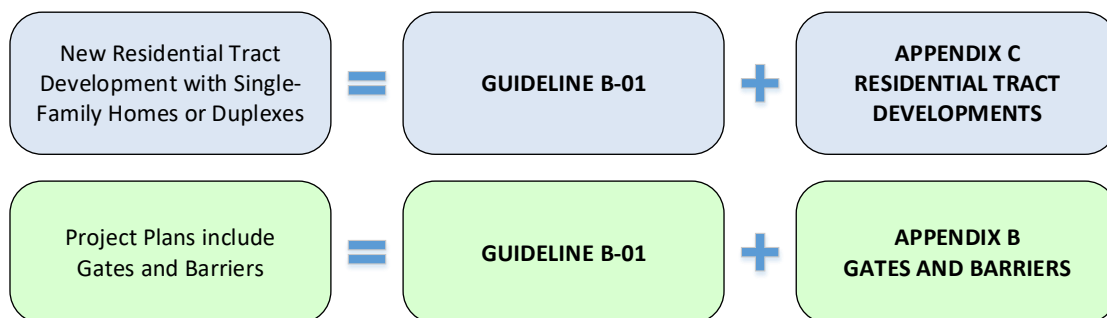
**Note:** In addition to the requirements of OCFA Guideline B-01, for buildings and facilities located within State Responsibility Area (SRA) or the Very High Fire Hazard Severity Zones (VHFHSZ) in the Local Responsibility Area (LRA), refer to California Code of Regulations (CCR) Title 14 from CA Board of Forestry & Fire Protection site: <https://bof.fire.ca.gov/>.

### HOW TO USE THIS GUIDELINE

The guideline consists of two main parts: Guideline B-01 and a series of lettered appendices: Appendix A, B, and C. The first part, Guideline B-01, provides instructions on how to prepare and submit a generic Fire Master Plan. The second part, the appendices to Guideline B-01, contain additional information that may be applicable based on the type of project submission.

**To prepare a Fire Master Plan, provide the information and comply with the requirements in both B-01 and all pertinent appendices.**

*Example:*



### SECTION 1: SUBMITTAL REQUIREMENTS

- 1. Universal Submittal Requirements** - Refer to Guideline A-02 from OCFA Planning and Development website ([www.ocfa.org](http://www.ocfa.org)). Complete the Fire Master Plan Submittal Checklist (Attachment 1) and verify that basic project information has been provided and that general access and water requirements have been addressed on the plan.

## SECTION 2: FIRE LANES

2. **Fire Lanes** - On-site private fire lanes shall be provided for every facility or building when any portion of an exterior wall of the first story is located more than 150 feet from a public roadway, as measured along an approved route. Extenuating circumstances, increased hazards, and additional fire safety features may affect these requirements.

2.1. **Loading** – Fire lanes shall be designed, constructed, and maintained to provide all-weather driving capabilities and support the imposed load of 94,000-pound fire apparatus with weight distributed as follows:

- No more than 32,000-pounds per axle.
- Bridges and underground vaults, culverts, and other features beneath fire access roadways shall be designed, at a minimum, to the AASHTO H-17 standard.
- A letter or statement, signed by a registered engineer, shall be provided on the plans certifying that any new roadway meets these loading and all-weather criteria. Natural or artificial turf products, and road base without an approved topping material does not satisfy the all-weather requirement and may not be approved.

2.2. **Number Required** - One fire lane is required if any portion of an exterior wall of the first story of a building is located more than 150 feet from a fire lane. The hose pull distance is to be measured by an approved route around the exterior of the building.

EXCEPTION: Hose-pull distance to the most remote exterior portion of a detached single-family home or duplex or related accessory structure (e.g., pool house, casita, garage, workshop, barn, etc.) may be up to 300 feet when protected throughout by a fire sprinkler system or as approved by the fire code official.

EXCEPTION: When approved by the fire code official, this distance may be increased up to 300 feet for open parking garages that comply with the following:

The structure is protected throughout with an NFPA 13 sprinkler system, or the structure meets the below requirements:

- Two stairways, both directly accessible from the exterior.
- Both stairways provide direct access to all tiers of the parking structure.
- Both stairways are equipped with Class I Wet Standpipe Outlets at each floor or intermediate landing.
- Access to both stairways is within 40-feet walking distance from a fire lane.
- The stairways are sufficiently separated from each other and located in a manner that facilitates firefighting operations within the structure, as determined by the fire code official.

2.2.1. More than one fire lane is required when access to a single road may be insufficient due to the following: terrain, location, travel distance, potential fire, life-safety hazards, vehicle congestion, railways, weather condition that may impair single-entry point, or other factors that could limit access. Supplementary access points shall be located to facilitate evacuation and emergency operations and minimize congestion or obstruction during an emergency incident. At least two of

the access points shall be separated by a distance of at least one-half of the longest dimension, as measured between the two points of the development that are furthest from one another, when any of the following conditions exist.

- A minimum of two vehicle access points is required for any area containing 150 or more residential dwelling units, including new and existing dwelling units.
- A minimum of two vehicle access points is required for any multi-family residential structure containing 200 or more dwelling units. Each entry point shall provide access to at least one of two (or more) required vehicle laddering areas. Laddering areas shall be remotely located on at least two sides of the structure in locations that facilitate fire department access to the roof as well as interior firefighting.
- A secondary access point is required for commercial projects with a cumulative building area of more than 124,000 square feet.

2.3. **Location** - For purposes of determining the suitability of public roads and private roads for staging fire apparatus and facilitating fire suppression operations for a particular structure, the following criteria shall apply:

2.3.1. The edge of fire access roadways serving two and three-story buildings should be located no closer than 10 to 30 feet from the building. The edge of fire lanes serving structures four or more stories in height shall be located between 20 to 40 feet from the building. The setback is measured from the face of the building to the top edge of the curb face or rolled curb flow line nearest the building. The distance and the amount of fire lane serving the structure that is required to meet these criteria are a function of overall building height, construction, presence of openings, and other potential hazards and considerations.

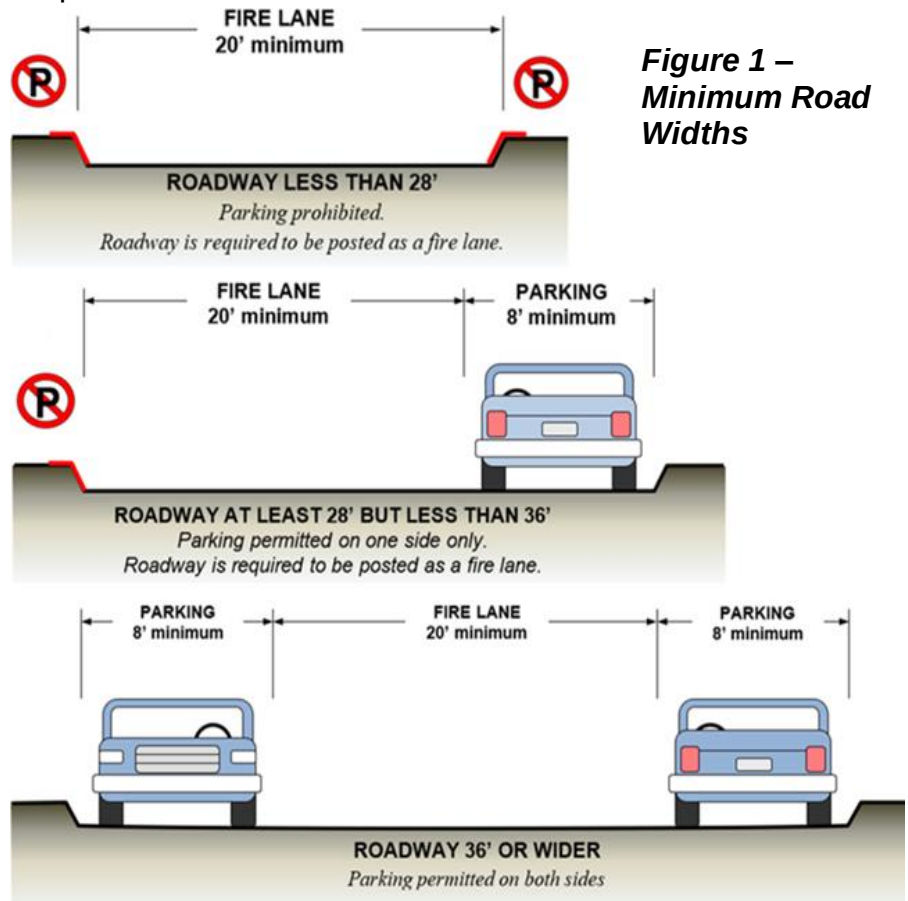
2.3.1.1. Fire lanes serving buildings that are over 30' high as measured from grade to the roof parapet or eave shall be provided, at a minimum, along the longest façade of the building, or along at least two remote sides of the building, or in another manner approved by the fire code official that optimizes firefighter access to the roof.

2.3.1.2. For location of access roads serving high-rise structures, see Guideline H-01.

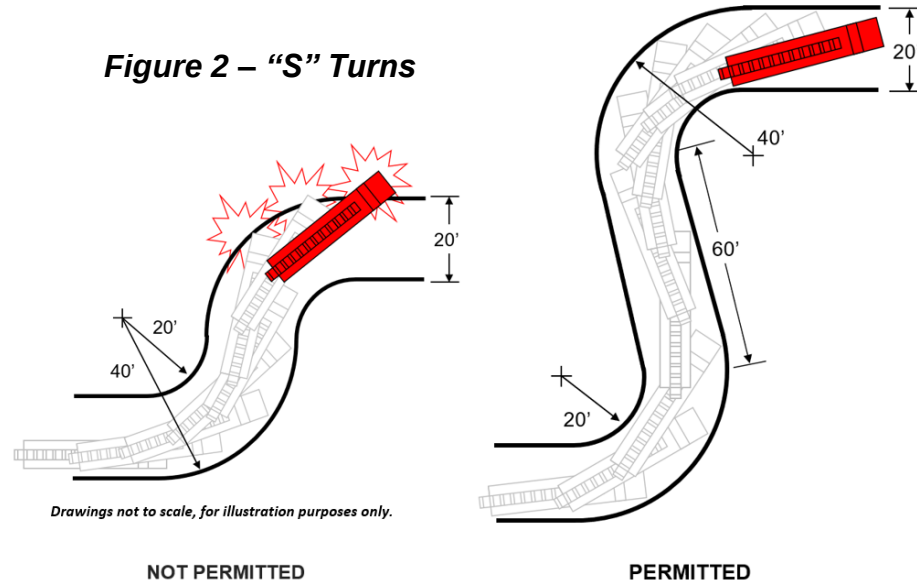
2.3.2. To ensure that vehicular traffic from dead-end fire lanes serving buildings greater than 30-feet in height, is always maintained, staging areas at least 25-feet wide, and 60-feet long with a 25-ft taper on each end (for 110-feet total length) shall be provided along the roadway to permit fire apparatus to pass ladder trucks that have the outriggers extended. Consideration should be given to the length of the roadway, roof and building design, obstructions to laddering, and other operational factors in determining the number, location, and configuration of such staging areas.

2.3.3. A fire lane may be an on-site private fire lane or a public road with a projected average daily trip (ADT) count below 30,000, or as approved by the Fire Code Official. Contact the city or County Traffic Engineer's office or Public Works Department for ADT information.

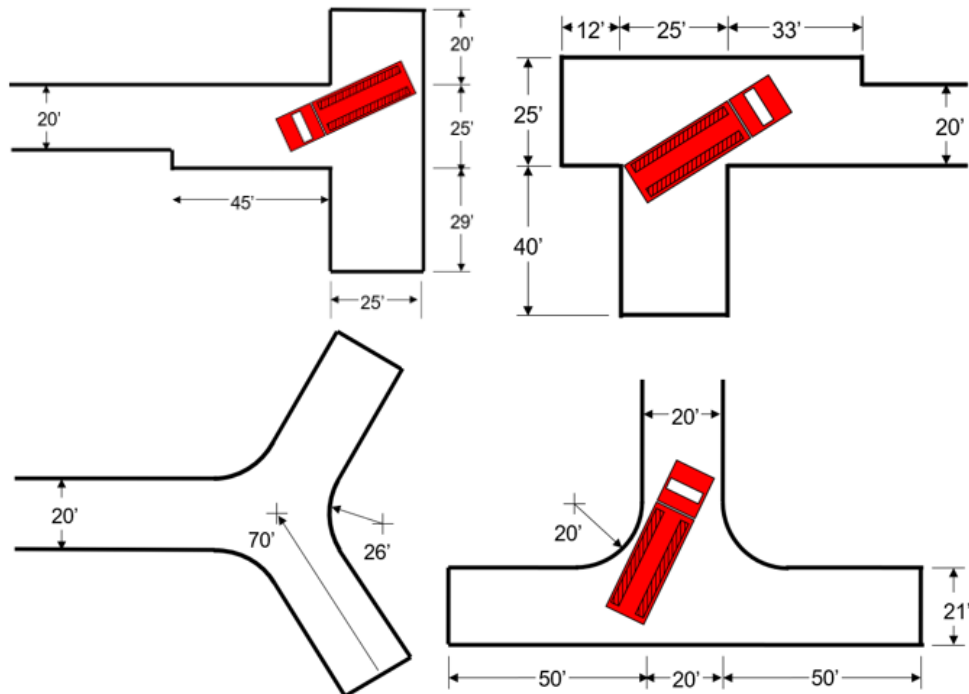
- 2.3.4. A fire lane on an adjacent property may only be considered as a fire lane for the project property if an emergency access easement has been granted by the adjacent property owner ("GRANTOR") to the benefit of the city or county ("GRANTEE") for the purpose of emergency access to the project property and recorded by the Orange County Clerk-Recorder Department. Evidence of the recorded easement may need to be provided to OCFA.
- 2.4. **Width** – The minimum width of a fire lane is 20 feet. If a center median is included, the required width shall be provided on both sides of the median.
- 2.5. **Parking Restrictions**  
 - No parking is permitted along fire lanes that are narrower than 28 feet in width (Figure 1). Width is measured from top face of curb to top face of curb for standard vertical curbs or flow line to flow line for rolled, ramped, or other curb types. Parking on one side is permitted on a fire lane that is at least 28-feet in width. Parking on two sides is permitted on a roadway 36-feet or more in width.
- 2.6. **Vertical Clearance** - Fire lanes shall have an unobstructed vertical clearance of not less than 13-feet 6-inches. If trees are located adjacent to the fire lanes, place a note on the plans stating that all vegetation overhanging the fire lane shall be maintained to provide a clear height of 13-feet, 6-inches at all times (Appendix B, Figure B1).
- 2.7. **Grade** - The grade for fire lanes shall not exceed 10%. When all structures served by the fire lane are protected by automatic fire sprinkler systems, the grade may be increased to a maximum of 15% for approved sections of roadway where fire apparatus may drive but will not likely stopped during an emergency. The cross-slope of fire lanes shall not be greater than 2%.



- 2.8. **Turning Radii** - The inside turning radius for a fire lane shall be 20 feet. The outside turning radius for an fire lane shall be 40 feet or greater. A 60-foot straight section of roadway must be provided between a turn in one direction and another turn in the opposite direction (Figure 2). For additional requirements related to minimum turning radii, please refer to CCR Title 14.



- 2.9. **Dead-ends** - Dead-end roadways more than 150 feet shall be designed and constructed with approved hammerheads or turnarounds (Figure 3, Figure C1 in Appendix C). Turnarounds shall meet the turning radius requirements identified above. The minimum cul-de-sac radius is 40 feet with no parking allowed. The maximum length of a cul-de-sac or other dead-end road without mid-way turnarounds or other mitigating features is 800 feet.



- 2.10. **Bridges** - When a bridge is required as part of a fire lane, the driveable surface shall be a minimum of 20' in width and the bridge shall be designed and constructed at a minimum to AASHTO H-17 standards to accommodate a total weight of 94,000 pounds.
- 2.11. **Median breaks** - Where medians or raised islands are proposed that prevent emergency apparatus from crossing over into opposing traffic lanes, breaks or pass-throughs may be required. The location and design specifications for the pass-throughs shall be coordinated with the city/county public works or engineering department.
- 2.12. **Continuity of Fire Lanes** – Where roadways serving structures are not required fire lanes but may still appear to be usable by fire apparatus, they shall be designed to the applicable fire lane criteria. This shall include, but not be limited to, adequate turning radii and turnarounds necessary to prevent fire apparatus entrapment or undue delays.

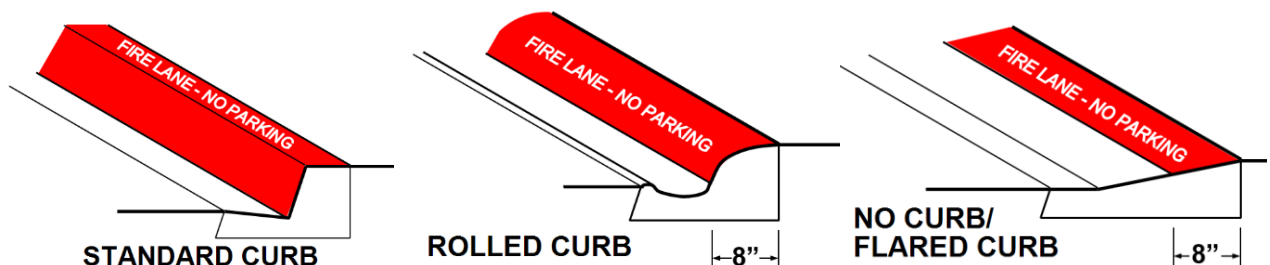
## SECTION 3: FIRE LANE IDENTIFICATION

3. **Fire Lane Identification** - Fire Lane identification is required to maintain the required width of fire lanes for emergency vehicle use. Unlawful use of fire lanes will be enforced by the local law enforcement agency in accordance with the California Vehicle Code (CVC) on public roadways. Enforcement of fire lane no-parking restrictions on private roadways is the responsibility of the property owner, HOA, or their designated agent (Attachment 2).

3.1. **Sign and Curb Marking options** – Areas designated as a fire lane require an acceptable method of marking that shall be approved prior to installation. Select either option 3.1.1. OR option 3.1.2. below.

3.1.1. Specific areas designated by the OCFA as fire lanes must be marked with red curbs meeting the specifications below (Figure 4). In addition, where the number of entrances into the area marked with fire lanes is limited, all such vehicle entrances to the designated area shall be posted with approved fire lane entrance signs.

**Figure 4 – Fire Lane Identification, Red Curbs**



- Curbs shall be painted OSHA safety red.
- “FIRE LANE – NO PARKING” shall be painted on top of curb in 3” white lettering at a spacing of 30’ on center or portion thereof.

3.1.2. “Fire Lane – No Parking” signs (Figure 5) meeting the appropriate specifications shall be posted immediately adjacent to each designated fire lane and at intervals not to exceed 50 feet, unless otherwise approved by the fire code official. In areas where fire lane parking restrictions are enforced by the California Highway Patrol, “NO STOPPING - FIRE LANE” signs meeting Caltrans standards shall be used. In addition, where the number of entrances into the area marked with fire lanes is limited, all such vehicle entrances to the designated area shall be posted with approved fire lane entrance signs (Figure 6).

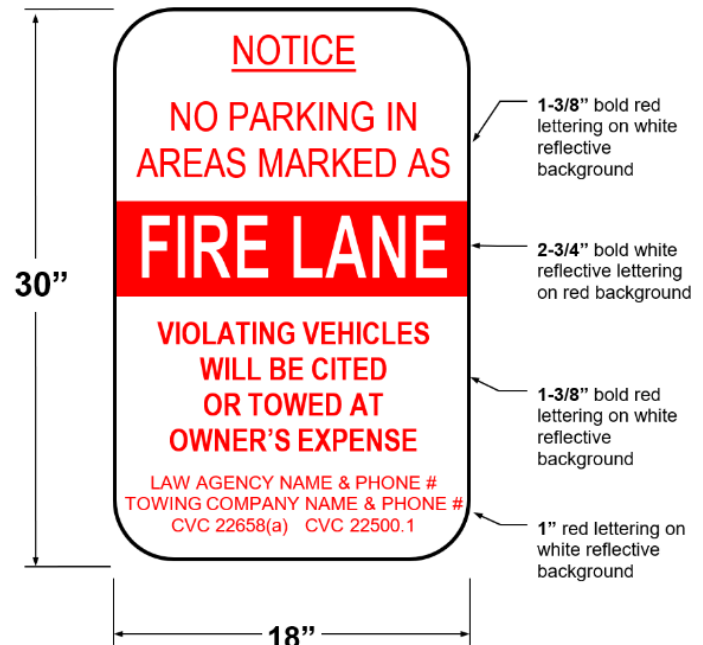
**Figure 5 – Fire Lane No Parking Signs**



**3.2. Fire Lane Entrance Signs** - Fire lane entrance signs must meet the following specifications:

- Fire lane entrance signs are to be used only at vehicle entry points to areas that contain “Fire Lane – No Parking” signs or red curbs.
- The sign shall be posted at all vehicle entrances to areas marked with either red curbs or fire lane “No Parking” signs. Signs shall be securely mounted facing the direction of travel and clearly visible to oncoming traffic entering the designated area.
- Signs shall be installed per OCFA mounting specifications for fire lane signs.

**Figure 6 – Fire Lane Entrance Signs**



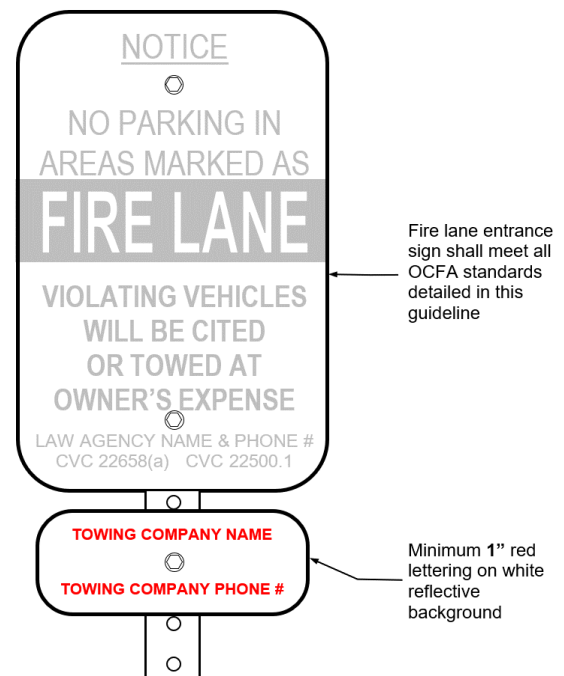
**3.3. Towing Company Information** -

Towing company contact information is required for all properties with a standing written agreement for services with a towing company per the California Vehicle Code. To facilitate periodic changes in towing company contracts, the towing company contact information may be posted on a separate sign mounted directly below the fire lane entrance sign instead of on the entrance sign itself (Figure 7). The method of attachment to the post shall not obscure the wording on either sign.

**3.4. Alternative “Fire Lane – No Parking”** - Alternative “Fire Lane – No Parking” signs may be allowed with approval from the fire code official. Signs shall be securely mounted facing the direction of travel and clearly visible to oncoming traffic entering the designated area. Signs shall be made of durable material and installed per OCFA mounting specifications for fire lane signs.

Note: All alternative signs must be approved through the OCFA and by the city/County engineer and/or policy agency, as applicable. In areas where fire lane parking restrictions are enforced by the California Highway Patrol, “NO STOPPING – FIRE LANE” signs meeting Caltrans standards shall be used.

**Figure 7 – Alternate Location of Towing Company Information**



- 3.4.1. “Fire Lane – No Parking Beyond This Point Except in Designated Stalls” sign may be approved for use in limited areas up to 100-feet in length, such as motor courts or dead-end roads, when permitted by the Fire Code Official. Where parking stalls are not present, sign may omit “except in designated stalls” and sign height may be reduced to 18”. The specifications for the rest of the sign shall match the standard fire lane no parking signs (Figure 8).

**Figure 8 – Specifications for Alternative Fire Lane No Parking Signs**

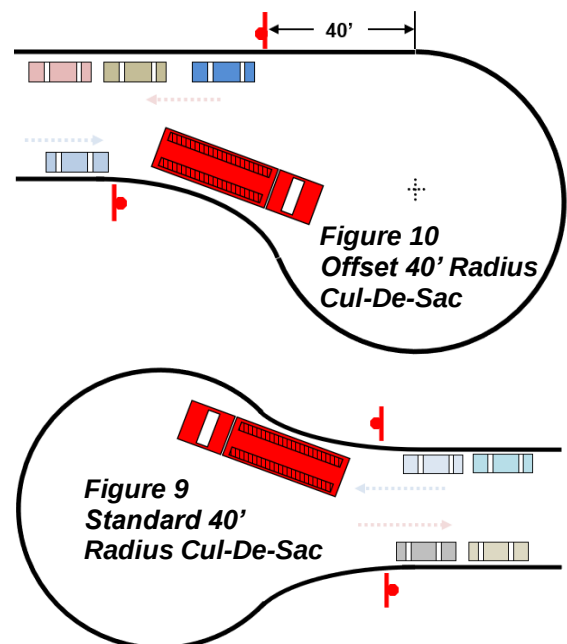


- 3.4.2. “Fire Lane – No Parking in Cul-De-Sac” signs may be approved for use on the right side of a roadway. Signs shall be securely mounted facing the direction of travel and clearly visible to oncoming traffic entering the designated area.

For a standard cul-de-sac, the “begin” and “end” signs shall be located at the point where the street begins to widen into the bulb (Figure 9).

A cul-de-sac with an offset radius shall have signs located at the point where the street begins to widen into the bulbs and at a point 40' from where the cul-de-sac and street are tangent (Figure 10).

Additionally, a minimum 2” red lettering on white reflective background must be provided for the “BEGIN” sign at entry into cul-de-sac and “END” sign when leaving cul-de-sac.



“BEGIN” or “END” sign may be omitted where cul-de-sac is the continuation of a no parking zone on streets less than 36' wide (Figure 11).

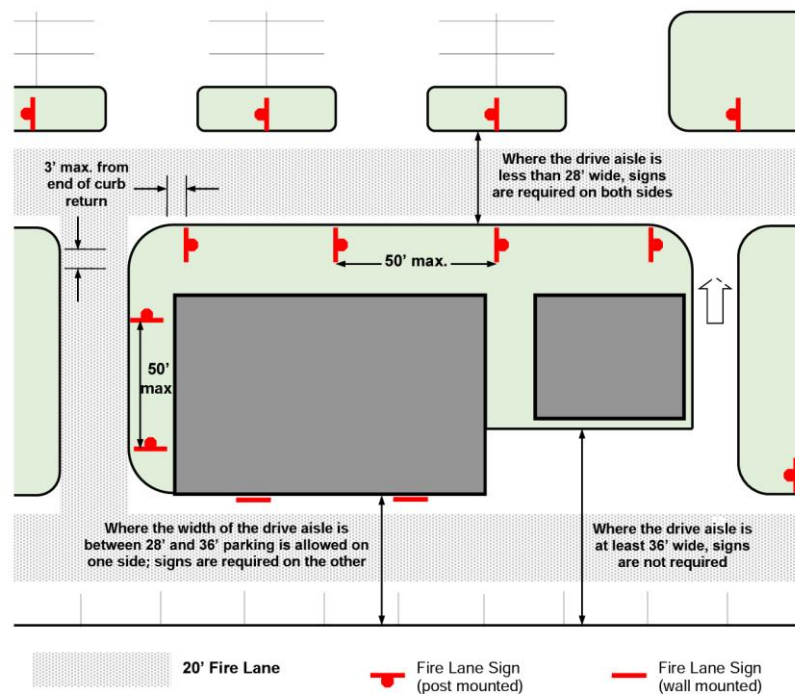
- 3.5. **Fire Lane No Parking Sign Locations** - Signs are required within 3' at the end of the curb return at the beginning of each “block” along the fire lane and spaced a maximum of 50' along the entire designated lane (Figure 12).

A sign shall be located within a reasonable distance of the end of each block as necessary to clearly identify the extend of the no parking zone. Signs shall be securely mounted facing the direction of travel and clearly visible to oncoming traffic entering the designated area. Signs shall be made of durable material and installed per OCFA mounting specifications. Where signposts are not practical, signs may be mounted on a wall or fence and are allowed to be oriented parallel to the length of the fire lane. OCFA inspectors will determine if additional signs or sign locations are required.

**Figure 11 – Specifications for Cul-de-Sac Fire Lane No Parking Signs**

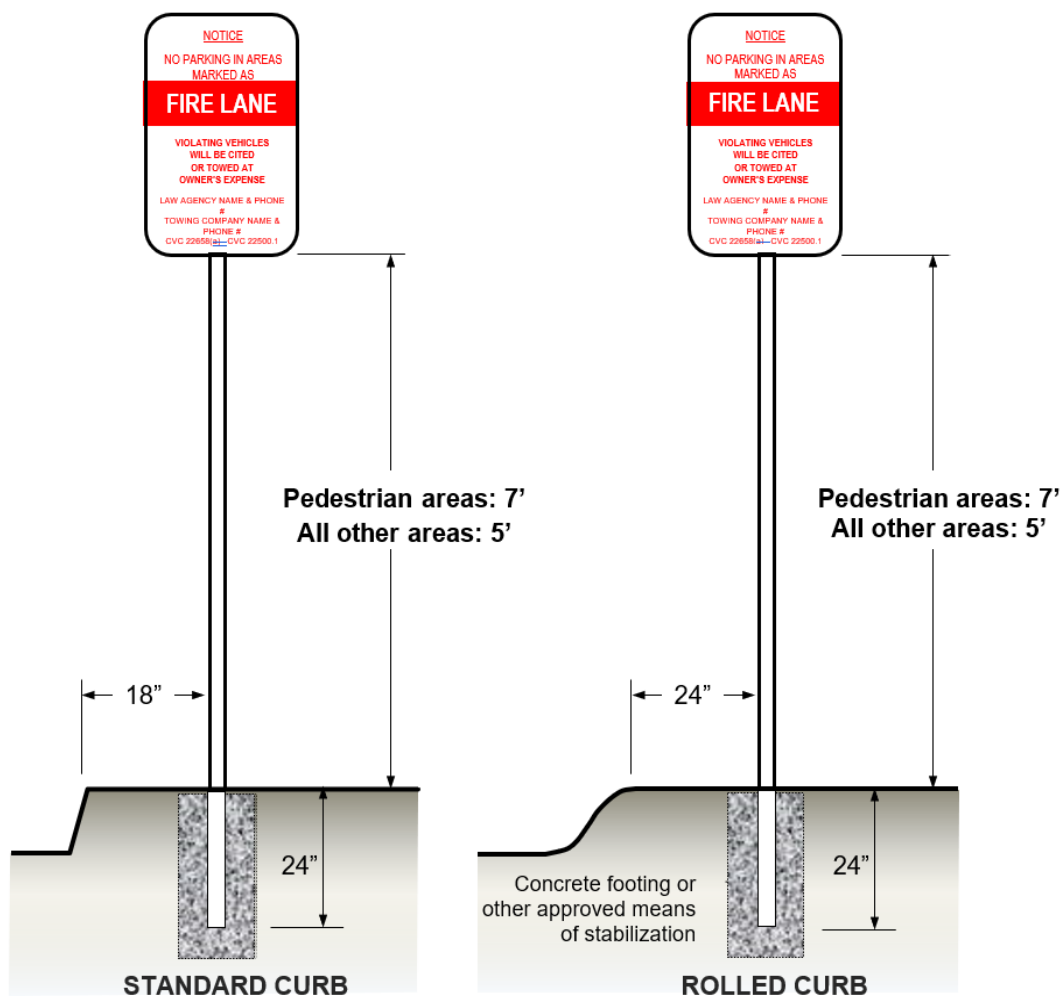


**Figure 12 – Fire Lane No Parking Sign Locations**



- 3.6. **Mounting Specifications for Fire Lane Entrance and No Parking Signs** - Signs shall be mounted facing the direction of vehicular travel. They may be mounted on existing posts or buildings where the centerline of the sign is no more than 24" from the edge of the roadway. The sign post depth of bury shall be a minimum of 24" and rebar, a concrete footing, or another method to prevent removal is recommended (Figure 13). Footings for signs located in the public right-of-way shall be per the local jurisdiction's requirements.

**Figure 13 – Mounting Specifications for Fire Lane Entrance and No Parking Signs**



## SECTION 4: PREMISES IDENTIFICATION

4. **Premises Identification** - Approved numbers or letters shall be placed on the front elevation of all new and existing buildings in such a position that is plainly visible and legible from the street or the road to which the property is addressed. Addresses shall not be located where there is potential of being obstructed by signs, awnings, vegetation, or other building/site elements. Where only a single building with a single street address is present (and no other structures are accessible from the fire lane serving that structure), an address monument at the vehicle entrance or other location clearly visible and legible from the public road may be provided in lieu of an address on the building.
  - 4.1. The numbers shall contrast with their background. In SRA and in LRA VHFHSZ, addresses for residential buildings shall be reflectorized per CCR Title 14.
  - 4.2. The address characters shall be a minimum of 4 inches in height for single-family residential structures/duplexes, or individual unit numbers in multi-family residential structures. The 4-inch numbers shall have a ½-inch stroke, or as required by local ordinance, whichever is more restrictive. Building setbacks, elevation, and landscaping can affect these minimum size requirements.
  - 4.3. The address characters shall be a minimum of 6 inches in height for commercial structures, or the primary building address or address range posted on multi-family residential structures. The 6-inch numbers shall have a one-inch stroke, or as required by local ordinance, whichever is more restrictive. Building setbacks, elevation, and landscaping can affect these minimum size requirements.
  - 4.4. Address numbers may be required to be internally or externally illuminated by the local jurisdiction's security code. While not required by the OCFA, illumination of addresses is recommended to facilitate rapid location of a site or building.
  - 4.5. Where it is unclear as to which street a building is addressed to (e.g., a building is accessed only from a street other than the one it is addressed to; multiple main entrances to the site, or building itself, front different streets), the name of the street shall also be identified as part of the posted address.
  - 4.6. Multi-Unit Buildings - Suite/apartment numbers shall be placed on or adjacent to the primary entrance for each suite/apartment and any other door providing access to fire department personnel during an emergency. Multiple residential and commercial units having entrance doors not visible from the street or road shall, in addition, have approved numbers grouped for all units within each structure and positioned to be plainly visible from the street or road.
  - 4.7. Multi-Building Clusters - Approved numbers or addresses shall be placed on the front elevation(s) of all buildings that form the cluster. If all building addresses are not clearly visible or legible from the public road serving the structures, an address monument shall also be provided at the entry point(s) to the site indicating the range of addresses accessible from that entrance.

## SECTION 5: HYDRANT AND WATER AVAILABILITY REQUIREMENTS

5. **Hydrant and Water Availability Requirements** - Applicants must provide documentation that hydrants are provided in the quantity and spacing described in the Hydrant Quantity and Spacing in OCFA Jurisdiction table (Attachment 3). They must also show that the hydrant is capable of delivering the amount of water required in the Minimum Required Fire Flow and Flow Duration for Buildings in OCFA Jurisdiction table (Attachment 4). The quantity and spacing of hydrants are governed by the fire flow required for the structure(s) served. The required fire flow is dependent upon the size of the structure, type of construction, and whether the building is equipped with fire sprinklers. This information must be shown clearly on the plans to assist in the determination of the fire flow requirement.

5.1. **Water Availability** – To facilitate the review process and avoid untimely delays in project approval, applicants are strongly encouraged to arrange a hydrant flow test with the local water department prior to submitting plans to the OCFA if the project includes a new structure or increase in the floor area of an existing structure. Water availability information may not be required to be submitted for every project, and plans may be submitted with a hydrant flow test pending, but the applicant should understand that project approval may be delayed if it is determined during review that this information is required. If the project requires evaluation of the available fire flow, it will not be approved without a completed OCFA Water Availability form or equivalent data sheets from a water district. Water availability information must not be older than six months.

5.1.1. Obtain a Water Availability form from OCFA Planning & Development Services Section.

5.1.2. Fill out the project and building information in the first section of the Water Availability form. Care should be taken when determining the applicable fire area for the project. As stated above, fire flow is dependent on several factors, so the largest building or group of structures is not necessarily the most demanding in terms of fire flow.

5.1.3. Determine the required fire flow from Minimum Required Fire Flow and Flow Duration for Buildings in OCFA Jurisdiction (Attachment 4), as applicable. A 50% reduction in fire flow (but not duration) may be taken when the fire-flow calculation area consists only of buildings equipped with an approved automatic fire sprinkler system. If you are unsure of how to calculate the fire flow requirement for your project, you may email or fax the form to the OCFA, and we will determine the fire flow for you.

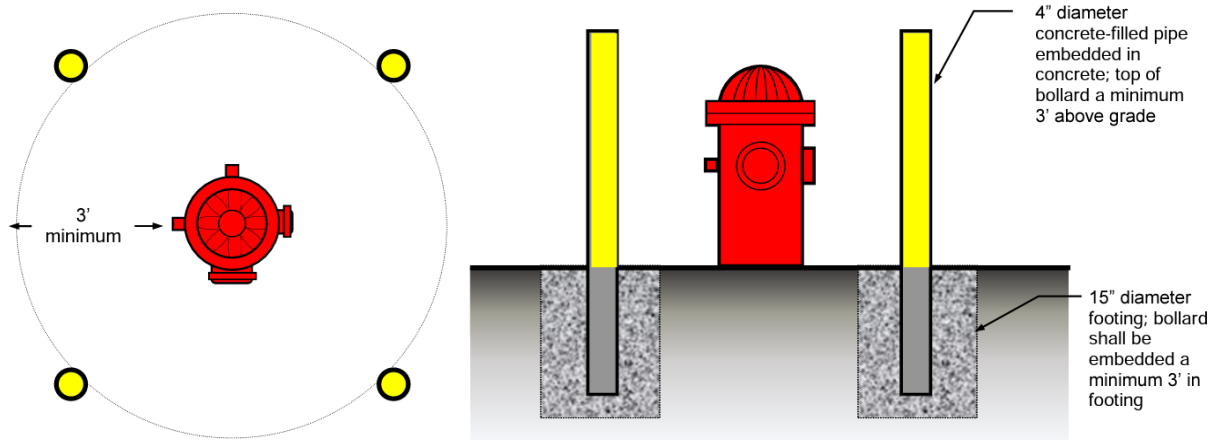
5.1.4. Contact the local water company to request a hydrant flow test or fire flow modeling calculation and have a representative of the water company complete and sign the last section on the form. In some cases, the water company may allow or require a qualified third party to perform the flow test for you.

- In newly developed areas without water infrastructure, the water department may issue a “will-serve” letter indicating the expected fire flow and duration of water that will be delivered once the water system is installed and operational.

- If multiple hydrants are located within the maximum distance allowed in Hydrant Quantity and Spacing in OCFA Jurisdiction (Attachment 4). The amount of water available from each hydrant may be combined, provided that the hydrants are flowed simultaneously.
- 5.1.5. It is the applicant's responsibility to ensure that the following information is provided at a minimum on either the water company's test data sheet and/or the OCFA Water Availability form:
- Static pressure and residual pressure in PSI and observed flow in GPM; or
  - Calculated flow in GPM at 20 PSI
- 5.1.6. Scan or photocopy the completed form or data sheets onto your plans or include the original with your plan submittal.
- 5.1.7. Please ensure that the fire area, building size, construction type, and flow data are complete and accurate. Errors or omissions in this information may result in plans having to be resubmitted or fire flow testing to be redone.
- 5.2. **Fire-Flow Calculation Area** - The fire-flow calculation area shall be the total floor area of all floor levels within the exterior walls, and under the horizontal projections of the roof of a building, except as modified in the following two conditions:
- Portions of buildings which are separated by fire walls without openings, constructed in accordance with the California Building Code are allowed to be considered as separate fire-flow calculation areas.
  - The fire-flow calculation area of buildings constructed of Type IA and Type IB construction shall be the area of the three largest successive floors. *CFC Appendix B Section B104*
- 5.3. **Hydrant Location** - Hydrants shall be provided along the length of the fire access roadway in the quantities and up to the maximum distances prescribed in Hydrant Quantity and Spacing in OCFA Jurisdiction table (Attachment 3).
- 5.3.1. Hydrants must be located within three feet of the edge of a fire lane and cannot be located in areas where it may be visually or operationally obstructed (behind fences, walls, in bushes, behind parking spaces, etc.). Clearance shall be provided to a distance no less than three feet from the perimeter of the hydrant. Hydrants located in landscapes areas may require a 4'x4' concrete pad and the OCFA inspector will ensure that vegetation does not encroach on this clear space.
- 5.3.2. The hydrant outlets must face the fire lane. In areas where the outlets cannot face the fire lane (e.g., the hydrant is located on a landscape peninsula or island in a parking lot; the hydrant has three outlets, etc.), the 4" outlet(s) shall take precedence.
- 5.3.3. The hydrant shall be located at least 40-feet from the building it serves. Where it is impractical to locate the hydrant 40-feet from adjacent structures, additional hydrants may be provided, or the hydrant may be located closer if nearby walls do not contain openings and the hydrant is not in a location where it may be rendered inoperable due to damage from collapsed walls, debris, or excessive heat.

- 5.3.4. Hydrants shall be located so that a hose line running between the hydrant and the fire department connection(s) (FDCs) served by that hydrant does not cross driveways, obstruct roads or fire lanes, or otherwise interfere with emergency vehicle response and evacuation of a site.
- 5.3.5. Hydrants and fire department connections shall not be located behind parking stalls or in other locations where they are likely to be blocked by vehicles or other objects. Whenever possible, hydrants shall be placed at street and drive aisle intersections in preference to mid-block locations. Where on-street parking is allowed, hydrants should be placed in the shortest parkways between adjacent driveways, at corners and chokers where parking is not normally allowed, and in similar areas where impact to space available for parking and the potential for hydrants to be obstructed is minimized.
- 5.3.6. Hydrants and fire department connections should not be located where apparatus staged at these locations would then encroach on minimum fire apparatus turning radii unless alternative routes are available. Hydrants shall not be placed in the “bulb” end of a cul-de-sac where apparatus staged at the hydrant would prevent the cul-de-sac from being used as a turnaround.
- 5.4. **Protection of Hydrants** - Hydrants in locations that are exposed or susceptible to potential damage from vehicular collision need to be protected by curbs and/or bollards (Figure 14).

**Figure 14 - Protection of Hydrants**



*Protection of Hydrants, Detector Checks, Fire Department Connections, Post Indicator Valves, and other Similar Devices.*

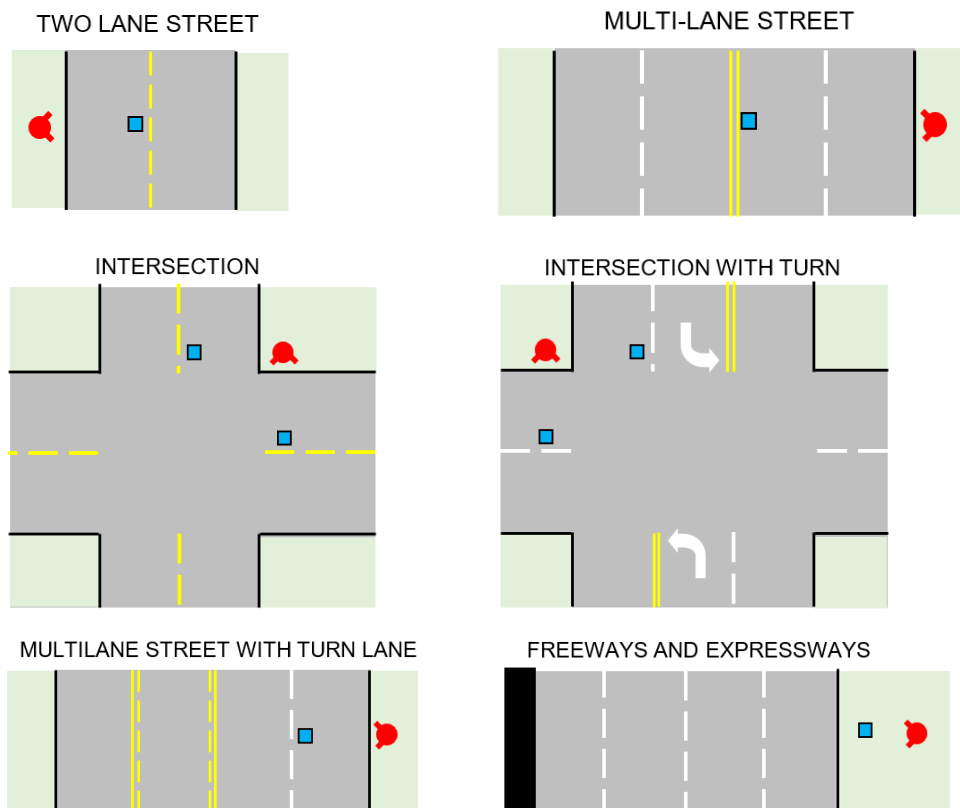
- 5.4.1. If vehicles can approach the hydrant from more than one direction, the hydrant shall be protected by four bollards of concrete-filled pipe four inches in diameter and mounted in concrete in a square around the hydrant. The bollards need to be spaced a minimum of three feet from the perimeter of the hydrant. The bollards must be placed so that their location does not impede access to or use of the hydrant. Two bollards may protect hydrants that can be approached from only one side.

- 5.4.2. Hydrants may not require protection by bollards if they are located such that the potential for collision is minimal or if they are sufficiently protected by a standard concrete curb of at least six inches in height.

## 5.5. Hydrant Markers and Color

- 5.5.1. Blue reflective pavement markers (“blue dots”) shall be used to identify fire hydrant locations (Figure 15). Blue reflective markers used for any other purpose should be removed. The developer may contact the local water company to arrange the installation of the blue dot/hydrant marker. If the water agency does not participate in the blue dot program, the developer is still responsible to install the dots in an approved manner.

**Figure 15 - “Blue Dot” Reflective Hydrant Marker Location**



- 5.5.2. Two-way streets and roads – Markers shall be placed six inches from the edge of the painted centerline or from the approximate center of streets without a painted centerline on the side nearest the hydrant.
- 5.5.3. Streets with left turn lanes at the intersection – Markers shall be placed six inches from the edge of the painted white line on the side nearest the hydrant.
- 5.5.4. Streets with continuous two-way left turn lanes – Markers shall be placed six inches from the edge of the painted yellow line on the side nearest the fire hydrant.
- 5.5.5. Hydrant Color – Private hydrants (hydrants separated from the city main by and located downstream from a backflow prevention device) shall be painted OSHA safety red.

## SECTION 6: ACCESS TO STRUCTURES

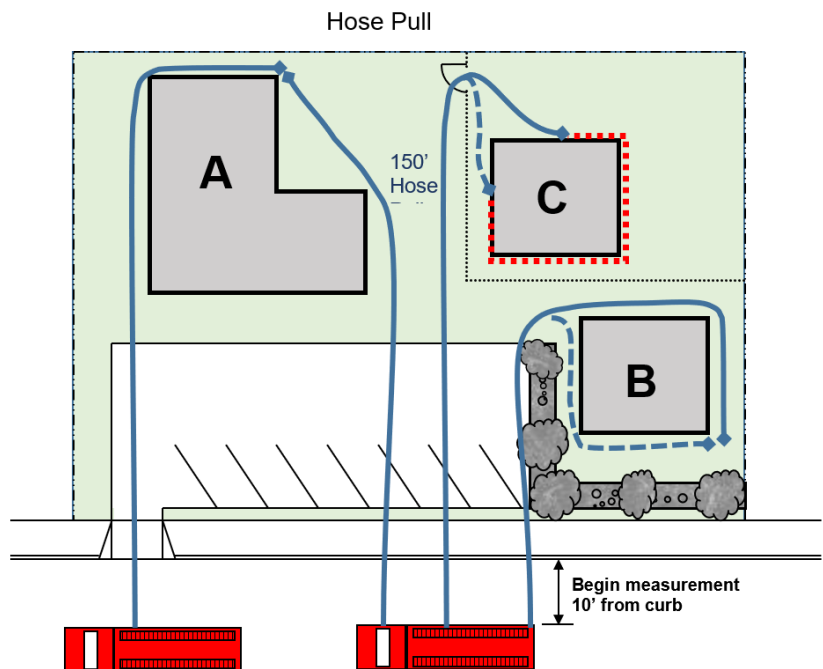
### 6. Access to Structures

- 6.1. Hose pull – The dimension of 150-feet in relation to fire department access is commonly referred to as “hose pull distance”. As the name implies, this is the maximum distance that Firefighters can effectively pull a fire hose or carry other equipment to combat a fire. The hose pull distance is set at 150 feet due to a variety of factor, including standard hose lengths, weight of equipment, hydraulic properties, and accepted operational procedures (Figure 16).

**Figure 16 – Hose Pull**

*For the hose pull example below, assume that the parking lot is not accessible to fire apparatus due to turning radii and fire lane widths less than the required minimums.*

- *Building A – All portions of the buildings are within 150 feet of the public road as measured along the path of firefighter travel. This building is in access.*
- *Building B – The building is in access despite the obstruction presented by the planter and hedges due to its proximity to the road.*
- *Building C – The building is out of access; the presence of a chain-link fence forces firefighters to backtrack once they pass through the gate, increasing their travel distance to the dashed part of the perimeter beyond 150'. On-site fire access roadways and/or a change in the location of the gate would be necessary to provide access to Building “C”.*



- 6.1.1. Hose pull is measured along a path that simulates the route a Firefighter may take to access all portions of the exterior of a structure from the nearest public road or fire lane. Under most circumstances, hose pull will not be a straight-line distance and should not be measured “as the crow flies”.
- 6.1.2. All obstructions, such as fences, planters, vegetation, and other structures must be considered when determining whether a building is accessible from a particular location on the fire lane. Topography may also affect the potential access route and any significant changes in elevation must be accounted for when measuring hose pull distances.

6.2. **Access walkways** – CFC 504.1 provides for the installation of approved access walkways from fire access roadways to exterior openings required by either the CBC or CFC. The OCFA may require the construction of such walkways depending upon particular site conditions or project parameters. These conditions include, but are not limited to, building use or occupancy, topography, vegetation, and surface conditions. Design professionals must carefully consider these issues when developing a project site. When required:

- 6.2.1. Access walkways must be provided to all required egress doors from a building, all firefighter access doorways in buildings with high-piled storage, and the area beneath each rescue window, at a minimum. Access walkways will typically be required around the entire perimeter of a structure to facilitate control of a fire through any other available openings.
- 6.2.2. Access walkways must be a minimum of five feet in width.
- 6.2.3. Access walkways shall consist of a surface that lends itself to safe use during building evacuation, firefighting, and rescue efforts.
- 6.2.4. Where elevation change is present, indicate the grade as a percentage on the plans.
- 6.2.5. The type of material provided for the access walkway and/or other specifications shall be indicated on the fire master plan and are subject to approval by the OCFA.

6.3. **Access to Interior Courtyards** - Firefighter access and water supply as described below shall be provided for interior courtyards of R-occupancy buildings and buildings of other occupancies where the main entry to a suite is accessed via the courtyard.

6.3.1. Number of Access Routes

- A minimum of two means of access via “firefighter tunnels” shall be provided between each courtyard and the fire lane. A single tunnel may be allowed for smaller courtyards, as determined by the fire code official.
- A tunnel interconnecting courtyards may suffice as a second means of access, provided that each courtyard so connected has at least one other tunnel leading directly to a fire lane.

6.3.2. Design of Firefighter Tunnels

- The outer entrance to the tunnel shall front on a fire lane.
- Tunnels shall be a minimum 10 feet wide, and when possible, at least 10 feet tall (but no less than 8 feet).
- Doorways and gate openings in the path of firefighter travel to, through, and from the tunnel shall provide a minimum 44-inch clear width.
- Where the tunnel intersects with corridors or other interior spaces, doors shall be provided to separate the tunnel from those spaces in a manner that provides an uninterrupted path of travel through the tunnel, from one end to the other.
- At least 1 tunnel shall provide a straight path of travel between the fire lane and the courtyard to ensure access by a firefighter’s 35’ ladder.

- Landscape and hardscape features such as trees, shrubs, light poles, raised planters, walls, fences, and gates near the openings to the tunnel shall not hinder or delay movement of firefighters carrying a ladder.
- Where there is an elevation change between the fire lane and courtyard, code-compliant ramps or stairs with a minimum clear width of 44" between handrails shall be provided. Only straight-run stairs shall be provided, no stair returns are allowed along the path of firefighter travel.

#### 6.3.3. Tunnel Construction

- Tunnels shall be separated from adjacent construction by minimum 2 hour fire barriers and 2 hour ceiling/floor assemblies.
- Interior door openings into the tunnel may be equipped with mag-holds, but other doorstops are not allowed.
- Wall and ceiling finishes within the tunnel shall be non-combustible. Where allowed by CBC/CFC Chapter 8, floors may be carpeted.

6.3.4. Use of Firefighter tunnels – Tunnels are permitted to be used for other purposes provided that the use does not obstruct the clear path required or otherwise interfere with use of the tunnel for emergency purposes. Combustible furnishings and fixtures within the tunnel shall be kept to a minimum, and such items shall be fixed in place. Where the tunnel is also an exit component of the egress system (e.g., exit enclosure, passageway, exit stair, horizontal exit) or functions as an egress court per CBC 1029.1, no other non-emergency use shall be allowed within the tunnel.

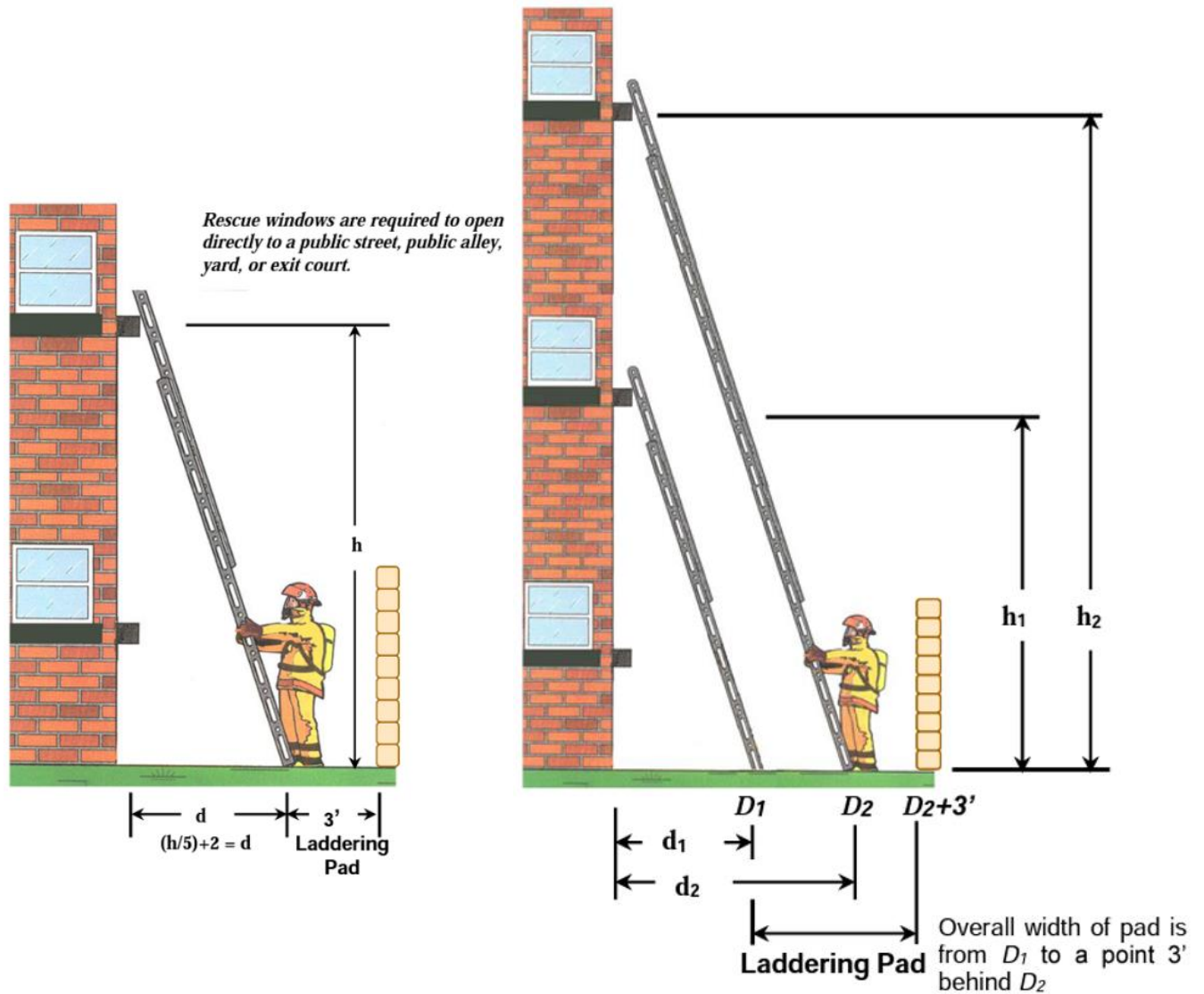
#### 6.3.5. Courtyard Standpipes

- At least one standpipe outlet shall be provided in the courtyard when hose-pull from fire apparatus in the fire lane to any portion of the inner façade within the courtyard exceeds 200'.
- If standpipes are required, outlet(s) shall be provided within the firefighter tunnel at the opening of the firefighter tunnel(s) into the courtyard and at other approved locations as required by the fire code official. The hose-pull to all portions of the courtyard shall be less than 150-feet as measured from the standpipe outlet.
- The system shall be designed to not send a waterflow signal.
- The standpipe may be wall mounted or standalone. If standalone, it shall be located no more than 18" from the edge of a primary walkway in the courtyard in a position where it is immediately visible and accessible to firefighters. Access to and use of standpipes shall not be hindered by planter walls, vegetation, or other features; 18" clearance shall be provided on all sides.

6.4. **Rescue Openings** - Group-R occupancies that are required by CBC 1031.1 to have rescue openings shall have a walkable path free of obstructions between the fire lane and each rescue opening.

- 6.4.1. An approved access walkway must be provided to enable firefighters to easily and safely reach a clear, flat space beneath each rescue opening. Obstructions including but not limited to shrubs, trees, trellises, carports, raised planters, walls, fences, pools, steeply sloped roofs, overhangs, vegetation, and similar building and site elements shall not impede the use of or access to the walkway or rescue opening.
- 6.4.2. Walkways may consist of hardscape, decomposed granite, grass, or other similar walkable material that does not inhibit access to or use of the area.
- 6.4.3. Trees that encroach on walkways shall provide a minimum 7-foot clearance underneath to allow unhindered passage by firefighters, however, trees and shrubs shall not encroach on areas outside the rescue opening.
- 6.5. **Laddering Pad and Setback at Rescue Openings of Group R-1, R-2, and R-2.1 Occupancies** - A clear, flat space for laddering rescue openings shall be provided beneath each rescue opening. The distance between the nearest edge of this laddering pad and the structure is based on standardized operational procedures and safe practice to achieve a proper laddering angle (next page, Figure 17). The plan provided must demonstrate that the vegetation (at fully-grown sizes), buildings, and site features will not obstruct the access walkways or laddering operations. It is incumbent upon the developer, architect, landscape architect, and facility maintenance personnel to collaborate on a design and plant palette that complies with these requirements through the *life of the building*.
- 6.5.1. Proper laddering angle calculation:  $d = (h/5) + 2$
- Where **h** = The height of the window sill or balcony railing
- d** = The distance in feet from the edge of the pad nearest the building to a point on the ground directly beneath the rescue window sill or balcony edge.
- 6.5.2. Dimensions for placement of ladders:

| Placement of Ladders |              |                 |              |                 |              |
|----------------------|--------------|-----------------|--------------|-----------------|--------------|
| Sill Height (h)      | Distance (d) | Sill Height (h) | Distance (d) | Sill Height (h) | Distance (d) |
| 35'                  | 9'-0"        | 25'             | 7'-0"        | 15'             | 5'-0"        |
| 34'                  | 8'-10"       | 24'             | 6'-10"       | 14'             | 4' to 5'     |
| 33'                  | 8'-7"        | 23'             | 6'-7"        | 13'             | 4' to 5'     |
| 32'                  | 8'-5"        | 22'             | 6'-5"        | 12'             | 3' to 5'     |
| 31'                  | 8'-2"        | 21'             | 6'-2"        | 11'             | 3' to 4'     |
| 30'                  | 8'-0"        | 20'             | 6'-0"        | 10'             | 2' to 4'     |
| 29'                  | 7'-10"       | 19'             | 5'-10"       | 9'              | 2' to 4'     |
| 28'                  | 7'-7"        | 18'             | 5'-7"        | 8'              | 2' to 3'     |
| 27'                  | 7'-5"        | 17'             | 5'-5"        | 7'              | 1' to 3'     |
| 26'                  | 7'-2"        | 16'             | 5'-2"        | <7'             | 1' to 2'     |

**Figure 17 - Ladder Pad Setback at Rescue Openings**

## ATTACHMENTS

### Attachment 1 - Fire Master Plan Submittal Checklist

#### PROJECT INFORMATION

|                                                                       |                                                                                                        |
|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Scope of project is clearly defined on the plan?                      | <input type="checkbox"/> Yes                                                                           |
| Conditional Use Permit conditions included with submittal?            | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (CUP was not required by city/county)        |
| Tract/Tentative Tract/Parcel Map Number has been provided?            | <input type="checkbox"/> Yes                                                                           |
| Standard OCFA fire master plan notes are included?                    | <input type="checkbox"/> Yes (Notes are tailored to this project, where applicable)                    |
| Building area, construction, occupancy, sprinkler type noted on plan? | <input type="checkbox"/> Yes                                                                           |
| Allowable area calculation provided on plan?                          | <input type="checkbox"/> Yes <input type="checkbox"/> No (<6,000 sf unsprinklered; <18,000 w/ sprink.) |
| Sheets not relevant to fire master plan removed from plan set?        | <input type="checkbox"/> Yes                                                                           |
| Access/hydrant phasing plan provided?                                 | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (No phasing of access/hydrant installation)  |

#### WATER AND HYDRANTS

|                                                                |                                                                                                                          |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Water availability form completed and provided?                | <input type="checkbox"/> Yes <input type="checkbox"/> No (in progress) <input type="checkbox"/> No (no change in demand) |
| All hydrants within 350' of the site are shown on plan?        | <input type="checkbox"/> Yes                                                                                             |
| Are hydrants provided/spaced per Guideline B-01, Attachment 3? | <input type="checkbox"/> Yes                                                                                             |

#### ACCESS AND ROADWAYS

|                                                                  |                                                                                                                        |
|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Extent of the access roadway is clearly shown on the plan?       | <input type="checkbox"/> Yes                                                                                           |
| Turning radii and width (incl. road sections) shown on the plan? | <input type="checkbox"/> Yes                                                                                           |
| Exterior of all structures within 150' hose pull distance?       | <input type="checkbox"/> Yes <input type="checkbox"/> No (AM&M proposed) <input type="checkbox"/> No (sprinklered R-3) |
| Engineer's certification provided for new paving?                | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (No new paving)                                              |
| Walkable surface provided to required openings?                  | <input type="checkbox"/> Yes                                                                                           |
| Road and walkway grades >10% shown on plan?                      | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (Grade <10%)                                                 |

#### FIRE LANE IDENTIFICATION

|                                                                   |                                                                                                   |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Red curbs are identified on plan with bold, dashed, or red lines? | <input type="checkbox"/> Yes <input type="checkbox"/> N/A ("Fire Lane—No Parking" signs provided) |
| Location of each "Fire Lane—No Parking" sign shown?               | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (Red curbs provided)                    |
| Fire lane entrance sign provided at each vehicle entrance?        | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (All roads at least 36 feet wide)       |
| Drawings of red curbs/"No Parking"/entrance signs provided?       | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (All roads at least 36 feet wide)       |

#### GATES AND OBSTRUCTIONS

|                                                           |                                                                                        |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------|
| Are all gates, fences, and planters shown?                | <input type="checkbox"/> Yes                                                           |
| Are vehicle gates identified as manual or electric?       | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (No gates proposed)          |
| Gate operator specs showing emergency operation provided? | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (No electric gates proposed) |
| Manual vehicle gates have "No Parking" sign noted?        | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (No manual gates proposed)   |
| Knox boxes/locks/switches are noted on plans?             | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (No gates proposed)          |
| OCFA gate notes/specifications included on plan?          | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (No gates proposed)          |

#### OTHER REQUIREMENTS

|                                                                                                                                       |                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| AM&M request letter scanned onto plan?                                                                                                | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (No alternate methods proposed)         |
| Premises ID/address monument location shown on plan?                                                                                  | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (Single family homes)                   |
| Trash enclosures are located at least 5' from buildings?                                                                              | <input type="checkbox"/> Yes <input type="checkbox"/> No (Enclosures are existing or sprinklered) |
| Two entry points provided for 150 or more residences?                                                                                 | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (Non-residential project)               |
| Buildings >75' to highest occupiable floor called out?                                                                                | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (No high-rise structures)               |
| Parking enforcement letter provided?                                                                                                  | <input type="checkbox"/> Yes <input type="checkbox"/> N/A (Public streets only)                   |
| Project located in methane zone(s) (portions of Yorba Linda, Buena Park, Seal Beach, San Clemente, and Unincorporated Orange County)? | <input type="checkbox"/> Yes <input type="checkbox"/> No                                          |

**NOTE:** This is only a listing of basic fire master plan submittal requirements. Other information or requirements may be necessary, depending on conditions specific to each project.

**Attachment 2 – CVC, Fire Lane Parking Violations**

The California Fire Code (CFC) and California Vehicle Code (CVC) specify rules of the road for stopping, standing, and parking in fire lanes or near fire hydrants.

- A. Section 22500.1 states that no person shall stop, park, or leave standing any vehicle whether attended or unattended, in any location designated as a fire lane by the Fire Authority except when necessary to avoid conflict with other traffic or in compliance with the direction of a peace officer or official traffic control device. Vehicles illegally parked in a fire lane may be towed per CVC 22953(b).
- B. There shall be no parking of any vehicles other than fire department vehicles within 15 feet of either side of a fire hydrant in accordance with CVC 22514(c). Such vehicles may be towed per CVC 22651(e).
- C. CVC 22658(a) permits the owner or person in lawful possession of any private property, subsequent to notifying local law enforcement, to cause the removal of a vehicle parked on such property to the nearest public garage, if a sign is displayed in plain view at all entrances to the property specifying:
  - 1. The ordinance prohibiting public parking, a notation indicating that vehicles will be removed at the owner's expense, and the telephone number of the local traffic law enforcement agency, or;
  - 2. The lot or parcel upon which the vehicle is parked has a single-family dwelling.
- D. CFC 503.4 states that the required width of a fire apparatus access road shall not be obstructed in any manner, including parking of vehicles. Minimum required widths and clearances shall be maintained at all times.
- E. CFC 507.5.4 states that vehicles and other obstructions shall not be placed or kept near fire hydrants, fire department inlet connections or fire-protection system control valves in a manner that would prevent such equipment or fire hydrants from being immediately discernible. The fire department shall not be deterred or hindered from gaining immediate access to fire-protection equipment or hydrants.

**Attachment 3 – Hydrant Quantity and Spacing in OCFA Jurisdiction****SINGLE FAMILY RESIDENCES/DUPLEXES/TOWNHOUSES with SPRINKLERS**

| Flow Requirement | Minimum Number of Hydrants | Maximum Distance to a Hydrant |          | Maximum Distance between Hydrants <sup>1</sup> |          | Average Distance between Hydrants <sup>1</sup> |          |
|------------------|----------------------------|-------------------------------|----------|------------------------------------------------|----------|------------------------------------------------|----------|
|                  |                            | Thru road                     | Dead-end | Thru road                                      | Dead-end | Thru road                                      | Dead-end |
| 500 - 1750       | 1                          | 300                           | 250      | 600                                            | 500      | 600                                            | 500      |
| 1751+            | Use the table below        |                               |          |                                                |          |                                                |          |

**ALL OTHER STRUCTURES**

| Flow Requirement | Minimum Number of Hydrants         | Maximum Distance to a Hydrant |          | Maximum Distance between Hydrants <sup>1,2</sup> |          | Average Distance between Hydrants <sup>1,2</sup> |          |
|------------------|------------------------------------|-------------------------------|----------|--------------------------------------------------|----------|--------------------------------------------------|----------|
|                  |                                    | Thru road                     | Dead-end | Thru road                                        | Dead-end | Thru road                                        | Dead-end |
| 1000 - 1750      | 1                                  | 250                           | 200      | 500                                              | 400      | 500                                              | 400      |
| 1751 - 2250      | 2                                  | 225                           | 175      | 450                                              | 350      | 450                                              | 350      |
| 2251 - 2500      | 3                                  | 225                           | 175      | 450                                              | 350      | 450                                              | 350      |
| 2501 - 3000      | 3                                  | 225                           | 175      | 450                                              | 350      | 400                                              | 300      |
| 3001 - 4000      | 4                                  | 210                           | 160      | 420                                              | 320      | 350                                              | 250      |
| 4001 - 5000      | 5                                  | 180                           | 130      | 360                                              | 260      | 300                                              | 200      |
| 5001 - 5500      | 6                                  | 180                           | 130      | 360                                              | 260      | 300                                              | 200      |
| 5501 - 6000      | 6                                  | 150                           | 100      | 300                                              | 200      | 250                                              | 150      |
| 6001 - 7000      | 7                                  | 150                           | 100      | 300                                              | 200      | 250                                              | 150      |
| 7001+            | 1 per 1000 gpm or fraction thereof | 120                           | 70       | 240                                              | 140      | 200                                              | 100      |

All distances are in feet.

<sup>1</sup> Where streets are provided with median dividers which cannot be crossed by fire fighters pulling hose lines, or where arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis.

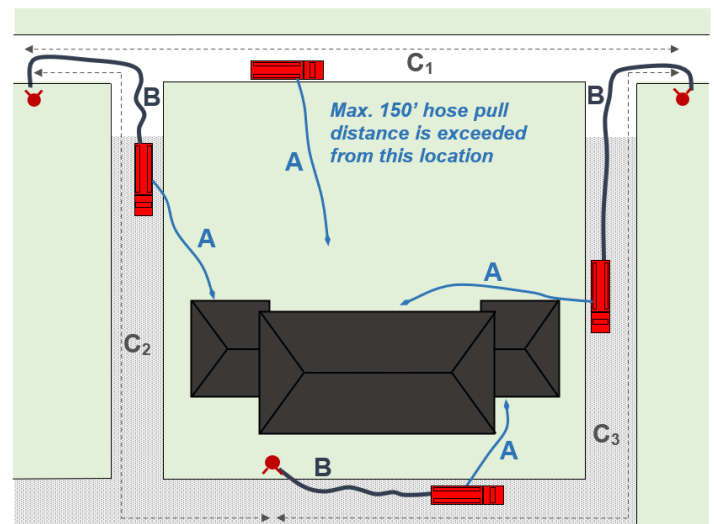
<sup>2</sup> Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards.

**A: HOSE PULL** – In the diagram, firefighters would be able to reach the entire perimeter of the building by pulling no more than 150' of hose from one or more fire engines staged in the shaded portion of the fire lane; the unshaded roadway has a hose pull distance greater than 150' and would be considered "out of access" relative to this building.

**B: HOSE LAY** – No point along the portion of the fire lane serving the structure (the shaded road) may be farther from a hydrant than the distance specified in the table above. The hydrant may be located along portions of the fire lane that exceed the hose pull distance (unshaded roadway) provided that it is:

1. On the same property,
2. On an adjacent property where an emergency access easement has been obtained, or
3. On a public road leading to the fire lane serving the property.

**C: HYDRANT SPACING** – Hydrants located on portions of the fire lane that do not serve the building (unshaded road) do not need to be evaluated for spacing relative to each other, only with respect to hydrants that do serve the structure. Example: C1 may exceed hydrant spacing requires. However, C2 and C3 cannot. "Average spacing" from the table above shall be maintained to prevent multiple hydrants from being concentrated in only one portion of the fire lane.



**Attachment 4 – Minimum Required Fire Flow and Flow Duration**

| FIRE FLOW CALCULATION AREA<br>(square feet) |               |               |               |             | DETACHED SINGLE-FAMILY<br>RESIDENCE/DUPLEX              |      | OTHER BUILDINGS     |                                                         |      |                     |
|---------------------------------------------|---------------|---------------|---------------|-------------|---------------------------------------------------------|------|---------------------|---------------------------------------------------------|------|---------------------|
|                                             |               |               |               |             | FIRE FLOW<br>(gallons per minute<br>at 20 psi residual) |      | DURATION<br>(hours) | FIRE FLOW (gallons<br>per minute at 20 psi<br>residual) |      | DURATION<br>(hours) |
| Type IA/IB                                  | Type IIA/IIIA | Type IV/VA    | Type IIB/IIIB | Type VB     | NS                                                      | S    |                     | NS                                                      | S    |                     |
| 0-22700                                     | 0-12700       | 0-8200        | 0-5900        | 0-3600      | 1000                                                    | 500  | 1                   | 1500                                                    | 1500 | 2                   |
| 22701-30200                                 | 12701-17000   | 8201-10900    | 5901-7900     | 3601-4800   | 1750                                                    | 875  | NS: 2<br>S: 1       | 1750                                                    | 1500 |                     |
| 30201-38700                                 | 17001-21800   | 10901-12900   | 7901-9800     | 4801-6200   | 2000                                                    | 1000 |                     | 2000                                                    | 1500 |                     |
| 38701-48300                                 | 21801-24200   | 12901-17400   | 9801-12600    | 6201-7700   | 2250                                                    | 1125 |                     | 2250                                                    | 1500 |                     |
| 48301-59000                                 | 24201-33200   | 17401-21300   | 12601-15400   | 7701-9400   | 2500                                                    | 1250 |                     | 2500                                                    | 1500 |                     |
| 59001-70900                                 | 33201-39700   | 21301-25500   | 15401-18400   | 9401-11300  | 2750                                                    | 1375 |                     | 2750                                                    | 1500 |                     |
| 70901-83700                                 | 39701-47100   | 25501-30100   | 18401-21800   | 11301-13400 | 3000                                                    | 1500 | NS: 3<br>S: 1       | 3000                                                    | 1500 | 3                   |
| 83701-97700                                 | 47101-54900   | 30101-35200   | 21801-25900   | 13401-15600 | 3250                                                    | 1625 |                     | 3250                                                    | 1625 |                     |
| 97701-112700                                | 54901-63400   | 35201-40600   | 25901-29300   | 15601-18000 | 3500                                                    | 1750 |                     | 3500                                                    | 1750 |                     |
| 112701-128700                               | 63401-72400   | 40601-46400   | 29301-33500   | 18001-20600 | 3750                                                    | 1875 |                     | 3750                                                    | 1875 |                     |
| 128701-145900                               | 72401-82100   | 46401-52500   | 33501-37900   | 20601-23300 | 4000                                                    | 2000 | NS: 4<br>S: 1       | 4000                                                    | 2000 | 4                   |
| 145901-164200                               | 82101-92400   | 52501-59100   | 37901-42700   | 23301-26300 | 4250                                                    | 2125 |                     | 4250                                                    | 2125 |                     |
| 164201-183400                               | 92401-103100  | 59101-66000   | 42701-47700   | 26301-29300 | 4500                                                    | 2250 |                     | 4500                                                    | 2250 |                     |
| 183401-203700                               | 103101-114600 | 66001-73300   | 47701-53000   | 29301-32600 | 4750                                                    | 2375 |                     | 4750                                                    | 2375 |                     |
| 203701-225200                               | 114601-126700 | 73301-81100   | 53001-58600   | 32601-36000 | 5000                                                    | 2500 |                     | 5000                                                    | 2500 |                     |
| 225201-247700                               | 126701-139400 | 81101-89200   | 58601-65400   | 36001-39600 | 5250                                                    | 2625 |                     | 5250                                                    | 2625 |                     |
| 247701-271200                               | 139401-152600 | 89201-97700   | 65401-70600   | 39601-43400 | 5500                                                    | 2750 |                     | 5500                                                    | 2750 |                     |
| 271201-295900                               | 152601-166500 | 97701-106500  | 70601-77000   | 43401-47400 | 5750                                                    | 2875 |                     | 5750                                                    | 2875 |                     |
| 295901+                                     | 166501+       | 106501-115800 | 77001-83700   | 47401-51500 | 6000                                                    | 3000 |                     | 6000                                                    | 3000 |                     |
|                                             |               | 115801-125500 | 83701-90600   | 51501-55700 | 6250                                                    | 3125 |                     | 6250                                                    | 3125 |                     |
|                                             |               | 125501-135500 | 90601-97900   | 55701-60200 | 6500                                                    | 3250 |                     | 6500                                                    | 3250 |                     |
|                                             |               | 135501-145800 | 97901-106800  | 60201-64800 | 6750                                                    | 3375 |                     | 6750                                                    | 3375 |                     |
|                                             |               | 145801-156700 | 106801-113200 | 64801-69600 | 7000                                                    | 3500 |                     | 7000                                                    | 3500 |                     |
|                                             |               | 156701-167900 | 113201-121300 | 69601-74600 | 7250                                                    | 3625 |                     | 7250                                                    | 3625 |                     |
|                                             |               | 167901-179400 | 121301-129600 | 74601-79800 | 7500                                                    | 3750 |                     | 7500                                                    | 3750 |                     |
|                                             |               | 179401-191400 | 129601-138300 | 79801-85100 | 7750                                                    | 3875 |                     | 7750                                                    | 3875 |                     |
|                                             |               | 191401+       | 138301+       | 85101+      | 8000                                                    | 4000 |                     | 8000                                                    | 4000 |                     |

**NS:** The building is not protected throughout with an approved fire sprinkler system**S:** The building is protected throughout with an approved fire sprinkler system.**Construction Types:** Types of construction are based on the California Building Code

### **Attachment 5 – Definitions**

**Access Walkways** - An approved walking surface leading from fire access roadways to exterior doors, the area beneath rescue windows, and other required openings in structures.

**Bollards** - Permanent or removable poles that are placed across a roadway for the purpose of restricting vehicular access or to protect a piece of equipment from potential vehicular damage.

**Breakaway Lock** - A lock that features a scored shackle that will break when struck by a hammer or other substantial object.

**Fire Lane** – A road or other passageway developed to allow the passage of fire apparatus which may or may not be intended for vehicular traffic other than fire apparatus.

**Fire Lane Identification** - Signs or curb markings that allow fire apparatus access roads to be readily recognized so that they will always remain unobstructed and available for emergency use.

**Gate** – A movable barrier, usually on hinges or wheels, located at an opening in a fence, wall, or other enclosure, that can be opened to allow the passage of pedestrians or vehicles, and closed to restrict passage.

**Hose Pull** - The distance between the fire engine and a building, represented by the amount of fire hose that firefighters must pull from the engine to reach the structure and conduct fire suppression operations. Hose pull is measured along the firefighter's path of travel from the fire lane to the building, accounting for any obstructions along that path.

**Hose Lay** - The distance between the fire engine and a hydrant, represented by the amount of hose laid out from the engine to supply water from the hydrant to the engine. Hose lay is measured along the engine's path of travel on a fire lane.

**Hydrant Spacing** – The distance between two hydrants that could supply water to fire apparatus engaged in firefighting operations. Hydrant spacing is measured along the fire lane.

**Local Responsibility Area (LRA)** - Land where a city/county has primary financial responsibility for the prevention and suppression of wildland fires. LRA land is generally located within city boundaries. (Refer to CCR Title 14)

**Premises Identification** – A method of recognizing and visual means (e.g., address numbers) used to readily identify a property or facility street address. It may also be used to distinguish separate buildings within a single facility or property.

**Rescue Openings** – An operable window, door, or other similar device that provides for a means of escape and access for rescue in the event of an emergency.

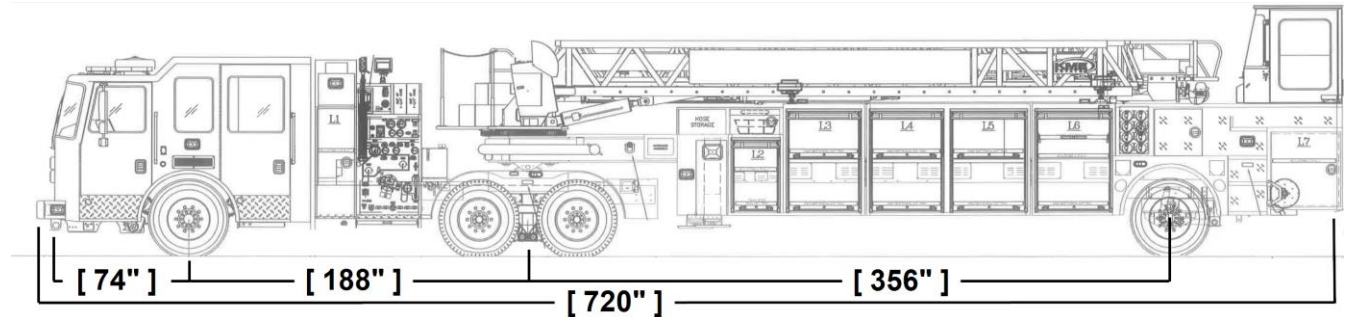
**State Responsibility Area (SRA)** - Land where the State of California has primary financial responsibility for the prevention and suppression of wildland fires. All SRA land is located within County unincorporated areas; SRA does not include lands within city boundaries or in federal ownership. (Refer to CCR Title 14)

**Very High Fire Hazard Severity Zone (VHFHSZ)** - A designated area in which the type and condition of vegetation, topography, fire history, and other relevant factors increase the possibility of uncontrollable wildland fire. Structures within a VHFHSZ require special construction features to protect against wildfire hazards; please consult with the local building department. (Refer to CCR Title 14)

**Wildfire Risk Area** - Land that is covered with vegetation, which is so situated or is of such an inaccessible location that a fire originating upon it would present an abnormally difficult job of suppression or would result in great or unusual damage through fire, or such areas designated by the fire code official.

### Attachment 6 - Apparatus Data for Swept Path Analysis

Use the following inputs for analyzing the swept path of a “typical” OCFA fire truck. To improve maneuverability for *all* OCFA apparatus, increase the speed of apparatus navigation through tight turns, and reduce the potential for property damage and resulting delays to emergency response, projections such as light poles, sign posts, mailboxes, planter walls, and vegetation shall not be placed near the edge of the fire lane where they can obstruct or be struck by portions of the vehicle that may overhang the curb.



|                   |            |
|-------------------|------------|
| Weight            | 94,000 lbs |
| Width (Cab)       | 8.50 feet  |
| Width (Outrigger) | 15.00 feet |
| Height Clearance  | 13.50 feet |

## APPENDIX A - ACCESS DURING CONSTRUCTION

### HOW TO USE THIS APPENDIX

This appendix contains information related to access during construction. In addition to the generic information listed in Guideline B-01, the information in this appendix must be provided with your plan for projects where access or water supply may impact emergency response during construction. **Note: This information may not stand alone and must be used in conjunction Guideline B-01.**

- A1. Access During Construction** - Access and water supply during construction shall comply with CFC Chapter 33 and the provisions listed in this section. Construction activities at job sites that do not comply with these requirements may be suspended at the discretion of the fire code official until a reasonable level of compliance is achieved.

*At no time shall construction projects impair/obstruct existing fire lanes or access to the operation of an existing fire hydrant(s) serving other structures.*

The developer shall provide alternative access routes, fire lanes, and other mitigation features when existing roadways or hydrants may need to be moved or altered during construction to ensure adequate fire and life-safety protection. Such alternatives and features shall be submitted to the OCFA for review and approval prior to alteration of existing conditions.

- A1.1. Lumber Drop Inspection** - An inspection shall be scheduled with an OCFA inspector to verify that access roadways, fire lanes, and operable hydrants have been provided for buildings under construction and prior to bringing combustible building materials on site.
- A1.1.1. The street address of the site shall be posted at each entrance. Projects on streets without names or street signs posted at the time of construction shall include the project name, tract number, or lot number for identification.
  - A1.1.2. Gates through construction fencing shall be equipped with a Knox padlock or breakaway lock/chain.
  - A1.1.3. When required by the OCFA inspector, fire lanes shall be posted with "Fire Lane – No Parking" signs or 'No Parking Areas' will be identified to maintain obstruction free areas during construction.
  - A1.1.4. Provisions shall be made to ensure that hydrants are not blocked by vehicles or obstructed by construction material or debris. A three-foot clear space shall be provided around the perimeter of the hydrant and no parking or similar obstructions shall be allowed along the adjacent road within 15 feet of the hydrant. Inoperable hydrants shall be bagged.
- A1.2. Temporary Fire Access Roads** - Temporary access roads (construction roads that do not match the final location and configuration of permanent roads as approved on a Fire Master Plan) and temporary hydrants may be permitted for single family residential model construction or a single detached custom home less than 5500 square feet in area with the conditions listed below. They may be allowed on a case-

by-case basis for other structures with additional requirements, as determined by the fire code official.

- A1.2.1. Plans for temporary access shall be submitted to the OCFA Planning and Development Services Section. Plans will show proposed temporary roadway locations, location of models, space dedicated to storage of construction materials, and parking for work crews and construction vehicles. The plans shall clearly state that they have been submitted for temporary access and hydrants.
- A1.2.2. Plans shall be stamped and signed by a licensed civil engineer stating that the temporary access road can support 94,000 pounds of vehicle weight in all-weather conditions. Plans will also provide manufacturer's documentation that demonstrates suitability of the material, specifically as a road stabilizer.
- A1.2.3. Parking plans will include details on how the construction site will enforce fire lanes and no parking zones.
- A1.2.4. Aboveground invasion lines are acceptable for water supply.
  - Drawings show detail how the line will be secured in place (e.g., size, depth, and interval of rebar tie-downs) and protected from vehicular damage (e.g., K-rails or bollards).
  - An invasion line may be run underground if the depth of bury can support the 94,000-pound weight of a fire apparatus.
  - The temporary water line must provide the required fire flow; calculations may be required.
  - The pipe shall be listed for fire service.
  - Fire hydrants shall consist of a minimum 6" barrel with one 2-1/2" outlet and a 4" outlet. Note this on the plan.
- A1.2.5. All other access and water requirements shall apply (e.g., width, approach clearance, premises identification, locks, gates, barriers, etc.).
- A1.2.6. The approved plan for temporary access and water supply shall be available at the construction site prior to bringing combustible building materials on-site.
- A1.2.7. An inspection by OCFA personnel is required to verify adherence to the approved plan prior to bringing combustible materials on-site.
- A1.3. **Phased Access** - Incremental installation of permanent access roadways as shown on a fire master plan may be permissible for commercial and residential developments. If phased installation is anticipated, the site superintendent or designee shall review the installation process with an OCFA inspector during the lumber drop inspection or pre-construction meeting. Depending on the complexity of the installation, size of the project, and other project-specific factors, the inspector may allow phased installation to proceed immediately or may first require that all or some of the following items are satisfied:
  - The extent of building construction.
  - Location of operable hydrants serving all buildings under construction.

- The location of construction fencing, barriers, and vehicle access gates.
  - The location of all temporary or permanent “fire lane—no parking” signs.
  - Equipment/materiel staging locations.
  - Worker parking areas.
- A1.3.1. Phasing plans shall be stamped and signed by a licensed civil engineer stating that the access road can support 94,000 pounds of vehicle weight in all-weather conditions. The final road section less the final lift of asphalt topping may be acceptable if certified by the engineer.
- A1.3.2. The phasing plan shall identify any anticipated areas where fire department access roadways may be temporarily inaccessible due to trenching, slurry coating, striping, or other construction activities after they have been installed and inspected. The plan shall indicate the anticipated period of impairment and include provisions for providing plating over trenches and alternative access routes, notification to the fire department, and/or other forms of mitigation when such roadways are impaired.
- A1.3.3. Provide a parking plan for the construction site detailing how the fire lane no parking regulations will be enforced. Include a clause stating that “the job-site superintendent is responsible for informing the work crews of parking requirements and that the entire job-site is subject to shut down by the OCFA inspector if parking is in violation of fire lane posting.”
- A1.3.4. The approved phasing plan shall be available at the construction site prior to bringing combustible building materials on-site. A lumber drop inspection by an OCFA inspector will be required prior to the commencement of each phase; additional inspection fees will be due for each phase.
- A1.3.5. All other access and water requirements shall apply (e.g., width, approach clearance, premises identification, locks, gates, barriers, etc.).

## APPENDIX B – GATES AND BARRIERS

### HOW TO USE THIS APPENDIX

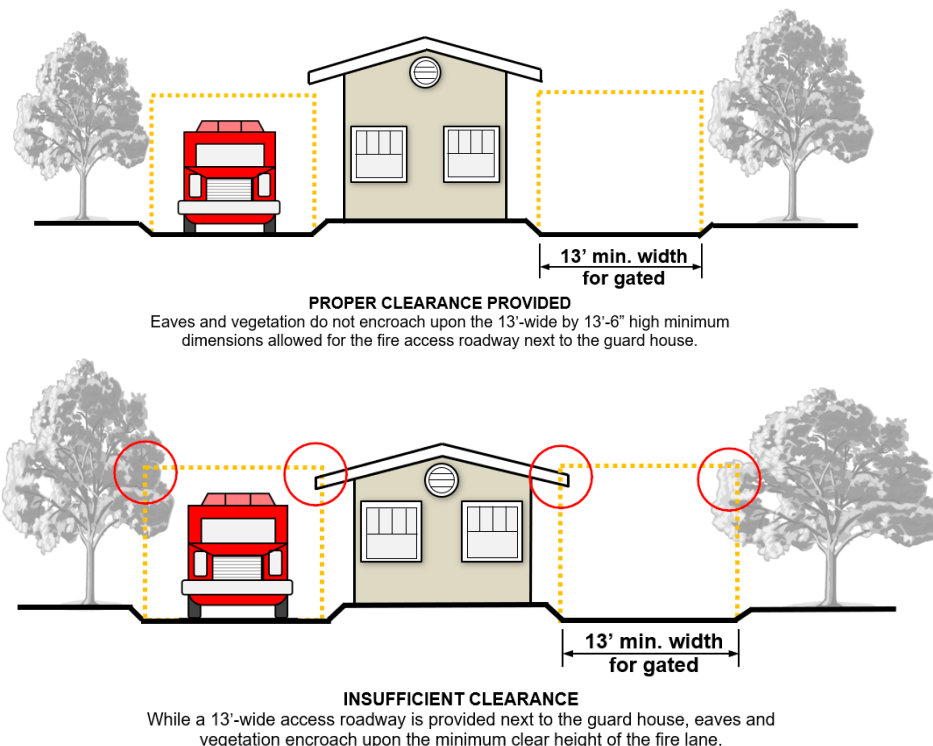
This appendix contains information related to gates and barriers shown on the Fire Master Plan. In addition to the generic information listed in Guideline B-01, the information in this appendix must be provided with your plan if your plan incorporates gates and barriers. **Note: This information may not stand alone and must be used in conjunction Guideline B-01.**

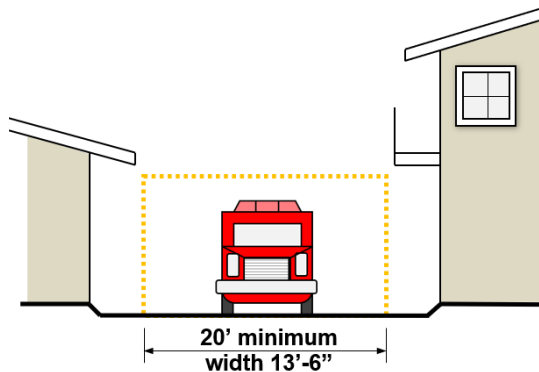
**B1. Obstructions to Emergency Vehicle Access** - Existing or proposed gates and barriers crossing fire lanes must be shown on the plans. Information such as the location, type of gate (e.g., swinging, sliding), dimensions, and method of operation (manual, electric) must also be provided. Note or identify the following on the fire master plan:

**B1.1. Clear Width** – Gated openings for vehicle egress and ingress of vehicles shall have at least 13-feet of clear width when serving a single 13-foot-wide fire lane designed for traffic travelling in one direction and 20-feet clear for a 20-foot-wide fire lane serving traffic travelling in two directions. The vertical clearance shall not be less than 13-feet 6-inches, including landscaping and/or foliage (Figure B1 and next page, Figure B2). In SRA and LRA VHFHSZ, gate openings shall be at least two feet wider than the roadway and a minimum of 14' wide in accordance with CCR Title 14.

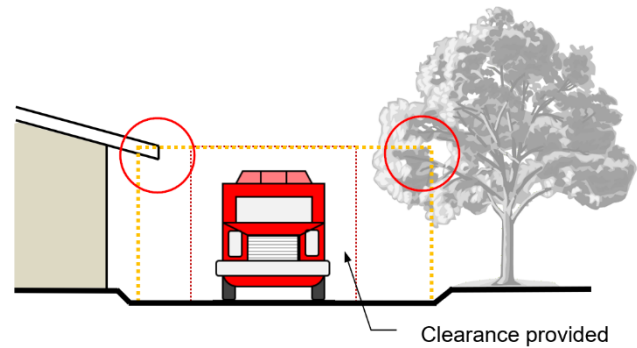
**FIGURE B1- Fire Apparatus Access Roadway Clearance for Typical Gated Community Guard House**

*Fire lane width reductions detailed below are applicable only to the area immediately adjacent to the guard house or gate. Roads leading up to and beyond the guard house or gate shall meet standard fire lane width requirements prescribed in Section 2.5 of this guideline.*



**Figure B2– Fire Apparatus Access Roadway Clearance****PROPER CLEARANCE PROVIDED**

Eaves, balconies, and other obstructions do not encroach upon the 20' wide by 13'-6" high fire access roadway envelope. As projections over the fire lane can interfere with firefighting and rescue operations, such obstructions shall be limited.

**INSUFFICIENT CLEARANCE**

A 20'-wide roadway has been provided, but eaves and vegetation effectively reduce the clear dimensions below required minimums.

**B1.2. Turning Radii** – The inside turning radius shall be at least 20-feet with an outside radius of 40-feet or greater for both the exterior and the interior approach to the gate.

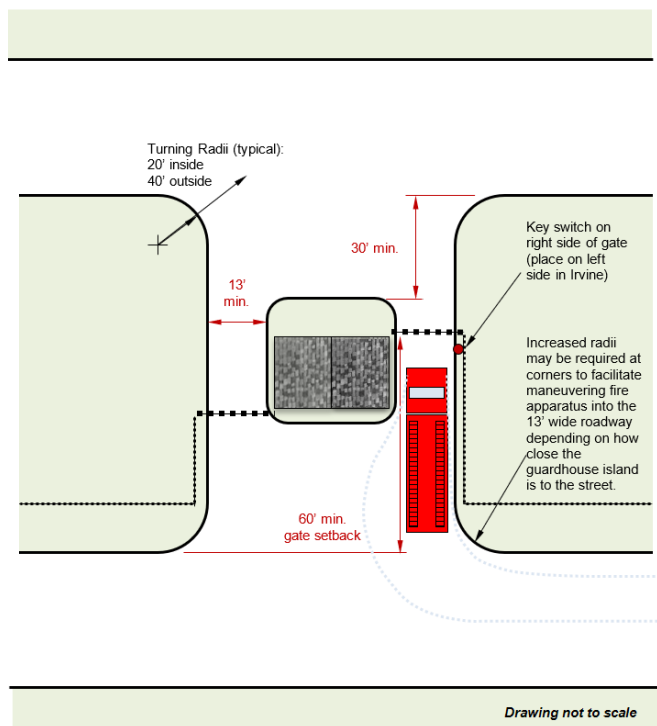
**B1.3. Setbacks from the Street** – Gates and barriers shall be located a minimum of 60-feet from any street with average daily trip (ADT) greater than 30,000 (Figure B3). A private driveway serving only one single-family residence is exempt from this requirement. In SRA and in LRA VHFHSZ, all setbacks shall be a minimum of 30 feet per CCR Title 14.

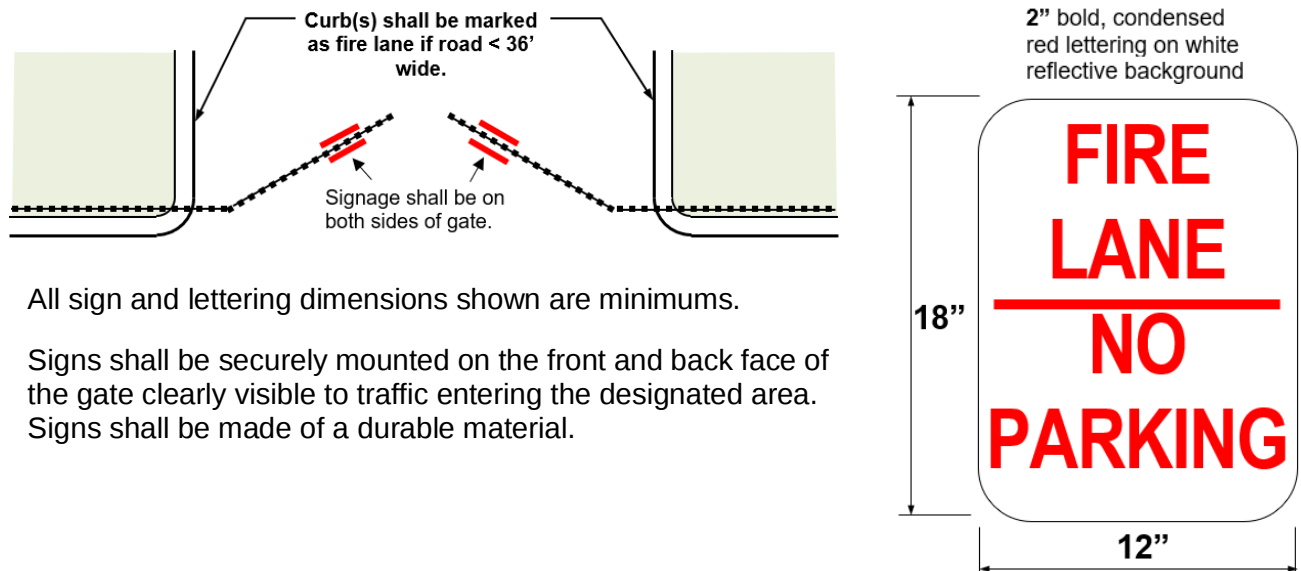
**B1.4. Setbacks from First Interior Turn** – A 30-foot minimum setback is required from a gate to the first turn.

**B1.5. Manually Operated Gate Design** – Typical gate designs may include sliding gates, swinging gates, or a chain traversing the opening.

**B1.5.1.** Permanent or removable bollards are not permitted to be placed across fire lanes.

**B1.5.2.** Permanent signage constructed of 18-gauge steel or equivalent shall be attached on each face of the gate that reads "NO PARKING – FIRE LANE" or similar (next page, Figure B4).

**Figure B3 – Minimum Gate Setbacks**

**Figure B4– Fire Lane No Parking Signs for Manually Operated Gates and Barriers**

All sign and lettering dimensions shown are minimums.

Signs shall be securely mounted on the front and back face of the gate clearly visible to traffic entering the designated area. Signs shall be made of a durable material.

B1.5.4. Where the gate will be used for purposes other than emergency vehicle access, installation of a Knox box containing a key to operate an owner-supplied padlock is recommended. If the gate can be reached by emergency personnel from both sides (such as for a secondary emergency access roadway serving a residential tract), the lock shall also be capable of being accessed from both sides. Knox boxes shall be provided as necessary to ensure that the lock can be accessed and opened from any direction of approach available to emergency personnel.

#### **B1.6. Electrically Operated Gates and Barriers CFC 503.6**

B1.6.1. In the event of loss of normal power to the gate operating mechanism, it shall be automatically transferred to a fail-safe mode allowing the gate to be pushed open by a single Firefighter *without any other actions, knowledge, or manipulation of the operating mechanism being necessary and without the use of battery back-up power, except as noted below.* The manufacturer's specification sheet demonstrating compliance with this method of operation during power loss shall be provided or scanned directly onto the plan. Should the gate be too large or heavy for a single firefighter to open manually, a secondary source of reliable power by means of emergency generator or a capacitor with enough reserve to automatically, immediately, and completely open the gate upon loss of primary power shall be provided for fail-open operation. A capacitor, *but not a battery*, may also be used for fail-open operation where the gate operating mechanism does not have a fail-safe mode.

B1.6.1.1. A battery may only be used in place of fail-safe manual operation when the gate operator has a fail-open mode that will automatically, immediately, and completely open the gate and keep it open upon reaching a low power threshold, regardless of the presence of normal power.

B1.6.2. For electrically operated gates, the type of remote gate opening device that will be installed shall be noted on the plan. The remote opening device is required in

addition to the Knox key switch. A gate serving an individual single-family residence or duplex is exempt from this requirement. Please see below for the currently approved gate opening systems:

- 3M Opticom
- Click2Enter (system shall be configured in single-pulse mode with 1.5 second transmission window)
- Fire Strobe Access Products, Inc.
- Tomar

B1.6.3. Upon activation of the key switch, the gate shall open and remain open until returned to normal operation by means of the key switch. Where a gate consists of two leaves, the key switch shall open both simultaneously if operation of a single leaf of the ingress side does not provide for the width, turning radii, or setbacks necessary for fire apparatus to navigate the vehicle entry point.

B1.6.4. The key switch shall be labeled with a permanent red sign with not less than ½" contrasting letters reading "FIRE DEPT" or with a "Knox" decal.

B1.6.5. Place the OCFA notes for electric gates on the plan verbatim (Appendix B, Attachment 1).

B1.7. **Gate Locks** – Gate locks shall be reviewed and approved prior to their installation on any new and/or existing gate. Authorization for Knox products is processed through the Knox Box company website at [www.knoxbox.com](http://www.knoxbox.com). Knox key switches and key boxes serving only vehicle gates and not buildings shall be sub-mastered for use by both the fire and sheriff/police department. Call the OCFA Planning and Development Services Section at 714-573-6100 for any questions regarding the need for key boxes or switches.

B2. **Path of travel obstructions** – Fences, planters, and vegetation may not interfere with access and egress routes.

B2.1. **Key boxes and key switches** – Knox devices shall be provided where necessary to ensure that immediate access for firefighting, rescue, and other emergency purposes is possible. The location, at a minimum, for the Knox device(s) shall be provided for the following locations:

- Gates along the paths of firefighter travel from the fire lane to all points along the perimeter of the structure.
- Gates to pool enclosures.
- Building gates or doors leading to interior courtyards containing rescue windows.
- Building gates or doors leading to exterior hallways or balconies providing access to residential units or tenant suites.
- Gates in exterior enclosures containing hazardous or combustible material storage.
- Buildings using hazardous materials or processes where such warrants immediate access.

- Exterior doors to rooms containing main alarm panels or annunciators.
- Doors and gates providing access to parking structures.
- Within the fire command center in high-rises and other large buildings.
- Main entry to buildings equipped throughout with an alarm system and not staffed 24/7.
- Facilities where a high-volume of after-hours calls is expected or experienced.
- Doors and gates to other areas identified by the fire department.

**Breakaway Lock** – When approved by the OCFA, a breakaway lock or a Knox padlock may be used in lieu of a key box for exterior hazardous or combustible material storage areas. Manually operated vehicle or pedestrian access gates that are not commonly used or not required to be openable from the egress side may also be provided with a breakaway padlock.

- B2.2. Knox Device Location** - Knox boxes or switches shall be located adjacent to and clearly visible from the gate or door served. Gates in walls and fences up to six feet in height shall be securely mounted at a height of four to five feet above grade; on buildings they shall be mounted six feet above grade and in a location that is easily accessible to firefighters. Where the potential for vandalism or tampering is significant, key boxes that are not submastered may be mounted higher with OCFA approval. Boxes and switches are not required to be electronically monitored; if they are, they shall not initiate an alarm signal that requires a response by the fire department.
- B2.3. Key box Contents** - The key used to unlock the gate or door shall be kept in the key box. When the key unlocks more than the individual adjacent gate or door, a label or tag shall be attached to the key identifying the gates or doors it operates. Where multiple gates or doors are served by a single box, two or more copies of the key(s) are recommended so that a copy will be available to each engine company responding to the site.
- B2.4. Electric Locks** – Electromagnetically or electromechanically locked pedestrian gates and doors shall be equipped either with a Knox box containing a key to open the lock or, if the door lock cannot be operated with a key from the exterior, a Knox key switch shall be provided adjacent to the door. Where key switches are provided, the door or gate lock shall remain disengaged until the key switch is returned to the “normal” closed or locked position.
- B2.5. Manual Vehicle Gates** – Manually operated gates shall have breakaway padlocks, Knox padlocks, or weather-resistant Knox key boxes. The key box shall be placed four to five feet above the roadway surface at the right side of the access gate in a conspicuous location that is readily visible and accessible. In Irvine, the key boxes shall be located on the left side. The key box must be clearly labelled “FIRE DEPT”.
- B2.6. Electric Vehicle Gates** – The gate control for electronic gates shall be operable by a Knox emergency override key switch (with dust cover), readily visible and unobstructed from the fire lane leading to the gate, and clearly labelled “FIRE DEPT”. The key switch shall be placed between 42” and 48” above the roadway surface at the right side of the access gate within two feet of the roadway edge. In Irvine, the key switches shall be located on the left side of the access gate.

- B2.7. Master and Submaster Keying** – Knox devices that provide access only to the perimeter of buildings and exterior common areas shall be submastered for dual use by the fire and police departments. Where access to interior common areas of buildings is mandated by the local security or municipal code, Knox devices shall also be submastered. Knox boxes containing keys to access any interior private spaces, such as the interior of single tenant buildings or individual suites in a multi-tenant building, shall be mastered for use by the fire department only.

Where additional devices beyond those required by the fire department are called for in the local municipal or security code, they shall also be accessible for use by the fire department to facilitate emergency response.

- B2.8. Ordering Knox Devices** – Knox products are ordered through the Knox Box company website at [www.knoxbox.com](http://www.knoxbox.com) . If you have questions, please contact OCFA Community Risk Reduction by email at [knoxboxprogram@ocfa.org](mailto:knoxboxprogram@ocfa.org) or by phone at 714-573-6100.

## **APPENDIX B, ATTACHMENT 1 - OCFA Notes for Electric Vehicle Gates**

**All of the notes listed below shall be placed on the plan verbatim, under the heading “OCFA Notes for Electric Vehicle Gates.” Indicate the type of remote gate operator under Note #1.**

- 1) A remote opening device is required. The remote gate opening device that will be installed is (check one):
  - ☐ 3M Opticom
  - ☐ Click2Enter\* (single-pulse mode with 1.5 second transmission window)
  - ☐ Fire Strobe Access Products, Inc.
  - ☐ Tomar
- 2) In the event of loss of normal power to the gate operating mechanism, it shall be automatically transferred to a fail-safe mode allowing the gate to be pushed open by a single firefighter *without any other actions, knowledge, or manipulation of the operating mechanism being necessary.*
  - a) A battery may only be used in place of fail-safe manual operation when the gate operator has a fail-open mode that will automatically, immediately, and completely open the gate and keep it open upon reaching a low power threshold, regardless of the presence of normal power.
  - b) Should the gate be too large or heavy for a single firefighter to open manually, a secondary source of reliable power by means of an emergency generator or a capacitor with enough reserve to automatically, immediately, and completely open the gate upon loss of primary power shall be provided for fail-open operation.
- 3) In addition to the remote operator, the gate control shall be operable by a Knox emergency override key switch equipped with a dust cover. Upon activation of the key switch, the gate shall open and remain open until returned to normal operation by means of the key switch. Where a gate consists of two leaves, the key switch shall open both simultaneously if operation of a single leaf on the ingress side does not provide for the width, turning radii, or setbacks necessary for fire apparatus to navigate the vehicle entry point.
- 4) The key switch shall be placed between 42” and 48” above the roadway surface at the right side of the access gate within two feet of the edge of the roadway. In Irvine, the switch shall be on the left side in accordance with Irvine’s Uniform Security Ordinance.
- 5) The key switch shall be readily visible and unobstructed from the fire lane leading to the gate.
- 6) The key switch shall be labeled with a permanent red sign with not less than ½” contrasting letters reading “FIRE DEPT” or with a “Knox” decal.

## APPENDIX C - RESIDENTIAL AND TRACT DEVELOPMENTS

### HOW TO USE THIS APPENDIX

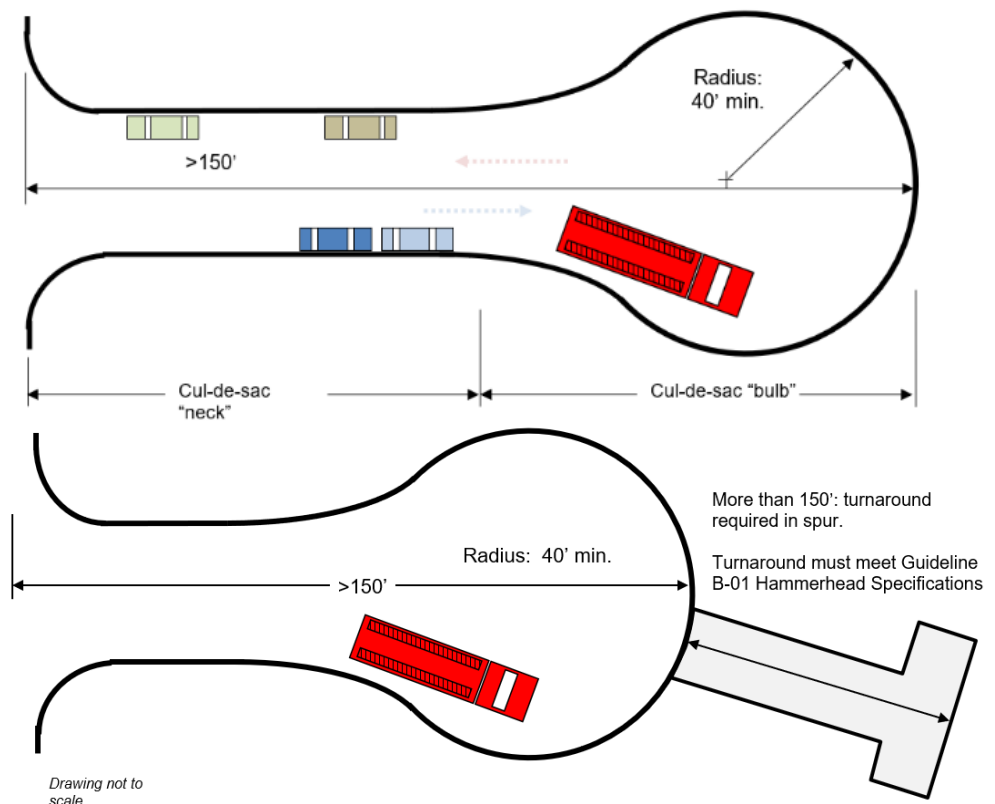
This appendix contains information related to fire master plans for residential tract developments. These requirements may also be applied to individual single-family homes or duplexes (Appendix C, Attachment 1) or to multi-family housing projects as approved by the fire code official. In addition to the generic information listed in Guideline B-01, the information in this section of the appendix must be provided with your plan if your plan incorporates residential developments. **Note: This information may not stand alone and must be used in conjunction Guideline B-01.**

**C3. Residential Tract Developments** - The following requirements apply to all new residential tract developments with single-family homes or duplexes.

**C3.1. Cul-de-sacs** – Cul-de-sacs shall comply with the following requirements:

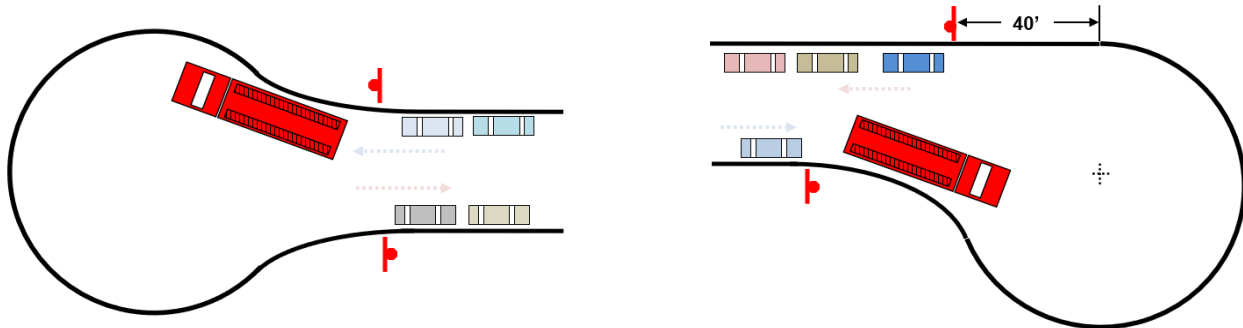
**C3.1.1.** Any street that is a required fire lane and greater than 150 feet in length shall be provided with a 40-foot minimum outside turning radius or other approved turnaround within 150' of the end of the fire lane (Figure C1). Where a spur road or private driveway that is a required fire lane is accessed via the cul-de-sac road, the driveway or spur shall be no more than 150-feet in length unless an approved turnaround has been provided within the 150-feet at the end of the spur or driveway.

**Figure C1 -  
Cul-de-Sacs  
and Dead-End  
Roadways**



- C3.1.2. The cul-de-sac shall be identified as a fire lane with red curbs or include “Fire Lane – No Parking” signs (Figure C2) unless the radius, with parking, is a minimum of 48 feet.

**Figure C2 – Fire Lane No Parking Sign Locations for Cul-de-sacs/Bulbs**



**Standard 40' radius cul-de-sac:**

“no-parking in cul-de-sac begin” and “end” signs shall be located at the point where the street begins to widen into the bulb.

**Offset 40' radius cul-de-sac:**

“no-parking in cul-de-sac begin” and “end” signs shall be located at the point where the street begins to widen into the bulb and at a point 40' from where the cul-de-sac and street are tangent.

- C3.1.3. Cul-de-sacs longer than 150-feet that are required to be designated as fire lanes may contain a center island provided the following requirements are met:

- A minimum 20-foot-wide drive lane with a minimum 40-foot outside turning radius is provided around the island.
- Island landscaping will not intrude into the drive lane.
- The island is designated a no parking area with red curbs or fire lane signs.

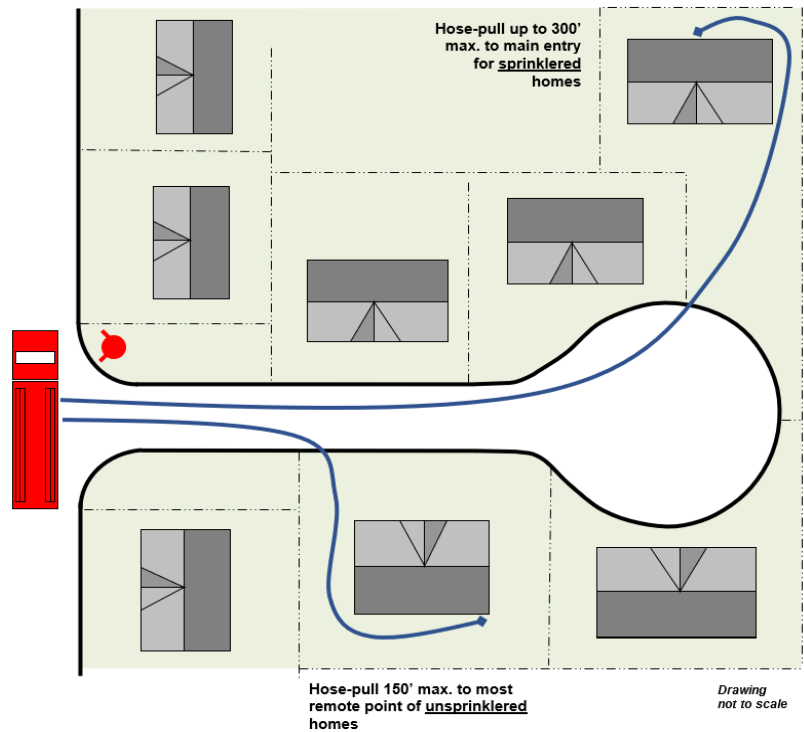
- C3.2. When there are not more than two Group R3 and two Group U occupancies on a single-family residential lot, the fire lane serving a detached single-family home or duplex, or related accessory structure (pool house, casita, garage, workshop, barn, etc.) is protected through by an approved NFPA 13-D, 13-R, or 13 fire sprinkler system, shall extend to within 300-feet of all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building.

- C3.3. In residential tracts with private roads, parking enforcement plans shall include:

- Detailed information specifically identifying who will be responsible for enforcing the plan.
- Powers granted to the entity including vehicle towing information for parking violations (needs to include similar language provided in CVC).
- The aforementioned information needs to be integrated into the fire master plan. Evidence that the enforcement plan is permanently incorporated into the Conditions, Covenants, and Restrictions (CCRs) and/or recorded against the deed shall be provided prior to OCFA approval of the final map or print of linen. Once approved, these provisions cannot be amended without written approval by the OCFA. See Appendix C, Attachment 2 for a sample enforcement letter.

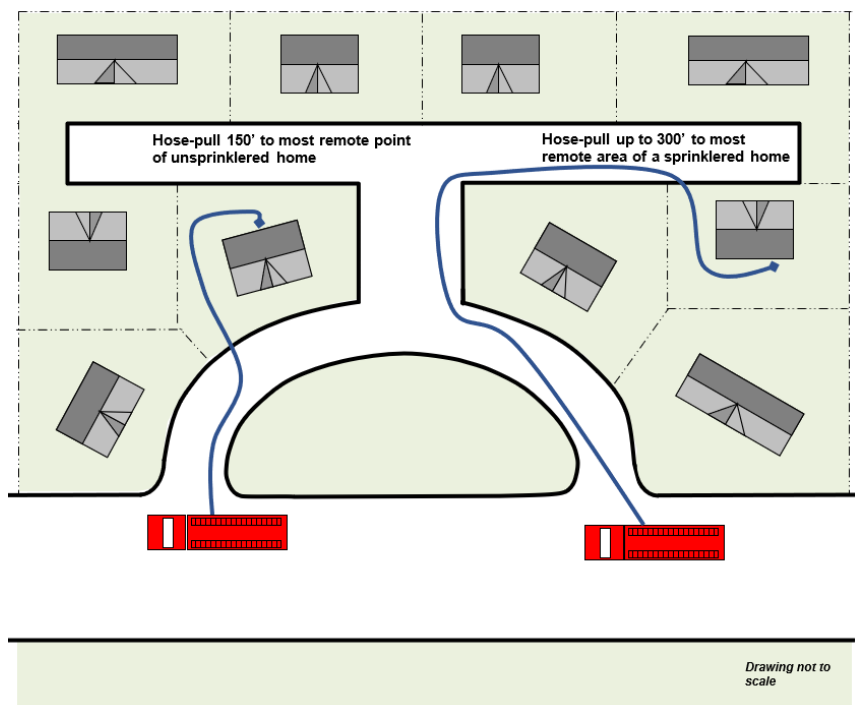
- C3.4. Short Cul-de-sacs and Dead-End Roads** - If hose-pull distance can be satisfied without fire apparatus entering the cul-de-sac or dead-end road, and the road is not otherwise required to be a fire lane as determined by the fire code official, the street is not required to have a bulb or hammerhead with minimum OCFA turning radii or meet other standard fire lane requirements. (Figure C3)

**Figure C3 – Short Cul-de-sacs and Dead-End Roads**



- C3.5. Eyebrows** - If the eyebrow does not meet OCFA's minimum turning radius and width requirements, fire department access will be measured from the nearest available fire lane around the island and any other obstructions. If hose-pull to the most remote area of a sprinklered home exceeds 300' (or 150' to the most remote point around the perimeter for unsprinklered homes), the eyebrow shall be designed as a fire lane or other mitigating features shall be provided. (Figure C4)

**Figure C4 – Eyebrows**

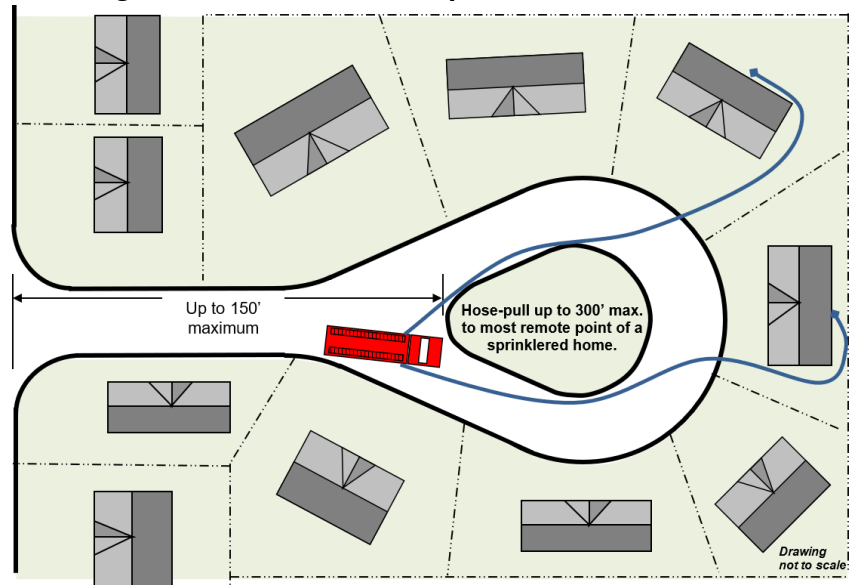


**C3.6. Cul-de-Sacs up to 150' with Islands** - Cul-de-sacs up to 150-feet in length containing an island (Figure C5) will have access to the homes measured along an approved route around the island and any other obstructions in the path of travel from the point of where the island begins to impede fire apparatus.

C3.6.1. If all homes are in access from the area preceding the island, the portion of the bulb beyond the island is not required to comply with OCFA fire lane requirements.

C3.6.2. If the hose-pull to the most remote point of a sprinklered home exceeds 300' (or 150' to the most remote point around the perimeter for unsprinklered homes), the portion of the bulb beyond the island shall be designed as a fire lane or other mitigating features shall be provided.

**Figure C5 – Cul-de-sacs up to 150' with Islands**



**APPENDIX C, ATTACHMENT 1 – Residential Site Plan Checklist****ORANGE COUNTY FIRE AUTHORITY****Plan Checklist for SINGLE FAMILY RESIDENCE (Fee Code PR 160)**

For ADU or SB9 Projects, refer to OCFA information bulletin 01-21

**INSTRUCTIONS:** Return this completed form with the plans to be submitted. This worksheet is provided for your convenience and is a listing of the required information and content needed for residential site plan review. Providing the items listed is not a guarantee of plan approval. *Please note that additional information or requirements may apply depending on the project and that some of the items listed will not be applicable to every project.* If you need help completing this form or have questions regarding requirements for review, please contact the OCFA [Techline@ocfa.org](mailto:Techline@ocfa.org) or visit us at 1 Fire Authority Road, Irvine, CA for assistance. You can verify where to submit plans based upon the submittal routing form or by calling the plans counter (714) 573-6100.

Address (Street Number/Name, City): \_\_\_\_\_

Project Service Request #: \_\_\_\_\_

1. ☐ Complete OCFA Residential Cover sheet with Submittal scaled plan sheets showing the vicinity map, site plan, building footprint, stories, property lines and elevations of the project. Show any fences, walls, or gates.
2. ☐ Provide the project scope on the plans. Include the building summary, building occupancy, construction type and square footage (existing & proposed) of the residence, garage and any other accessory structures. Note if fire sprinklers are existing or not. *Complete fillable area on OCFA Residential coversheet*
3. ☐ If an automatic fire sprinkler system is required, note on the plan that "a fire sprinkler plan shall be installed per NFPA 13D 2022". Separate plan review and approval of a **fire sprinkler plan** by the OCFA is required prior to installation. *Complete fillable area on OCFA Residential coversheet*
4. ☐ Provide a project directory with the property owner information, project address and city. Include the tract map number or parcel map number for the property. *Complete fillable area on OCFA Residential coversheet*
5. ☐ Show the location and distance of any proposed or existing fire hydrant(s) within 300 feet of property lines.
6. ☐ Indicate all surrounding property uses. If the project adjoins an open space, fuel modification area or a wild-land interface, a **fuel modification plan** may be required separately for a *new* structure. See *Guideline C-05*
7. ☐ Indicate if the project is located near an oil well, oilfield or landfill. A **methane plan** for soil gas mitigation may be required separately. <https://www.conservation.ca.gov/calgem/Pages/WellFinder.aspx>
8. ☐ If applicable complete, signed "**Water Availability**" form and place onto plan. To obtain the form, see [www.ocfa.org](http://www.ocfa.org) under the Planning and Development homepage. *Complete fillable area on OCFA Residential coversheet.* For additional information, see OCFA Plan Submittal Criteria Form – Residential Projects Question #5 and Guideline B-01, Appendix D, Table 2.
9. ☐ Specify the width of street or road to which the property is addressed.
10. ☐ Please state on the plans if the project resides within a **Very High Fire Severity Zone (VHFSZ) or State Responsibility Area (SRA)**. If unsure, see [ocfa.org](http://ocfa.org) to obtain information. Indicate with a note if the design requires CBC Chapter 7A/Residential Code R337. *Complete fillable area on OCFA Residential coversheet*

Print name: \_\_\_\_\_

Signature: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Date: \_\_\_\_\_

Serving the Cities of Aliso Viejo • Buena Park • Cypress • Dana Point • Garden Grove • Irvine • Laguna Hills • Laguna Niguel • Laguna Woods  
Lake Forest • La Palma • Los Alamitos • Mission Viejo • Rancho Santa Margarita • San Clemente • San Juan Capistrano  
Seal Beach • Santa Ana • Stanton • Tustin • Villa Park • Westminster • Yorba Linda • and Unincorporated Areas of Orange County

**RESIDENTIAL SPRINKLERS AND SMOKE DETECTORS SAVE LIVES**

**APPENDIX C, ATTACHMENT 2 - Sample Parking Enforcement Letter**

Date

Planning and Development Services Section  
 Orange County Fire Authority  
 1 Fire Authority Road  
 Irvine, CA. 92602

Re: *(Project Name, Location, and Service Request Number)*  
 Parking Enforcement Plan

The fire lane parking enforcement plan for the above referenced project is stated as follows:

All fire lanes within *(list development address or tract information)* shall be maintained and in no event shall parking be permitted along any portion of a street or drive that required fire lanes or any area designated as a fire lane for turn-around purposes either during construction or after occupancy.

***(Association name)* shall adopt reasonable rules and regulations regarding the parking of vehicles along the streets, roads and or drives within the project that are not in conflict with applicable law.**

In furtherance thereof, *(Association name)*, through its officers, committees and agents, will establish the “parking” and “no parking” areas within the property in accordance with Section 22658 of the California Vehicle Code and OCFA Guideline B-01. The law shall be enforced through such rules and regulations by all lawful means, including, written warnings, citing, levying fines and towing vehicles in violation.

*(Association name)* will contract with a certified patrol and towing company to remove vehicles that violate no parking restrictions. First time violators will receive a written warning and with subsequent violations, the vehicle shall be subject to towing. The vehicle owner shall be responsible for all costs incurred in remedying such violation, including without limitation towing cost, citations, and legal fees.

Company Name

Authorized Agent Signature

Cc:

**EXHIBIT “B”**

**Guideline C-05**

**Vegetation Management Guideline: Technical Design for New Construction**

**Fuel Modification Plans and Maintenance Program**

# Orange County Fire Authority

## Community Risk Reduction

1 Fire Authority Road, Building A, Irvine, CA 92602 • www.ocfa.org • 714-573-6100

# Vegetation Management Guideline: Technical Design for New Construction Fuel Modification Plans and Maintenance Program



## Guideline C-05

Serving the Cities of Aliso Viejo • Buena Park • Cypress • Dana Point • Garden Grove • Irvine • Laguna Hills • Laguna Niguel • Laguna Woods  
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# Vegetation Management Guideline: Technical Design for New Construction Fuel Modification Plans and Maintenance Program

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## Technical Design for New Construction Fuel Modification Plans and Maintenance Program

### INTRODUCTION

Vegetation management has proven to be a major factor in reducing the probability of buildings igniting from wildfires. When combined with special building construction features, the potential for ignition is further reduced.

### PURPOSE

Managing the design and placement of vegetation in and around new structures will reduce the effects of a wildfire. For this reason, codes are adopted that require vegetation management and special construction features. The Fuel Modification Plan is a vegetation management code that requires landscaped areas adjacent to new structures be dedicated for permanent vegetation management activities.

The Fuel Modification Program brings fire-safe landscaping and construction features together to improve community safety and reduce property loss during wildfire emergencies. This guideline provides you with the information and steps needed to prepare a Fuel Modification Plan and maintain vegetation in Fuel Modification areas for a successful long-term outcome. Furthermore, it covers the timing of plans for construction, plan criteria needed for approval, plant lists for the zones, new construction inspection requirements, and introductory maintenance information.

### SCOPE

All new single-family homes, multi-family residential, Accessory Dwelling Unit (ADU), utility, and commercial structures built in, or adjacent to, a wildfire-risk area or such areas designated by the fire code official, require a Fuel Modification Plan in conjunction with the 2022 California Fire Code (CFC), Chapter 49. However, a Fuel Modification Plan may or may not be required based on lot size, configuration, or your property's connection and proximity to grass, brush, and ornamental vegetation. For questions regarding the Fuel Modification requirements and your project, contact the OCFA RSG line at (714) 573-6774.

The plan requires permanent vegetation management in dedicated land areas and is used indefinitely to facilitate on-going maintenance requirements. For existing structures that were not developed with a fuel modification plan or condition, maintenance shall be completed as required in the Vegetation Management Maintenance Guideline for Property Owners.

For new structures proposed within the State Responsibility Area (SRA), as defined in the Public Resource Code Sections 4126-4127 or within the Local Responsibility Area (LRA) - Very High Fire Hazard Severity Zone (VHFHSZ), as defined in the Government Code Section 51175 – 51189, and the California Code of Regulations, Title 14, Division 1.5, Chapter 7, Subchapter 2, Articles 1-5, a 30-foot setback from the structures to the property line shall be required.

## FUEL MODIFICATION PLAN OVERVIEW & SEQUENCING

There are two types of Fuel Modification Plans, conceptual and precise. Each type is submitted at a different time during the development and construction process.

1. Conceptual (see Section 1: Conceptual Fuel Modification Plans for requirements)
  - a. Infrastructure of the zone widths and program
  - b. Land use restrictions
  - c. Tract and property line information
  - d. When to submit
    - 1) Concurrent with Environmental Impact Report (EIR) processing
    - 2) Prior to tentative tract map, parcel map, or final tract map approval
    - 3) Prior to fire master plan submittal
2. Precise (see Section 2: Precise Fuel Modification Plans for requirements)
  - a. Approval of planting plans
  - b. Final details
  - c. Inspection information
  - d. When to submit
    - 1) Prior to approval of planting plans from other permitting agencies
    - 2) Prior to precise grading or building permit issuance, whichever comes first
    - 3) Prior to Fire Master Plan approval

## FUEL MODIFICATION ZONES

The Fuel Modification area is comprised of three zones with specific design criteria. The standard Fuel Modification area is 170 feet in width, measured out horizontally from the structure in all directions on the site (see Attachment 3: Incline Measurement for Selected Slopes). Many developments have interior slopes with Special Maintenance Areas (SMA). See below for specific unique requirements for each zone. The fuel modification plan may be altered if conditions change. Any alterations to the fuel modification areas shall have prior approval from the fire code official.

**Note:** Additional planting restrictions may be required for certain plant species (see Approved Plant Palette Qualification Statements for Select Plant Species on page 31).

1. Zone "A" (20-foot minimum width, with the first 5 feet as the Immediate Zone)
  - a. Flat level ground requirement
  - b. Building foundation setback (no design alternatives allowed)
  - c. Zone "A" (20 feet wide – measured from the structure out)
    - 1) Setback from the slope nearest the foundation
    - 2) No combustible construction is allowed within Zone "A"
    - 3) Automatic irrigation systems to maintain healthy vegetation with high moisture content and to be regularly irrigated
    - 4) Plants in this zone shall be highly fire resistant and selected from Attachment 8: Fuel Modification Zone Plant List (also refer to Section 3: Plant Palette Information)
    - 5) If all Zones "A-D" are to be maintained by the structure owner, then Zone "A" shall begin at the wall of the structure

- d. Immediate Zone (First 5 feet measured from the structure out, in all directions)
  - 1) No combustible bark or mulch
  - 2) Plants in this area to be irrigated, naturally low growing (below 2 feet in height), and non-woody
  - 3) No combustible construction is allowed, fencing, gates, patio covers, etc.
- 2. Zone "B" (50 -150 feet in width): Slope design requires a minimum 50-foot irrigated zone

**Note:** A dry Zone "B" may be used if plants and design are appropriate

- a. Required at the nearest slope adjoining Zone "A"
- b. Irrigated and planted per Attachment 6: Requirements for Planting Installation in Fuel Modification Zones
- c. May replace Zones "C/D" when grading plans require larger replanted areas
- d. All plant species designed for Zone "B" shall be selected from Attachment 8: Fuel Modification Zone Plant List. 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 Attachment 6: Requirements for Planting Installation in Fuel Modification Zones, Attachment 7: Undesirable and Invasive Plant Species, and Attachment 8: Fuel Modification Zone Plant List.
- e. No combustible construction is allowed within Zone "B"
- 3. Zone "C/D" (0-100 feet in width)
  - a. One natural vegetation thinning (Zone "C") or two thinning zones (Zone "C/D")
    - 1) Zone "C" shall be 50% thinning of vegetation
    - 2) Zone "D" shall be 30% thinning of vegetation
  - b. Planting installation per Attachment 6, if installing plants
    - 1) Existing plants that will remain shall be in accordance with Attachment 6: Requirements for Planting Installation in Fuel Modification Zones and Attachment 7: Undesirable and Invasive Plant Species (see Section 3: Plant Palette Information)
  - c. See Section 4: Alternative Material & Methods
  - d. Plant species introduced into Zone "C" and "D" shall be selected from Attachment 8: Fuel Modification Zone Plant List. Maintenance shall be in accordance with Attachment 6: Requirements for Planting Installation in Fuel Modification Zones and Attachment 7: Undesirable and Invasive Plant Species (see Section 3: Plant Palette Information)
  - e. No combustible construction is allowed within Zone "C" and "D"

**Note:** A clear, brush-free area of 10 ft shall be required around the perimeter of the ground-mounted photovoltaic arrays. A noncombustible base, approved by the fire code official, shall be installed and maintained under the photovoltaic arrays and associated electrical equipment installations, per the 2022 CFC Chapter 1205.5.1.

## TYPES OF INTERIOR SLOPES: RESIDENTIAL TRACT

1. SMA Interior Slopes
  - a. 100 feet maximum width
  - b. Slopes and common areas interior from the community perimeter (see Section 5: Special Maintenance Areas and Roadside Protection Zones)
  - c. Located in commonly owned land areas, beginning at the property lines of the privately owned lot
  - d. Areas shall be irrigated
2. Roadside Protection Zones (RPZ)
  - a. 50 feet maximum width measured from the edge of the roadway
  - b. Can be designed as RPZ or SMA, depending if the road is at the perimeter or interior of the community
  - c. Streetscape designs that are not community perimeter edges may not be regulated unless a distinct hazard is created
  - d. Areas shall be irrigated

When an SMA or RPZ is within 100 feet of a structure, the SMA or RPZ will be considered a defensible space area. The defensible space area shall comply with Attachment 2: Introductory Maintenance Information, Attachment 6: Requirements for Planting Installation in Fuel Modification Zones, and Attachment 7: Undesirable and Invasive Plant Species. Alternative design methods may be approved through the Alternate Materials & Methods process.

## FUEL MODIFICATION PLANS: REQUIRED INFORMATION

### Section 1: Conceptual Fuel Modification Plans

Plans shall be prepared by a licensed landscape architect or other design professional with equivalent credentials. First submittal requires only two sets of plans. Each subsequent submittal shall include an electronic PDF copy of the plan and three sets of paper plans.

**Note:** If the designer is prepared to submit Precise Fuel Modification Plans with the planting plans, conceptual plans are not required to be submitted. If the designer forgoes the conceptual submittal and submits the precise plan, the required conceptual plan information shall be provided on the precise plan.

#### The following information shall be included on Conceptual Fuel Modification Plans:

- ☒ Check each box, after providing the information on your design plans:
- A. ☐ Identify the total size of the development by showing all tract boundary lines, property lines, slope contour lines, and structure foundation footprints.
- B. ☐ Place descriptive notes of the land uses adjoining the development property on all sides (e.g., future construction, existing structures, natural vegetation, restoration plans, roads, parks, etc.).
- C. ☐ Add a note on the plan stating the project is or is not located in a LRA - VHFHSZ or in an SRA.
- D. ☐ Add a note stating the structure(s) shall be built to the California Building Code (CBC) Chapter 7A standard if the project is located in a LRA - VHFHSZ or in an SRA area.
- E. ☐ Add a note stating combustible fencing is not allowed within any Fuel Modification Zone.
- F. ☐ Contour lines shall be provided on the plan to show valleys and hills, and the steepness or gentleness of slopes for all Fuel Modification Zones.
- G. ☐ Ensure all foundations have a minimum 20-foot setback from edge of slope.
- H. ☐ Select an on-slope option from the choices of Fuel Modification Zones from pages 4 and 5. Delineate the width as described.
- I. ☐ All plants in fuel modification zones shall be selected from Attachment 8: Fuel Modification Zone Plant List.
- J. ☐ Label all interior slopes and all common areas as "Special Maintenance Areas" and/or "Roadside Protection Zones", if applicable. If SMA planting plans are

designed, they shall be submitted with the conceptual FMZ plans. If not designed yet, place a note that all planting plans require plan review and approval (see Section 5: Special Maintenance Areas and Roadside Protection Zones for more information). When a SMA or RPZ is within 100 feet of a structure, the SMA or RPZ will be considered a defensible space area. The defensible space area shall comply with Attachment 2: Introductory Maintenance Information, Attachment 6: Requirements for Planting Installation in Fuel Modification Zones, and Attachment 7: Undesirable and Invasive Plant Species. Alternative design methods may be approved through the Alternate Materials & Methods process (see Section 4: Alternate Materials & Methods).

- K. ☐ SMA and RPZ shall not have plants from Attachment 7: Undesirable and Invasive Plant Species.
- L. ☐ Delineate RPZ with either a maximum irrigated 50-foot wide FMZ "B" when located on community perimeter areas or SMA when roads are interior to perimeter.
- M. ☐ Each FMZ, SMA, and RPZ shall be symbolized and referenced on the plan clearly and on a distinct legend.
- N. ☐ Notate all FMZ, SMA, and RPZ as irrigated or non-irrigated landscaping.
- O. ☐ Provide the name of the entity/entities responsible for the maintenance of all FMZ, SMA, and RPZ.
- P. ☐ Show the name and location of any existing plant species you are proposing to retain on the plan (If no existing plant species are shown, existing vegetation shall be removed from the plan entirely).
- Q. ☐ Design dedicated emergency and maintenance access paths on **commonly owned** property, from the street frontage to lettered lots, to facilitate access behind the homes. This requires:
  1. Paths every 500 lineal feet of FMZ or SMA length to have access, with a minimum 7-foot clear **width** and a dedicated **flat** path.
  2. Covenants for FMZ and SMA access and maintenance to be recorded concurrently with all planning maps and referenced in Covenants, Conditions & Restrictions (CC&Rs).
- R. ☐ Covenants will be required to be recorded for FMZ, SMA, and RPZ located on private homeowner lots prior to Precise Fuel Modification Plan approval (place as a note on plan if applicable).
- S. ☐ Copy Attachment 1: New Construction Inspection Requirements, Attachment 2: Introductory Maintenance Information, Attachment 3: Incline Measurement for Selected Slopes, Attachment 6: Requirements for Planting Installation in Fuel Modification Zones, and Attachment 7: Undesirable and Invasive Plant Species on the plans for on-going maintenance requirements.

- T.** ☐ If there are limited areas in which you cannot meet Fuel Modification distance requirements, follow the plan submittal requirement directions in Section 4: Alternate Materials & Methods.
- U.** ☐ If the project has an area within the project boundary or adjacent areas affecting the project which would fall under the restriction of an agency (e.g., Army Corps of Engineers, California Coastal Commission, a Specific Plan, a Habitat Management & Monitoring Plan, etc.), the agency name; along with the maintenance, scope of work and management plan for those restricted areas shall be provided on the plan and documentation to support the management plan and maintenance allowed in the restricted areas provided at the time of submittal. If an area is discovered at any point in the submittal process, which would limit the design and/or maintenance requirements of the plan, the project will need to be re-evaluated to determine whether the limitations will impact the Fuel Modification design. If there are no restricted areas, make a note stating to the fact on the plans.
- V.** ☐ The following notes (1-6) shall be copied on the plans:
1. The owner/developer will obtain planting plan approval from OCFA prior to receiving final approval from all other landscape permitting agencies within FMZ, interior slopes/common area landscaping SMA, and RPZ.
  2. FMZ, SMA, and RPZ land areas were purchased and dedicated for the purposes of wildfire maintenance activities, beautification, and erosion control. Protected plants and habitat identified after Fuel Modification Plan approval through surveys or other biological programs cannot be retrofitted back within the limits of these areas.
  3. The developer is responsible for ensuring that the calculated revenue from homeowner dues is sufficient to cover the cost of future maintenance, based on the originally approved design. After the final landowner has accepted the long-term maintenance responsibility, changes to the fuel modification areas or interrupted maintenance activities by the final landowner become the responsibility of the final landowner.
  4. When a required maintenance area is located on commonly owned land, while the required Zone "A" is located on homeowner's land, a written disclosure regarding the Zone "A" and vegetation requirement is required to be signed by the homeowner and the lot number referenced in the CC&Rs.
  5. The FMZ, SMA, and RPZ shall be maintained in perpetuity for fire safety purposes, in accordance with recorded covenants, CC&Rs, and property title restrictions.
  6. Prior to dropping of lumber, call for a Vegetation Clearance Inspection. The developer/builder shall provide a separation of combustible vegetation for a minimum distance of 100 feet from the location of the structures and lumber stock-pile.
- W.** ☐ A copy of the CC&Rs shall be provided to ensure the language regarding maintenance and responsibility is clearly defined, prior to approval of a conceptual plan.
- X.** ☐ For certain projects, photographs of existing vegetation may be required.
- Y.** ☐ Provide the degree or percentage of slope on the plan at the location of the zone markers to indicate the actual distance. The marker shall be placed when using Attachment 3: Incline Measurement for Selected Slopes.

## Section 2: Precise Fuel Modification Plans

Plans shall be prepared by a licensed landscape architect or other design professional with equivalent credentials. First submittal requires only two sets of plans. Subsequent plan submittals shall include an electronic PDF copy of the plans and minimum of three sets of paper plans.

### The following information shall be included on the Precise Fuel Modification Plan:

- ☒ Check each box, after providing the information on your design plans:
- A. ☐ If there was not a Conceptual Fuel Modification Plan approved, the Precise Fuel Modification Plans shall include all criteria required for the Conceptual Fuel Modification Plans (refer to Section 1: Conceptual Fuel Modification Plans).
  - B. ☐ Show the location of permanent zone markers. (The goal is to install the lowest number of markers possible to ensure maintenance workers stay within the correct property lines when performing vegetation management. Generally, markers are only required to indicate side property lines and where zones end).
  - C. ☐ Copy Attachment 4: Zone Marker Details and Attachment 5: Sample CC&R Maintenance Language on the plans, if applicable.
  - D. ☐ Submit written proof that the CC&R's reference the fuel modification areas and associated maintenance and restrictions (see Attachment 5: Sample CC&R Maintenance Language), if applicable.
  - E. ☐ Provide supporting documentation that demonstrates the Fuel Modification Zones, SMA, RPZ, access and maintenance points have been legally recorded on the Tentative Tract Maps.
  - F. ☐ Irrigation plan sheets shall be submitted to demonstrate the wet zones are irrigated.
  - G. ☐ The planting plans for FMZ, SMA, and RPZ are required to be reviewed and approved (see Section 5: Special Maintenance Areas and Roadside Protection Zones for more information).
  - H. ☐ **Plant Palette Legend for FMZ, SMA, RPZ:**  
Provide a separate plant palette legend for each bulleted point below:
    1. Trees
    2. Shrubs
    3. Ground Cover (maximum natural growth height shall be no taller than 2 feet)
    4. Grasses
    5. If proposing plant species not on the Attachment 8: Fuel Modification Zone Plant List, follow the submittal directions from Section 3.B.

**I. ☐ Each legend shall include:**

1. Plant Symbol (separate symbol for each plant)
2. Plant Form
3. Botanical Name
4. Common Name
5. Plant # from Attachment 8: Fuel Modification Zone Plant List
6. Symbol Code from Attachment 8: Fuel Modification Zone Plant List
7. Expected Max Growth Height
8. Expected Max Growth Width
  - a. \*See Sample #1: Plant Legend

**J. ☐ Planting Plans:**

1. On the installation Planting Plans, all plants shall be horizontally and vertically spaced to meet the formula from Attachment 6: Requirements for Planting Installation in Fuel Modification Zones of this guideline, using the heights and widths in your legend.
2. Refer to the Attachment 8: Fuel Modification Zone Plant List code symbols and qualification statements for design installation before you place plants on the plan.
3. See Section 3: Plant Palette Information for plant species not on the OCFA list and follow directions.

**K. ☐ For alternative proposals that do not meet minimum requirements, see Section 4: Alternate Materials & Methods and follow the plan submittal requirements.**

**L. ☐ Create a heading titled "Required Inspections," then copy Attachment 1: New Construction Inspection Requirements on the plans underneath the heading.**

**Sample #1: Plant Legend****Example Required Plant Legends**

| Plant Form              | Plan Symbol | Botanical Name | Common Name | Plant # from Attach 8 | Symbol Code from Attach 8 | Expected Max Growth Height | Expected Max Growth Width |
|-------------------------|-------------|----------------|-------------|-----------------------|---------------------------|----------------------------|---------------------------|
| TREES                   |             |                |             |                       |                           |                            |                           |
| Plant Form              | Plan Symbol | Botanical Name | Common Name | Plant # from Attach 8 | Symbol Code from Attach 8 | Expected Max Growth Height | Expected Max Growth Width |
| SHRUBS                  |             |                |             |                       |                           |                            |                           |
| Plant Form              | Plan Symbol | Botanical Name | Common Name | Plant # from Attach 8 | Symbol Code from Attach 8 | Expected Max Growth Height | Expected Max Growth Width |
| GROUND COVER            |             |                |             |                       |                           |                            |                           |
| Plant Form              | Plan Symbol | Botanical Name | Common Name | Plant # from Attach 8 | Symbol Code from Attach 8 | Expected Max Growth Height | Expected Max Growth Width |
| GRASSES                 |             |                |             |                       |                           |                            |                           |
| SPECIES NOT ON ATTACH 8 | Plan Symbol | Botanical Name | Common Name |                       |                           | Expected Max Growth Height | Expected Max Growth Width |
|                         |             |                |             |                       |                           |                            |                           |

### Section 3: Plant Palette Information

- A. The plant list from Attachment 8: Fuel Modification Zone Plant List was approved by various resource agencies responsible for environmental protection. All plants installed shall be selected from Attachment 8: Fuel Modification Zone Plant List and be grouped and spaced for initial installation in accordance with Attachment 6: Requirements for Planting Installation in Fuel Modification Zones of this guideline. Specific installation requirements are included for various plant species (see plant code, legend, and qualification statements in Attachment 8: Fuel Modification Zone Plant List). Retained plants shall be proposed for approval on the conceptual FMZ plans or on the precise plan (see above for plant palette legends demonstrated for plan design).

B. Proposing Alternate Species:

If alternate plant species are proposed, the landscape architect shall provide photographs and data on the size, fire resistive characteristics, and invasiveness for installation criteria. A maximum of 10 alternate species may be proposed per project.

Alternative species need to have similar/equal properties to the plants from Attachment 8: Fuel Modification Zone Plant List. OCFA will make a case-by-case determination as to the acceptability of the proposed species. Some species that are equal in combustibility to pre-approved species on the list may not be allowed due to the invasiveness of the species. The proposed species must be spaced based on size and characteristics.

If the plant materials are proposed to be planted within 300 feet of reserve lands (except plants on the interior of the tract), concurrence from the permitting resource agencies shall be required. If the proposed plants have received previous resource-agency approval, no concurrence letter will be required, but supporting documentation shall be provided. Contact OCFA prior to your submittal if needed.

## Section 4: Alternative Materials & Methods Construction Features, and Fire Protection Plans

If there are limits to areas in which you cannot meet fuel modification width distance requirements or if you are proposing a non-irrigated FMZ, follow the performance based design direction below for conceptual FMZ plans:

1. Performance Based Design:
  - a. A detailed technical fire behavior analysis report by a qualified wildland fire behavior professional is required (qualifications of the professional must be approved by OCFA prior to their design). The report shall include BehavePlus fuel modeling outputs at a minimum.
  - b. A one to two-page Alternative Materials & Methods (AM&M) request letter to OCFA must be submitted with the detailed technical report. The report and letter shall be drafted by the fire behavior professional and submitted with the plans.
  - c. The applicant shall propose compensating factors to demonstrate equivalency to the distance required (see building construction features and fire protection plans below).
  - d. Locate OCFA Guideline A-01 at [www.ocfa.org](http://www.ocfa.org). Use the information within A-01 as a model for drafting your letter. If an alternative means of protection is approved by the OCFA, copy the OCFA signed AM&M request letter onto the plans. You will be required to resubmit the plans again for review and final approval with the letters incorporated into the plans.
2. Building Construction Features and Fire Protection Plans:
  - a. Building Construction Features designed in accordance with Chapter 7A of the California Building Code (CBC)/Residential Code Section 337 are required for all structures.
  - b. Additional compensating factors will also be required. These include but are not limited to: additional building construction features, solid block wall or block wall with tempered glass measuring a minimum of 6 feet on both sides of the wall, increased structure setbacks, special planting designs, rockscapes and plant restrictions, and reduced planting and increased hardscape areas. If a maintenance/ fire access gate is being shown along a solid block wall or block wall with tempered glass, a gate detail shall be provided on the plan that demonstrates the same applied effect as the solid wall.
3. A Fire Protection Plan (OCFA Fee Code PR 146) shall be submitted with or prior to the conceptual FMZ plan and does not take the place of the Fire Master Plan (OCFA Fee Code PR 145). Special 7A code section screening forms are available by request from the OCFA Community Wildfire Mitigation section and shall be placed on the plan to indicate which buildings and lots will meet specific Chapter 7A code sections. OCFA does not review the architectural plans for one- and two-family dwellings. Approved Fire Protection Plans are provided to the applicant and to the Building Department by OCFA, for design and plan review approval of the construction features.
4. Offsite Landowner Recorded Easements (for extreme cases):
  - a. All fuel modification should be located within the property or tract of the protected structure(s).

- b. Proper on-site Fuel Modification design should be set back from the tract or property boundary lines for a distance of 170 feet.
- c. When the required distance is not within the property, as a last option, a legally recorded easements shall be signed by the adjoining property owner and integrated into fuel modification plans, giving rights to the beneficiary to maintain the recorded area in perpetuity. The easement shall show the distance designed on the plans.
- d. The conceptual FMZ plans will not be approved until the legally recorded agreements are copied on the plans.

## Section 5: Special Maintenance Areas and Roadside Protection Zones

The interior landscaped portions of a community and roadsides may not be standard FMZs but are subject to planting restrictions, irrigation, and maintenance requirements. This is to ensure structures are reasonably protected from fire continuing into interior areas of the community and from flying embers that may land and start spot fires.

The Planting Plans submitted with the Fuel Modification Plans shall indicate the plant palette and planting design for these areas. The plans will be evaluated to determine if the areas have the potential to increase the hazard to structures or if they will lessen the hazard.

1. The SMA determination will occur during the Conceptual Fuel Modification review. The review will use the following OCFA initial hazard assessment criteria:
  - a. Roadside planting does not sufficiently protect vital main evacuation routes
  - b. There are no proposed planting restrictions on lots
  - c. Proximity between structures and slopes is such that fire travel is probable
  - d. The area/slope is not proposed to be irrigated
  - e. Plant palette contains plant species from the OCFA undesirable plant list
  - f. Plant spacing arrangement creates "Ladder Fuels"
  - g. Slope/area is contiguous with community perimeter FMZs
  - h. Use of special construction features on all structures throughout the community as required in CBC Chapter 7A and California Residential Code 337
2. When it is determined by the OCFA that the design of an SMA may contribute to an increased wildfire risk, the first 100 feet of the SMA, measured from the structure out, is considered defensible space. The defensible space area shall comply with Attachment 2: Introductory Maintenance Information, Attachment 6: Requirements for Planting Installation in Fuel Modification Zones, Attachment 7: Undesirable and Invasive Plant Species and Attachment 8: Fuel Modification Zone Plant List.

# ATTACHMENT 1

## New Construction Inspection Requirements

The Builder or Developer shall call OCFA Inspection Scheduling at (714) 573-6150 for the three new construction inspections listed below:

1. Prior to dropping of lumber: Schedule a Vegetation Clearance Inspection – the developer/builder shall provide a separation of combustible vegetation for a minimum distance of 100 feet from the location of the structures and lumber stock-pile, generators, and fuel tanks/dispensers. An inspection sign-off and/or release letter to the building department is required.
2. Prior to occupancy of the building: Schedule a Final Fuel Modification Inspection – the FMZ, SMA, and RPZ adjacent to structures must be installed, irrigated, and inspected. This includes physical installation of features identified in the approved precise fuel modification plans including, but not limited to, plant establishment, thinning, irrigation, zone markers, special mitigation measures, and access easements. An OCFA Inspector will provide written approval of completion at the time of this final inspection on the building card. A written disclosure will be requested by the OCFA Inspector indicating that the landowner is aware of the FMZ on their land.
3. Prior to Homeowners Association (HOA) or Landowner Maintenance Acceptance from Developer/Builder: Schedule an Owner Turnover Inspection – This inspection/meeting must happen with OCFA staff prior to accepting the maintenance responsibility from the developer or builder.
  - a. The inspection/meeting must include the following representatives:
    - 1) Landscape architect
    - 2) Community manager or homeowner
    - 3) HOA board member
    - 4) Installing landscape company
    - 5) HOA landscape company
  - b. At the time of turnover, the Fuel Modification areas shall be maintained by the developer or builder as originally installed and approved.
  - c. The accepting landowner is responsible for ensuring the developer or builder sufficiently calculated the amount of revenue needed to perform the on-going maintenance of the FMZs and any SMAs per the approved plans.
  - d. A copy of the approved plans must be provided to the HOA representatives or homeowner at this time.
  - e. The Landscape Architect must convey ongoing maintenance requirements to HOA representatives or homeowner and provide OCFA a document stating the fuel modification has been installed per plan.
  - f. An OCFA written disclosure will be required to be signed by the HOA representatives or homeowner indicating that the HOA or homeowner is aware of the FMZ on their land and that they are aware of the importance of retaining the plans and the ongoing maintenance.
  - g. The responsibility and necessary language for maintenance must also be stated within the CC&Rs (Refer to Attachment 5: Sample CC&R Maintenance Language).

## ATTACHMENT 2

### Introductory Maintenance Information

The FMZ, SMA, RPZ shall be maintained in perpetuity for fire safety purposes and shall cause a covenant to be recorded and referenced in the CC&Rs or on the property title when there is no HOA involvement.

Emergency access covenants shall be identified on the tract map indicating the reservation and restriction for permanent entry by the HOA or Fire Authority.

Select either Option #1 or #2 below

1. Option #1 Maintenance Method:

- a. On-going maintenance shall occur to preserve the originally approved design found on the approved plans. Attachment 6: Requirements for Planting Installation in Fuel Modification Zones spacing is required and only approved planting species and arrangements on the plans are perpetually preserved.
- b. The property owner is responsible for all maintenance of FMZ, SMA, and RPZ.
- c. **Two maintenance activities** shall be performed each year.
  - 1) The first during middle- to late-Spring and the second in early- to middle-Fall.
- d. Other activities include:
  - 1) Grasses cut to 4 inches after annual seeding
  - 2) Dead and dying, all vegetation litter, and Attachment 7: Undesirable and Invasive Plant Species removed from all zones
  - 3) Maintenance of irrigation systems
  - 4) Replacement of dead or dying vegetation with approved species (proposed changes shall be approved by OCFA)
  - 5) Removal of trees and shrubs not on the approved plans
- e. If maintained by an HOA, the landscape maintenance company and/or property manager shall inspect the FMZs throughout the year to identify where specific maintenance activities need to take place.
- f. 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.
- g. The property owner shall retain all approved Fuel Modification Plans. The design and information on the plans shall be used as the basis for maintenance.

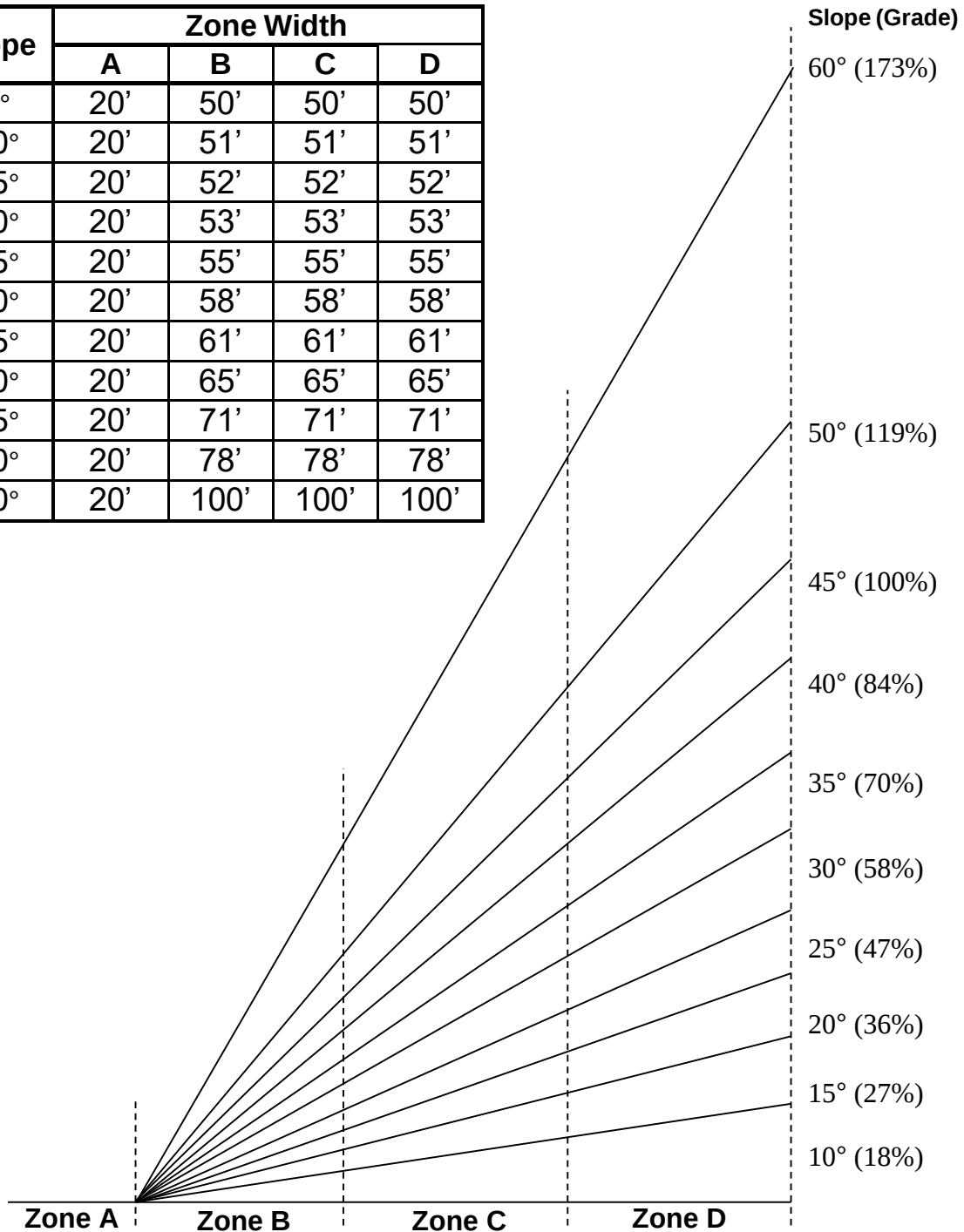
2. Option #2 Maintenance Method (when approved by OCFA):

Ongoing maintenance shall occur per the current posted OCFA Vegetation Management Maintenance Guidelines at [www.ocfa.org](http://www.ocfa.org). Distances of FMZ, SMA, and RPZ will always remain required and will be specific to the approved Fuel Modification Plan.

## ATTACHMENT 3

### Incline Measurement for Selected Slopes (See Attachment 4: Zone Marker Details)

| Slope | Zone Width |      |      |      |
|-------|------------|------|------|------|
|       | A          | B    | C    | D    |
| 0°    | 20'        | 50'  | 50'  | 50'  |
| 10°   | 20'        | 51'  | 51'  | 51'  |
| 15°   | 20'        | 52'  | 52'  | 52'  |
| 20°   | 20'        | 53'  | 53'  | 53'  |
| 25°   | 20'        | 55'  | 55'  | 55'  |
| 30°   | 20'        | 58'  | 58'  | 58'  |
| 35°   | 20'        | 61'  | 61'  | 61'  |
| 40°   | 20'        | 65'  | 65'  | 65'  |
| 45°   | 20'        | 71'  | 71'  | 71'  |
| 50°   | 20'        | 78'  | 78'  | 78'  |
| 60°   | 20'        | 100' | 100' | 100' |

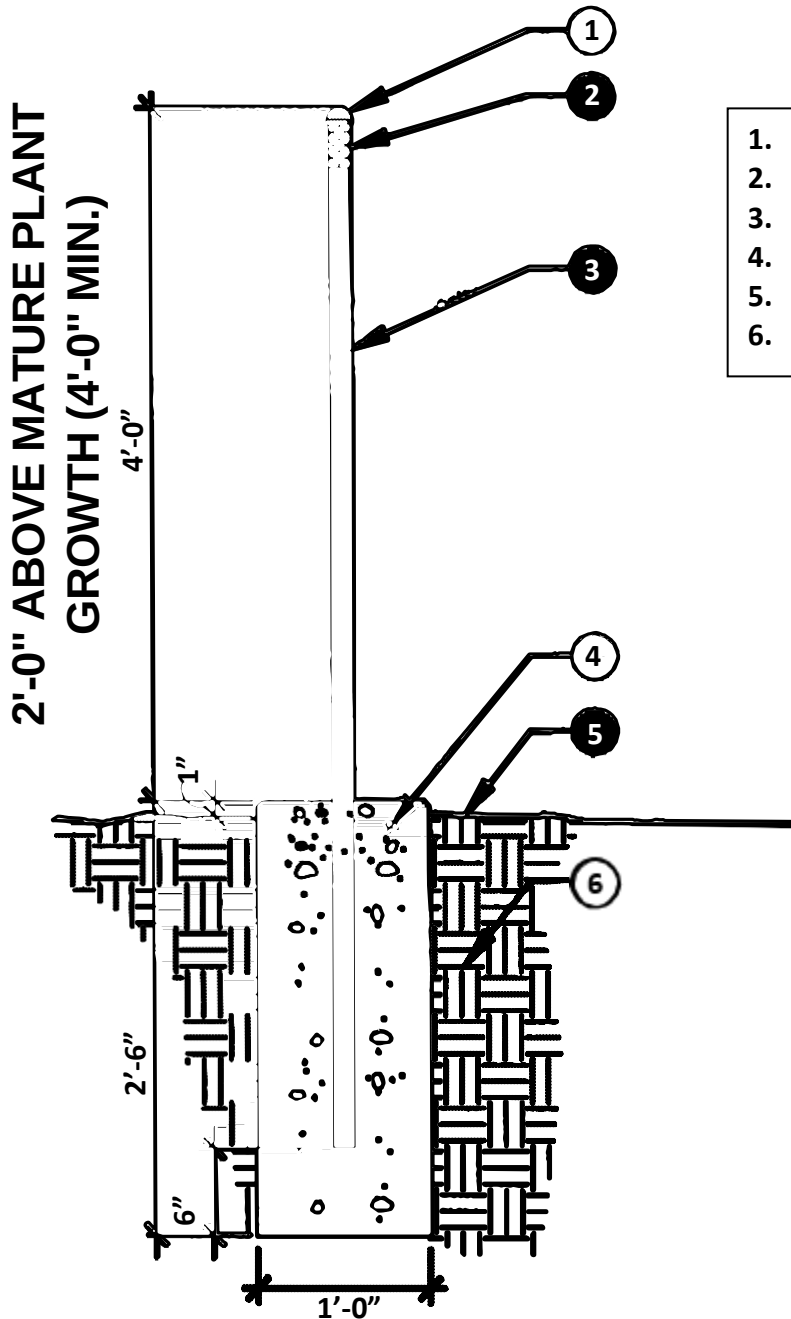


## ATTACHMENT 4

### Zone Marker Details

(Marker Distances Shall Be Increased on Slopes to Accommodate Incline Measurements in Accordance with Attachment 3: Incline Measurement for Selected Slopes)

**Note:** An alternate design may be proposed and approved on a case-by-case basis (e.g., using a large boulder, existing fencing, permanent fixtures, etc.).



## 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, Special Maintenance Areas, Roadway Protection Zone, 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 FMZ 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 an HOA's duty to perform "Fire Prevention Maintenance" (as defined below) for all portions of the Association Property or Common Area that constitute FMZs and designated interior/manufactured slopes to be maintained by the HOA, and of any Owner's duty to comply with any FMZ restrictions applicable to their lot or condominium. Additionally, OCFA shall have the right, but not the obligation, to enforce the HOA's duty to perform such Fire Prevention Maintenance, and to enforce compliance by any owner with any FMZ 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 an HOA 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:
  - a. All portions of the Association Property or Common Area that constitute FMZs or designated interior/manufactured slopes shall be regularly maintained by the HOA on a year-round basis in accordance with the fuel modification plan on file with the property manager for the development.
  - b. The irrigation system for FMZs 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.

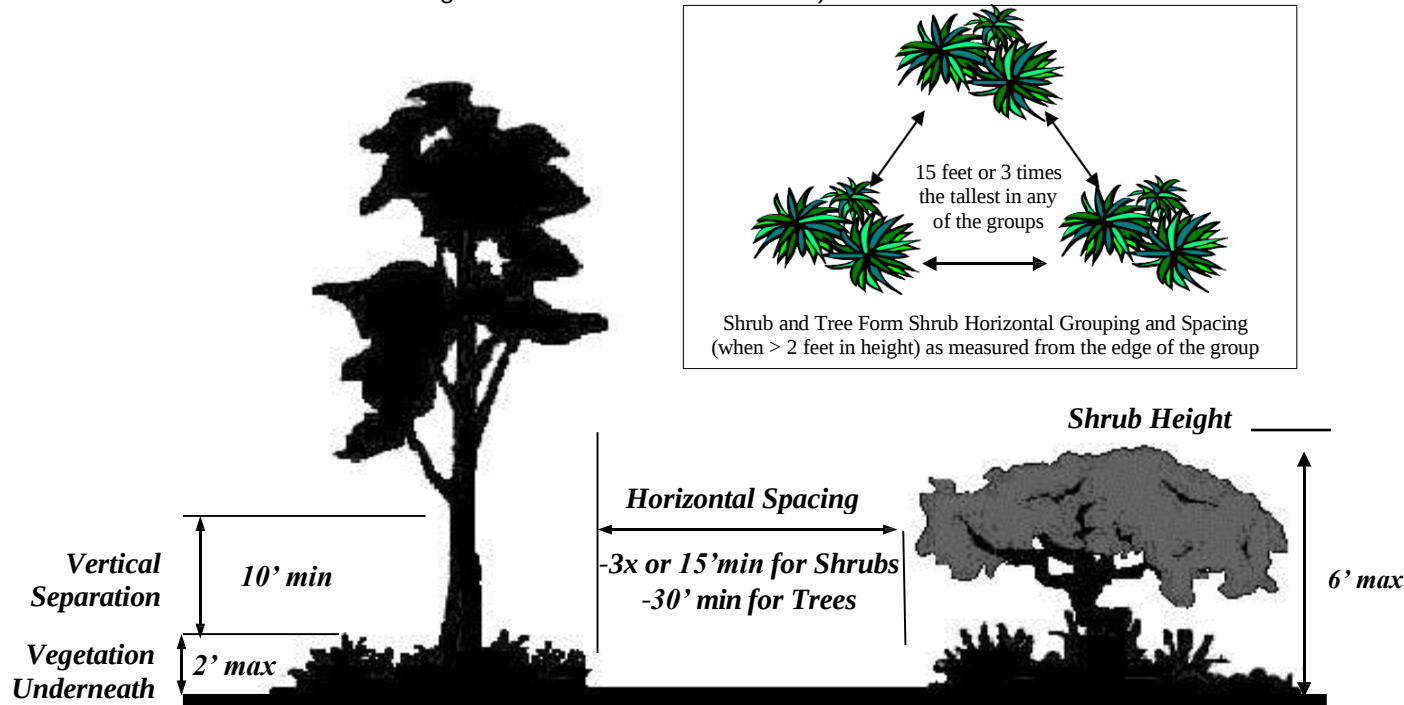
**ADDENDUM “1”**

Enforcement by the Orange County Fire Authority (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 FMZs or designated interior/manufactured slopes in accordance with the fuel modification plan, and of each owner’s duty to comply with any FMZ or designated interior/manufactured slopes restrictions applicable to their 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.). The OCFA shall also have the right, but not the obligation, to enforce compliance by any owner with any FMZ or designated interior/manufactured slopes restrictions applicable to their 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

### Requirements for Planting Installation in Fuel Modification Zones

(For ongoing requirements, see Attachment 2: Introductory Maintenance Information and the OCFA Vegetation Management Maintenance Guidelines)



#### Horizontal Spacing

Vegetation Less than 2 Feet in Height:

- No horizontal spacing or vertical separation is required. Ground cover shall not exceed 2 feet in height. In Zone "B" ground cover shall cover the entire ground between groups of shrubs, trees, or grasses and grasses are not considered ground cover. Limited compartments of grasses are acceptable as approved on the planting plans. In Zone "C/D" grasses can cover the entire area.

Vegetation 2 Feet in Height or Greater:

- Shrub Group Size & Spacing:
  - Shrubs shall not exceed 6ft in height.
  - Groupings of shrubs are limited to a maximum aggregate diameter of 10 feet.
  - Groups of shrubs shall be spaced by the greater of the following two measurements: A distance of 15 feet minimum (or) 3 times the height of the tallest specimen in any of the groups.
  - Groupings of shrubs are not allowed within 30 feet of structures. Only single specimen shrubs are allowed, with a minimum 15 feet of separation between each shrub specimen.
  - No shrubs over 2 feet in height are allowed within 5 feet of combustible structures.
  - No vegetation over 2 feet in height is allowed within 15 feet from the edge of tree canopy(s).
- Tree Group Size & Spacing:
  - Groupings of trees are limited to a maximum number of 3 specimens or less.
  - Groups of trees shall be spaced by a minimum distance of 30 feet regardless of height. In Zone "A," full growth tree branches are not allowed within 10 feet of combustible structures.
  - Horizontal spacing is required inside the group with a minimum 10 feet separation between each tree canopy.

#### Vertical Separation

Trees Less than 15 Feet in Height:

- When the fuel modification zone is within 30 feet of the structure, a vertical separation of 2 feet minimum is required from the vegetation below.

Trees 15 Feet in Height or Greater:

- A vertical separation of 10 feet minimum is required to be maintained from the vegetation below.
- All vegetation located underneath trees, shall be a maximum of 2 feet in height.

## ATTACHMENT 7

### Undesirable and Invasive Plant Species

Certain plants are considered to be undesirable and invasive due to their physical or chemical characteristics. Physical properties that would contribute to high flammability include large amounts of dead material retained within the plant, rough or peeling bark, and the production of copious amounts of litter. Chemical properties include the presence of volatile substances such as oils, resins, wax, and pitch. Certain native plants are notorious for containing these volatile substances.

Plants with these characteristics shall not be planted in any fuel modification zones or anywhere within the area covered by Alternate Methods & Materials agreements (see Section 4: Alternate Materials & Methods). Should these species already exist within these areas, they shall be removed because of their invasiveness or potential threat they pose to structures.

#### PLANT SPECIES (MANDATORY REMOVAL)

| Botanical Name               | Common Name                                |
|------------------------------|--------------------------------------------|
| Adenostoma Fasciculatum      | Chamise                                    |
| Adenostoma Sparsifolium      | Red Shanks                                 |
| Anthemix Cotula              | Mayweed                                    |
| Artemisia Californica        | California Sagebrush                       |
| Brassica Nigra               | Black Mustard                              |
| Brassica Rapa                | Wild Turnip, Yellow Mustard, Field Mustard |
| Cardaria Draba               | Hoary Cress, Perennial Peppergrass         |
| Cirsium Vulgare              | Wild Artichoke                             |
| Conyza Canadensis            | Horseweed                                  |
| Cynara Cardunculus           | Artichoke Thistle                          |
| Eriogonum Fasciculatum       | Common Buckwheat                           |
| Heterothaca Grandiflora      | Telegraph Plant                            |
| Lactuca Serriola             | Prickly Lettuce                            |
| Nassella/Stipa tenuissima    | Mexican Feathergrass                       |
| Nicotiana Bigelevil          | Indian Tobacco                             |
| Nicotiana Glauca             | Tree Tobacco                               |
| Pennisetum alopecuroides     | Fountain Grass                             |
| Ricinus Communis             | Castor Bean Plant                          |
| Sacsola Austails             | Russian Thistle/Tumbleweed                 |
| Salvia Mellifera             | Black Sage                                 |
| Silybum Marianum             | Milk Thistle                               |
| Tamarix Ramosissima          | Salt Cedar                                 |
| Urtica Urens                 | Burning Nettle                             |
| <b>Ornamental:</b>           |                                            |
| Arecaceae (all palm species) | Palms                                      |
| Cycas Revoluta               | Sago Palms                                 |
| Cortaderia                   | Pampas Grass                               |
| Cupressus sp                 | Cypress                                    |
| Eucalyptus sp                | Eucalyptus                                 |
| Juniperus sp                 | Juniper                                    |
| Pinus sp                     | Pine                                       |

## ATTACHMENT 8

### Fuel Modification Zone Plant List

### Symbol Legend

- X = Plant species prohibited in wet and dry FMZs adjacent to reserve lands. Acceptable on all other fuel modification locations and zones.
- W = Plant species appropriate for use in wet FMZs adjacent to reserve lands. Acceptable in all other wet and irrigated dry (manufactured slopes) fuel modification locations and zones.
- o = Plant species native to Orange County. Acceptable in all fuel modification wet and dry zones in all locations.
- N = Plant species acceptable on a limited basis (maximum 30% of the area) in wet FMZs adjacent to reserve lands. Acceptable on all other FMZs.
- \* = If locally collected.
- \*\* = Not native but can be used in all zones.
- n = Plant species acceptable on a limited use basis. Refer to qualification requirements following plant palette.

Yellow row = Plant species susceptible to Invasive Shot Hole Borers (ISHB) infestation.

|     | Code | Botanical Name                | Common Name          | Plant Form   |
|-----|------|-------------------------------|----------------------|--------------|
| 1.  | W    | Abelia x grandiflora          | Glossy Abelia        | Shrub        |
| 2.  | n    | Acacia redolens desert carpet | Desert Carpet        | Ground Cover |
| 3.  | o    | Acer macrophyllum             | Big Leaf Maple       | Tree         |
| 4.  | X    | Achillea millefolium          | Common Yarrow        | Low Shrub    |
| 5.  | W    | Achillea tomentosa            | Woolly Yarrow        | Low Shrub    |
| 6.  | X    | Aeonium decorum               | Aeonium              | Ground cover |
| 7.  | X    | Aeonium simsii                | no common name       | Ground cover |
| 8.  | W    | Agave attenuata               | Century Plant        | Succulent    |
| 9.  | W    | Agave shawii                  | Shaw's Century Plant | Succulent    |
| 10. | N    | Agave victoriae-reginae       | no common name       | Ground Cover |
| 11. | X    | Ajuga reptans                 | Carpet Bugle         | Ground Cover |
| 12. | W    | Alnus cordata                 | Italian Alder        | Tree         |
| 13. | o    | Alnus rhombifolia             | White Alder          | Tree         |
| 14. | N    | Aloe arborescens              | Tree Aloe            | Shrub        |
| 15. | N    | Aloe aristata                 | no common name       | Ground Cover |
| 16. | N    | Aloe brevifoli                | no common name       | Ground Cover |
| 17. | W    | Aloe Vera                     | Medicinal Aloe       | Succulent    |
| 18. | W    | Alogyne huegeii               | Blue Hibiscus        | Shrub        |
| 19. | o    | Ambrosia chammissonis         | Beach Bur-Sage       | Perennial    |

|     | <b>Code</b> | <b>Botanical Name</b>                    | <b>Common Name</b>        | <b>Plant Form</b>  |
|-----|-------------|------------------------------------------|---------------------------|--------------------|
| 20. | o           | Amorpha fruticosa                        | Western False Indigobush  | Shrub              |
| 21. | W           | Anigozanthus flavidus                    | Kangaroo Paw              | Perennial/accent   |
| 22. | o           | Antirrhinum nuttalianum ssp.             | no common name            | Subshrub           |
| 23. | X           | Aptenia cordifolia x 'Red Apple'         | Red Apple Aptenia         | Ground cover       |
| 24. | W           | Arbutus unedo                            | Strawberry Tree           | Tree               |
| 25. | W           | Arctostaphylos 'Pacific Mist'            | Pacific Mist Manzanita    | Ground Cover       |
| 26. | W           | Arctostaphylos edmundsii                 | Little Sur Manzanita      | Ground Cover       |
| 27. | o           | Arctostaphylos glandulosa ssp.           | Eastwood Manzanita        | Shrub              |
| 28. | W           | Arctostaphylos hookeri 'Monterey Carpet' | Monterey Carpet Manzanita | Low Shrub          |
| 29. | N           | Arctostaphylos pungens                   | no common name            | Shrub              |
| 30. | N           | Arctostaphylos refugioensis              | Refugio Manzanita         | Shrub              |
| 31. | W           | Arctostaphylos uva-ursi                  | Bearberry                 | Ground Cover       |
| 32. | W           | Arctostaphylos x 'Greensphere'           | Greensphere Manzanita     | Shrub              |
| 33. | N           | Artemisia caucasica                      | Caucasian Artemisia       | Ground Cover       |
| 34. | X           | Artemisia pycnocephala                   | Beach Sagewort            | Perennial          |
| 35. | X           | Atriplex canescens                       | Four-Wing Saltbush        | Shrub              |
| 36. | X           | Atriplex lentiformis ssp. breweri        | Brewer Saltbush           | Shrub              |
| 37. | o           | Baccharis emoyi                          | Emory Baccharis           | Shrub              |
| 38. | W o         | Baccharis pilularis ssp. Consanguinea    | Chaparral Bloom           | Shrub              |
| 39. | X           | Baccharis pilularis var. pilularis       | Twin Peaks #2             | Ground Cover       |
| 40. | o           | Baccharis salicifolia                    | Mulefat                   | Shrub              |
| 41. | N           | Baileya Multiradiata                     | Desert Marigold           | Ground Cover       |
| 42. | N n         | Bougainvillea spectabilis                | Bougainvillea             | Shrub              |
| 43. | o           | Brickellia californica                   | no common name            | Subshrub           |
| 44. | W o         | Bromus carinatus                         | California Brome          | Grass              |
| 45. | o           | Camissonia cheiranthifolia               | Beach Evening Primrose    | Perennial Shrub    |
| 46. | N           | Carissa macrocarpa                       | Green Carpet Natal Plum   | Ground Cover/Shrub |
| 47. | X           | Carpobrotus chilensis                    | Sea Fig Ice Plant         | Ground Cover       |
| 48. | W           | Ceanothus gloriosus 'Point Reyes'        | Point Reyes Ceanothus     | Shrub              |
| 49. | W           | Ceanothus griseus 'Louis Edmunds'        | Louis Edmunds Ceanothus   | Shrub              |
| 50. | W           | Ceanothus griseus horizontalis           | Yankee Point              | Ground Cover       |
| 51. | W           | Ceanothus griseus var. horizontalis      | Carmel Creeper Ceanothus  | Shrub              |
| 52. | W           | Ceanothus griseus var. horizontalis      | Yankee Point Ceanothus    | Shrub              |
| 53. | o           | Ceanothus megacarpus                     | Big Pod Ceanothus         | Shrub              |
| 54. | W           | Ceanothus prostratus                     | Squaw Carpet Ceanothus    | Shrub              |
| 55. | o           | Ceanothus spinosus                       | Green Bark Ceanothus      | Shrub              |
| 56. | W           | Ceanothus verrucosus                     | Wart-Stem Ceanothus       | Shrub              |
| 57. | W           | Cerastium tomentosum                     | Snow-in-Summer            | Ground cover/Shrub |
| 58. | W           | Ceratonia siliqua                        | Carob                     | Tree               |
| 59. | W           | Cercis occidentalis                      | Western Redbud            | Shrub/Tree         |

|      | Code | Botanical Name                            | Common Name              | Plant Form         |
|------|------|-------------------------------------------|--------------------------|--------------------|
| 60.  | X    | Chrysanthemum leucanthemum                | Oxeye Daisy              | Ground Cover       |
| 61.  | W    | Cistus Crispus                            | no common name           | Ground Cover       |
| 62.  | W    | Cistus hybridus                           | White Rockrose           | Shrub              |
| 63.  | W    | Cistus incanus                            | no common name           | Shrub              |
| 64.  | W    | Cistus incanus ssp. Corsicus              | no common name           | Shrub              |
| 65.  | W    | Cistus salviifolius                       | Sageleaf Rockrose        | Shrub              |
| 66.  | W    | Cistus x purpureus                        | Orchid Rockrose          | Shrub              |
| 67.  | W    | Citrus species                            | Citrus                   | Tree               |
| 68.  | o    | Clarkia bottae                            | Showy Fairwell to Spring | Annual             |
| 69.  | o    | Cneoridium dumosum                        | Bushrue                  | Shrub              |
| 70.  | o    | Collinsia heterophyllia                   | Chinese Houses           | Annual             |
| 71.  | W o  | Comarostaphylis diversifolia              | Summer Holly             | Shrub              |
| 72.  | N    | Convolvulus cneorum                       | Bush Morning Glory       | Shrub              |
| 73.  | W    | Coprosma kirkii                           | Creeping Coprosma        | Ground Cover/Shrub |
| 74.  | W    | Coprosma pumila                           | Prostrate Coprosma       | Low shrub          |
| 75.  | o    | Coreopsis californica                     | California Coreopsis     | Annual             |
| 76.  | W    | Coreopsis lanceolata                      | Coreopsis                | Ground Cover       |
| 77.  | N    | Corea pulchella                           | Australian Fuschia       | Ground Cover       |
| 78.  | W    | Cotoneaster buxifolius                    | no common name           | Shrub              |
| 79.  | W    | Cotoneaster congestus 'Likiang'           | Likiang Cotoneaster      | Ground Cover/Vine  |
| 80.  | W    | Cotoneaster aprneyi                       | no common name           | Shrub              |
| 81.  | X    | Crassula lactea                           | no common name           | Ground Cover       |
| 82.  | X    | Crassula multicava                        | no common name           | Ground Cover       |
| 83.  | X    | Crassula ovata                            | Jade Tree                | Shrub              |
| 84.  | X    | Crassula tetragona                        | no common name           | Ground Cover       |
| 85.  | W o  | Croton californicus                       | California Croton        | Ground Cover       |
| 86.  | X    | Delosperma 'alba'                         | White trailing Ice Plant | Ground Cover       |
| 87.  | o    | Dendromecon rigida                        | Bush Poppy               | Shrub              |
| 88.  | o    | Dichelostemma capitatum                   | Blue Dicks               | Herb               |
| 89.  | N    | Distinctis buccinatoria                   | Blood-Red Trumpet Vine   | Vine/Climbing vine |
| 90.  | N    | Dodonaea viscosa                          | Hopseed Bush             | Shrub              |
| 91.  | X    | Drosanthemum floribundum                  | Rosea Ice Plant          | Ground Cover       |
| 92.  | X    | Drosanthemum hispidum                     | no common name           | Ground Cover       |
| 93.  | X    | Drosanthemum speciosus                    | Dewflower                | Ground Cover       |
| 94.  | o    | Dudleya lanceolata                        | Lance-leaved Dudleya     | Succulent          |
| 95.  | o    | Dudleya pulverulenta                      | Chalk Dudleya            | Succulent          |
| 96.  | W    | Elaeagnus pungens                         | Silverberry              | Shrub              |
| 97.  | o    | Encelia californica                       | California Encelia       | Small Shrub        |
| 98.  | o *  | Epilobium canum [Zauschneria californica] | Hoary California Fuschia | Shrub              |
| 99.  | o    | Eriastrum Sapphirinum                     | Mojave Woolly Star       | Annual             |
| 100. | N    | Eriobotrya japonica                       | Loquat                   | Tree               |

|      | Code | Botanical Name               | Common Name                     | Plant Form         |
|------|------|------------------------------|---------------------------------|--------------------|
| 101. | o    | Eriodictyon trichocalyx      | Yerba Santa                     | Shrub              |
| 102. | W o  | Eriophyllum confertiflorum   | no common name                  | Shrub              |
| 103. | W    | Erythrina species            | Coral Tree                      | Tree               |
| 104. | N    | Escallonia species           | Several varieties               | Shrub              |
| 105. | W o  | Eschscholzia californica     | California Poppy                | Flower             |
| 106. | X    | Eschscholzia mexicana        | Mexican Poppy                   | Herb               |
| 107. | N    | Euonymus fortunei            | Winter Creeper Euonymus         | Ground Cover       |
| 108. | N    | Feijoa sellowiana            | Pineapple Guava                 | Shrub/Tree         |
| 109. | N    | Fragaria chiloensis          | Wild Strawberry/Sand Strawberry | Ground Cover       |
| 110. | o    | Frankenia salina             | Alkali Heath                    | Ground Cover       |
| 111. | W    | Fremontodendron californicum | California Flannelbush          | Shrub              |
| 112. | X    | Gaillardia x grandiflora     | Blanketflower                   | Ground Cover       |
| 113. | W    | Galvezia speciosa            | Bush Snapdragon                 | Shrub              |
| 114. | W    | Garrya ellipta               | Silktassel                      | Shrub              |
| 115. | X    | Gazania hybrids              | South African Daisy             | Ground Cover       |
| 116. | X    | Gazania rigens leucolaena    | Training Gazania                | Ground Cover       |
| 117. | o    | Gilia capitata               | Globe Gilia                     | Perennial          |
| 118. | W    | Gilia leptantha              | Showy Gilia                     | Perennial          |
| 119. | W    | Gilia tricolor               | Bird's Eyes                     | Perennial          |
| 120. | W    | Ginkgo biloba                | Maidenhair Tree                 | Tree               |
| 121. | o    | Gnaphalium californicum      | California Everlasting          | Annual             |
| 122. | W    | Grewia occidentalis          | Starflower                      | Shrub              |
| 123. | o    | Grindelia stricta            | Gum Plant                       | Ground Cover       |
| 124. | N n  | Hakea suaveolens             | Sweet Hakea                     | Shrub              |
| 125. | W    | Hardenbergia comptoniana     | Lilac Vine                      | Shrub              |
| 126. | N    | Heliathemum muutabile        | Sunrose                         | Ground Cover/Shrub |
| 127. | o    | Helianthemum scoparium       | Rush Rose                       | Shrub              |
| 128. | o    | Heliotropium curassavicum    | Salt Heliotrope                 | Ground Cover       |
| 129. | X    | Helix Canariensis            | English Ivy                     | Ground Cover       |
| 130. | W    | Hesperaloe parviflora        | Red Yucca                       | Perennial          |
| 131. | o n  | Heteromeles arbutifolia      | Toyon                           | Shrub              |
| 132. | X    | Hypericum calycium           | Aaron's Beard                   | Shrub              |
| 133. | N    | Iberis sempervirens          | Edging Candytuft                | Ground Cover       |
| 134. | N    | Iberis umbellatum            | Globe Candytuft                 | Ground Cover       |
| 135. | o    | Isocoma menziesii            | Coastal Goldenbush              | Small Shrub        |
| 136. | o    | Isomeris arborea             | Bladderpod                      | Shrub              |
| 137. | W    | Iva hayesiana                | Poverty Weed                    | Ground Cover       |
| 138. | N    | Juglans californica          | California Black Walnut         | Tree               |
| 139. | o    | Juncus acutus                | Spiny Rush                      | Perennial          |
| 140. | o    | Keckiella antirrhinoides     | Yellow Bush Penstemon           | Subshrub           |
| 141. | o    | Keckiella cordifolia         | Heart Leaved Penstemon          | Subshrub           |

|      | Code | Botanical Name                              | Common Name                                        | Plant Form       |
|------|------|---------------------------------------------|----------------------------------------------------|------------------|
| 142. | o    | Keckiella ternata                           | Blue Stemmed Bush Penstemon                        | Subshrub         |
| 143. | W    | Kniphofia uvaria                            | Red Hot Poker                                      | Perennial        |
| 144. | W    | Lagerstroemia indica                        | Crape Myrtle                                       | Tree             |
| 145. | W    | Lagunaria patersonii                        | Primrose Tree                                      | Tree             |
| 146. | X    | Lampranthus aurantiacus                     | Bush Ice Plant                                     | Ground Cover     |
| 147. | X    | Lampranthus filicaulis                      | Redondo Creeper                                    | Ground Cover     |
| 148. | X    | Lampranthus spectabilis                     | Trailing Ice Plant                                 | Ground Cover     |
| 149. | W    | Lantana camara cultivars                    | Yellow Sage                                        | Shrub            |
| 150. | W    | Lantana montevidensis                       | Trailing Lantana                                   | Shrub            |
| 151. | o    | Lasthenia californica                       | Dwarf Goldfields                                   | Annual           |
| 152. | W    | Lavandula dentata                           | French Lavender                                    | Shrub            |
| 152. | W    | Leptospermum laevigatum                     | Australian Tea Tree                                | Shrub            |
| 154. | W    | Leucophyllum frutescens                     | Texas Ranger                                       | Shrub            |
| 155. | o    | Leymus condensatus                          | Giant Wild Rye                                     | Large Grass      |
| 156. | N    | Ligustrum japonicum                         | Texas privet                                       | Shrub            |
| 157. | X    | Limonium pectinatum                         | no common name                                     | Ground Cover     |
| 158. | X    | Limonium perezii                            | Sea Lavender                                       | Shrub            |
| 159. | W n  | Liquidambar styraciflua                     | American Sweet Gum                                 | Tree             |
| 160. | W    | Liriodendron tulipifera                     | Tulip Tree                                         | Tree             |
| 161. | X    | Lonicera japonica 'Halliana'                | Hall's Japanese Honeysuckle                        | Vining Shrub     |
| 162. | o    | Lonicera subspicata                         | Wild Honeysuckle                                   | Vining Shrub     |
| 163. | X    | Lotus corniculatus                          | Bird's Foot Trefoil                                | Ground Cover     |
| 164. | o    | Lotus hermannii                             | Northern Woolly Lotus                              | Perennial        |
| 165. | o    | Lotus scoparius                             | Deerweed                                           | Shrub            |
| 166. | W    | Lupinus arizonicus                          | Desert Lupine                                      | Annual           |
| 167. | W    | Lupinus benthamii                           | Spider Lupine                                      | Annual           |
| 168. | o    | Lupinus bicolor                             | Sky Lupine                                         | Flowering annual |
| 169. | o    | Lupinus sparsiflorus                        | Loosely Flowered Annual Lupine or Coulter's Lupine | Annual           |
| 170. | W    | Lyonothamnus floribundus ssp. Asplenifolius | Fernleaf Ironwood                                  | Tree             |
| 171. | W    | Macadamia integrifolia                      | Macadamia Nut                                      | Tree             |
| 172. | W    | Mahonia aquifolium 'Golden Abundance'       | Golden Abundance Oregon Grape                      | Shrub            |
| 173. | W    | Mahonia nevenii                             | Nevin Mahonia                                      | Shrub            |
| 174. | o    | Malacothamnus fasciculatus                  | Chapparal Mallow                                   | Shrub            |
| 175. | X    | Malephora luteola                           | Training Ice Plant                                 | Ground Cover     |
| 176. | W    | Maytenus boaria                             | Mayten Tree                                        | Tree             |
| 177. | W    | Melaleuca nesophila                         | Pink Melaleuca                                     | Shrub            |
| 178. | N    | Metrosideros excelsus                       | New Zealand Christmas Tree                         | Tree             |
| 179. | o *  | Mimulus species                             | Monkeyflower                                       | Flower           |
| 180. | o    | Mirabilis californica                       | Wishbone Bush                                      | Perennial        |
| 181. | N    | Myoporum debile                             | no common name                                     | Shrub            |

|      | <b>Code</b> | <b>Botanical Name</b>             | <b>Common Name</b>          | <b>Plant Form</b> |
|------|-------------|-----------------------------------|-----------------------------|-------------------|
| 182. | W           | Myoporum insulare                 | Boobyalla                   | Shrub             |
| 183. | W           | Myoporum parvifolium              | no common name              | Ground Cover      |
| 184. | W           | Myoporum 'Pacifcum'               | no common name              | Ground Cover      |
| 185. | o           | Nassella (stipa) lepidra          | Foothill Needlegrass        | Ground Cover      |
| 186. | o           | Nassella (stipa) pulchra          | Purple Needlegrass          | Ground Cover      |
| 187. | o           | Nemophila menziesii               | Baby Blue Eyes              | Annual            |
| 188. | X           | Nerium Oleander                   | Oleander                    | Shrub             |
| 189. | o           | Nolina cismontana                 | Chapparal Nolina            | Shrub             |
| 190. | N           | Nolina species                    | Mexican Grasstree           | Shrub             |
| 191. | W           | Oenothera belandieri              | Mexican Evening Primrose    | Ground Cover      |
| 192. | N           | Oenothera hookeri                 | California Evening Primrose | Flower            |
| 193. | W           | Oenothera speciosa                | Show Evening Primrose       | Perennial         |
| 194. | X           | Ophiopogon japonicus              | Mondo Grass                 | Ground Cover      |
| 195. | o *         | Opuntia littoralis                | Prickly Pear                | Cactus            |
| 196. | o *         | Opuntia oricola                   | Oracle Cactus               | Cactus            |
| 197. | o *         | Opuntia prolifera                 | Coast Cholla                | Cactus            |
| 198. | W           | Osmanthus fragrans                | Sweet Olive                 | Shrub             |
| 199. | X           | Osteospermum fruticosum           | Training African Daisy      | Ground Cover      |
| 200. | X           | Parkinsonia aculeata              | Mexican Palo Verde          | Tree              |
| 201. | W           | Pelargonium peltatum              | Ivy Geranium                | Ground Cover      |
| 202. | X           | Penstemon species                 | Beard Tongue                | Shrub             |
| 203. | W           | Photinia fraseria                 | no common name              | Shrub             |
| 204. | W           | Pistacia chinensis                | Chinese Pistache            | Tree              |
| 205. | X           | Pittosporum undulatum             | Victorian Box               | Tree              |
| 206. | o           | Plantago erecta                   | California Plantain         | Annual            |
| 207. | **          | Plantago insularis                | Woolly Plantain             | Annual            |
| 208. | X           | Plantago sempervirens             | Evergreen Plantain          | Ground Cover      |
| 209. | W           | Plantanus racemosa                | California Sycamore         | Tree              |
| 210. | W           | Plumbago auriculata               | Plumbago Cape               | Shrub             |
| 211. | o           | Populus fremontii                 | Western Cottonwood          | Tree              |
| 212. | X           | Portulacaria afra                 | Elephant's Food             | Shrub             |
| 213. | o           | Potentilla glandulosa             | Sticky Cinquefoil           | Subshrub          |
| 214. | X           | Potentilla tabernaemontanii       | Spring Cinquefoil           | Ground Cover      |
| 215. | X           | Prunus caroliniana                | Carolina Cherry Laurel      | Shrub/Tree        |
| 216. | o           | Prunus ilicifolia ssp. ilicifolia | Holly Leafed Cherry         | Shrub             |
| 217. | X           | Prunus lyonii                     | Catalina Cherry             | Shrub/Tree        |
| 218. | N           | Punica granatum                   | Pomegranate                 | Shrub/Tree        |
| 219. | W           | Puya species                      | Puya                        | Succulent/Shrub   |
| 220. | W           | Pyracantha species                | Firethorn                   | Shrub             |
| 221. | o           | Quercus agrifolia                 | Coast Live Oak              | Tree              |
| 222. | o n *       | Quercus berberidifolia            | California Scrub Oak        | Shrub             |
| 223. | o n *       | Quercus dumosa                    | Coastal Scrub Oak           | Shrub             |

|      | Code | Botanical Name                                   | Common Name                  | Plant Form       |
|------|------|--------------------------------------------------|------------------------------|------------------|
| 224. | X    | <i>Quercus engelmannii</i>                       | Engelmann Oak                | Tree             |
| 225. | X    | <i>Quercus suber</i>                             | Cork Oak                     | Tree             |
| 226. | X    | <i>Rhamnus alaternus</i>                         | Italian Buckthorn            | Shrub            |
| 227. | o    | <i>Rhamnus californica</i>                       | California Coffee Berry      | Shrub            |
| 228. | o    | <i>Rhamnus crocea</i>                            | Redberry                     | Shrub            |
| 229. | o    | <i>Rhamnus crocea</i> ssp. <i>ilicifolia</i>     | Hollyleaf Redberry           | Shrub            |
| 230. | N    | <i>Raphiolepis species</i>                       | Indian Hawthorne             | Shrub            |
| 231. | o    | <i>Rhus integrifolia</i>                         | Lemonade Berry               | Shrub            |
| 232. | N    | <i>Searsia Lancea</i>                            | African Sumac                | Tree             |
| 233. | o n  | <i>Rhus ovata</i>                                | Sugar bush                   | Shrub            |
| 234. | o    | <i>Ribes aureum</i>                              | Golden Currant               | Shrub            |
| 235. | o    | <i>Ribes indecorum</i>                           | White Flowering Currant      | Shrub            |
| 236. | o    | <i>Ribes speciosum</i>                           | Fuschia Flowering Gooseberry | Shrub            |
| 237. | W    | <i>Ribes viburnifolium</i>                       | Evergreen currant            | Shrub            |
| 238. | o *  | <i>Romneya coulteri</i>                          | Matilija Poppy               | Shrub            |
| 239. | X    | <i>Romneya coulteri</i> 'White Cloud'            | White Cloud Matilija Poppy   | Shrub            |
| 240. | W n  | <i>Rosmarinus officinalis</i>                    | Rosemary                     | Shrub            |
| 241. | W n  | <i>Salvia greggii</i>                            | Autums Sage                  | Shrub            |
| 242. | W n  | <i>Salvia sonomensis</i>                         | Creeping Sage                | Ground Cover     |
| 243. | o    | <i>Sambucus mexicana</i>                         | Mexican Elderberry           | Tree             |
| 244. | W    | <i>Santolina chamaecyparissus</i>                | Lavender Cotton              | Ground Cover     |
| 245. | W    | <i>Santolina virens</i>                          | Green Lavender Cotton        | Shrub            |
| 246. | o    | <i>Satureja chandleri</i>                        | San Miguel Savory            | Perennial        |
| 247. | o    | <i>Scirpis scutus</i>                            | Hard Stem Bulrush            | Perennial        |
| 248. | o    | <i>Scirpus californicus</i>                      | California Bulrush           | Perennial        |
| 249. | X    | <i>Sedum acre</i>                                | Goldmoss Sedum               | Ground Cover     |
| 250. | X    | <i>Sedum album</i>                               | Green Stonecrop              | Ground Cover     |
| 251. | X    | <i>Sedum confusum</i>                            | no common name               | Ground Cover     |
| 252. | X    | <i>Sedum lineare</i>                             | no common name               | Ground Cover     |
| 253. | X    | <i>Sedum x rubrotinctum</i>                      | Pork and Beans               | Ground Cover     |
| 254. | X    | <i>Senecio serpens</i>                           | no common name               | Ground Cover     |
| 255. | o    | <i>Sisyrinchium bellum</i>                       | Blue Eyed Grass              | Ground Cover     |
| 256. | o    | <i>Solanum douglasii</i>                         | Douglas Nightshade           | Shrub            |
| 257. | o    | <i>Solanum xanthii</i>                           | Purple Nightshade            | Perennial        |
| 258. | W    | <i>Stenocarpus sinuatus</i>                      | Firewheel Tree               | Tree             |
| 259. | W    | <i>Strelitzia nicolai</i>                        | Giant Bird of Paradise       | Perennial        |
| 260. | W    | <i>Strelitzia reginae</i>                        | Bird of Paradise             | Perennial        |
| 261. | o    | <i>Symphoricarpos mollis</i>                     | Creeping Snowberry           | Shrub            |
| 262. | W    | <i>Tecoma stans</i> ( <i>Stenolobium stans</i> ) | Yellow Bells                 | Shrub/Small Tree |
| 263. | X    | <i>Tecomaria capensis</i>                        | Cape Honeysuckle             | Ground Cover     |
| 264. | N    | <i>Teucrium chamedrys</i>                        | Germander                    | Ground Cover     |
| 265. | N    | <i>Thymus serpyllum</i>                          | Lemon Thyme                  | Ground Cover     |

|      | <b>Code</b> | <b>Botanical Name</b>           | <b>Common Name</b>  | <b>Plant Form</b>       |
|------|-------------|---------------------------------|---------------------|-------------------------|
| 266. | N           | Trachelospermum jasminoides     | Star Jasmine        | Shrub                   |
| 267. | o           | Trichostema lanatum             | Woolly Blue Curls   | Shrub                   |
| 268. | X           | Trifolium hirtum 'Hyron'        | Hyron Rose Clover   | Ground Cover            |
| 269. | X           | Trifolium fraserum 'O'Connor's' | O'Connor's Legume   | Ground Cover            |
| 270. | o           | Umbellularia californica        | California Laurel   | Tree                    |
| 271. | o           | Verbena lasiostachys            | Western Vervain     | Perennial               |
| 272. | N           | Verbena peruviana               | no common name      | Ground Cover            |
| 273. | X           | Verbena species                 | Verbena             | Ground Cover            |
| 274. | X           | Vinca minor                     | Dwarf Periwinkle    | Ground Cover            |
| 275. | o           | Vitis girdiana                  | Desert Wild Grape   | Vine                    |
| 276. | X           | Vulpia myuros 'Zorro'           | Zorro Annual Fescue | Grass                   |
| 277. | W           | Westringia fruticosa            | no common name      | Shrub                   |
| 278. | W           | Xanthorrhoea species            | Grass Tree          | Perennial, Accent shrub |
| 279. | W           | Xylosma congestum               | Shiny Xylosma       | Shrub                   |
| 280. | X           | Yucca Species                   | Yucca               | Shrub                   |
| 281. | o           | Yucca whipplei                  | Yucca               | Shrub                   |

## Approved Plant Palette Qualification Statements for Select Plant Species

- 2. Acacia redolens desert carpet:** May be used in the furthest ½ of the “B” FMZ from the structure, and no closer than 25 feet from the edge of the zone nearest the structure. The plants may be planted with a minimum spacing at 10 feet on center, maximum spacing in meandering zones not to exceed a mature width of 24 feet and mature height of 24 inches. If acacia redolens desert carpet is used in the roadway protection zone, it shall be maintained at a minimum of 25 feet from the curb face. At the time of precise plan review, the mature spacing shall be accounted for.
- 42. Bougainvillea spectabilis (procumbent varieties):** Procumbent to mounding varieties may be used in the mid “B” FMZ. The plants may be planted in groups at 6 feet on center spacing not to exceed eight plants per group. Mature spacing between individual plants or groups shall be at a 30 foot minimum.
- 125. Hakea suaveolens:** May be used in the mid “B” FMZ. The plants shall be used as single specimens with mature spacing between plants of 30 feet minimum.
- 132. Heteromeles arbutifolia:** May be used in the mid to lower “B” FMZ. The plants may be planted in groups of up to 3 plants per group. Mature spacing between individual plants or groups shall be at a 30 foot minimum.
- 160. Liquidambar styraciflua:** May be used in the mid “B” FMZ. The plant shall be used as single specimens with mature spacing between trees and a 30 foot minimum.
- 223. Quercus berberidifolia:** Additional information may be required as directed by the OCFA unless approved on the plan as shown.
- 224. Quercus dumosa:** May be used in the mid to lower “B” FMZ. The plants may be planted in groups of up to 3 plants per group. Mature spacing between individual plants or groups shall be at a 30 foot minimum.
- 234. Rhus ovata & Rhus integrifolia:** May be used in the mid to lower “B” FMZ of inland areas only. The plants may be planted in groups of up to 3 plants per group. Mature spacing between individual plants or groups shall be at a 30 foot minimum.
- 241. Rosmarinus officinalis:** When used as a ground cover, it shall be maintained at 2 feet in height. Additional information may be required as directed by the OCFA.
- 242. Salvia greggii:** Additional information may be required as directed by the OCFA unless approved on the plan as shown.
- 243. Salvia sonomensis:** May be used in the mid to upper “B” FMZ. The plants may be planted in groups of up to 3 plants per group. Mature spacing between individual plants or groups shall be at a 15 foot minimum.

## **Noteworthy changes to the 2021 International Building Codes (IBC)**

<https://codes.iccsafe.org/content/IBC2021P1>

This code applies to all buildings except detached one- and two-family dwellings and townhouses up to three stories. The 2021 IBC® contains many important changes such as:

- Puzzle rooms (escape rooms) are now defined and regulated as special amusement areas, requiring compliance with Section 411 and special means of egress requirements.
- For the purposes of determining the allowable number of control areas in a building, each portion separated by one or more fire walls is now considered as a separate building.
- In Group E occupancies, enhanced classroom acoustics in compliance with ICC A117.1 are to be provided in all classrooms having of volume of 20,000 cubic feet or less.
- The requirements for metal composite materials and systems (MCM) installed on the exterior walls of Types I, II, III and IV construction were simplified and sprinkler allowances were deleted
- The use of intermodal shipping containers as buildings is now specifically addressed through provisions intended to supplement existing applicable IBC requirements.
- Automatic sprinkler protection is now required in Group S-2 open parking garages where any fire area exceeds 48,000 square feet.
- The 2017 edition of ICC A117.1 was adopted.
- Parapets of a minimum height are now required for aggregate-surfaced roofs to prevent blow-off.
- Mixed occupancy buildings with assembly spaces are placed in Risk Category III when the total public assembly occupant load is greater than 2500 people.
- The 2021 IBC snow map is updated to match ASCE 7-16 snow maps by adding a reference to ASCE 7 snow tables in states with large case study areas.
- Secondary rain loads are updated to be consistent with ASCE 7.
- Special inspection requirements were added to address the anchorage and connection of mass timber structural elements.
- Installation of firestop, fire-resistant joint systems and perimeter fire barrier systems in residential-use buildings now requires special inspection in Group R fire areas having an occupant load exceeding 250 people.
- Frost protection for egress doors was added to the foundation requirements.
- ACI standards ACI 117 and ITG 7 were added by reference to provide acceptable tolerances for concrete construction.
- Three new types of construction (Types IV-A, IV-B, and IV-C) allow mass timber buildings of taller heights, more stories above grade, and greater allowable areas compared to existing provisions for heavy timber buildings.

## **Noteworthy changes to the 2021 International Residential Codes (IRC)**

<https://codes.iccsafe.org/content/IRC2021P1>

This comprehensive code comprises all building, plumbing, mechanical, fuel gas and electrical requirements for one- and two-family dwellings and townhouses up to three stories. The 2021 IRC® contains many important changes such as:

- Braced wall lines must be placed on a physical wall or placed between multiple walls.
- The rated separation for two-family dwellings is 1 hour whether or not a lot line exists between units.
- Emergency escape and rescue openings require a clear 36-inch-wide path to a public way.
- An engineered design is required for storm shelters.
- A habitable attic is limited to one-half the area of the story below and the dwelling requires sprinklers.
- Updated Wind Speed maps match IBC and ASCE 7 maps.
- Deck design now considers snow load, tributary area for footing and post height, and guard details.
- Specific requirements for deck guardrails were added.
- Component and cladding wind pressures in Table R301.2(2) are updated for new design wind speeds and hip or gable roof profiles.
- Minimum footing size tables are revised to more accurately reflect current practice.
- Cripple wall requirements apply only to exterior cripple walls.
- New appendices for cob construction and 3D printed construction are added.
- A 30 percent reduction of airflow is permitted for balanced ventilation systems.
- Commercial gas cooking appliances are prohibited.
- The head pressure for a water test of DWV systems increased to 10 feet.
- Air vacuum testing is now permitted for plastic piping DWV systems.
- Section P2904 for dwelling sprinklers is expanded to more closely align with NFPA 13D.
- An emergency service disconnect is required in a readily accessible outdoor location.
- A surge-protective device (SPD) is now required at the service panel.
- The number of receptacle outlets required for peninsular and island countertops in kitchens is determined by the area of the countertop surface.
- GFCI protection is now required for damp and wet locations not included in the other 10 areas requiring GFCI protection.

## 2022 California Fire Code (CFC) - OCFA Amendment Summary

### Legend

|          |                                                                                                                                                                                    |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Existing | This 2019 amendment is being carried forward into 2022 amendment package. Minor editorial/clerical changes may have been made, but they do not have material regulatory effect.    |
| Revised  | A modified version of the 2019 amendment is being carried forward. Changes in scope or wording are significant relative to the 2019 version, or they may impact regulatory effect. |
| Deleted  | This 2019 amendment is not being carried forward into the 2022 amendment package.                                                                                                  |
| New      | This is a new amendment in the 2022 amendment package.                                                                                                                             |

| 2022 CFC CODE SECTION                         | 2019 Code Section | TITLE/SUBJECT                                                                              | COMMENTS/JUSTIFICATION                                                                                                                                 | STATUS         |
|-----------------------------------------------|-------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Chapter 1 - Scope &amp; Administration</b> |                   |                                                                                            |                                                                                                                                                        |                |
| 112.4                                         | 110.4             | Violation penalties                                                                        | Clarifies administrative violation process; fines now based on OCFA adopted fee schedule.                                                              | Existing       |
| 112.4.2                                       | 110.4.2           | Infraction & Misdemeanor                                                                   | Used for purpose of applying penalties under 109.4. Amendment combines definitions of infraction and misdemeanor under one section.                    | Existing       |
| <b>Chapter 2 - Definitions</b>                |                   |                                                                                            |                                                                                                                                                        |                |
| 202                                           | 202               | Definitions                                                                                | Definition of "OCFA" and "spark arrester" unchanged.                                                                                                   | Existing       |
| <b>Chapter 3 - General Requirements</b>       |                   |                                                                                            |                                                                                                                                                        |                |
| 304.1.2                                       | 304.1.2           | Vegetation                                                                                 | Aligns maintenance to OCFA Guideline C-05 requirements.                                                                                                | Existing       |
| 305.6                                         | 305.6             | Hazardous Conditions                                                                       | Prohibits outdoor fires during hazardous weather conditions.                                                                                           | Existing       |
| 305.7                                         | 305.7             | Disposal of Rubbish                                                                        | Prohibits open burning of trash, leaves, and other debris.                                                                                             | Existing       |
| 307                                           | 307               | Open burning, recreational fires, fire pits, fire rings, and outdoor fireplaces            | Administrative change to the section title to include fire pits and fire rings regulated under amendments in 307.6. No change from previous amendment. | Existing       |
| 307.6                                         | 307.6             | Outdoor Fireplaces, Fire Pits, Fire Rings, or similar devices used at Group R Occupancies. | Addresses requirements for outdoor fireplaces, fire pits, fire rings.                                                                                  | Existing       |
| 307.6.1                                       | 307.6.1           | Gas-fueled devices                                                                         | Prohibits gas fire pits within 3' of R-3 occupancy or 10' of other R occupancies                                                                       | Existing       |
| 307.6.2                                       | 307.6.2           | Devices using wood or fuels other than natural gas or LPG                                  | Prohibits solid fuel within 15' of combustibles unless in a fireplace                                                                                  | Existing       |
| 307.6.2.1                                     | 307.6.2.1         | Where prohibited                                                                           | Prohibits solid fuel fires in fuel mod zone, and in Wildland-Urban Interface/Wildfire Risk Area outside of fireplaces                                  | Existing       |
| 308.1.6.3                                     | 308.1.6.3         | Sky lanterns                                                                               | Addressed in 2022 CA Fire Code.                                                                                                                        | Deleted - 2022 |
| 324                                           | 321               | Fuel modification requirements for new construction                                        | Codifies requirements for fuel modification in properties adjacent to areas with combustible vegetation hazards.                                       | Existing       |
| 325                                           | 322               | Clearance of brush or vegetation growth from roadways                                      | Authorizes clearance of vegetation from edges of roadways to reduce ignition hazard                                                                    | Existing       |

## 2022 California Fire Code (CFC) - OCFA Amendment Summary

### Legend

|          |                                                                                                                                                                                    |
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| New      | This is a new amendment in the 2022 amendment package.                                                                                                                             |

| 2022 CFC CODE SECTION                                  | 2019 Code Section | TITLE/SUBJECT                                                              | COMMENTS/JUSTIFICATION                                                                                                                                                                                 | STATUS         |
|--------------------------------------------------------|-------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>326</b>                                             | 323               | <b>Unusual circumstances</b>                                               | Provides for suspension of or alternative methods of compliance with vegetation maintenance standards under specific circumstances                                                                     | Existing       |
| <b>327</b>                                             | 324               | <b>Use of equipment</b>                                                    | Requires use of spark arrester on equipment used in wildfire prone areas                                                                                                                               | Existing       |
| <b>327.1</b>                                           | 324.1             | <b>Use of equipment and devices generating heat, sparks or open flames</b> | Adopts a modified version of Public Resources Code requirement (30' setback instead of 10') for hazardous activities in wildland risk areas based on the cause of multiple fires in OCFA jurisdiction. | Existing       |
| <b>327.2</b>                                           | 324.2             | <b>Spark arresters</b>                                                     | Requires spark arresters to comply with CFC 202 and prevent accidental ignition                                                                                                                        | Existing       |
| <b>Chapter 4 - Emergency Planning and Preparedness</b> |                   |                                                                            |                                                                                                                                                                                                        |                |
| <b>407.5</b>                                           | 407.5             | <b>Hazardous Material Inventory Statement</b>                              | Reference to Hazardous material Inventory Statement is replaced by "OCFA's Chemical Classification packet" for consistency with Ch.50 language                                                         | Existing       |
| <b>Chapter 5- Fire Service Features</b>                |                   |                                                                            |                                                                                                                                                                                                        |                |
| <b>501.1</b>                                           | 501.1             | <b>Scope</b>                                                               | Guideline B-09 has been reworked and renamed to B-01. Reference to B-09a is deleted since there are cross-references to Title 14 requirements in B-01.                                                 | Revised        |
| <b>510.1</b>                                           | 510.1             | <b>Emergency responder radio coverage in new buildings</b>                 | Amendment makes reference to local authority having jurisdiction's ordinance and specifies types of buildings where an emergency responder radio system is required                                    | Existing       |
| <b>Chapter 9 - Fire Protection Systems</b>             |                   |                                                                            |                                                                                                                                                                                                        |                |
| <b>903.2</b>                                           | 903.2             | <b>Where required (Sprinklers)</b>                                         | Requires sprinklers in new buildings based on size. Requires sprinkler retrofit in buildings undergoing addition based on various area criteria. Revised to allow exception for open parking garages.  | Existing       |
| <b>903.2.8</b>                                         | 903.2.8           | <b>Group R (Sprinklers)</b>                                                | Requires sprinkler retrofit in homes undergoing addition or remodel based on various area criteria.                                                                                                    | Existing       |
| <b>903.3.5.3</b>                                       | 903.3.5.3         | <b>Hydraulically calculated systems</b>                                    | Adds specification for industry standard 10% safety margin to be included in sprinkler calculations                                                                                                    | Existing       |
| <b>Chapter 12 - Energy Systems</b>                     |                   |                                                                            |                                                                                                                                                                                                        |                |
| <b>1201.1.1</b>                                        |                   | <b>Other Systems</b>                                                       | Added specification for battery charging systems for cars and carts                                                                                                                                    | Deleted - 2022 |

## 2022 California Fire Code (CFC) - OCFA Amendment Summary

### Legend

|          |                                                                                                                                                                                    |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Existing | This 2019 amendment is being carried forward into 2022 amendment package. Minor editorial/clerical changes may have been made, but they do not have material regulatory effect.    |
| Revised  | A modified version of the 2019 amendment is being carried forward. Changes in scope or wording are significant relative to the 2019 version, or they may impact regulatory effect. |
| Deleted  | This 2019 amendment is not being carried forward into the 2022 amendment package.                                                                                                  |
| New      | This is a new amendment in the 2022 amendment package.                                                                                                                             |

| 2022 CFC CODE SECTION                                                                      | 2019 Code Section | TITLE/SUBJECT                              | COMMENTS/JUSTIFICATION                                                                                                                | STATUS         |
|--------------------------------------------------------------------------------------------|-------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 1205.2                                                                                     |                   | Solar PV Syatems, Access & Pathways        | Added a statement in Exception 3, to clarify the location of roof ventilation for Building-Integrated PV (BIPV) systems.              | New            |
| <b>Chapter 28 - Lumber yard, agro-industrial, Solid Biomass and Woodworking Facilities</b> |                   |                                            |                                                                                                                                       |                |
| 2801.2                                                                                     | 2801.2            | Permit (Miscellaneous combustible storage) | Clarifies permit for storage/composting of green waste is a Miscellaneous Combustible Storage permit                                  | Existing       |
| 2808.2                                                                                     | 2808.2            | Storage site                               | Requires OCFA approval of site before bringing product to the site                                                                    | Existing       |
| 2808.3                                                                                     | 2803.3            | Size of piles                              | Reduces the size of piles of combustible materials                                                                                    | Existing       |
| 2808.4                                                                                     | 2808.4            | Pile separation                            | Requires 20' separation between piles instead of specifically a fire lane; requires 100' separation from other combustible vegetation | Existing       |
| 2808.7                                                                                     | 2808.7            | Pile fire protection                       | Requires oscillating sprinklers to maintain moisture content and wet                                                                  | Existing       |
| 2808.9                                                                                     | 2808.9            | Material-handling equipment                | Requires approved spark arrester on equipment                                                                                         | Existing       |
| 2808.11                                                                                    | 2808.11           | Temperature control                        | Requires that temperature be monitored and maintained                                                                                 | Existing       |
| 2808.11.1                                                                                  | 2808.11.1         | Pile temperature Control                   | Requires rotation of piles above 165 degrees                                                                                          | Existing       |
| 2808.11.2                                                                                  | 2808.11.2         | New material temperature control           | Regulates acceptance of new piles above 165 degrees                                                                                   | Existing       |
| 2808.12                                                                                    | 2808.12           | Water Availability                         | Establishes firefighting water quantity requirements                                                                                  | Existing       |
| 2808.13                                                                                    | 2808.13           | Tipping Area                               | Establishes requirements for new material tipping area configuration and use                                                          | Existing       |
| 2808.14                                                                                    | 2808.14           | Emergency Contact                          | Requires posting of emergency contact info                                                                                            | Existing       |
| 2808.15                                                                                    | N/A               | Maximum Grid of Piles & Rows               | Defining maximum separation of piles.                                                                                                 | New            |
| 2808.16                                                                                    | N/A               | Push out / Clear area                      | Identifying when a push-out area is required for piles.                                                                               | New            |
| <b>Chapter 49 - Requirements for Wildland-Urban Interface Fire Areas</b>                   |                   |                                            |                                                                                                                                       |                |
| 4903.3                                                                                     | 4908              | Fuel Modification Plans                    | Amendment updated to be In accordance with new Fire Protection Plan language in Chapter 49 and revised language in Guideline C-05.    | Revised        |
| 4906.3                                                                                     | 4906.3            | Requirements                               | This is now addressed in the new Defensible Space section in 2022 CFC Chapter 49, and OCFA Guideline C-05.                            | Deleted - 2022 |
| <b>Chapter 50 - Hazardous Materials</b>                                                    |                   |                                            |                                                                                                                                       |                |

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| 2022 CFC CODE SECTION                                              | 2019 Code Section   | TITLE/SUBJECT                                  | COMMENTS/JUSTIFICATION                                                                                                                                                                  | STATUS         |
|--------------------------------------------------------------------|---------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 5001.5.2                                                           | 5001.5.2            | Hazardous materials inventory statement (HMIS) | References "OCFA's Chemical Classification Packet" instead of a Hazardous Materials Inventory Statement                                                                                 | Existing       |
| 5003.1.1.1                                                         | 5003.1.1.1          | Extremely hazardous substances                 | Prohibits extremely hazardous substances above disclosable amounts in a residential area.                                                                                               | Existing       |
| <b>Chapter 56 - Explosives and Fireworks</b>                       |                     |                                                |                                                                                                                                                                                         |                |
| 5608.2                                                             | 5608.2              | Firing (Fireworks)                             | Requires fireworks shows to be electrically fired.                                                                                                                                      | Existing       |
| 5608.3                                                             | N/A                 | Application for Permit                         | Carries over Title 19 requirement into Fire Code so it can be amended to establish a 100'/inch fallout zone instead of the standard 70'/inch.                                           | Existing       |
| <b>Chapter 57 - Flammable and Combustible Liquids</b>              |                     |                                                |                                                                                                                                                                                         |                |
| 5701.1.1                                                           | 5701.1.1            | Mobile Fueling                                 | Removed mobile fueling from the scope of Chapter 57. Amendment is no longer needed as adoption matrix in the 2022 CFC clearly indicates that mobile fueling provisions are not adopted. | Deleted - 2022 |
| <b>Chapter 58 - Flammable Gases and Flammable Cryogenic Fluids</b> |                     |                                                |                                                                                                                                                                                         |                |
| 5801.1                                                             | 5801.1              | Scope                                          | Prohibited mobile fueling of hydrogen, CNG, LPG.                                                                                                                                        | Deleted - 2022 |
| <b>Chapter 80 - Referenced Standards</b>                           |                     |                                                |                                                                                                                                                                                         |                |
| <b>NFPA 13</b>                                                     |                     |                                                |                                                                                                                                                                                         |                |
| 2022 NFPA 16.12.3.3                                                | 2016 NFPA 13, 6.7.3 | FDC Type                                       | Specifies type, location, color of FDC. Existing amendment language modified for additional clarity and to better align with other sections of                                          | Existing       |
| 9.4.3.1                                                            | 8.3.3.1             | Shell buildings                                | Specifies sprinkler type for spec shell buildings that are not warehouses                                                                                                               | Existing       |
| 9.2.1.7                                                            | 8.15.1.2.7          | Concealed spaces                               | Revises section to ensure that the use of noncombustible insulation can be reviewed to prevent conflicts with operational requirements                                                  | Existing       |
| 19.1.1                                                             | 11.1.1.1            | Sprinkler design                               | Specifies sprinkler design criteria for spec buildings that are not                                                                                                                     | Deleted - 2022 |
| 19.1.4.1                                                           | 11.2.3.1.1.1        | Water supply                                   | Specifies acceptable methods of determining water supply                                                                                                                                | Deleted - 2022 |
| <b>NFPA 13D</b>                                                    |                     |                                                |                                                                                                                                                                                         |                |

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| 2022 CFC CODE SECTION             | 2019 Code Section                                                                                                                                                                                                                          | TITLE/SUBJECT                 | COMMENTS/JUSTIFICATION                                                                                                                                                                                                            | STATUS         |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>2022 NFPA 13D 7.1.2</b>        | <b>2016 NFPA 13D: 7.1.2</b>                                                                                                                                                                                                                | <b>Control valves</b>         | Requires monitoring if a dedicated sprinkler shutoff valve is installed                                                                                                                                                           | Existing       |
| <b>NFPA 14</b>                    |                                                                                                                                                                                                                                            |                               |                                                                                                                                                                                                                                   |                |
| <b>2019 NFPA 14 7.3.1.1</b>       | <b>2016 NFPA 14: 7.3.1.1</b>                                                                                                                                                                                                               | <b>Hose Connection Height</b> | Specified height of hose outlet                                                                                                                                                                                                   | Deleted - 2022 |
| <b>NFPA 24</b>                    |                                                                                                                                                                                                                                            |                               |                                                                                                                                                                                                                                   |                |
| <b>2019 NFPA 24 6.2.8.1</b>       | <b>2016 NFPA 24: 6.2.8.1</b>                                                                                                                                                                                                               | <b>Indicating Valves</b>      | Specifies that valves controlling firefighting water supplies shall be painted red to facilitate identification by firefighters; provides exception for valves on exterior risers and for a system with only OS&Y shutoff valves. | Existing       |
| <b>6.2.9 (5)</b>                  | <b>6.2.9 (5)</b>                                                                                                                                                                                                                           | <b>Street valves</b>          | Removes exception for roadway valve boxes                                                                                                                                                                                         | Existing       |
| <b>10.1.5</b>                     | <b>10.1.5</b>                                                                                                                                                                                                                              | <b>Wrapping/Coating Pipe</b>  | Revised to allow <i>wrapping</i> of pipe with polyethylene sheet in accordance with AWWA standards instead of <i>tubing</i> .                                                                                                     | Existing       |
| <b>10.4.1.1</b>                   | <b>10.4.1.1</b>                                                                                                                                                                                                                            | <b>Pipe joints</b>            | Specifies that stainless steel parts do not need to be coated with asphalt                                                                                                                                                        | Existing       |
| <b>10.4.1.1.1</b>                 | <b>10.4.1.1.1</b>                                                                                                                                                                                                                          | <b>Stainless steel bolts</b>  | Requires use of stainless steel bolts.                                                                                                                                                                                            | Existing       |
| <b>10.4.3.2</b>                   | <b>10.6.3.1</b>                                                                                                                                                                                                                            | <b>Pipe under foundations</b> | Requires pipe to terminate near exterior wall; requires single piece stainless steel sweep at riser.                                                                                                                              | Existing       |
| <b>Appendices</b>                 |                                                                                                                                                                                                                                            |                               |                                                                                                                                                                                                                                   |                |
| <b>Appendices B, BB, C, CC, H</b> | Only five of the 16 appendices included in the 2022 Fire Code (B, BB, C, CC, and H) are adopted by the State. OCFA is not proposing adoption of any additional appendices or amendments to them beyond what the State has already adopted. |                               |                                                                                                                                                                                                                                   |                |