AGENDA
EL SEGUNDO CITY COUNCIL
COUNCIL CHAMBERS - 350 Main Street

The City Council, with certain statutory exceptions, can only take action upon properly posted and listed agenda items. Any writings or documents given to a majority of the City Council regarding any matter on this agenda that the City received after issuing the agenda packet are available for public inspection in the City Clerk’s office during normal business hours. Such Documents may also be posted on the City’s website at www.elsegundo.org and additional copies will be available at the City Council meeting.

Unless otherwise noted in the Agenda, the Public can only comment on City-related business that is within the jurisdiction of the City Council and/or items listed on the Agenda during the Public Communications portions of the Meeting. Additionally, the Public can comment on any Public Hearing item on the Agenda during the Public Hearing portion of such item. The time limit for comments is five (5) minutes per person.

Before speaking to the City Council, please come to the podium and state: Your name and residence and the organization you represent, if desired. Please respect the time limits.

Members of the Public may place items on the Agenda by submitting a Written Request to the City Clerk or City Manager’s Office at least six days prior to the City Council Meeting (by 2:00 p.m. the prior Tuesday). The request must include a brief general description of the business to be transacted or discussed at the meeting. Playing of video tapes or use of visual aids may be permitted during meetings if they are submitted to the City Clerk two (2) working days prior to the meeting and they do not exceed five (5) minutes in length.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact City Clerk, 524-2305. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

REGULAR MEETING OF THE EL SEGUNDO CITY COUNCIL
TUESDAY, NOVEMBER 2, 2010 – 5:00 P.M.

Next Resolution # 4690
Next Ordinance # 1449

5:00 P.M. SESSION

CALL TO ORDER

ROLL CALL

PUBLIC COMMUNICATION – (Related to City Business Only – 5 minute limit per person, 30 minute limit total) Individuals who have received value of $50 or more to communicate to the City Council on behalf of another, and employees speaking on behalf of their employer, must so identify themselves prior to addressing the City Council. Failure to do so shall be a misdemeanor and punishable by a fine of $250.
SPECIAL ORDER OF BUSINESS:

CLOSED SESSION:
The City Council may move into a closed session pursuant to applicable law, including the Brown Act (Government Code Section §54960, et seq.) for the purposes of conferring with the City's Real Property Negotiator; and/or conferring with the City Attorney on potential and/or existing litigation; and/or discussing matters covered under Government Code Section §54957 (Personnel); and/or conferring with the City's Labor Negotiators; as follows:

CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION (Gov't Code §54956.9(a) -1- matter

1. City of El Segundo vs. City of Los Angeles, et. al. LASC Case No. BS094279

CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION
Significant exposure to litigation pursuant to Government Code §54956.9(b): -0- potential case (no further public statement is required at this time); Initiation of litigation pursuant to Government Code §54956.9(c): -0- matter.

APPOINTMENT OF PUBLIC EMPLOYEE (Gov’t. Code § 54957) -1- matter
Position/Title: City Manager

CONFERENCE WITH CITY’S LABOR NEGOTIATOR (Gov’t Code §54957.6): -2- matters

1. Represented Group: Police Support Services Employees Association (PSSEA), City Employees Association (CEA), Firefighters Association (FFA), Police Managers Association (PMA), Police Officers Association (POA), Supervisory and Professional Employees (S&P)
   Negotiators: Jack Wayt, Bob Hyland and Richard Kreisler

2. Unrepresented Group: Management Confidential Group
   Negotiator: Jack Wayt

CONFERENCE WITH REAL PROPERTY NEGOTIATOR (Gov’t Code §54956.8): -0- matters
AGENDA
EL SEGUNDO CITY COUNCIL
COUNCIL CHAMBERS - 350 Main Street

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REGULAR MEETING OF THE EL SEGUNDO CITY COUNCIL
TUESDAY, NOVEMBER 2, 2010 - 7:00 P.M.

Next Resolution # 4690
Next Ordinance # 1449

7:00 P.M. SESSION

CALL TO ORDER

INVOCATION – Father Alexei Smith, St. Andrews Russian Greek Catholic Church

PLEDGE OF ALLEGIANCE – Council Member Carl Jacobson
PRESENTATIONS

a. Proclamation announcing November 20, 2010 as Hometown Forest Day.
b. Proclamation encouraging citizens to observe Veterans Day on November 11, 2010

ROLL CALL

PUBLIC COMMUNICATIONS – (Related to City Business Only – 5 minute limit per person, 30 minute limit total) Individuals who have received value of $50 or more to communicate to the City Council on behalf of another, and employees speaking on behalf of their employer, must so identify themselves prior to addressing the City Council. Failure to do so shall be a misdemeanor and punishable by a fine of $250. While all comments are welcome, the Brown Act does not allow Council to take action on any item not on the agenda. The Council will respond to comments after Public Communications is closed.

A. PROCEDURAL MOTIONS

Consideration of a motion to read all ordinances and resolutions on the Agenda by title only.

Recommendation – Approval.

B. SPECIAL ORDERS OF BUSINESS (PUBLIC HEARING)


Recommendation – (1) Open Public Hearing; (2) Introduce and waive first reading of Ordinances to adopt the 2010 California Building, Fire, Electrical, Plumbing, Mechanical, Energy, Residential and Green Building Standards Codes with amendments; (3) Continue Public Hearing and schedule second reading and adoption of Ordinances for November 16, 2010; (4) Alternatively, discuss and take other action related to this item.
C. UNFINISHED BUSINESS

2. Consideration and possible by action to indicate a willingness to establish lifeline rates in the event that trash rates are ultimately imposed by the City after the Proposition 218 process has been completed (Fiscal Impact: Unknown, but estimated to be approximately $3,000.00 in lost revenue). Recommendation – (1) Consideration and possible by action to indicate a willingness to establish lifeline rates in the event that trash rates are ultimately imposed by the City after the Proposition 218 process has been completed; (2) Alternatively, discuss and take other action related to this item.

3. Consideration and possible action to either (1) accept proposal from Firefighters Association to reduce budgeted employment costs for the Fire Department, or (2) direct staff to implement layoff procedures and layoffs of Fire Department employees to reduce employment costs for the Fire Department
Recommendation – (1) Accept proposal from Firefighters Association to reduce budgeted employment costs for the Fire Department; or (2) Direct staff to implement layoff procedures and layoffs of Fire Department employees to reduce employment costs for the Fire Department; or (3) Alternatively, discuss and take other action related to this item.

D. REPORTS OF COMMITTEES, COMMISSIONS AND BOARDS

E. CONSENT AGENDA

All items listed are to be adopted by one motion without discussion and passed unanimously. If a call for discussion of an item is made, the item(s) will be considered individually under the next heading of business.

4. Warrant Numbers 2579479 to 2579704 on Register No. 2 in the total amount of $968,727.74 and Wire Transfers from 10/8/10 through 10/21/10 in the total amount of $4,371,095.70.
Recommendation – Approve Warrant Demand Register and authorize staff to release. Ratify: Payroll and Employee Benefit checks; checks released early due to contracts or agreement; emergency disbursements and/or adjustments; and wire transfers.
Recommendation – Approval.

6. Consideration and possible action to approve an addendum, in a form approved by the City Attorney, to Agreement No. 4077 with Advance Sewer Technologies, Inc. The amendment would add the Cleaning and Closed Circuit Television (CCTV) inspection of sewer lines east of Sepulveda Boulevard between Rosecrans Avenue and Imperial Highway. (Project No.: PW 10-02) (Fiscal Impact: $54,172.21)
Recommendation – (1) Authorize the City Manager or designee to execute an amendment, in a form as approved by the City Attorney, to Agreement No. 4077 with Advanced Sewer Technologies, Inc., in the amount of $49,247.46; (2) Alternatively, discuss and take other action related to this item.

7. Consideration and possible action regarding a new Alcoholic Beverage Control (ABC) license for on-site sale of alcohol for on-site and off-site consumption for an accessory tasting room within a proposed brewery, El Segundo Brewery, (Type 23 – Beer Manufacturer) located at 140 Main Street. Applicant: Robert Croxall (Fiscal Impact: N/A)
Recommendation – (1) Receive and file this report without objecting to a new Type 23 ABC license at 140 Main Street; (2) Alternatively, discuss and take other possible action related to this item.

8. Consideration and possible action regarding the purchase of new hardware for an audio/video security system for the police station using funds from the Citizens Option for Public Safety (COPS) Grant and the Justice Assistance Grant (JAG). (Fiscal impact to the city is $99,364.35).
Recommendation – (1) Approve the purchase of the hardware for an audio/video security monitoring system from Metro Video using funds from COPS and JAG grants; (2) Alternatively, discuss and take other action related to this item.

9. Consideration and possible action to adopt a resolution supporting the Southern California Association of Governments Economic Growth Strategic Plan for Economic Growth Strategy. (Fiscal Impact: None)
Recommendation – (1) Adopt the attached resolution; (2) Alternatively, discuss and take other action related to this item.

Recommendation – (1) Approve the Side Letter between the City of El Segundo and City of El Segundo Police Managers’ Association; (2) Alternatively discuss and take other action related to this item.


Recommendation – (1) Approve the Side Letter between the City of El Segundo Police Officers Association. (2) Alternatively discuss and take other action related to this item.

CALL ITEMS FROM CONSENT AGENDA

F. NEW BUSINESS

G. REPORTS – CITY MANAGER

H. REPORTS – CITY ATTORNEY

I. REPORTS – CITY CLERK

J. REPORTS – CITY TREASURER

K. REPORTS – CITY COUNCIL MEMBERS
Council Member Fuentes –

Council Member Brann –

Council Member Jacobson –

Mayor Pro Tem Fisher –

Mayor Busch –

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MEMORIALS –

CLOSED SESSION

The City Council may move into a closed session pursuant to applicable law, including the Brown Act (Government Code Section §54960, et seq.) for the purposes of conferring with the City’s Real Property Negotiator; and/or conferring with the City Attorney on potential and/or existing litigation; and/or discussing matters covered under Government Code Section §54957 (Personnel); and/or conferring with the City’s Labor Negotiators.

REPORT OF ACTION TAKEN IN CLOSED SESSION (if required)

ADJOURNMENT

POSTED:

DATE: Oct. 28, 2010

TIME: 2:55 p.m.

NAME:  

8
WHEREAS, Global Warming is advancing and represents a threat to both local and worldwide economies, diversity of species, fresh water supply, food sources, stability of governments, and life as we know it on Earth; and

WHEREAS, Trees help to mitigate the advance of climate change by sequestering carbon dioxide while improving property values and making communities more livable; and

WHEREAS, The City of El Segundo’s 2005 tree inventory identified 400 vacant street tree sites in our residential neighborhoods; and

WHEREAS, Tree Musketeers and its youth leaders in partnership with the City of El Segundo and the State of California Resources Agency will plant 200 trees where needed on residential streets; and

WHEREAS, The Hometown Forest project further signifies the City of El Segundo’s commitment to the environment.

NOW, THEREFORE, the Mayor and members of the City Council of the City of El Segundo, California, join with Tree Musketeers in proclaiming November 20, 2010 as Hometown Forest Day and express appreciation to the citizens who are enthusiastic participants in launching this year’s program by welcoming new trees to El Segundo neighborhoods.

Mayor Eric H. Burb

Mayor Pro Temp Bill Fisher

Council Member Carl Sacken

Council Member Don Brand

Council Member Suzanne Fuentes
Proclamation
City of El Segundo, California

WHEREAS, In 1921, an unknown World War I American soldier was buried in Arlington National Cemetery, on a hillside overlooking the Potomac and the City of Washington, D.C., which site became the focal point of reverence for America’s veterans.

WHEREAS, Similar ceremonies occurred earlier in England and France, where an unknown soldier was buried in each nation’s highest place of honor (in England, Westminster Abbey; in France, the Arc de Triomphe).

WHEREAS, These memorial gestures all took place on November 11th, giving universal recognition to the celebrated ending of World War I fighting at 11 a.m., November 11, 1918 (the 11th hour of the 11th day of the 11th month). November 11th became officially known as “Armistice Day” in America in 1926 through a Congressional resolution, and became a national holiday 12 years later by similar Congressional action. In 1954 Armistice Day was officially changed to “Veterans Day” by presidential decree signed by Dwight D. Eisenhower to honor all American veterans living and dead, in whatever war or period of peace they served.

WHEREAS, Today, more than 1.4 million men and women are on active duty in the five branches of the military. The service members who serve in Iraq and Afghanistan, American veterans deserve our deepest appreciation and respect. Our Nation’s servicemen and women are the best and brightest, enlisting in times of peace and war, serving with honor under the most difficult circumstances, and making sacrifices that many of us cannot begin to imagine.

NOW, THEREFORE, the Mayor and Members of the City Council of the City of El Segundo, California, encourage its citizens to observe VETERANS DAY on November 11, 2010, in honor of the unfailing valor, dignity, and courage of our patriotic men and women in uniform, so that their spirit and selfless public service may shine brightly in the annals of history.

Mayor Erin K. Pickup
Mayor Pro-Tem Bill Fisher
Council Member Carl Johnson
Council Member Don Brann
Council Member Susanne Tovar
AGENDA DESCRIPTION:

RECOMMENDED COUNCIL ACTION:
1. Open Public Hearing;
2. Introduce and waive first reading of Ordinances to adopt the 2010 California Building, Fire, Electrical, Plumbing, Mechanical, Energy, Residential and Green Building Standards Codes with amendments;
3. Continue Public Hearing and schedule second reading and adoption of Ordinances for November 16, 2010; and/or
4. Alternatively, discuss and take other action related to this item.

ATTACHED SUPPORTING DOCUMENTS:
1. Ordinance No. ___ Adopting 2010 - California Building Code, Volumes I and II with amendments
2. Ordinance No. ___ Adopting 2010 – California Electrical Code
3. Ordinance No. ___ Adopting 2010 – California Plumbing Code with amendments
4. Ordinance No. ___ Adopting 2010 – California Mechanical Code with amendments
5. Ordinance No. ___ Adopting 2010 – California Fire Code with amendments
7. Ordinance No. ___ Adopting 2010 – California Residential Code with amendments
8. Ordinance No. ___ Adopting 2010 – California Green Building Standards Code

FISCAL IMPACT: N/A
Amount Budgeted: N/A
Additional Appropriation: N/A
Account Number(s): N/A

ORIGINATED BY: Sam Lee, Building Official
James Carver, Fire Marshal

REVIEWED BY: Greg Carpenter, Director of Planning and Building Safety
Kevin Smith, Fire Chief

APPROVED BY: Jack Wayt, City Manager

BACKGROUND AND DISCUSSION:
Every three years the State’s Health & Safety Code requires local governments to adopt the most recent editions of the model codes related to construction. The construction codes include: the
Building, Plumbing, Mechanical, Electrical, Fire, Energy, Residential and Green Building codes. If the City Council approves Ordinance Nos. 10-______, then the most recent editions of the construction codes with local amendments will be in effect with the City of El Segundo on January 1, 2011 as required by State law.

I. Background

The State’s Health & Safety Code (Section 17958) mandates that the California Building Standards Commission adopt and publish the California Building Standards Code (Title 24 California Code of Regulations) every three (3) years and local governments are required to enforce the State Code after 180 days of the code’s publication by the state.

The following codes are proposed for adoption by reference with amendments. If adopted, these codes will replace the prior editions of the model codes in the El Segundo Municipal Code Title 13.

- 2010 California Building Code
- 2010 California Electrical Code
- 2010 California Plumbing Code
- 2010 California Mechanical Code
- 2010 California Fire Code
- 2010 California Energy Code
- 2010 California Residential Code
- 2010 California Green Building Standards Code

Proposed Amendments to the State Model Codes

The State Building Standards Code provides the minimum construction standards. Under the state law, local jurisdictions are permitted to make amendments to the State Code if there are local conditions that make it reasonably necessary because of local climatic, geological or topographical conditions. Both the Building & Safety Division and the Fire Department staff are proposing amendments to the California Building, Residential and Fire Codes. The amendments will affect construction of new buildings and additions to existing buildings and are not retroactive to existing buildings. Staff is recommending amendments to the Building, Residential and Fire codes be adopted to protect the welfare of the occupants and to ensure the economic viability of the community.

Why We Need Building and Residential Code Amendments

The City of El Segundo is within the greater Los Angeles region which is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the 1994 Northridge Earthquake which resulted in over 60 deaths, left more than 25,000 people homeless and caused approximately $40 billion in economic loss. The amendments in the Building and Residential
codes were first adopted and have been in our codes since the 1997. The amendments emphasize that the design concern is for seismic-force-resisting elements and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the most recent International Building Code and local geological conditions. These amendments have been adopted by the Los Angeles Regional Uniform Code Program and have been incorporated in many of the Los Angeles County cities.

Additionally, voluntary earthquake mitigation standards have been incorporated in the new Building code. If adopted, building owners will have an option to use a city approved earthquake mitigation methodology to seismically upgrade their older buildings to a nationally recognized standard that will not only result in a more earthquake resistant building, but may mean lower insurance rates for our residents and business owners.

**Why We Need Fire Code Amendments**

The fire code amendments continue requirements for mid-rise buildings from 4 stories to 75 feet in height, existing fire department access, water supply and general fire safety requirements that are not addressed in the 2010 California Fire Code. These amendments in the Fire Code were first adopted and have been in our codes since the 1994. Also proposed this year are standards for building emergency radio communications and rooftop obstructions; installing roof top photovoltaic systems, roof gardens and landscaped roofs.

**Justification of Local Amendments**

The Building & Safety Division and the Fire Department are recommending that the above changes and modifications be made to the respective Codes and are advising that amendments are reasonably necessary due to local conditions in the City of El Segundo. Other modifications are of an administrative or procedural nature and concern themselves with subjects that are not covered by the Codes or are reasonably necessary to safeguard life and property within the City of El Segundo.

**II. Legal Review**

The City Attorney has approved the Ordinances as to form.

**III. Recommendation**

If the City Council approves Ordinance Nos. 10-______________, the most recent editions of the Construction Codes with the applicable amendments will be in effect within the City of El Segundo on January 1, 2011 as required by State law.
ORDINANCE NO. __________

AN ORDINANCE INCORPORATING THE 2010 CALIFORNIA BUILDING CODE ("CBC") BY REFERENCE AND AMENDING THE CBC BASED UPON LOCAL CLIMATIC, TOPOGRAPHIC, AND GEOLOGICAL CONDITIONS.

The council of the city of El Segundo does ordain as follows:

SECTION 1: FINDINGS. The City Council finds and declares as follows:

A. In accord with Health & Safety Code Section 17958.7, it is in the public interest to adopt the California Building Code ("CBC") with the changes set forth in this Ordinance.

B. Pursuant to the requirements of Health & Safety Code Section 17958.7, the City Council finds that there are local geological conditions justifying the CBC amendments set forth below.

The City of El Segundo and the greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification emphasize that the design concern is for seismic-force-resisting elements and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Building Code. Experts predict a major earthquake in our area within the next 50 years. This situation creates the need for both additional fire protection measures and automatic on-site fire protection of building occupants since a multitude of fires may result from breakage of gas and electric lines as a result of an earthquake. After due consideration, the City Council finds and determines that due to local climatic, geological, or topographical conditions, the structural and fire protection amendments to the 2010 CBC are necessary to give buildings a reasonable degree of structural integrity and fire life safety to help protect public health and safety in the event of a seismic event;

Additional amendments have been made to Codes 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.

C. The specific amendments of the CBC that fulfill this requirement are:

1. Amend CBC Section 105.2 Work exempt from permit
2. Amend CBC Section 105.3.2 Expiration of Plan Check
3. Amend CBC Section 105.5 Expiration of Permits
4. Amend CBC Section 113.3 Board of appeals
5. Amend CBC Section 1613.6.1 Assumption of Flexible Diaphragm.
6. Amend CBC Section 1613.6.7 Building Separation
7. Add CBC Section 1613.8 BRBF Period Parameter
8. Add CBC Section 1613.9 Values for Vertical Combinations
9. Add CBC Section 1613.10 Stability Coefficient
10. Add CBC Section 1613.11 Subdiaphragm
11. Add CBC Section 1613.13 Suspended Ceiling
12. Amend CBC Section 1704.4 SI for Concrete Construction
13. Amend CBC Section 1704.8 Driven Deep Foundations
14. Amend CBC Section 1704.9 Cast-in-Place Deep Foundations
15. Amend CBC Section 1705.3 Seismic Resistance Inspection
16. Amend CBC Section 1710.1 Structural Observations General
17. Amend CBC Section 1710.2 Structural Observations Seismic
18. Amend CBC Section 1807.1.4 Permanent Wood Foundation System
19. Amend CBC Section 1807.1.6 Prescriptive Design of Foundation Walls
20. Amend CBC Section 1809.3 Stepped Footings
21. Amend CBC Table 1809.7 Prescriptive Footings
22. Amend CBC Section 1809.12 Timber Footings
23. Amend CBC Section 1810.3.2.4 Timber
24. Add CBC Sections 1908.1.11 thru 14 Reinforcement
25. Amend CBC Section 1908.1.2 Intermediate Structural Wall
26. Amend CBC Section 1908.1.3 Wall Pier
27. Amend CBC Section 1908.1.8 Minimum Reinforcement
28. Amend CBC Section 1909.4 Structural Plain Concrete Design
29. Add CBC Section 2204.1.1 Consumables for Welding
30. Add CBC Section 2205.4 SCBF Member Type
31. Amend CBC Section 2304.11.7 Wood Used in Retaining Wall
32. Add CBC Section 2305.4 Quality of Nails
33. Add CBC Section 2305.5 Hold-down Connectors
34. Amend CBC Section 2306.2.1 Wood Diaphragm
35. Amend CBC Section 2306.3 Wood Shear Walls
36. Amend CBC Section 2306.7 Other Shear Walls
37. Amend CBC Section 2308.3.4 Brace Wall Line Support
38. Amend CBC Section 2308.12.2 Concrete or Masonry
39. Amend CBC Section 2308.12.4 Braced Wall Sheathing
40. Amend CBC Section 2304.9.1 Fastener Requirement
41. Amend CBC Section 2308.12.5 Attachment of Sheathing
42. Amend Appendix J section J 101 by adding a new section J 101.3 Protection of Adjacent Properties

D. At least one copy of the CBC was filed with the City Clerk of the City was available for public inspection for at least fifteen (15) days preceding the date of the hearing

SECTION 2: El Segundo Municipal Code ("ESMC") Section 13-1-1 is amended in its entirety to read as follows:

CHAPTER 1
BUILDING CODE

"13-1-1: ADOPTION OF CALIFORNIA BUILDING CODE, 2010 EDITION. Pursuant to California Government Code Section 50022.2, the California Building Code, 2010 Edition, published at Title 24, Part 5, of the California Code of Regulations, including Appendices F, H, I, and J ("CBC") is adopted by reference, subject to the amendments, additions and deletions set forth below. One true copy of the CBC, is on file in the office of the Building Official and is available for public inspection as required by law."

SECTION 3: ESMC Section 13-1-2 is amended to the California Building Code including the adopted appendices is hereby amended as follows:

"13-1-2: AMENDMENTS TO THE CODE:

Number 14 is added to Section 105.2 of Division II of Chapter 1 of the CBC as follows:

Section 105.2 Work exempt from permit."
14. Block wall and concrete fences not over 3 ft 6 inches.

Section 105.3.2 of Division II of Chapter 1 of the CBC is hereby amended to read as follows:

SECTION 105.3.2 EXPIRATION OF PLAN CHECK.

An application for a permit for any proposed work shall be deemed to have been abandoned 12 months after the date of filing and no permit shall be issued until the plans are rechecked and approved and a new fee is paid.

EXCEPTION: The Building Official may grant extensions of time if a permit applicant submits in writing sufficient evidence that unusual conditions or circumstances precluded the securing of the permit within the allocated time.

Section 105.5 of Division II of Chapter 1 of the CBC is hereby amended to read as follows:

SECTION 105.5 EXPIRATION OF PERMITS.

Every permit issued shall be valid for a period of three (3) years from the date thereof, provided that any permit shall expire on the one hundred and eightieth (180) day from date of issuance if the work permitted there under has not been commenced; or shall expire whenever the Department determines the work authorized by any permit has been suspended, discontinued or abandoned for a continuous period of 180 days.

EXCEPTION: The Building Official may grant extensions of time if a permit applicant submits in writing sufficient evidence that unusual conditions or circumstances precluded from the work being completed. An extension of time may require conditions of approval and additional fees.

Section 113.4 of Division II of Chapter 1 of the CBC is hereby added to read as follows:

Section 113.4 Board of Appeals.

The board of appeals shall consist of members of the Planning Commission. The term of a board of appeals member will coincide with the term of service as a Planning Commissioner and will terminate should the member cease serving as a Planning Commissioner. The building official is the secretary to the board. The board may adopt reasonable rules and regulations for conducting its investigations and will render all its decisions and findings on contested matters, in writing to the building official, with a duplicate copy for any appellant or contestant affected by such decision or finding, and may recommend to the city council appropriate new legislation.

Three members of the board constitute a quorum. The Planning Chairperson is the board's chairperson and in the chairperson's absence the board will select a temporary chairperson.

The city will assess a $250.00 charge, or a higher amount set by resolution, at the time that an appellant file appeal of any order, decisions, or determination made by the building official relative to the application and interpretation of this code. The filing fee is refundable should the appellant prevail in a decision by the board. The appeal must be taken by filing a written notice of appeal, in letterform, to the board of appeals. The board's decision constitutes the city's final decision.
Section 1613.6.1 of the CBC is amended to read as follows:

1613.6.1 Assumption of flexible diaphragm. Add the following text at the end of Section 12.3.1.1 of ASCE 7:

Diaphragms constructed of wood structural panels or untopped steel decking shall also be permitted to be idealized as flexible, provided all of the following conditions are met:

1. Toppings of concrete or similar materials are not placed over wood structural panel diaphragms except for nonstructural toppings no greater than 1 ½ inches (38 mm) thick.

2. Each line of vertical elements of the seismic-force-resisting system complies with the allowable story drift of Table 12.12-1.

3. Vertical elements of the seismic-force-resisting system are light-framed walls sheathed with wood structural panels rated for shear resistance or steel sheets.

4. Portions of wood structural panel diaphragms that cantilever beyond the vertical elements of the lateral seismic-force-resisting system are designed in accordance with Section 4.2.5.2 of AF&PA SDPWS.
Equation 16-44 of Section 1613.6.7 of the CBC is amended to read as follows:

\[ \delta_M = \frac{C_d \delta_{\text{max}}}{I} \]  \hspace{1cm} \text{(Equation 16-44)}

where:
- \( C_d \) = Deflection amplification factor in Table 12.2-1 of ASCE 7.
- \( \delta_{\text{max}} \) = Maximum displacement defined in Section 12.8.4.3 of ASCE 7.
- \( I \) = Importance factor in accordance with Section 11.5.1 of ASCE 7.
Section 1613.8 is added to Chapter 16 of the CBC to read as follows:

1613.8 ASCE 7, Table 12.8-2. Modify ASCE 7 Table 12.8-2 by adding the following:

<table>
<thead>
<tr>
<th>Structure Type</th>
<th>$C_t$</th>
<th>$x$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eccentrically braced steel frames and buckling-restrained braces frames</td>
<td>0.03</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>$(0.0731)^a$</td>
<td></td>
</tr>
</tbody>
</table>
Section 1613.9 is added to Chapter 16 of the CBC to read as follows:

1613.9 ASCE 7, 12.2.3.1, Exception 3. Modify ASCE 7 Section 12.2.3.1 Exception 3 to read as follows:

3. Detached one and two family dwellings up to two stories in height of light frame construction.
2010 LARUCP 16-05. Section 1613.10 is added to Chapter 16 of the CBC to read as follows:

**1613.10 ASCE 7, Section 12.8.7.** Modify ASCE 7 Section 12.8.7 by amending Equation 12.8-16 as follows:

$$\theta = \frac{P_x \Delta I}{V_x h_{sx} C_d}$$

(12.8-16)
Section 1613.11 is added to Chapter 16 of the CBC to read as follows:

1613.11 ASCE 7, Section 12.11.2.2.3. Modify ASCE 7, Section 12.12.4 to read as follows:

12.11.2.2.3 Wood Diaphragms. In wood diaphragms, the continuous ties shall be in addition to the diaphragm sheathing. Anchorage shall not be accomplished by use of toe nails or nails subject to withdrawal nor shall wood ledgers or framing be used in cross-grain bending or cross-grain tension. The diaphragm sheathing shall not be considered effective as providing ties or struts required by this section.

For structures assigned to Seismic Design Category D, E or F, wood diaphragms supporting concrete or masonry walls shall comply with the following:

1. The spacing of continuous ties shall not exceed 40 feet. Added chords of diaphragms may be used to form subdiaphragms to transmit the anchorage forces to the main continuous cross-ties.

2. The maximum diaphragm shear used to determine the depth of the subdiaphragm shall not exceed 75% of the maximum diaphragm shear.
Section 1613.13 is added to Chapter 16 of the CBC to read as follows:

1613.13 Suspended Ceilings. Minimum design and installation standards for suspended ceilings shall be determined in accordance with the requirements of Section 2506.2.1 of this Code and this subsection.

1613.13.1 Scope. This part contains special requirements for suspended ceilings and lighting systems. Provisions of Section 13.5.6 of ASCE 7 shall apply except as modified herein.

1613.13.2 General. The suspended ceilings and lighting systems shall be limited to 6 feet (1828 mm) below the structural deck unless the lateral bracing is designed by a licensed engineer or architect.

1613.13.3 Design and Installation Requirements.

1613.13.3.1 Bracing at Discontinuity. Positive bracing to the structure shall be provided at changes in the ceiling plane elevation or at discontinuities in the ceiling grid system.

1613.13.3.2 Support for Appendages. Cable trays, electrical conduits and piping shall be independently supported and independently braced from the structure.

1613.13.3.3 Sprinkler Heads. All sprinkler heads (drops) except fire-resistance-rated floor/ceiling or roof/ceiling assemblies, shall be designed to allow for free movement of the sprinkler pipes with oversize rings, sleeves or adaptors through the ceiling tile, in accordance with Section 13.5.6.2.2 (e) of ASCE 7.

Sprinkler heads penetrating fire-resistance-rated floor/ceiling or roof/ceiling assemblies shall comply with Section 713 of this Code.

1613.13.3.4 Perimeter Members. A minimum wall angle size of at least a two-inch (51 mm) horizontal leg shall be used at perimeter walls and interior full height partitions. The first ceiling tile shall maintain 3/4 inch (19 mm) clear from the finish wall surface. An equivalent alternative detail that will provide sufficient movement due to anticipated lateral building displacement may be used in lieu of the long leg angle subject to the approval of the Building Official.

1613.13.4 Special Requirements for Means of Egress. Suspended ceiling assemblies located along means of egress serving an occupant load of 30 or more shall comply with the following provisions.

1613.13.4.1 General. Ceiling suspension systems shall be connected and braced with vertical hangers attached directly to the structural deck along the means of egress serving an occupant load of 30 or more and at lobbies accessory to Group A Occupancies. Spacing of vertical hangers shall not exceed 2 feet (610 mm) on center along the entire length of the suspended ceiling assembly located along the means of egress or at the lobby.

1613.13.4.2 Assembly Device. All lay-in panels shall be secured to the suspension ceiling assembly with two hold-down clips minimum for each tile within a 4-foot (1219 mm) radius of the exit lights and exit signs.

1613.13.4.3 Emergency Systems. Independent supports and braces shall be provided for light fixtures required for exit illumination. Power supply for exit illumination shall comply with the requirements of Section 1006.3 of this Code.

1613.13.4.4 Supports for Appendage. Separate support from the structural deck shall be provided for all appendages such as light fixtures, air diffusers, exit signs, and similar elements.
Section 1704.4 of the CBC is amended to read as follows:

1704.4 Concrete Construction. The special inspections and verifications for concrete construction shall be as required by this section and Table 1704.4.

Exceptions: Special inspection shall not be required for:

1. Isolated spread concrete footings of buildings three stories or less above grade plane that are fully supported on earth or rock, where the structural design of the footing is based on a specified compressive strength, \( f'c \), no greater than 2,500 pounds per square inch (psi) (17.2 Mpa).

2. Continuous concrete footings supporting walls of buildings three stories or less in height that are fully supported on earth or rock where:
   2.1. The footings support walls of light-frame construction;
   2.2. The footings are designed in accordance with Table 1805.4.2; or
   2.3. The structural design of the footing is based on a specified compressive strength, \( f'c \), no greater than 2,500 pounds per square inch (psi) (17.2 Mpa), regardless of the compressive strength specified in the construction documents or used in the footing construction.

3. Nonstructural concrete slabs supported directly on the ground, including prestressed slabs on grade, where the effective prestress in the concrete is less than 150 psi (1.03 Mpa).

4. Concrete foundation walls constructed in accordance with Table 1807.1.6.2.

5. Concrete patios, driveways and sidewalks, on grade.

Section 1704.8 of the CBC is amended to read as follows:

1704.8 Driven deep foundations and connection grade beams. Special inspections shall be performed during installation and testing of driven deep foundation elements as required by Table 1704.8. Special inspections shall be performed for connection grade beams in accordance with Section 1704.4 for structures assigned to Seismic Design Category D, E or F. The approved geotechnical report, and the construction documents prepared by the registered design professionals, shall be used to determine compliance.

Section 1704.9 of the CBC is amended to read as follows:

1704.9 Cast-in-place deep foundations and connection grade beams. Special inspections shall be performed during installation and testing of cast-in-place deep foundation elements as required by Table 1704.9. Special inspections shall be performed for connection grade beams in accordance with Section 1704.4 for structures assigned to Seismic Design Category D, E or F. The approved geotechnical report, and the construction documents prepared by the registered design professionals, shall be used to determine compliance.
Section 1705.3 of the CBC is amended to read as follows:

1705.3 Seismic resistance. The statement of special inspections shall include seismic requirements for cases covered in Sections 1705.3.1 through 1705.3.5.

Exception: Seismic requirements are permitted to be excluded from the statement of special inspections for structures designed and constructed in accordance with the following:

1. The structure consists of light-frame construction; the design spectral response acceleration at short periods, $S_{DS}$, as determined in Section 1613.5.4, does not exceed 0.5g; and the height of the structure does not exceed 35 feet (10 668 mm) above grade plane; or

2. The structure is constructed using a reinforced masonry structural system or reinforced concrete structural system; the design spectral response acceleration at short periods, $S_{DS}$, as determined in Section 1613.5.4, does not exceed 0.5g, and the height of the structure does not exceed 25 feet (7620 mm) above grade plane; or

3. Detached one- or two-family dwellings not exceeding two stories above grade plane, provided the structure is not assigned to Seismic Design Category D, E or F and does not have any of the following plan or vertical irregularities in accordance with Section 12.3.2 of ASCE 7:

   3.1 Torsional irregularity.
   3.2 Nonparallel systems.
   3.3 Stiffness irregularity—extreme soft story and soft story.
   3.4 Discontinuity in capacity—weak story.

Section 1710.1 of the CBC is amended to read as follows:

1710.1 General. Where required by the provisions of Section 1710.2 or 1710.3, the owner shall employ a registered design professional structural observer to perform structural observations as defined in Section 1702. The structural observer shall be one of the following individuals:

1. The registered design professional responsible for the structural design, or

2. A registered design professional designated by the registered design professional responsible for the structural design.

Prior to the commencement of observations, the structural observer shall submit to the building official a written statement identifying the frequency and extent of structural observations.

At the conclusion of the work included in the permit, the structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies that, to the best of the structural observer's knowledge, have not been resolved.

The owner or owner's representative shall coordinate and call a preconstruction meeting between the structural observer, contractors, affected subcontractors and special inspectors. The structural observer shall preside over the meeting. The purpose of the meeting shall be to identify the major structural elements and connections that affect the vertical and lateral load resisting systems of the structure and to review scheduling of the required observations. A record of the meeting shall be included in the report submitted to the building official.
Observed deficiencies shall be reported in writing to the owner or owner's representative, special inspector, contractor and the building official. Upon the form prescribed by the building official, the structural observer shall submit to the building official a written statement at each significant construction stage stating that the site visits have been made and identifying any reported deficiencies which, to the best of the structural observer's knowledge, have not been resolved. A final report by the structural observer which states that all observed deficiencies have been resolved is required before acceptance of the work by the building official.

Section 1710.2 of the CBC is amended to read as follows:

1710.2 Structural observations for seismic resistance. Structural observations shall be provided for those structures assigned to Seismic Design Category D, E or F, as determined in Section 1613, where one or more of the following conditions exist:

1. The structure is classified as Occupancy Category III or IV in accordance with Table 1604.5.

2. The height of the structure is greater than 75 feet (22860 mm) above the base.

3. The structure is assigned to Seismic Design Category E, is classified as Occupancy Category I or II in accordance with Table 1604.5, and is greater than two stories one stories above grade plane a lateral design is required for the structure or portion thereof.

   **Exception:** One-story wood framed Group R-3 and Group U Occupancies less than 2,000 square feet in area, provided the adjacent grade is not steeper than 1 unit vertical in 10 units horizontal (10% sloped), assigned to Seismic Design Category D.

4. When so designated by the registered design professional responsible for the structural design.

5. When such observation is specifically required by the building official.

Section 1807.1.4 of the CBC is amended to read as follows:

1807.1.4 Permanent wood foundation systems. Permanent wood foundation systems shall be designed and installed in accordance with AF&PA PWF. Lumber and plywood shall be treated in accordance with AWPA U1 (Commodity Specification A, Use Category 4B and Section 5.2) and shall be identified in accordance with Section 2303.1.8.1. Permanent wood foundation systems shall not be used for structures assigned to Seismic Design Category D, E or F.

Section 1807.1.6 of the CBC is amended 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, E or F.
Section 1809.3 of the CBC is amended to read as follows:

1809.3 Stepped footings. The top surface of footings shall be level. The bottom surface of footings shall be permitted to have a slope not exceeding one unit vertical in 10 units horizontal (10-percent slope). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footing or where the surface of the ground slopes more than one unit vertical in 10 units horizontal (10-percent slope).

For structures assigned to Seismic Design Category D, E or F, the stepping requirement shall also apply to the top surface of grade beams supporting walls. Footings shall be reinforced with four 1/2-inch diameter (12.7 mm) deformed reinforcing bars. Two bars shall be placed at the top and bottom of the footings as shown in Figure 1809.3.

![Diagram of stepped footing](image-url)

**STEPPED FOUNDATIONS**

**FIGURE 1809.3**

**STEPPED FOOTING**
Section 1809.7 and Table 1809.7 of the CBC are amended to read as follows:

1809.7 Prescriptive footings for light-frame construction. Where a specific design is not provided, concrete or masonry-unit footings supporting walls of light-frame construction shall be permitted to be designed in accordance with Table 1809.7. Prescriptive footings in Table 1809.7 shall not exceed one story above grade plane for structures assigned to Seismic Design Category D, E or F.

<table>
<thead>
<tr>
<th>NUMBER OF FLOORS SUPPORTED BY THE FOOTING</th>
<th>WIDTH OF FOOTING (inches)</th>
<th>THICKNESS OF FOOTING (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
<td>8(^{\text{g}})</td>
</tr>
</tbody>
</table>

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm

a. Depth of footings shall be in accordance with Section 1809.4.
b. The ground under the floor shall be permitted to be excavated to the elevation of the top of the footing.
c. Interior stud-bearing walls shall be permitted to be supported by isolated footings. The footing width and length shall be twice the width shown in this table, and footings shall be spaced not more than 6 feet on center. Not Adopted.
d. See Section 1908 for additional requirements for concrete footings of structures assigned to Seismic Design Category C, D, E or F.
e. For thickness of foundation walls, see Section 1807.1.6.
f. Footings shall be permitted to support a roof addition to the stipulated number of floors. Footings supporting roof only shall be as required for supporting one floor.
g. Plain concrete footings for Group R-3 occupancies shall be permitted to be 6 inches thick.
Section 1809.12 of the CBC is amended to read as follows:

1809.12 Timber footings. Timber footings shall be permitted for buildings of Type V construction and as otherwise approved by the building official. Such footings shall be treated in accordance with AWPA U1 (Commodity Specification A, Use Category 4B). Treated timbers are not required where placed entirely below permanent water level, or where used as capping for wood piles that project above the water level over submerged or marsh lands. The compressive stresses perpendicular to grain in untreated timber footing supported upon treated piles shall not exceed 70 percent of the allowable stresses for the species and grade of timber as specified in the AF&PA NDS. Timber footings shall not be used in structures assigned to Seismic Design Category D, E or F.

Section 1810.3.2.4 of the CBC is amended to read as follows:

1810.3.2.4 Timber. Timber deep foundation elements shall be designed as piles or poles in accordance with AF&PA NDS. Round timber elements shall conform to ASTM D 25. Sawn timber elements shall conform to DOC PS-20. Timber shall not be used in structures assigned to Seismic Design Category D, E or F.
Section 1908.1 is amended to read as shown below and Sections 1908.1.11 thru 1908.1.14 is added to Chapter 19 of the CBC to read as follows:

1908.1 General. The text of ACI 318 shall be modified as indicated in Sections 1908.1.1 through 1908.1.14.

1908.1.11 ACI 318, Section 21.6.4.1. Modify ACI 318, Section 21.6.4.1, to read as follows:

Where the calculated point of contraflexure is not within the middle half of the member clear height, provide transverse reinforcement as specified in ACI 318 Sections 21.6.4.1, Items (a) through (c), over the full height of the member.

1908.1.12 ACI 318, Section 21.6.4. Modify ACI 318, Section 21.6.4, by adding Section 21.6.4.8 to read as follows:

21.6.4.8 - At any section where the design strength, \( \varphi P_{n} \), of the column is less than the sum of the shears \( V_n \) computed in accordance with ACI 318 Sections 21.5.4.1 and 21.6.5.1 for all the beams framing into the column above the level under consideration, transverse reinforcement as specified in ACI 318 Sections 21.6.4.1 through 21.6.4.3 shall be provided. For beams framing into opposite sides of the column, the moment components may be assumed to be of opposite sign. For the determination of the design strength, \( \varphi P_{n} \), of the column, these moments may be assumed to result from the deformation of the frame in any one principal axis.

1908.1.13 ACI 318, Section 21.9.4. Modify ACI 318, Section 21.9.4, by adding Section 21.9.4.6 to read as follows:

21.9.4.6 - Walls and portions of walls with \( P_n > 0.35P_{n} \) shall not be considered to contribute to the calculated strength of the structure for resisting earthquake-induced forces. Such walls shall conform to the requirements of ACI 318 Section 21.13.

1908.1.14 ACI 318, Section 21.11.6. Modify ACI 318, Section 21.11.6, by adding the following:

Collector and boundary elements in topping slabs placed over precast floor and roof elements shall not be less than 3 inches (76 mm) or 6 \( d_p \) thick, where \( d_p \) is the diameter of the largest reinforcement in the topping slab.
Section 1908.1.2 of the CBC is amended to read as follows:

1908.1.2 ACI 318, Section 21.1.1. Modify ACI 318, Sections 21.1.1.3 and 21.1.1.7 as follows:

21.1.1.3 — Structures assigned to Seismic Design Category A shall satisfy requirements of Chapters 1 to 19 and 22; Chapter 21 does not apply. Structures assigned to Seismic Design Category B, C, D, E or F also shall satisfy 21.1.1.4 through 21.1.1.8, as applicable. Except for structural elements of plain concrete complying with Section 1908.1.8 of the International Building Code, structural elements of plain concrete are prohibited in structures assigned to Seismic Design Category C, D, E or F.

21.1.1.7 — Structural systems designated as part of the seismic-force-resisting system shall be restricted to those permitted by ASCE 7. Except for Seismic Design Category A, for which Chapter 21 does not apply, the following provisions shall be satisfied for each structural system designated as part of the seismic-force-resisting system, regardless of the Seismic Design Category:

(a) Ordinary moment frames shall satisfy 21.2.
(b) Ordinary reinforced concrete structural walls and ordinary precast structural walls need not satisfy any provisions in Chapter 21.
(c) Intermediate moment frames shall satisfy 21.3.
(d) Intermediate precast structural walls shall satisfy 21.4.
(e) Special moment frames shall satisfy 21.5 through 21.8.
(f) Special structural walls shall satisfy 21.9.
(g) Special structural walls constructed using precast concrete shall satisfy 21.10.

All special moment frames and special structural walls shall also satisfy 21.1.3 through 21.1.7. Concrete tilt-up wall panels classified as intermediate precast structural wall system shall satisfy 21.9 in addition to 21.4.2 and 21.4.3 for structures assigned to Seismic Design Category D, E or F.
Section 1908.1.3 of the CBC is amended to read as follows:

**1908.1.3 ACI 318, Section 21.4.** Modify ACI 318, Section 21.4, by renumbering Section 21.4.3 to become 21.4.4 and adding new Sections 21.4.3, 21.4.5, and 21.4.6 and 21.4.7 to read as follows:

21.4.3 – Connections that are designed to yield shall be capable of maintaining 80 percent of their design strength at the deformation induced by the design displacement or shall use Type 2 mechanical splices.

21.4.4 – Elements of the connection that are not designed to yield shall develop at least 1.5 $S_y$.

21.4.5 – Wall piers in Seismic Design Category D, E or F shall comply with Section 1908.1.4 of this Code.

21.4.6 – Wall piers not designed as part of a moment frame in buildings assigned to Seismic Design Category C shall have transverse reinforcement designed to resist the shear forces determined from 21.3.3. Spacing of transverse reinforcement shall not exceed 8 inches (203 mm). Transverse reinforcement shall be extended beyond the pier clear height for at least 12 inches (305 mm).

**Exceptions:**
2. Wall piers along a wall line within a story where other shear wall segments provide lateral support to the wall piers and such segments have a total stiffness of at least six times the sum of the stiffnesses of all the wall piers.

21.4.7 – Wall segments with a horizontal length-to-thickness ratio less than 2.5 shall be designed as columns.
Section 1908.1.8 of the CBC is amended to read as follows:

1908.1.8 ACI 318, Section 22.10. Delete ACI 318, Section 22.10, and replace with the following:

22.10 – Plain concrete in structures assigned to Seismic Design Category C, D, E or F.

22.10.1 – Structures assigned to Seismic Design Category C, D, E or F shall not have elements of structural plain concrete, except as follows:

(a) Structural plain concrete basement, foundation or other walls below the base are permitted in detached one- and two-family dwellings three stories or less in height constructed with stud-bearing walls. In dwellings assigned to Seismic Design Category D or E, the height of the wall shall not exceed 8 feet (2438 mm), the thickness shall not be less than 7½ inches (190 mm), and the wall shall retain no more than 4 feet (1219 mm) of unbalanced fill. Walls shall have reinforcement in accordance with 22.6.6.5. Concrete used for fill with a minimum cement content of two (2) sacks of Portland cement per cubic yard.

(b) Isolated footings of plain concrete supporting pedestals or columns are permitted, provided the projection of the footing beyond the face of the supported member does not exceed the footing thickness.

Exception: In detached one- and two-family dwellings three stories or less in height, the projection of the footing beyond the face of the supported member is permitted to exceed the footing thickness.

(c) Plain concrete footings supporting walls are permitted provided the footings have at least two continuous longitudinal reinforcing bars. Bars shall not be smaller than No. 4 and shall have a total area of not less than 0.002 times the gross cross-sectional area of the footing. For footings that exceed 3 inches (203 mm) in thickness, a minimum of one bar shall be provided at the top and bottom of the footing. Continuity of reinforcement shall be provided at corners and intersections.

Exceptions:
1. In detached one- and two-family dwellings three stories or less in height and constructed with stud-bearing walls, plain concrete footings without longitudinal reinforcement supporting walls are permitted with at least two continuous longitudinal reinforcing bars not smaller than No. 4 are permitted to have a total area of less than 0.002 times the gross cross-sectional area of the footing.
2. For foundation systems consisting of a plain concrete footing and a plain concrete stemwall, a minimum of one bar shall be provided at the top of the stemwall and at the bottom of the footing.
3. Where a slab on ground is cast monolithically with the footing, one No. 5 bar is permitted to be located at either the top of the slab or bottom of the footing.
Section 1909.4 of the CBC is amended to read as follows:

**1909.4 Design.** Structural plain concrete walls, footings and pedestals shall be designed for adequate strength in accordance with ACI 318, Section 22.4 through 22.8.

*Exception:* For Group R-3 occupancies and buildings or other occupancies less than two stories above grade plane of light-frame construction, the required edge thickness of ACI 318 is permitted to be reduced to 6 inches (152 mm), provided that the footing does not extend more than 4 inches (102 mm) on either side of the supported wall. *This exception shall not apply to structural elements designed to resist seismic lateral forces for structures assigned to Seismic Design Category D, E or F.*
Section 2204.1.1 is added to Chapter 22 of the CBC to read as follows:

2204.1.1 Consumables for welding.

2204.1.1.1 Seismic Force Resisting System (SFRS) welds. All welds used in members and connections in the SFRS shall be made with filler metals meeting the requirements specified in AWS D1.8 Clause 6.3. AWS D1.8 Clauses 6.3.5, 6.3.6, 6.3.7 and 6.3.8 shall apply only to demand critical welds.

2204.1.1.2 Demand critical welds. Where welds are designated as demand critical, they shall be made with filler metals meeting the requirements specified in AWS D1.8 Clause 6.3.
Section 2205.4 is added to Chapter 22 of the CBC to read as follows:

**2205.4 AISC 341, Part I, Section 13.2 Members. Add Section 13.2f to read as follows:**

13.2f. Member Types

The use of rectangular HSS are not permitted for bracing members, unless filled solid with cement grout having a minimum compressive strength of 3,000 psi (20.7 MPa) at 28 days. The effects of composite action in the filled composite brace shall be considered in the sectional properties of the system where it results in the more severe loading condition or detailing.

Section 2304.11.7 of the CBC is amended to read as follows:

**2304.11.7 Wood used in retaining walls and cribs.** Wood installed in retaining or crib walls shall be preservative treated in accordance with AWPA U1 (Commodity Specifications A or F) for soil and fresh water use. Wood shall not be used in retaining or crib walls for structures assigned to Seismic Design Category D, E or F.

Section 2305.4 is added to Chapter 23 of the CBC to read as follows:

**2305.4 Quality of Nails.** In Seismic Design Category D, E or F, mechanically driven nails used in wood structural panel shear walls shall meet the same dimensions as that required for hand-driven nails, including diameter, minimum length and minimum head diameter. Clipped head or box nails are not permitted in new construction. The allowable design value for clipped head nails in existing construction may be taken at no more than the nail-head-area ratio of that of the same size hand-driven nails.

Section 2305.5 is added to Chapter 23 of the CBC to read as follows:

**2305.5 Hold-down connectors.** In Seismic Design Category D, E or F, hold-down connectors shall be designed to resist shear wall overturning moments using approved cyclic load values or 75 percent of the allowable seismic load values that do not consider cyclic loading of the product. Connector bolts into wood framing shall require steel plate washers on the post on the opposite side of the anchorage device. Plate size shall be a minimum of 0.229 inch by 3 inches by 3 inches (5.82 mm by 76 mm by 76 mm) in size. Hold-down connectors shall be tightened to finger tight plus one half (1/2) wrench turn just prior to covering the wall framing.

Tables 2306.2.1(3) and 2306.2.1(4) are added to Chapter 23 of the CBC and Section 2306.2.1 of the CBC is amended to read as follows:

**2306.2.1 Wood structural panel diaphragms.** Wood structural panel diaphragms shall be designed and constructed in accordance with AF&PA SDPWS. Wood structural panel diaphragms are permitted to resist horizontal forces using the allowable shear capacities set forth in Table 2306.2.1(1) or 2306.2.1(2). For structures assigned to Seismic Design Category D, E or F the allowable shear capacities shall be set forth in Table 2306.2.1(3) or 2306.2.1(4). The allowable shear capacities in Table 2306.2.1(1) or 2306.2.1(2) are permitted to be increased 40 percent for wind design.

Wood structural panel diaphragms fastened with staples shall not used to resist seismic forces in structures assigned to Seismic Design Category D, E or F.
Exception: Staples may be used for wood structural panel diaphragms when the allowable shear values are substantiated by cyclic testing and approved by the building official.

Wood structural panel diaphragms used to resist seismic forces in structures assigned to Seismic Design Category D, E or F shall be applied directly to the framing members.

Exception: Wood structural panel diaphragm is permitted to be fastened over solid lumber planking or laminated decking, provided the panel joints and lumber planking or laminated decking joints do not coincide.
**TABLE 2306.2.1(3)**

**ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL DIAPHRAGMS WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE**

FOR SEISMIC LOADING FOR STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E OR F

<table>
<thead>
<tr>
<th>PANEL GRADE</th>
<th>COMMON NAIL SIZE</th>
<th>MINIMUM FASTENER PENETRATION IN FRAMING (Inches)</th>
<th>MINIMUM NOMINAL PANEL THICKNESS (Inch)</th>
<th>MINIMUM NOMINAL WIDTH OF FRAMING MEMBERS AT ADJOINING PANEL EDGES AND BOUNDARIES (Inches)</th>
<th>BLOCKED DIAPHRAGMS</th>
<th>UNBLOCKED DIAPHRAGMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural 1 Grades</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural 1 Grades</td>
<td>8d (2 1/2&quot; x 0.131&quot;)</td>
<td>1 3/8</td>
<td>3/8</td>
<td>2</td>
<td>270</td>
<td>360</td>
</tr>
<tr>
<td>Structural 1 Grades</td>
<td>10d (3&quot; x 0.148&quot;)</td>
<td>1 1/2</td>
<td>15/32</td>
<td>2</td>
<td>320</td>
<td>425</td>
</tr>
<tr>
<td>Sheathing, single floor and other grades covered in DOC PS1 and PS2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheathing, single floor and other grades covered in DOC PS1 and PS2</td>
<td>6d (2&quot; x 0.113&quot;)</td>
<td>1 1/4</td>
<td>3/8</td>
<td>2</td>
<td>210</td>
<td>280</td>
</tr>
<tr>
<td>Sheathing, single floor and other grades covered in DOC PS1 and PS2</td>
<td>8d (2 1/2&quot; x 0.131&quot;)</td>
<td>1 3/8</td>
<td>7/16</td>
<td>2</td>
<td>240</td>
<td>320</td>
</tr>
<tr>
<td>Sheathing, single floor and other grades covered in DOC PS1 and PS2</td>
<td>8d (2 1/2&quot; x 0.131&quot;)</td>
<td>1 3/8</td>
<td>15/32</td>
<td>2</td>
<td>270</td>
<td>360</td>
</tr>
<tr>
<td>Sheathing, single floor and other grades covered in DOC PS1 and PS2</td>
<td>10d (3&quot; x 0.148&quot;)</td>
<td>1 1/2</td>
<td>19/32</td>
<td>2</td>
<td>290</td>
<td>385</td>
</tr>
</tbody>
</table>

**A. Fastener spacing (inches) at other panel edges**

(Cases 1, 2, 3 and 4) | (Cases 1, 2, 3 and 4) | (No unblocked edges or continuous joints parallel to load) | All other configurations (Cases 2, 3, 4, 5 and 6)

<table>
<thead>
<tr>
<th></th>
<th>Fastener spaced 6&quot; max. at supported edges</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>240</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>240</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>240</td>
<td>180</td>
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<tr>
<td></td>
<td>240</td>
<td>180</td>
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<tr>
<td></td>
<td>240</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>240</td>
<td>180</td>
</tr>
</tbody>
</table>
TABLE 2306.2.1(3)—continued
ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL
Panel Diaphragms With Framing of Douglas Fir-Larch,
Or Southern Pine* FOR SEISMIC LOADING†
FOR STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E OR F

For SI: 1 inch = 25.4 mm, 1 pound per foot = 14.5939 N/m.

a. For framing of other species: (1) Find specific gravity for species of lumber in AF&PA NDS. (2) For nails find shear value from table above for nail size for actual grade and multiply value by the following adjustment factor: Specific Gravity Adjustment Factor = [1-(0.5-SG)], where SG = Specific Gravity of the framing lumber. This adjustment factor shall not be greater than 1.

b. Space fasteners maximum 12 inches o.c. along intermediate framing members (6 inches o.c. where supports are spaced 48 inches o.c.).

c. Framing at adjoining panel edges shall be 3 inches nominal or thicker, and nails at all panel edges shall be staggered where panel edge nailing is specified at 2 1/2 inches o.c. or less.

d. Framing at adjoining panel edges shall be 3 inches nominal or thicker, and nails at all panel edges shall be staggered where both of the following conditions are met: (1) 10d nails having penetration into framing of more than 1 1/2 inches and (2) panel edge nailing is specified at 3 inches o.c. or less.

e. The minimum nominal width of framing members not located at boundaries or adjoining panel edges shall be 2 inches.

f. For shear loads of normal or permanent load duration as defined by the AF&PA NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.
<table>
<thead>
<tr>
<th>PANEL GRADE*</th>
<th>COMMON NAIL SIZE</th>
<th>MINIMUM FASTENER PENETRATION IN FRAMING (inches)</th>
<th>MINIMUM NOMINAL PANEL THICKNESS (inches)</th>
<th>MINIMUM NOMINAL WIDTH OF FRAMING MEMBERS AT ADJOINING PANEL EDGES AND BOUNDARIES*</th>
<th>LINES OF FASTENERS</th>
<th>BLOCKED DIAPHRAGMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural 1 grades</td>
<td>10d common nails</td>
<td>1 1/2</td>
<td>15/32</td>
<td>3 2</td>
<td>605 815 875 1,150</td>
<td>Cases 1 and 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>19/32</td>
<td>4 2</td>
<td>700 915 1,005 1,290</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 3</td>
<td>875 1,220 1,288 1,385</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 2</td>
<td>670 880 965 1,255</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 2</td>
<td>780 990 1,110 1,440</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 3</td>
<td>965 1,320 1,405 1,792</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 2</td>
<td>730 955 1,060 1,365</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 2</td>
<td>855 1,070 1,210 1,565</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 3</td>
<td>1,050 1,430 1,525 1,800</td>
<td></td>
</tr>
<tr>
<td>Sheathing, single floor and other grades covered in DOC PS1 and PS2</td>
<td>10d common nails</td>
<td>1 1/2</td>
<td>15/2</td>
<td>3 2</td>
<td>525 725 765 1,010</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 2</td>
<td>605 815 875 1,105</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 3</td>
<td>765 1,095 1,195 1,225</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 2</td>
<td>650 860 935 1,225</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 2</td>
<td>755 955 1,080 1,370</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 3</td>
<td>935 1,290 1,365 1,485</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 2</td>
<td>710 935 1,020 1,335</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 2</td>
<td>825 1,050 1,175 1,445</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 3</td>
<td>1,020 1,400 1,480 1,565</td>
<td></td>
</tr>
</tbody>
</table>

For SI: 1 inch = 25.4 mm, 1 pound per foot = 14.5939 N/m

a. For framing of other species: (1) Find specific gravity for species of lumber in AF&PA NDS. (2) For nails find shear value from table above for nail size for actual grade and multiply by the following adjustment factor: Specific Gravity Adjustment Factor = [1 - (0.5 x SG)], where SG = Specific Gravity of the framing lumber. This adjustment factor shall not be greater than 1.
b. Fastening along intermediate framing members: Space fasteners a maximum of 12 inches on center, except 6 inches on center for spans greater than 32 inches.
c. Panels conforming to PS1 or PS 2.
d. This table gives shear values for Cases 1 and 2 as shown in Table 2306.2.1(3). The values shown are applicable to Cases 3, 4, 5 and 6 as shown in Table 2306.2.1(3), providing fasteners at all continuous panel edges spaced in accordance with the boundary fastener spacing.
e. The minimum nominal depth of framing members shall be 3 inches nominal. The minimum nominal width of framing members not located at boundaries or adjoining panel edges shall be 2 inches.
f. High load diaphragms shall be subject to special inspection in accordance with Section 1704.6.1.
g. For shear loads of normal or permanent load duration as defined by the AF&PA NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.
Table 2306.3(2) is added to Chapter 23 of the CBC and Section 2306.3 and Table 2306.3 of the CBC are amended to read as follows:

### 2306.3 Wood structural panel shear walls

Wood structural panel shear walls shall be designed and constructed in accordance with AF&PA SDPWS. Wood structural panel shear walls are permitted to resist horizontal forces using the allowable shear capacities set forth in Table 2306.3(1). For structures assigned to Seismic Design Category D, E or F, the allowable shear capacities shall be set forth in Table 2306.3(2). The allowable shear capacities in Table 2306.3(1) are permitted to be increased 40 percent for wind design.
Wood structural panel shear walls used to resist seismic forces in structures assigned to Seismic Design Category D, E or F shall not be less than 4 feet by 8 feet (1219 mm by 2438 mm), except at boundaries and at changes in framing. Wood structural panel thickness for shear walls shall not be less than 3/8 inch thick and studs shall not be spaced at more than 16 inches on center.

The maximum allowable shear value for three-ply plywood resisting seismic forces in structures assigned to Seismic Design Category D, E or F is 200 pounds per foot (2.92 kN/m). Nails shall be placed not less than 1/2 inch (12.7 mm) in from the panel edges and not less than 3/8 inch (9.5 mm) from the edge of the connecting members for shear greater than 350 pounds per foot (5.11 kN/m). Nails shall be placed not less than 3/8 inch (9.5 mm) from panel edges and not less than 1/4 inch (6.4 mm) from the edge of the connecting members for shears of 350 pounds per foot (5.11 kN/m) or less.

Wood structural panel shear walls fastened with staples shall not used to resist seismic forces in structures assigned to Seismic Design Category D, E or F.

**Exception:** Staples may be used for wood structural panel shear walls when the allowable shear values are substantiated by cyclic testing and approved by the building official.

Wood structural panel shear walls used to resist seismic forces in structures assigned to Seismic Design Category D, E or F shall be applied directly to the framing members.

---

**TABLE 2306.3(1)**

ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL SHEAR WALLS WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE\(^5\) FOR WIND OR SEISMIC LOADING\(^5, 6, 7, 8, 9, 10, 11, 12, 13\)
<table>
<thead>
<tr>
<th>PANEL GRADE</th>
<th>MINIMUM NOMINAL PANEL THICKNESS (inch)</th>
<th>MINIMUM FASTENER PENETRATION IN FRAMING (inches)</th>
<th>ALLOWABLE SHEAR VALUE FOR SEISMIC FORCES PANELS APPLIED DIRECTLY TO FRAMING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>COMMON NAIL SIZE</td>
</tr>
<tr>
<td>Structural I sheathing</td>
<td>3/8</td>
<td>1 3/8</td>
<td>8d (2 1/4 x 0.131&quot; common)</td>
</tr>
<tr>
<td></td>
<td>7/16</td>
<td>1 3/8</td>
<td>8d (2 1/4 x 0.131&quot; common)</td>
</tr>
<tr>
<td></td>
<td>15/32</td>
<td>1 1/2</td>
<td>8d (2 1/4 x 0.131&quot; common)</td>
</tr>
<tr>
<td>Sheathing, plywood siding² excl.</td>
<td></td>
<td></td>
<td>10d (3 x 0.148&quot; common)</td>
</tr>
<tr>
<td>Group 5 Species</td>
<td>3/8²</td>
<td>1 3/8</td>
<td>8d (2 1/4 x 0.131&quot; common)</td>
</tr>
</tbody>
</table>

For SI: 1 inch = 25.4 mm, 1 foot = 25.4 mm, 1 pound per foot = 14.5939 N/m.

a. For framing of other species: (1) Find specific gravity for species of lumber in AF&PA NDS. (2) For nails find shear value from table above for nail size for actual grade and multiply value by the following adjustment factor: Specific Gravity Adjustment Factor = (1-0.5xSG), where SG = Specific Gravity of the framing lumber. This adjustment factor shall not be greater than 1.
b. Panel edges backed with 2-inch nominal or thicker framing, install panels either horizontally or vertically. Space fasteners maximum 6 inches on center along intermediate framing members for 3/8-inch and 7/16-inch panels installed on studs spaced 24 inches on center. For other conditions and panel thickness, space fasteners maximum 12 inches on center on intermediate supports.
c. 3/8-inch panel thickness or siding with a span rating of 16 inches on center is the minimum recommended where applied direct to framing as exterior siding. For grooved panel siding, the nominal panel thickness is the thickness of the panel measured at the point of nailing.
d. Allowable shear values are permitted to be increased to values shown for 15/32-inch sheathing with same nailing provided (a) studs are spaced a maximum of 16 inches on center, or (b) panels are applied with long dimension across studs.
e. Framing at adjoining panel edges shall be 3 inches nominal or thicker, and nails shall be staggered where nails are spaced 2 inches on center or less.
f. Framing at adjoining panel edges shall be 3 inches nominal or thicker, and nails shall be staggered where both of the following conditions are met: (1) 10d (3 x 0.148") nails having penetration into framing of more than 1 1/2 inches and (2) nails are spaced 3 inches on center or less.
g. Values apply to all-veneer plywood. Thickness of panel at framing on panel edges governs shear values.
h. Where panels applied on both faces of a wall and nail spacing is less than 6 inches o.c. on either side, panel joints shall be offset to fall on different framing members. Or framing shall be 3-inch nominal or thicker at adjoining panel edges and nails shall be staggered.
i. Where shear design values exceed 350 pounds per linear foot, all framing members receiving edge nailing from abutting panels shall not be less than a single 3-inch nominal member, or two 2-inch nominal members fastened together in accordance with Section 2306.1 to transfer the design shear value between framing members. Wood structural panel joints and sill plate nailing shall be staggered at all panel edges. See Section 4.3.8.1 and 4.3.8.4.3 of AF&PA SDPWS for all plate size and anchorage requirements.
j. Galvanized nails shall be hot dipped or tumbled.
k. For shear loads of normal or permanent load duration as defined by the AF&PA NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.
l. The maximum allowable shear value for three-ply plywood resisting seismic forces is 200 pounds per foot (2.92 kN/m).
Section 2306.7 of the CBC are amended to read as follows:

2306.7 Shear walls sheathed with other materials. Shear walls sheathed with portland cement plaster, gypsum lath, gypsum sheathing or gypsum board shall be designed and constructed in accordance with AF&PA SDPWS. Shear walls sheathed with these materials are permitted to resist horizontal forces using the allowable shear capacities set forth in Table 2306.7. Shear walls sheathed with portland cement plaster, gypsum lath, gypsum sheathing or gypsum board shall not be used to resist seismic forces in structures assigned to Seismic Design Category E or F.

Shear walls sheathed with lath, plaster or gypsum board shall not be used below the top level in a multi-level building for structures assigned to Seismic Design Category D.

Section 2308.3.4 of Chapter 23 of the CBC is amended to read as follows:

2308.3.4 Braced wall line support. Braced wall lines shall be supported by continuous foundations.

Exception: For structures with a maximum plan dimension not over 50 feet (15240 mm), continuous foundations are required at exterior walls only for structures not assigned to Seismic Design Category D, E or F.

Section 2308.12.2 of Chapter 23 of the CBC is amended to read as follows:

2308.12.2 Concrete or masonry. Concrete or masonry walls and stone or masonry veneer shall not extend above the basement.

Exception: Stone and masonry veneer is permitted to be used in the first story above grade plane in Seismic Design Category D, provided the following criteria are met:

1. Type of brace in accordance with Section 2308.9.3 shall be Method 3 and the allowable shear capacity in accordance with Table 2306.4.1 shall be a minimum of 350 plf (5108 N/m).

2. The bracing of the first story shall be located at each end and at least every 25 feet (7620 mm) o.c. but not less than 45 percent of the braced wall line.

3. Hold-down connectors shall be provided at the ends of braced walls for the first floor to foundation with an allowable design of 2,100 pounds (9341 N).

4. Cripple walls shall not be permitted.

5. Anchored masonry and stone wall veneer shall not exceed 5 inches (127 mm) in thickness, shall conform to the requirements of Chapter 14 and shall not extend more than 5 feet (1524 mm) above the first story finished floor.

Section 2308.12.4 and Table 2308.12.4 of the CBC are amended to read as follows:
2308.12.4 Braced wall line sheathing. Braced wall lines shall be braced by one of the types of sheathing prescribed by Table 2308.12.4 as shown in Figure 2308.9.3. The sum of lengths of braced wall panels at each braced wall line shall conform to Table 2308.12.4. Braced wall panels shall be distributed along the length of the braced wall line and start at not more than 8 feet (2438 mm) from each end of the braced wall line. Panel sheathing joints shall occur over studs or blocking. Sheathing shall be fastened to studs, top and bottom plates, and at panel edges occurring over blocking. Wall framing to which sheathing used for bracing is applied shall be nominal 2 inch wide (actual 1/2 inch [38 mm]) or larger members, and spaced a maximum of 16 inches on center.

Exception: Braced wall panels required by Section 2308.12.4 may be eliminated when all of the following requirements are met:

1. One story detached Group U occupancies not more than 25 feet in depth or length.

2. The roof and three enclosing walls are solid sheathed with 15/32 inch nominal thickness wood structural panels with 8d common nails placed 3/8 inches from panel edges and spaced not more than 6 inches on center along all panel edges and 12 inches on center along intermediate framing members. Wall openings for doors or windows are permitted provided a minimum 4 foot wide wood structural braced panel with minimum height to length ratio of 2 to 1 is provided at each end of the wall line and that the wall line be sheathed for 50% of its length.

Wood structural panel sheathing shall be a minimum of 15/32 inch thick nailed with 8d common placed 3/8 inches from panel edges and spaced not more than 6 inches on center and 12 inches on center along intermediate framing members.

Cripple walls having a stud height exceeding 14 inches (356 mm) shall be considered a story for the purpose of this section and shall be braced as required for braced wall lines in accordance with Table 2309.12.4. Where interior braced wall lines occur without a continuous foundation below, the length of parallel exterior cripple wall bracing shall be one and one-half times the lengths required by Table 2308.12.4. Where the cripple wall sheathing type used is Type S-W and this additional length of bracing cannot be provided, the capacity of Type S-W sheathing shall be increased by reducing the spacing of fasteners along the perimeter of each piece of sheathing to 4 inches (102 mm) o.c.

Braced wall panel construction types shall not be mixed within a braced wall line.

| TABLE 2308.12.4 |
| WALL BRACING IN SEISMIC DESIGN CATEGORIES D AND E |
| (Minimum Length of Wall Bracing per each 25 Linear Feet of Braced Wall Line) |

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>SHEATHING TYPE^</th>
<th>S_{DS} &lt; 0.50</th>
<th>0.50 ≤ S_{DS} &lt; 0.75</th>
<th>0.75 ≤ S_{DS} ≤ 1.00</th>
<th>S_{DS} &gt; 1.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Story</td>
<td>G-P^2</td>
<td>10 feet 8 inches</td>
<td>14 feet 8 inches</td>
<td>18 feet 8 inches</td>
<td>25 feet 0 inches</td>
</tr>
<tr>
<td></td>
<td>S-W^2</td>
<td>5 feet 4 inches</td>
<td>8 feet 0 inches</td>
<td>9 feet 4 inches</td>
<td>12 feet 0 inches</td>
</tr>
</tbody>
</table>

For St: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. Minimum length of panel bracing of one face of the wall for S-W sheathing shall be at least 4'-0" long or both faces of the walls for G-P sheathing shall be at least 8'-0" long; h/w ratio shall not exceed 2:1. For S-W panel bracing of the same material on two faces of the walls, the minimum length permitted to be one-half the tabulated value but the h/w ratio shall not exceed 2:1 and design for uplift is required.

b. G-P = gypsum board, fiberboard, particleboard, lath and portland cement plaster or gypsum sheathing boards; S-W = wood structural panels and diagonal wood sheathing.

c. Nailing as specified below shall occur at all panel edges at studs, at top and bottom plates, and, where occurring, at blocking:
   For 1/2-inch gypsum board, 5d (0.113 inch diameter) common nails at 7 inches on center;
   For 5/8-inch gypsum board, No. 11 gage (0.120 inch diameter) common nails at 7 inches on center;
   For gypsum sheathing board, 1-3/4 inches long by 7/16-inch head, diamond point galvanized nails at 4 inches on center;
   For gypsum lath, No. 13 gage (0.092 inch) by 1-1/8 inches long, 13/64-inch head, plasterboard at 5 inches on center;
For Portland cement plaster, No. 11 gage (0.120 inch) by 1\(\frac{1}{4}\) inches long, \(7/16\) inch head at 6 inches on center; for fiberboard and particleboard, No. 11 gage (0.120 inch) by 1\(\frac{1}{4}\) inches long, \(7/16\) inch head, galvanized nails at 3 inches on center.

d. S-W sheathing shall be a minimum of 15/32" thick nailed with 8d common placed 3/8 inches from panel edges and spaced not more than 6 inches on center and 12 inches on center along intermediate framing members.

Section 2304.9.1 and Table 2304.9.1 of the CBC are amended to read as follows:

2304.9.1 Fastener requirements. Connections for wood members shall be designed in accordance with the appropriate methodology in Section 2301.2. The number and size of fasteners connecting wood members shall not be less than that set forth in Table 2304.9.1. Staple fasteners in Table 2304.9.1 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E or F.

Exception: Staples may be used to resist or transfer seismic forces when the allowable shear values are substantiated by cyclic testing and approved by the building official.

Add new footnote q to Table 2304.9.1.

q. Staples shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E or F.

Section 2308.12.5 of the CBC are amended to read as follows:

2308.12.5 Attachment of sheathing. Fastening of braced wall panel sheathing shall not be less than that prescribed in Table 2308.12.4 or 2304.9.1. Wall sheathing shall not be attached to framing members by adhesives. Staple fasteners in Table 2304.9.1 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E or F.

Exception: Staples may be used to resist or transfer seismic forces when the allowable shear values are substantiated by cyclic testing and approved by the building official.

All braced wall panels shall extend to the roof sheathing and shall be attached to parallel roof rafter or blocking above with framing clips (18 gauge minimum) spaced at maximum 24 inches (6096 mm) on center with four 8d nails per leg (total eight 8d nails per clip). Braced wall panels shall be laterally braced at each top corner and at maximum 24 inches (6096 mm) intervals along the top plate of discontinuous vertical framing.

Amend Appendix J section J 101 by adding a new section J 101.3 Protection of Adjacent Properties that reads as follows:

The owner and permittee of any property on which grading has been performed and that requires a grading permit is responsible for the prevention of damage to adjacent property and no person shall excavate on land sufficiently close to the property line to endanger any adjoining public street, sidewalk, alley, or other public or private property without supporting and protecting such property from settling, cracking or other damage that might result. Special precautions approved by the building official shall be made to prevent imported or exported materials from being deposited on the adjacent public way and/or drainage courses. A 30 day excavation notice shall be provided as required by California Civil Code Section 829-834 when the excavation is of sufficient depth and proximity to adjacent lot structures.
Amend Appendix J section J 101 by adding a new section J101.4 Safety Precautions that reads as follows:

1. General
   a) If at any stage of work on an excavation or fill, the building official determines that the work has become or is likely to become dangerous to any person, or is likely to endanger any property, public or private, the building official shall be authorized to require safety precautions to be immediately taken by the property owner as a condition to continuing such permitted work or to require cessation thereof forthwith unless and until it is made safe and to amend the plans for such work.
   b) Safety precautions may include, but shall not be limited to, specifying a flatter exposed slope or construction of additional drainage facilities, berms, terracing, compaction, cribbing, retaining walls or buttress fills, slough walls, desilting basins, check dams, benching, wire mesh and guniting, rock fences, revetments or diversion walls.
   c) Upon the determination of the building official that such safety precautions during grading are necessary, the building official shall provide a notice and order to the permittee to implement same. After receiving such notice, oral or written, it is unlawful for the permittee or any person to proceed with such work contrary to such order.

2. Removal of Ground Cover
   a) The existing vegetative ground cover of any watershed in any hillside area shall not be destroyed, removed or damaged except for routine maintenance pursuant to lawful grading, use or occupancy of the property or to clear hazardous vegetation near structures and roads in areas designated as High Fire Hazard areas
   b) Whenever ground cover is removed or damaged pursuant to a validly issued grading permit, the permittee shall restore and maintain the affected area with an approved ground cover, or shall accomplish such other erosion control protection measures as may be approved by the building official. Such erosion control shall be completed within thirty days after cessation of the grading work or other work pursuant to a validly issued building permit.

3. Maintenance of Protective Devices
   All devices used to protect hillside areas from erosion or landslide damage including, but not limited to, retaining walls, cribbing, terracing, surface and subsurface drainage structures, interceptor drains, check dams, and riprap shall be maintained in good condition and repair as approved by the building official at the time of completion of construction thereof.

Amend Appendix J section J 101 by adding a new section J101.5 Protection of Utilities that reads as follows:

The owner and permittee of any property on which grading has been performed and that requires a grading permit shall be responsible for the prevention of damage to any public utilities or services.

Amend Appendix J section J 103.2 Exemptions item 1 and add 1-A to read as follows:

1. An excavation which (a) is less than 2 feet (610 mm) in depth, or (b) which does not create a cut slope greater than 5 feet (1524 mm) in height and steeper than one unit vertical in two units horizontal (50 percent slope). This exception shall not apply to cut which exceeds 50 cubic yards (38.3 m3) or which changes the existing drainage pattern.
A. Fill that is less than one foot (305 mm) in depth and placed on natural terrain with a slope flatter than one unit vertical in 10 units horizontal (10 percent slope). This exception shall not apply when the fill exceeds 50 cubic yards (38.3 m³) or when the fill changes the existing drainage pattern.

Amend Appendix J section J 109.4 Drainage across property lines, to read as follows:

J 109.4 Site Drainage. All lots with new cut or fill; projects with concentrated drainage such as roof or deck drainage, and which change the existing drainage pattern shall have drainage that slopes a minimum of two percent to an approved drainage device or facility, or to a public way without crossing adjacent lots. Where used, the drainage device shall be an adequately designed system of catch basins, swales and/or drain lines, which conducts the water to a Public Way, without crossing adjacent lot’s, via a non erosive device.

EXCEPTION: Where the slope of the underlying natural ground does not exceed three percent and the compacted fill is less than three feet (914 mm) in depth, the slope of the drainage pattern may be reduced to one percent. Compliance with California Building Code Section 1803.3 is still required, and the slope is not to be reduced per this section.

Appendix V – Voluntary Retrofit Standards are added to the CBC as follows:

APPENDIX V – SECTION V101 - VOLUNTARY EARTHQUAKE HAZARD REDUCTION IN EXISTING TILT-UP CONCRETE WALL BUILDINGS

SECTION V101. PURPOSE.
The purpose of this Chapter is to promote public safety and welfare by reducing the risk of death or injury that may result from the effects of earthquakes on tilt-up concrete wall buildings designed under the building codes in effect prior to January 1, 1976. The provisions of this Chapter are minimum voluntary standards for structural seismic resistance established primarily to reduce the risk of life loss or injury on both subject and adjacent properties and will not necessarily prevent loss of life or injury or prevent earthquake damage to an existing building which complies with these standards. This Chapter provides systematic procedures and standards for identification and classification of tilt-up concrete wall building based on the current use of the building.

SECTION V102. SCOPE.
The provisions of this Chapter shall apply to all buildings designed under building codes in effect prior to January 1, 1976, which, on the effective date of this Chapter have tilt-up concrete walls as defined herein.

SECTION V103. DEFINITIONS.
For purposes of this Chapter, the applicable definitions in Sections 1602, 1902, 2302 and Section 11.2 of ASCE 7, and the following shall apply:

COMMENCED CONSTRUCTION. Construction pursuant to a valid building permit has progressed to the point that one of the called inspections as required by the Department has been made and the work for which the inspection has been called has been judged by the Department to be substantial and has been approved by the Department.
DEPARTMENT. The Department of Building and Safety.

ESSENTIAL BUILDING. For purposes of this Chapter, any building housing a hospital or other medical facility having surgery or emergency treatment areas, fire or police stations, municipal government disaster operations, and communication centers.

TILT-UP CONCRETE WALL. A form of precast concrete panel construction either cast in the horizontal position at the site and after curing, lifted and moved into place in a vertical position, or cast off-site in a fabricator’s shop.

SECTION V104. RATING CLASSIFICATIONS.
The rating classification as exhibited in Table No. 91-A is hereby established and each building within the scope of this Chapter shall be placed in one rating classification by the Department. The total occupant load as determined by Section 1004.1 for the entire building plus the occupant load of any adjacent building, which interconnects with the subject building or uses the subject building for exiting purposes, shall be used to determine the rating classification.

SECTION V105. ANALYSIS AND DESIGN.
For the purpose of this section, “anchorage system(s)” shall mean all structural elements, which supports the wall in the lateral direction, including wall anchorage and continuity tie (cross-tie) connectors in subdiaphragms and main diaphragms for retrofit and repairs.

V105.1. Wall Panel Anchorage. Concrete walls shall be anchored to all floors and roofs which provide lateral support for the wall. The anchorage shall provide a positive direct connection between the wall and floor or roof construction capable of resisting a horizontal force equal to 30 percent of the tributary wall weight for all buildings, and 45 percent of the tributary wall weight for essential buildings, or a minimum force of 250 pounds per linear foot of wall, whichever is greater. The required anchorage shall be based on the tributary wall panel assuming simple supports at floors and roof.

V105.2. Special Requirements for Wall Anchors and Continuity Ties. The steel elements of the wall anchorage systems and continuity ties shall be designed by the allowable stress design method using a load factor of 1.7. The 1/3 stress increase permitted by Section 12.4.3.3 of ASCE 7 shall not be permitted for materials using allowable stress design methods. The strength design specified in Section 1912, using a load factor of 2.0 in lieu of 1.4 for earthquake loading, shall be used for design of embedments in concrete. Wall anchors shall be provided to resist out-of-plane forces, independent of existing shear anchors.

EXCEPTION: Existing cast-in-place shear anchors may be used as wall anchors if the tie element can be readily attached to the anchors and if the engineer or architect can establish tension values for the existing anchors through the use of approved as-built plans or testing, and through analysis showing that the bolts are capable of resisting the total shear load while being acted upon by the maximum tension force due to earthquake.
Expansion anchors are not allowed. Attaching the edge of plywood sheathing to steel ledgers is not considered as complying with the positive anchoring requirements of the Code; and attaching the edge of steel decks to steel ledgers is not considered as providing the positive anchorage of this Code unless testing and/or analysis are performed, which establish shear values for the attachment perpendicular to the edge of the deck.


**Exception:** If continuously tied girders are present, then the maximum spacing of the continuity ties is the greater of the girder spacing or 24 feet (7315 mm). In wood diaphragms, anchorage shall not be accomplished by use of toe nails or nails subject to withdrawal, nor shall wood ledgers, top plates or framing be used in cross-grain bending or cross-grain tension. The continuous ties required by Section 12.11 of ASCE 7 shall be in addition to the diaphragm sheathing. Lengths of development of anchor loads in wood diaphragms shall be based on existing field nailing of the sheathing unless existing edge nailing is positively identified on the original construction plans or at the site.

At reentrant corners, continuity collectors may be required for existing return walls not designed as shear walls, to develop into the diaphragm a force equal to the lesser of the rocking or shear capacity of the return wall, or the tributary shear, but not exceeding the capacity of the diaphragm. Shear anchors for the return wall shall be commensurate with the collector force. If a truss or beam, other than rafters or purlins, is supported by the return wall or by a column integral with the return wall, an independent secondary column, is required to support the roof or floor members whenever rocking or shear capacity of the return wall is governing. Seismic deflection shall be determined at the return walls, and fins/canopies at entrances, to ensure deflection compatibility with the diaphragm, by either seismically isolating the element or attaching the element and integrating its load into the diaphragm.

V105.4. Anchorage at Pilasters. Anchorage of pilasters shall be designed for the tributary wall anchoring load per Section 9105.1 of this Code, considering the wall as a two-way slab. The edge of the two-way slab shall be considered “fixed” when there is continuity at pilasters, and considered “pinned” at roof or floor levels. The pilasters or the walls immediately adjacent to the pilasters shall be anchored directly to the roof framing such that the existing vertical anchor bolts at the top of the pilasters are by-passed without causing tension or shear failure at the top of the pilasters.

**Exception:** If existing vertical anchor bolts at the top of the pilasters are used for the anchorage, then additional exterior confinement shall be provided. The minimum anchorage at a floor or roof between the pilasters shall be that specified in Section 9105.1 of this Code.

V105.5. Symmetry. Symmetry of connectors in the anchorage system is required. Eccentricity may be allowed when it can be shown that all components of forces are positively resisted and justified by calculations or tests.
V105.6. Minimum Roof Member Size. Wood members used to develop anchorage forces to the diaphragm must be at least 3x for new construction and replacement. All such members must be checked for gravity and earthquake as part of the wall anchorage system. For existing buildings, the member check shall be without the 1/3 stress increase per Section 9108.2.

V105.7. Combination of Anchor Types. To repair and retrofit existing buildings, a combination of different anchor types of different behavior or stiffness shall not be permitted. The capacity of the new and existing connectors cannot be added.

V105.8. Prohibited Anchors. Usage of connectors that were bent and/or stretched from the intended use shall be prohibited.

V105.9. Crack and Damage Repairs, Evaluation of Existing Structural Alterations. The engineer shall report any observed structural conditions and structural damage that have imminent life safety effects on the buildings and recommend repairs. Evaluations and repairs shall be reviewed and approved by the Department. The engineer shall also evaluate the effects of alterations such as openings cut in existing wall panels without a permit, that may present immediate life safety hazard and correct when necessary.

V105.10. Miscellaneous. Existing mezzanines relying on the tilt-up walls for vertical and/or lateral support shall be anchored to the walls for the tributary mezzanine load. Walls depending on the mezzanine for lateral support shall be anchored per Sections 9105.1, 9105.2 and 9105.3.

EXCEPTION: Existing mezzanines that have independent lateral and vertical support need not be anchored to the walls. Existing interior masonry or concrete walls not designed as shear walls, that extend to the floor above or to the roof diaphragm shall also be anchored for out-of-plane forces per Sections 9105.1, 9105.2 and 9105.3 of this Code. In the in-plane direction, the walls may be isolated or shall be developed into the diaphragm for a lateral force equal to the lesser of the rocking or shear capacity of the wall, or the tributary shear but not exceeding the diaphragm capacity.

SECTION V110. INFORMATION REQUIRED ON PLANS.

V110.1. General. In addition to the seismic analysis required elsewhere in this Chapter, the licensed engineer or architect responsible for the seismic analysis of the building shall record the information required by this section on the approved plans.

V110.2. Information Required. The plans shall accurately reflect the results of the engineering investigation and design and show all pertinent dimensions and sizes for plan review and construction. The following shall be provided:

1. Floor plans and roof plans shall show existing framing construction, diaphragm construction, proposed wall anchors, cross-ties and collectors. Existing nailing, anchors, ties and collectors shall also be shown on the plans if these are part of the design, and these structural elements need to be verified in the field.
2. At elevations where there are alterations or damage, details shall show roof and floor heights, dimensions of openings, location and extent of existing damage, and proposed repair.
3. Typical wall panel sections with panel thickness, height, location of anchors shall be provided.
4. Details shall include existing and new anchors and the method of development of anchor forces into the diaphragm framing; existing and/or new cross-ties; existing and/or new or improved support of roof and floor girders at pilasters or walls.

V110.3. Engineer's or Architect’s Statement.

The responsible engineer or architect shall state on the approved plans, the following:

1. I am responsible for this building's seismic strengthening design in compliance with the minimum seismic resistance standards of Chapter 91 of the California Building Code, and when applicable:
2. The Registered Deputy Inspector, required as a condition of the use of structural design stresses requiring continuous inspection, will be responsible to me as required by Section 1704 of the California Building Code.

SECTION V111. REQUIRED BUILDING MAINTENANCE.

Every building within the scope of this Chapter which has been analyzed to demonstrate compliance or structurally altered to comply with the minimum earthquake standards in this Chapter shall be maintained in conformity with the requirements of this Chapter in effect at the time of such analysis or structural alteration.

TABLE NO. 91-A
RATING CLASSIFICATIONS
Classification Occupant Load
Essential N/A
Group I 300 or more
Group II 100 to 299
Group III 50 to 99
Group IV Less than 50

Appendix V-Cripple Wall is hereby added to the CBC to read as follows:

CHAPTER V – SECTION V201 - VOLUNTARY EARTHQUAKE HAZARD REDUCTION IN EXISTING WOOD FRAME RESIDENTIAL BUILDINGS WITH WEAK CRIPPLE WALLS AND UNBOLTED SILL PLATES

SECTION V201. GENERAL.
V201.1. Purpose.

The provisions of this Chapter are intended to promote public safety and welfare by reducing the risk of earthquake-induced damage to existing wood-framed residential buildings. The voluntary minimum standards contained in this Chapter shall substantially improve the seismic performance of these residential buildings but will not necessarily prevent all earthquake
damage. When fully followed, these standards will strengthen the portion of the structure that is most vulnerable to earthquake damage.

Prior to 1960, most wood frame residential buildings were built with raised wood floors supported by short wood stud walls known as cripple walls. These cripple walls are typically braced with weak seismic materials such as portland cement plaster or horizontal wood siding. In addition, wood frame buildings built under building codes in effect prior to July 1938 were not required to be bolted to their foundations. Recent earthquakes have shown that if a building has weak cripple walls or is unbolted, it may fall off its foundation even in moderate earthquakes. Fallen buildings have collapsed, caught fire or needed extensive repairs to restore their occupancy.

This Chapter sets prescriptive standards for strengthening of underfloor enclosures that shall be permitted by the Building Official without requiring plans or calculations prepared by an architect or an engineer. This Chapter also provides a design standard for the use of alternate materials or an alternate method of construction in lieu of the prescriptive standards. Construction documents for strengthening using alternate materials or methods shall be prepared by an architect or engineer.

V201.2. Scope. The provisions of this Chapter may be applied to light wood frame Group R Occupancies with no more than four dwelling units when they contain one or more of the structural weaknesses specified in Section V203.1. The provisions of this Chapter do not apply to the buildings or elements of the buildings, listed below. These buildings or elements require analysis by an engineer or architect in accordance with Chapter 16 or other approved standards to determine appropriate strengthening.
1. Buildings with a lateral force resisting system using poles or columns embedded in the ground.
2. Cripple walls that exceed four feet (1234 mm) in height.
3. Buildings exceeding three stories in height and any three-story building with cripple wall studs exceeding 14 inches (360 mm) in height.
4. Buildings, or portions of buildings, constructed on a concrete slab on grade or constructed on or into a slope steeper than three horizontal to one vertical.
5. Buildings where the Building Official determines that conditions exist that are beyond the scope of the requirements of this Chapter. The standard details approved by the Building Official and these prescriptive provisions are not intended to be the only acceptable strengthening methods permitted. Alternate details and methods shall be permitted when approved by the Building Official. Qualified Historical Buildings shall be permitted to use alternate building regulations of Section 8119 of this Code in order to preserve their original or restored architectural elements and features.

V201.3. Alternative Design Procedures. When analysis by an engineer or architect is required or provided for a building within the scope of this Chapter, that analysis shall be in accordance with all requirements of this Code except as provided in this Chapter. The design shall provide strengthening for any structural weakness listed in Section V203 that is at least equivalent to that provided by the prescriptive requirements of this Chapter with respect to strength, deflection, and capacity. The Building Official may require that sufficient evidence be submitted to substantiate that equivalence. The base shear may be determined in accordance with the following:
\[ V = 0.1375 \, W \ (V2-1) \]

Where:
\( V \) = The total design lateral force or shear at the base.
\( W \) = The total seismic dead load defined in Section 12.7.2 of ASCE 7

SECTION V202. DEFINITIONS.
For the purpose of this Chapter, in addition to the applicable definitions, symbols and notations in this Code, certain additional terms are defined as follows:

**ADHESIVE ANCHOR** is a fastener placed in hardened concrete or masonry that derives its holding strength from a chemical adhesive compound placed between the wall of the hole and the embedded portion of the anchor.

**ANCHOR SIDE PLATE** is a metal plate or plates used to connect a sill plate to the side of a concrete or masonry stem wall.

**CRIPPLE WALL** is a wood-framed stud wall extending from the top of the foundation to the underside of the lowest floor framing.

**EXPANSION ANCHOR** is a mechanical fastener placed in hardened concrete or assembled masonry, designed to expand in a self-drilled or pre-drilled hole of a specified size and engage the sides of the hole in one or more locations to develop shear and/or tension resistance to applied loads without grout, adhesive or drypack.

**PERIMETER FOUNDATION** is a foundation system which is located under the exterior walls of a building.

**SNUG-TIGHT** is as tight as an individual can torque a nut on a bolt by hand using a wrench with a 10-inch (254 mm) long handle and the point at which the full surface of the plate washer is contacting the wood member and slightly indents the wood surface.

**UNREINFORCED MASONRY** includes adobe, burned clay, concrete or sand-lime brick, hollow clay or concrete block, hollow clay tile, rubble, cut stone and unburned clay masonry walls in which the area of reinforcement is less than 50 percent of the minimum steel ratios required for reinforced masonry.

SECTION V203. STRUCTURAL WEAKNESSES.

**V203.1. General.** For the purpose of this Chapter, structural weaknesses shall be as specified below.

1. Sill plates or floor framing which are supported directly on the ground without an approved foundation system.

2. A perimeter foundation system which is constructed of wood posts supported on isolated pad footings.

3. Perimeter foundation systems that are not continuous.
EXCEPTIONS:

A. Existing single-story exterior walls not exceeding 10 feet (3084 mm) in length forming an extension of floor area beyond the line of an existing continuous perimeter foundation.

B. Porches, storage rooms and similar spaces not containing fuel-burning appliances.

4. A perimeter foundation system which is constructed of unreinforced masonry.

5. Sill plates which are not connected to the foundation or are connected with less than what is required by Section V204.3.1.

6. Cripple walls that are not braced in accordance with the requirements of Section V204.4 and Table V2-A.

SECTION V204. STRENGTHENING REQUIREMENTS.

V204.1. General.

V204.1.1. Scope. The structural weaknesses noted in Section V203 shall be strengthened in accordance with the requirements of this section. Strengthening work shall be allowed to include both new construction and alteration of existing construction. Except as provided here, all strengthening work and materials shall comply with the applicable provisions of this Code. All prescribe nailing in this Chapter shall be common nails. Alternate methods of strengthening shall be allowed provided the systems are designed by an engineer or architect and approved by the Building Official.

V204.1.2. Condition of Existing Wood Materials. All existing wood materials which will be a part of the strengthening work shall be in a sound condition and free from defects which substantially reduce the capacity of the member. Any wood material found to contain fungus infection shall be removed and replaced with new material. Any wood material found to be infested with insects or to have been infested shall be strengthened or replaced with new materials to provide a net dimension of sound wood at least equal to its undamaged original dimension.

V204.1.3. Floor Joists Not Parallel to Foundations. Floor joists framed perpendicular or at an angle to perimeter foundations shall be restrained by either a nominal two-inch (51 mm) wide continuous rim joist or a nominal two-inch (51 mm) wide full depth blocking between alternate joists in one- and two-story buildings, and between each joist in three-story buildings. Blocking for multistory buildings must occur at each joist space above a braced cripple wall panel. Existing connections at the top edge of an existing rim joist or blocking need not be verified. The bottom edge connection to either the foundation sill plate or top plate of a cripple wall shall be verified unless a supplemental connection is provided. The minimum existing bottom edge connection shall consist of 8d toe nails spaced six inches (152 mm) apart for a continuous rim joist or three 8d toe nails per block. When this minimum bottom edge connection is not present, or is not verified, a supplemental connection shall be provided.
When an existing continuous rim joist or the minimum existing blocking does not occur, new 1-1/8 inch (2V mm) wood structural panel blocking installed tightly between floor joists and nailed with 10d common nails at four inches on center to the sill or wall top plate shall be provided at the inside face of the cripple wall. In lieu of 1-1/8 inch (29 mm) wood structural panel blocking, tight fitting, full or near full depth two inches nominal width (51 mm) lumber blocking shall be allowed provided it does not split during installation. New blocking is not required where it will interfere with vents or plumbing which penetrates the wall.

V204.1.4. Floor Joists Parallel to Foundations. Where existing floor joists are parallel to the perimeter foundations, the end joist shall be located over the foundation and, except for required ventilation openings, shall be continuous and in continuous contact with any existing foundation sill plate or top plate of the cripple wall. Existing connections at the top edge connection of the end joist need not be verified; however, the bottom edge connection to either the foundation sill plate or the top plate of a cripple wall shall be verified unless a supplemental connection is provided. The minimum bottom edge connection shall be 8d toe nails spaced six inches (152 mm) apart. If this minimum bottom edge connection is not present or is not verified, a supplemental connection shall be provided.

V204.1.5. Supplemental Connections. Supplemental connections shall provide sufficient strength to transfer the seismic forces. Framing anchors of minimum 18 gauge steel and 12 approved fasteners may be considered to meet this requirement when spaced 32 inches (813 mm) on center for one story buildings, 24 inches (610 mm) on center for two story buildings and 16 inches (406 mm) on center for three story buildings.

EXCEPTION: A supplemental connection is not required when:

1. The structural wood panel sheathing extends from the sill plate to the rim joist or blocking above.

2. The floor sheathing is nailed directly into the sill or top plate of the cripple wall.

V204.1.6. Single Top Plate Ties. When a single top plate exists in the cripple wall, all end joints in the top plate shall be tied. Ties shall be connected to each end of the discontinuous top plate and shall be equal to one of the following:

1. 3-inch by 6-inch (76 mm by 152 mm) by 0.036-inch-thick (0.9 mm) galvanized steel and nailed with six 8d nails at each end.

2. 1-1/2 inches (38 mm) by 12-inch (305 mm) by 0.058 inches (1.47 mm) galvanized steel nailed with six 16d nails at each end.

3. 2-inch by 4-inch by 12-inch wood blocking nailed with six 16d nails at each end.

V204.2. Foundations.
V204.2.1. New Perimeter Foundations. New perimeter foundations shall be provided for structures with the structural weaknesses noted in Items 1 and 2 of Section V203.1. Soil investigations or geotechnical studies are not required for this work unless the building shows signs of excessive settlement or creep.

V204.2.2. Foundation Evaluation by Engineer or Architect. Partial perimeter foundations or unreinforced masonry foundations shall be evaluated by an engineer or architect for the force levels noted in Formula (V2-1). Test reports or other substantiating data to determine existing foundation material strengths shall be submitted for review. When approved by the Building Official, these foundation systems may be strengthened in accordance with the recommendations included with the evaluation in lieu of being replaced.

EXCEPTION: In lieu of testing existing foundations to determine material strengths and when approved by the Building Official, a new nonperimeter foundation system, designed for the forces noted in Formula (V2-1), may be used to resist all exterior wall lateral forces.

V204.2.3. Details for New Perimeter Foundations. All new perimeter foundations shall be continuous and constructed according to the standards for new buildings.

EXCEPTIONS:

1. When approved by the Building Official, the existing clearance between existing floor joists or girders and existing grade below the floor need not comply with Section 2304.11.2.1. This exception shall not be permitted when buildings are relocated on new foundations.

2. When approved by the Building Official, and when designed by an engineer or architect, partial perimeter foundations may be used in lieu of a continuous perimeter foundation.

V204.3. Foundation Sill Plate Anchorage.

V204.3.1. Existing Perimeter Foundations. When the building has an existing continuous perimeter foundation, all perimeter wall sill plates shall be connected to the foundation in accordance with Table V2-A and this section. Anchors shall be installed with the plate washer installed between the nut and the sill plate. The nut shall be tightened to a snugfit condition after curing is complete for adhesive anchors and after expansion wedge engagement for expansion anchors. The installation of nuts on all anchors shall be subject to verification by the Building Official. Torque testing shall be performed for 25 percent of all adhesive or expansion anchors. Minimum test values shall be 30 foot pounds (41 N-m) for 1/2-inch (12.7 mm) and 40 foot pounds (55 N-m) for 5/8-inch (15.9 mm) diameter anchors.

Anchor side plates shall be permitted when conditions prevent anchor installation vertically through the sill plate. Anchor side plates shall be spaced as required for adhesive or expansion anchors but only one anchor side plate is required on individual pieces of sill plate less than 32 inches (813 mm) in length. Wood structural panel shims shall be used on sill plates for single plate anchor side plates when the foundation stem wall is from 3/16 inch (4.8 mm) to 3/4 inch (19 mm) wider than the sill plate. The shim length shall extend a minimum of two inches (50.8 mm) past each end of the anchor side plate. Two plate anchor side plates shall be used when the total thickness of the required
shim exceeds 3/4 inch (19 mm). All anchor side plates, which use lag or wood screws shall pre-drill the sill plate to prevent splitting as required by Section 2304.9. Lag or wood screws shall be installed in the center of the thickness of the existing sill plate. Expansion anchors shall not be used in unreinforced masonry or concrete or masonry grout of poor quality. Adhesive anchors shall be required when expansion anchors will not tighten to the required torque or their installation causes surface cracking of the foundation wall.

**V204.3.2. Placement of Anchors.** Anchors shall be placed within 12 inches (305 mm), but not less than nine inches (229 mm), from the ends of sill plates and shall be placed near the center of the stud space closest to the required spacing. New sill plates may be installed in pieces when necessary because of existing conditions. The minimum length of new sill plate pieces shall be 30 inches (762 mm).

**EXCEPTION:** Where physical obstructions such as fireplaces, plumbing or heating ducts interfere with the placement of an anchor, the anchor shall be placed as close to the obstruction as possible, but not less than nine inches (229 mm) from the end of the plate. Center-to-center spacing of the anchors shall be reduced as necessary to provide the minimum total number of anchors required based on the full length of the wall. Center-to-center spacing shall not be less than 12 inches (305 mm).

**V204.3.3. New Perimeter Foundations.** Sill plates for new perimeter foundations shall be anchored as required by Section 1805.6.

**V204.4. Cripple Wall Bracing.**

**V204.4.1. General.**

Exterior cripple walls, not exceeding four feet (1219 mm) in height shall use the prescriptive bracing method listed below. Cripple walls more than four feet (1219 mm) in height require analysis by an engineer or architect in accordance with Chapter 16.

**V204.4.1.1. Sheathing Requirements.**

Wood structural panel sheathing shall not be less than 15/32-inch (12 mm) thick. When used, plywood panels shall be constructed of five or more plies. All wood structural panels shall be nailed with 8d common nails spaced four inches (102 mm) on center at all edges and at 12 inches (305 mm) on center at each intermediate support with not less than two nails for each stud. Nails shall be driven so that their head or crown is flush with the surface of the sheathing and shall penetrate the supporting member a minimum of 1-1/2 inch (38 mm). When a nail fractures the surface, it shall be left in place and not counted as part of the required nailing. A new 8d nail shall be located within two inches (51 mm) of the discounted nail and hand driven flush with the sheathing surface.

**EXCEPTION:** No. 6 x 1-1/2 inch (38 mm) wood screws may be used for sheathing nailing when bracing materials are installed on the interior face of studs and cement plaster or other brittle finishes are on the exterior of the sheathed wall. All horizontal joints must occur over nominal two-inch by four-inch (51 mm by 102 mm) blocking installed with the nominal four-inch (102 mm) dimension against the face of the plywood. All vertical joints must occur over studs. Vertical joints at adjoining pieces of wood structural panels shall be centered on existing studs such that there is a minimum 1/8 inch (3.2 mm) between the panels. Nails shall be placed a minimum of 1/2 inch (12.7 mm) from the edges of the existing stud. When such edge distance
cannot be maintained because of the width of the existing stud, a new stud shall be added adjacent to the existing and connected with 16d common nails at eight inches (206 mm) on center. A minimum of three such nails shall be provided.

V204.4.2. Distribution and Amount of Bracing.

See Table V2-A for the distribution and amount of bracing required. Bracing for a building with three or more floor levels above cripple wall studs exceeding 14 inches (356 mm) in height must be designed in accordance with Chapter 16. The braced panel must be at least two times the height of the cripple stud wall but not less than 48 inches (1219 mm) in width. All panels along a wall shall be nearly equal in length and shall be nearly equally spaced along the length of the wall. Braced panels at ends of walls shall be located as near the end as possible.

Where physical obstructions such as fireplaces, plumbing or heating ducts interfere with the placement of cripple wall bracing, the bracing shall then be placed as close to the obstruction as possible. The total amount of bracing required shall not be reduced because of obstructions but the required length of bracing need not exceed the length of the wall.

Underfloor ventilation openings shall be maintained in accordance with Section 2306.7. Braced panels may include underfloor ventilation openings when the height of the solid portion of the panel meets or 75 percent of the height of the cripple stud wall. When the minimum amount of bracing prescribed in Table V2-A cannot be installed due to obstructions along any wall, the bracing must be designed by an architect or engineer in accordance with Section 1203.3.

V204.4.3. Stud Space Ventilation. When bracing materials are installed on the interior face of studs forming an enclosed space between the new bracing and existing exterior finish, each braced stud space must be ventilated. Adequate ventilation and access for future inspection shall be provided by drilling on two-inch to three-inch (51 mm to 76 mm) diameter round hole through the sheathing nearly centered between each stud at the top and bottom of the cripple wall. Such holes should be spaced a minimum of one-inch (25 mm) clear from the sill or top plates. In stud spaces containing sill bolts, the hole shall be located on the center line of the sill bolt but not closer than one-inch (25 mm) clear from the nailing edge of the sheathing.

When existing blocking occurs within the stud space, additional ventilation holes shall be placed above and below the blocking or the existing block shall be removed and a new nominal two-inch (51 mm) by four-inch (102 mm) block installed with the nominal four-inch (102 mm) dimension against the face of the plywood. For stud heights less than 18 inches (457 mm) only one ventilation hole need be provided.

V204.4.4. Existing Underfloor Ventilation. Existing underfloor ventilation shall not be reduced without providing equivalent new ventilation as close to the existing as possible. New sheathing may be installed around existing vent openings in braced panels when the length of the panel is increased a distance equal to the length of the vent opening or one stud space minimum.

EXCEPTION: For residential buildings with a post and pier foundation system where a new continuous perimeter foundation system is being installed, ventilation shall be provided in accordance with this Code.
SECTION V205. QUALITY CONTROL.

V205.1. Inspection by the Department. All work shall be subject to inspection by the Building Official including, but not limited to:
1. Placement and installation of new adhesive or expansion anchors or anchor side plates installed in existing foundations.

2. Placement of required blocking and framing anchors.

3. Installation and nailing of new cripple wall bracing.

The torque testing of sill plate anchors per Section V204.3.1 shall be performed by the building inspector.

V205.2. Special Inspection.

Special inspection is not required for sill plate anchors installed in existing foundations regulated by the provisions of this Chapter. Any work may be subject to special inspection when required by the Building Official or when so designated by the architect or engineer of record.

V205.3. Structural Observation.

Structural observation is not required for work done under the prescriptive provisions of this Chapter. When construction documents for strengthening are prepared by an architect or engineer and alternate materials or methods are used, structural observation shall be provided as required in Section 1709.

V205.4. Engineer’s or Architect’s Statement.

When an alternative design is provided per Section V201.3, the responsible engineer or architect shall place the following statement on the approved plans:
1. “I am responsible for this building’s seismic strengthening design for the underfloor cripple walls and sill bolting in compliance with the minimum seismic resistance standards of Appendix Chapter V201 of the Building Code,” or when applicable:
2. “The Registered Deputy Inspector, required as a condition of the use of structural design stresses requiring continuous inspection, will be responsible to me as required by Section 1704 of the Los Angeles Building Code.”

TABLE V2-A
SILL PLATE ANCHORAGE AND CRIPPLE WALL BRACING 1,2,3
Number of Stories above Cripple Walls Minimum Sill Plate Connection and Maximum Spacing Amount of Wall Bracing

One Story Adhesive or expansion anchors shall be 1/2-inch (12.7 mm) minimum diameter spaced at six feet (1829 mm) maximum center to center. Each end and not less than 50% of the wall length. Two Story Adhesive or expansion anchors shall be 1/2-inch (12.7 mm) minimum diameter spaced at four feet (1219 mm) maximum center to center; or 5/8 inch (15.9 mm) spaced at six feet maximum center to center. Each end and not less than 70% of the wall
length. Three Story Adhesive or expansion anchors shall be 1/2-inch minimum (12.7 mm) diameter spaced at two feet eight inches (813 mm) maximum center to center; or 5/8-inch minimum (15.9 mm) diameter spaced at four feet (1219 mm) maximum center to center. 100% of the wall length. 1. Plate washers for use with adhesive or expansion anchors shall be two-inch (51 mm) by two-inch (51 mm) by 3/16-inch (4.8 mm) for 1/2-inch (12.7 mm) diameter anchors and 2-1/2-inch (64 mm) by 2-1/2-inch (64 mm) by 1/4-inch (6 mm) for 5/8 inch (15.9 mm) diameter anchors. 2. Existing sill plate anchor bolts shall be permitted to provide all or a portion of the sill plate connection requirement if:

a. the anchor bolt is cast in concrete and in sound condition, and:
b. the diameter size and maximum spacing meets or exceeds the requirements of Table V2-A, and:
c. a new plate washer conforming to footnote 1 is installed, and:
d. the sill plate is connected to a snug tight condition and torque tested per Section V204.3.1.3. Anchor side plates shall be permitted when conditions prevent anchor installation vertically through the sill plate.

APPENDIX V301 - VOLUNTARY – EARTHQUAKE HAZARD REDUCTION IN EXISTING REINFORCED CONCRETE AND REINFORCED MASONRY WALL BUILDINGS WITH FLEXIBLE DIAPHRAGMS

SECTION V301. PURPOSE.
The purpose of this Chapter is to promote public safety and welfare by reducing the risk of death or injury that may result from the effects of earthquakes on reinforced concrete and masonry wall buildings with flexible diaphragms designed under the building codes in effect prior to January 1, 1995. These buildings are potentially hazardous and prone to significant damage, including possible collapse, in a moderate to major earthquake. These structures typically shelter large numbers of persons and property for retail, food markets, food distribution centers, warehousing, aerospace, industrial/manufacturing and general business and office use. Their continued use after an earthquake is also essential to the local economy and its post-earthquake recovery.

The provisions of this Chapter are minimum standards for structural seismic resistance established primarily to reduce the risk of loss of life or injury on both subject and adjacent properties and will not necessarily prevent all earthquake damage to an existing building which complies with these standards. This Chapter shall not require existing electrical, plumbing, mechanical or fire safety systems to be altered unless they constitute a hazard to life or property.

This Chapter provides voluntary retrofit standards for deficient wall anchorage systems on structures that are not subject to the mandatory provisions of Chapter When fully followed, these standards will strengthen the portion of the structure that is most vulnerable to earthquake damage.

SECTION V302. SCOPE.
The voluntary provisions of this Chapter shall apply to existing buildings of the following types:
1. Cast-in-place reinforced concrete or masonry wall buildings with flexible diaphragms
designed under building codes in effect prior to January 1, 1995.
2. Tilt-up concrete wall buildings with flexible diaphragms designed under the building codes in
effect prior to January 1, 1995, but after January 1, 1976.
All tilt-up concrete wall buildings designed under the Building Code in effect prior to January 1,
1976 are subject to the mandatory provisions of this Chapter. All existing reinforced masonry or
concrete buildings with flexible diaphragms, including tilt-up concrete wall buildings, designed
under the Building Code in effect on or after January 1, 1995, shall be designed in conformance
with Chapter 16.

SECTION V303. DEFINITIONS.
For the purposes of this Chapter, the applicable definitions in Chapter 2, Sections 1602, 1613.2,
1902 and 2302 of this Code; Sections 1.2, 3.1.1, 4.1, 5.2, 6.2 and 11.2 of ASCE 7, and the
following shall apply:

ANCHORAGE SYSTEM is the system of all structural elements and connections, which support
the concrete or masonry wall in the lateral direction, including diaphragms and subdiaphragms,
wall anchorage and continuity or cross tie connectors in subdiaphragms and main diaphragms.

COMMENCED CONSTRUCTION is construction pursuant to a valid building permit that has
progressed to the point that one of the called inspections as required by the Department has
been made and the work for which the inspection has been called has been judged by the
Department to be substantial and has been approved by the Department.

EXISTING BUILDING is an erected building for which a legal building permit and a certificate of
occupancy have been issued.

FLEXIBLE DIAPHRAGM is any diaphragm constructed of wood structural panel, diagonal or
straight wood sheathing, metal decking without a structural concrete topping, or horizontal rod
bracing.

HISTORICAL BUILDING is any building designated or currently in the process of being
designated as a historical building by an appropriate federal, state or City jurisdiction.

REINFORCED CONCRETE WALL is a concrete wall that has 50 percent or more of the
reinforcing steel required for reinforced concrete in Chapter 19.

REINFORCED MASONRY WALL is a masonry wall that has 50 percent or more of the
reinforcing steel required by Item 2.3 of Section 2106.4.

RETROFIT is strengthening or structurally improving the lateral force resisting system of an
existing building by alteration of existing or addition of new structural elements.

TILT-UP CONCRETE WALL is a form of precast concrete panel construction either cast in the
horizontal position at the site and after curing, lifted and moved into place in a vertical position,
or cast off-site in a fabricator's shop.

SECTION V304. ANALYSIS AND DESIGN.
V304.1. **Wall Panel Anchorage.** Concrete and masonry walls shall be anchored to all floors and roofs which provide lateral support for the wall. The anchorage shall provide a positive direct connection between the wall and floor or roof construction capable of resisting a horizontal force equal to 30 percent of the tributary wall weight for all buildings, and 45 percent of the tributary wall weight for essential buildings, or a minimum force of 250 pounds per linear foot of wall, whichever is greater. The required anchorage shall be based on the tributary wall panel assuming simple supports at floors and roof.

**EXCEPTION:** An alternate design may be approved by the Building Official when justified by well established principles of mechanics.

V304.2. **Special Requirements for Wall Anchors and Continuity Ties.** The steel elements of the wall anchorage systems and continuity ties shall be designed by the allowable stress design method using a load factor of 1.7. The 1/3 stress increase permitted by Section 1605.3.2 shall not be permitted for materials using allowable stress design methods. The strength design specified in Section 1912.1, using a load factor of 2.0 in lieu of 1.4 for earthquake loading, shall be used for the design of embedment in concrete. Wall anchors shall be provided to resist out-of-plane forces, independent of existing shear anchors.

**EXCEPTION:** Existing cast-in-place shear anchors may be used as wall anchors if the tie element can be readily attached to the anchors and if the engineer or architect can establish tension values for the existing anchors through the use of approved as-built plans or testing, and through analysis showing that the bolts are capable of resisting the total shear load while being acted upon by the maximum tension force due to seismic loading. Criteria for analysis and testing shall be determined by the Building Official. Expansion anchors are not allowed without special approval of the Building Official. Attaching the edge of plywood sheathing to steel ledgers is not considered as complying with the positive anchoring requirements of the Code; and attaching the edge of steel decks to steel ledgers is not considered as providing the positive anchorage of this Code unless testing and analysis are performed, which establish shear values for the attachment perpendicular to the edge of the deck.

V304.3. **Development of Anchor Loads into the Diaphragm.** Development of anchor loads into roof and floor diaphragms shall comply with Section 12.11.2.2.3 of ASCE 7.

**EXCEPTION:** If continuously tied girders are present, then the maximum spacing of the continuity ties is the greater of the girder spacing or 24 feet (7315 mm). In wood diaphragms, anchorage shall not be accomplished by use of toe nails or nails subject to withdrawal, nor shall wood ledgers, top plates or framing be used in cross-grain bending or cross-grain tension. The continuous ties required by Section 12.11.2.2.3 of ASCE 7 shall be in addition to the diaphragm sheathing. Lengths of development of anchor loads in wood diaphragms shall be based on existing field nailing of the sheathing unless existing edge nailing is positively identified on the original construction plans or at the site. At reentrant corners, continuity collectors may be required for existing return walls not designed as shear walls, to develop into the diaphragm a force equal to the lesser of the rocking or shear capacity of the return wall, or the tributary shear but not exceeding the capacity of the diaphragm. Shear anchors for the return wall shall be commensurate with the collector force. If a truss or beam other than rafters or purlins is supported by the return wall or by a column integral with the return wall, an independent
secondary column is required to support the roof or floor members whenever rocking or shear capacity of the return wall is governing.

**V304.4. Anchorage at Pilasters.** Anchorage of pilasters shall be designed for the tributary wall anchoring load per Section V304.1 of this Code, considering the wall as a two-way slab. The edge of the two-way slab shall be considered "fixed" when there is continuity at pilasters, and considered "pinned" at roof or floor levels. The pilasters or the walls immediately adjacent to the pilasters shall be anchored directly to the roof framing such that the existing vertical anchor bolts at the top of the pilasters are by-passed without causing tension or shear failure at the top of the pilasters.

**EXCEPTION:** If existing vertical anchor bolts at the top of the pilasters are used for the anchorage, then additional exterior confinement shall be provided. The minimum anchorage at a floor or roof between the pilasters shall be that specified in Section V304.1 of this Code.

**V304.5. Symmetry.** Symmetry of connectors in the anchorage system is required. Eccentricity may be allowed when it can be shown that all components of forces are positively resisted and justified by calculations or tests.

**V304.6. Minimum Roof Member Size.** Wood members used to develop anchorage forces to the diaphragm shall be of minimum nominal width for new construction and replacement. All such members must be designed for gravity and earthquake forces as part of the wall anchorage system. For existing structural members, the allowable stresses shall be without the 1/3 stress increase per Section V304.2.

**V304.7. Combination of Anchor Types.** To repair and retrofit existing buildings, a combination of different anchor types of different behavior or stiffness shall not be permitted. The capacity of the new and existing connectors cannot be added.

**V304.8. Prohibited Anchors.** Usage of connectors that were bent or stretched from the intended use shall be prohibited.

**V304.9. Crack and Damage Repairs, Evaluation of Existing Structural Alterations.** The engineer or architect shall report any observed structural conditions and structural damage that have imminent life safety effects on the buildings and recommend repairs. This includes alterations such as openings cut in existing wall panels without a building permit. Evaluations and repairs shall be reviewed and approved by the Department.

**V304.10. Miscellaneous.** Existing mezzanines relying on the concrete or masonry walls for vertical or lateral support shall be anchored to the walls for the tributary mezzanine load. Walls depending on the mezzanine for lateral support shall be anchored per Sections V304.1, V304.2 and V304.3 of this Code.

**EXCEPTION:** Existing mezzanines that have independent lateral and vertical support need not be anchored to the concrete or masonry walls. Existing interior masonry or concrete walls not designed as shear walls, which extend to the floor above or to the roof diaphragm shall also be anchored for out-of-plane forces per Section V304.1, V304.2 and V304.3 of this Code. In the in-plane direction, the walls may be isolated or shall be developed into the diaphragm for a lateral
force equal to the lesser of the rocking or shear capacity of the wall, or the tributary shear but not exceeding the diaphragm capacity.

**V304.11. Historical Buildings.** Qualified historical buildings shall be permitted to use alternate building standards or deviations from this Chapter in order to preserve their original or restored architectural elements and features.

**SECTION V305. MATERIALS OF CONSTRUCTION.**
All materials permitted by this Code.

**SECTION V306. INFORMATION REQUIRED ON PLANS.**

**V306.1. General.** In addition to the seismic analysis required elsewhere in this Chapter, the licensed engineer or architect responsible for the seismic analysis of the building shall record the information required by this section on the approved plans.

**V306.2. Information Required.** The plans shall accurately reflect the results of the engineering investigation and design and show all pertinent dimensions and sizes for plan review and construction. The following shall be provided:
1. Floor plans and roof plans shall show the existing framing construction, diaphragm construction, proposed wall anchors, cross-ties and collectors. Existing nailing, anchors, ties and collectors shall also be shown on the plans if these are part of the design, and these structural elements need to be verified in the field.
2. At elevations where there is alterations or damage, the details shall show the roof and floor heights, dimensions of openings, location and extent of existing damage, and proposed repair.
3. Typical concrete or masonry wall sections with wall thickness, height, and location of anchors shall be provided.
4. Details shall include the existing and new anchors and the method of development of anchor forces into the diaphragm framing; existing and new cross-ties, existing and new or improved support of the roof and floor girders at pilasters or walls.

**V306.3. Engineer's or Architect's Statement.** The responsible engineer or architect shall state on the approved plans, the following:
1. "I am responsible for this building's seismic strengthening design of the tilt-up concrete wall anchorage system in compliance with the minimum seismic resistance standards of Chapter V3 of the Los Angeles Building Code." or when applicable:
2. "The Registered Deputy Inspector, required as a condition of the use of structural design stresses requiring continuous inspection, will be responsible to me as required by Section 1704 of the Los Angeles Building Code."
Section 5. ESMC Section 13-1-4 is amended in its entirety to read as follows:

13-1-4 Residential Noise Insulation Standards; Further Amendments to Code:

CBC Section 1255 is added to read as follows:

SECTION 1255. Residential Noise Insulation Standards

Airport Noise Sources

1255.01: Noise Insulation Requirements For New Construction

1255.02: Purpose And Scope:

The purpose of this section is to establish minimum noise insulation performance standards for new residential dwelling units and additions of habitable rooms to existing residential dwelling units to protect public health, safety, and welfare from the effects of excessive noise, including without limitation, indoor quality of life, speech interference, and sleep disruption.

1255.03: Applicability: This section applies to all newly constructed residences and habitable room additions to existing residences.

1255.04: Definitions: For purposes of this section, the following words must have the following meaning:

"Community Noise Equivalent Level (CNEL)" means the noise measure defined in 21 Code of California Regulations § 5001(d), and any successor regulation or amendment.

"Habitable Room" means a room that is a space in a structure for living, sleeping, eating, or cooking. Bathrooms, toilet compartments, closets, halls, storage or utility space, garages, and similar areas are not considered habitable space.

"LAX" means Los Angeles International Airport.

"Noise Impact Boundary For LAX" means the area around LAX as defined in 21 California Code of Regulations § 5001(1), and any successor regulation or amendment. The city's building safety department must at all times maintain a current map of the noise impact boundary.

"Residence" means any occupancy group R building as used in El Segundo title 15 of the El Segundo municipal code.
1255.05: Standards: Any new residence or addition of one or more habitable rooms to an existing residence that is within the noise impact boundary for LAX must be designed to ensure that internal noise levels due to LAX do not exceed 45 dB CNEL. This standard may be satisfied in two ways: (1) by performing the acoustical analysis described in section E, below, or (2) by employing the prescribed construction methods described in section F, below.

1255.06: Acoustical Analysis: A building permit application for a new residence or addition of one or more habitable rooms to an existing residence must comply with the minimum noise insulation performance standards established in this section if it includes an acoustical analysis demonstrating that the proposed design will ensure that internal noise levels due to LAX aircraft noise will not exceed 45 dB CNEL. The acoustical analysis is subject to verification by the building official, who has the discretion to require post-construction/pre-occupancy acoustic measurement to verify compliance with the 45 dB CNEL standard.

A. The acoustical analysis must be prepared by or under the supervision of a person experienced in the field of acoustical engineering. The analysis must consider and include: the topographical relationship between LAX aircraft noise sources and the dwelling site, the characteristics of those noise sources, predicted noise spectra and levels at the exterior of the dwelling site, the basis for this prediction (measured or obtained from published data), the noise insulation measures to be employed, and the effectiveness of the proposed noise insulation measures.

B. If the interior allowable noise levels are to be met by requiring that windows be unopenable or closed, the design for the structure must also specify a ventilation or air-conditioning system to provide a habitable interior environment. The ventilation system must not compromise the interior room noise reduction.

1255.07: Prescribed Construction Methods: A building permit application for a new residence or addition of one or more habitable rooms to an existing residence must comply with the minimum noise insulation performance standards established in this section if the design incorporates the following construction methods.

Construction Methods In The 70 dB CNEL And Greater Noise Zone

1255.08: Exterior Walls: New walls that form the exterior portion of habitable rooms must be constructed as follows:

A. Studs must be at least 4 inches in nominal depth.

B. Exterior finish must be stucco, minimum 7/8-inch thickness, brick veneer, masonry, or any siding material allowed by this code. Wood or metal siding must be installed over 1/2-inch minimum solid sheathing.
C. Masonry walls with a surface weight of less than 40 pounds per square foot must require an
interior supporting studwall that is finished with at least $\frac{5}{8}$-inch thick gypsum wall board or
plaster.

D. Wall insulation must be at least R-11 glass fiber or mineral wool and must be installed
continuously throughout the stud space.

E. Exterior solid sheathing must be covered with overlapping asphalt felt.

F. Interior wall finish must be at least $\frac{5}{8}$-inch thick gypsum wall board or plaster.

1255.09: Exterior Windows

A. Openable Windows: All openable windows in the exterior walls of habitable rooms must have a
laboratory sound transmission class rating of at least STC 40 dB and must have an air
infiltration rate of no more than 0.5 cubic feet per minute when tested according to ASTM E-283.

B. Fixed Windows: All fixed windows in the exterior walls of habitable rooms must:

1. Have a sound transmission class rating of at least STC 40 dB, or

2. Must be $\frac{5}{8}$-inch laminated glass with STC rating of 40 dB and must be set in non-hardening
   glazing materials, or

3. Must be glass block at least 3$\frac{1}{2}$ inches thick.

C. The total areas of glazing in rooms used for sleeping must not exceed 20% of the wall area.

1255.10: Exterior Doors

A. Exterior hinged doors to habitable rooms that are directly exposed to aircraft noise and are
facing the source of the noise must be a door and edge seal assembly that has a laboratory
sound transmission class of at least STC 40 dB.

B. Exterior hinged doors to habitable rooms that are not directly exposed to aircraft noise and do
not face the source of the noise must have a minimum STC rating of 35 dB.

C. Sliding glass doors in habitable rooms must not be allowed in walls that are directly exposed to
aircraft noise. Sliding glass doors in walls that are not directly exposed must have an STC rating
of at least 40 dB.
D. Access doors from attached garage to the interior of a residence must have an STC rating of at least 30 dB.

1255.11: Roof/Ceiling Construction

A. Roof rafters must have a minimum slope of 4:12 and must be covered on their top surface with minimum 1/2-inch solid sheathing and any roof covering allowed by this code.

B. Attic insulation must be batt or blow-in glass fiber or mineral wool with a minimum R-30 rating applied between the ceiling joists.

C. Attic ventilation must be:

1. Gable vents or vents that penetrate the roof surface that are fitted with transfer ducts at least 6 feet in length that are insulating flexible ducting or metal ducts containing internal 1-inch thick coated fiberglass sound absorbing duct liner. Each duct must have a lined 90-degree bend in the duct so that there is no direct line of sight from the exterior through the duct into the attic, or

2. Noise control louver vents, or

3. Eave vents that are located under the eave overhang.

4. Ceilings must be finished with gypsum board or plaster that is at least 5/8-inch thick. Ceiling materials must be mounted on resilient channels.

5. Skylights must penetrate the ceiling by means of a completely enclosed light well that extends from the roof opening to the ceiling opening. A secondary openable glazing panel must be mounted at the ceiling line or at any point that provides at least a 4-inch space between the skylight glazing and the secondary glazing and must be glazed with at least 3/16-inch plastic or laminated glass. The weather-side skylight must be any type that is permitted by the building code. The size of skylights must be no more than 20 percent of the roof area of the room.

1255.12: Ventilation

A. A ventilation system must be provided that will provide at least the minimum air circulation and fresh air supply requirements of this code in each habitable room without opening any window, door or other opening to the exterior. All concealed ductwork must be insulated flexible glass fiber ducting that is at least 10 feet long between any two points of connection.

B. Kitchen cooktop vent hoods must be the non-ducted recirculating type with no ducted connection to the exterior.

1255.13: Fireplaces: Each fireplace must be fitted with a damper at the top of the chimney that is operated from the firebox and must have glass doors across the front of the firebox.
1255.14: Wall And Ceiling Openings: Openings in the shell of the residence that degrade its ability to achieve an interior CNEL rating of 45 dB or less when all doors and windows are closed are prohibited unless access panels, pet doors, mail delivery drops, air-conditioning, or other openings are designed to maintain the 45 dB CNEL (or less) standard in the room to which they provide access.

Construction Methods In The 65 dB CNEL To 70 dB CNEL Noise Zone

1255.15: Exterior Walls: New walls that form the exterior portion of habitable rooms must be constructed as follows:

A. Studs must be at least 4 inches in nominal depth.

B. Exterior finish must be stucco, minimum $\frac{7}{8}$-inch thickness, brick veneer, masonry, or any siding material allowed by this code. Wood or metal siding must be installed over $\frac{1}{2}$-inch solid sheathing.

C. Masonry walls with a surface weight of less than 40 pounds per square foot will require an interior studwall that is finished with at least $\frac{5}{8}$-inch thick gypsum wallboard or plaster.

D. Wall insulation must be at least R-11 glass fiber or mineral wool and must be installed continuously throughout the stud space.

E. Exterior solid sheathing must be covered with overlapping asphalt felt.

F. Interior wall finish must be at least $\frac{5}{8}$-inch thick gypsum wallboard or plaster.

1255.16: Exterior Windows

A. Openable Windows: All openable windows in the exterior walls of habitable rooms must have a laboratory sound transmission class rating of at least STC 35 dB and must have an air infiltration rate of no more than 0.5 cubic feet per minute when tested according to ASTM E-283.

B. Fixed Windows: All fixed windows in the exterior walls of habitable rooms must be at least $\frac{1}{4}$-inch thick and must be set in non-hardening glazing materials.

C. The total area of glazing in rooms used for sleeping must not exceed 20% of the floor area.

1255.17: Exterior Doors
A. Exterior hinged doors to habitable rooms that are directly exposed to aircraft noise and are facing the source of the noise must be a door and edge seal assembly that has a laboratory sound transmission class of at least STC 35 dB.

B. Exterior hinged doors to habitable rooms that are not directly exposed to aircraft noise and do not face the source of the noise must have a minimum STC rating of 30 dB.

C. Sliding glass doors in habitable rooms must have glass that is 1/4-inch thick.

D. Access doors from a garage to a habitable room must have an STC rating of at least 30 dB.

1255.18: Roof/Ceiling Construction

A. Roof rafters must have a minimum slope of 4:12 and must be covered on their top surface with minimum 1/2-inch solid sheathing and any roof covering allowed by this code.

B. Attic insulation must be batt or blow-in glass fiber or mineral wool with a minimum R-30 rating applied between the ceiling joists.

C. Attic ventilation must be:

1. Gable vents or vents that penetrate the roof surface that are fitted with transfer ducts at least 6 feet in length that are insulating flexible ducting or metal ducts containing internal 1-inch thick coated fiberglass sound absorbing duct liner. Each duct must have a lined 90-degree bend in the duct so that there is no direct line of sight from the exterior through the duct into the attic, or

2. Noise control louver vents, or

3. Eave vents that are located under the eave overhang.

D. Ceilings must be finished with gypsum board or plaster that is at least 5/8-inch thick.

E. Skylights must penetrate the ceiling by means of a completely enclosed light well that extends from the roof opening to the ceiling opening. A secondary openable glazing panel must be mounted at the ceiling line and must be glazed with at least 9/16-inch plastic, tempered or laminated glass. The weather-side skylight must be any type that is permitted by the building code.

1255.19: Floors: The floor of the lowest habitable rooms must be concrete slab on grade or wood framed floors.

1255.20: Ventilation
A. A ventilation system must be provided that will provide at least the minimum air circulation and fresh air supply requirements of this code in each habitable room without opening any window, door or other opening to the exterior. All concealed ductwork must be insulated flexible glass fiber ducting that is at least 10 feet long between any two points of connection.

B. Kitchen cooktop vent hoods must be the non-ducted recirculating type with no ducted connection to the exterior.

1255.21: Fireplaces: Each fireplace must be fitted with a damper at the top of the chimney that is operated from the firebox and must have glass doors across the front of the firebox.

1255.22: Wall And Ceiling Openings: Openings in the shell of the residence that degrade its ability to achieve an interior CNEL rating of 45 dB or less when all doors and windows are closed are prohibited. Any access panels, pet doors, mail delivery drops, air-conditioning, or other openings must be designed to maintain the 45 dB CNEL or less standard in the room to which they provide access.

Section 6. ESMC Chapter 16 of Title 13 is repealed.

SECTION 7: CALIFORNIA ENVIRONMENTAL QUALITY ACT EXEMPTION. The City Council determines that this ordinance is exempt from review under the California Environmental Quality Act (California Public Resources Code §§ 21000, et seq., “CEQA”) and the regulations promulgated thereunder (14 California Code of Regulations §§ 15000, et seq., the “State CEQA Guidelines”) because it consists only of minor revisions and clarifications to an existing code of construction-related regulations and specification of procedures related thereto and will not have the effect of deleting or substantially changing any regulatory standards or findings required therefor. This ordinance, therefore, is an action being taken for enhanced protection of the environment and that does not have the potential to cause significant effects on the environment.

SECTION 8: SAVINGS CLAUSE. Repeal of any provision of the ESMC or any other city ordinance herein will not affect any penalty, forfeiture, or liability incurred before, or preclude prosecution and imposition of penalties for any violation occurring before, this Ordinance’s effective date. Any such repealed part will remain in full force and effect for sustaining action or prosecuting violations occurring before the effective date of this Ordinance.

SECTION 9: SEVERABILITY. If any part of this Ordinance or its application is deemed invalid by a court of competent jurisdiction, the city council intends that such invalidity will not affect the effectiveness of the remaining provisions or applications and, to this end, the provisions of this Ordinance are severable.

SECTION 10: VALIDITY OF PREVIOUS CODE SECTIONS. If this the entire Ordinance or its application is deemed invalid by a court of competent jurisdiction, any repeal of the ESMC or other the city ordinance by this Ordinance will be rendered void and cause such ESMC provision or other the city ordinance to remain in full force and effect for all purposes.
SECTION 11: EFFECTIVE DATE. This Ordinance will take effect on January 1, 2011.

PASSED AND ADOPTED this ___ day of ________, 2010.

______________________________
Eric Busch, Mayor

APPROVED AS TO FORM
MARK HENSLEY, CITY ATTORNEY

By: ________________________________
Karl H. Berger
Assistant City Attorney

ATTEST:

STATE OF CALIFORNIA )
COUNTY OF LOS ANGELES ) SS
CITY OF EL SEGUNDO )

I, Cindy Mortesen, City Clerk of the City of El Segundo, California, do hereby certify that the whole number of members of the City Council of said City is five; that the foregoing Ordinance No. _______ was duly introduced by said City Council at a regular meeting held on the ___ day of _________________, 2010, and was duly passed and adopted by said City Council, approved and signed by the Mayor, and attested to by the City Clerk, all at a regular meeting of said Council held on the _______ day of ________________, 2010, and the same was so passed and adopted by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

______________________________
Cindy Mortesen, City Clerk
ORDINANCE NO. ________

AN ORDINANCE ADOPTING THE 2010 EDITION OF THE
CALIFORNIA ELECTRICAL CODE WITH AMENDMENTS.

The Council of the City of El Segundo does ordain as follows:

SECTION 1: FINDINGS. The City Council finds and declares as follows:

A. Health and Safety Code § 17958 requires the City is required to
adopt certain uniform codes that are set forth in Health and Safety
Code § 17922 and published in the California Code of Regulations;

B. Pursuant to Government Code § 50022.2, et seq., the City may
adopt other uniform codes by reference;

C. It is in the public interest to adopt the 2010 Edition of the California
Electrical Code ("CEC") with the changes set forth in this
Ordinance;

D. At least one copy of the CEC was filed with the City Clerk of the
City was available for public inspection for at least fifteen (15) days
preceding the date of the hearing.

SECTION 2: Chapter 2 to Title 13 of the El Segundo Municipal Code ("ESMC")
is amended in its entirety to read as follows:

CHAPTER 2

ELECTRICAL CODE

SECTION:

13-2-1: California Electrical Code Adopted.

13-2-1: ADOPTION OF CALIFORNIA ELECTRICAL CODE,
2010 EDITION. Pursuant to California Government Code §
50022.1 to 50022.8, the California Electrical Code, 2010 Edition,
published at Title 24, Part 3, of the California Code of Regulations,
including Annexes A thru G ("CEC") is adopted by reference,
subject to the amendments, additions and deletions set forth below.
One true copy of the CEC, is on file in the office of the Building
Official and is available for public inspection as required by law.
SECTION 3: CALIFORNIA ENVIRONMENTAL QUALITY ACT EXEMPTION. The City Council determines that this ordinance is exempt from review under the California Environmental Quality Act (California Public Resources Code §§ 21000, et seq., “CEQA”) and the regulations promulgated thereunder (14 California Code of Regulations §§ 15000, et seq., the “CEQA Guidelines”) because it consists only of minor revisions and clarifications to an existing code of construction-related regulations and specification of procedures related thereto and will not have the effect of deleting or substantially changing any regulatory standards or findings required therefor. This ordinance, therefore, is an action being taken for enhanced protection of the environment and that does not have the potential to cause significant effects on the environment. Consequently, it is categorically exempt in accordance with CEQA Guidelines §§ 15301 as a minor alteration of existing public or private structures involving no expansion of use; 15305 as a minor alteration in land use limitations which do not result in any changes in land use or density; and 15308 as an action taken by a regulatory agency as authorized by California law to assure maintenance or protection of the environment.

SECTION 4: SAVINGS CLAUSE. Repeal of any provision of the ESMC or any other city ordinance herein will not affect any penalty, forfeiture, or liability incurred before, or preclude prosecution and imposition of penalties for any violation occurring before, this Ordinance’s effective date. Any such repealed part will remain in full force and effect for sustaining action or prosecuting violations occurring before the effective date of this Ordinance.

SECTION 5: SEVERABILITY. If any part of this Ordinance or its application is deemed invalid by a court of competent jurisdiction, the city council intends that such invalidity will not affect the effectiveness of the remaining provisions or applications and, to this end, the provisions of this Ordinance are severable.

SECTION 6: VALIDITY OF PREVIOUS CODE SECTIONS. If this the entire Ordinance or its application is deemed invalid by a court of competent jurisdiction, any repeal of the ESMC or other the city ordinance by this Ordinance will be rendered void and cause such ESMC provision or other the city ordinance to remain in full force and effect for all purposes.

SECTION 7: EFFECTIVE DATE. This Ordinance will take effect on January 1, 2011.

PASSED AND ADOPTED this ___ day of ________, 2010.

_________________________
Eric Busch,
Mayor
I, Cindy Mortesen, City Clerk of the City of El Segundo, California, do hereby certify that the whole number of members of the City Council of said City is five; that the foregoing Ordinance No. ________ was duly introduced by said City Council at a regular meeting held on the ______ day of ________________, 2010, and was duly passed and adopted by said City Council, approved and signed by the Mayor, and attested to by the City Clerk, all at a regular meeting of said Council held on the ______ day of ________________, 2010, and the same was so passed and adopted by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

______________________________________
Cindy Mortesen, City Clerk
ORDINANCE NO. _______

AN ORDINANCE ADOPTING THE 2010 EDITION OF THE
CALIFORNIA PLUMBING CODE WITH AMENDMENTS.

The Council of the City of El Segundo does ordain as follows:

SECTION 1: FINDINGS. The City Council finds and declares as follows:

A. Health and Safety Code § 17958 requires the City is required to
adopt certain uniform codes that are set forth in Health and Safety
Code § 17922 and published in the California Code of Regulations;

B. Pursuant to Government Code § 50022.2, et seq., the City may
adopt other uniform codes by reference;

C. It is in the public interest to adopt the 2010 Edition of the California
Plumbing Code ("CPC") with the changes set forth in this
Ordinance;

D. Amendments have been made to Codes 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.

E. At least one copy of the CPC was filed with the City Clerk of the
City was available for public inspection for at least fifteen (15) days
preceding the date of the hearing

SECTION 2: Chapter 5 to Title 13 of the El Segundo Municipal Code ("ESMC")
is amended in its entirety to read as follows:

CHAPTER 5

PLUMBING CODE

SECTION:

13-5-1: California Plumbing Code Adopted.

13-5-1: ADOPTION OF CALIFORNIA PLUMBING CODE,
2010 EDITION. Pursuant to California Government Code §
50022.1 to 50022.8, the California Plumbing Code, 2010 Edition,
published at Title 24, Part 4, of the California Code of Regulations, including Appendices A, B, D, I, and L ("CPC") is adopted by reference, subject to the amendments, additions and deletions set forth below. One true copy of the CPC, is on file in the office of the Building Official and is available for public inspection as required by law.

SECTION 3: ESMC Section 13-5-2 is amended to the California Plumbing Code including the adopted appendices is hereby amended as follows:

Section 103.3 of the CPC is hereby amended to read as follows:

CPC Section 103.3, Permit Issuance, is deleted in its entirety. The 2010 California Building Code, as incorporated into the El Segundo Municipal Code, will govern the administration of the CPC.

Section 103.4 of the CPC is hereby amended to read as follows:

CPC Section 103.4 Fees, is deleted in its entirety. The 2010 California Building Code, as incorporated into the El Segundo Municipal Code, will govern the administration of the CPC.

SECTION 4: CALIFORNIA ENVIRONMENTAL QUALITY ACT EXEMPTION. The City Council determines that this ordinance is exempt from review under the California Environmental Quality Act (California Public Resources Code §§ 21000, et seq., "CEQA") and the regulations promulgated thereunder (14 California Code of Regulations §§ 15000, et seq., the "CEQA Guidelines") because it consists only of minor revisions and clarifications to an existing code of construction-related regulations and specification of procedures related thereto and will not have the effect of deleting or substantially changing any regulatory standards or findings required therefor. This ordinance, therefore, is an action being taken for enhanced protection of the environment and that does not have the potential to cause significant effects on the environment. Consequently, it is categorically exempt in accordance with CEQA Guidelines §§ 15301 as a minor alteration of existing public or private structures involving no expansion of use; 15305 as a minor alteration in land use limitations which do not result in any changes in land use or density; and 15308 as an action taken by a regulatory agency as authorized by California law to assure maintenance or protection of the environment.

SECTION 5: SAVINGS CLAUSE. Repeal of any provision of the ESMC or any other city ordinance herein will not affect any penalty, forfeiture, or liability incurred before, or preclude prosecution and imposition of penalties for any violation occurring before, this Ordinance’s effective date. Any such repealed
part will remain in full force and effect for sustaining action or prosecuting violations occurring before the effective date of this Ordinance.

SECTION 6: SEVERABILITY. If any part of this Ordinance or its application is deemed invalid by a court of competent jurisdiction, the city council intends that such invalidity will not affect the effectiveness of the remaining provisions or applications and, to this end, the provisions of this Ordinance are severable.

SECTION 7: VALIDITY OF PREVIOUS CODE SECTIONS. If this the entire Ordinance or its application is deemed invalid by a court of competent jurisdiction, any repeal of the ESMC or other the city ordinance by this Ordinance will be renedered void and cause such ESMC provision or other the city ordinance to remain in full force and effect for all purposes.

SECTION 8I EFFECTIVE DATE. This Ordinance will take effect on January 1, 2011.

PASSED AND ADOPTED this _____ day of __________, 2010.

_____________________
Eric Busch,
Mayor

APPROVED AS TO FORM
MARK HENSLEY, CITY ATTORNEY

By:
_____________________
Karl H. Berger
Assistant City Attorney

ATTEST:

STATE OF CALIFORNIA )
COUNTY OF LOS ANGELES )  SS
CITY OF EL SEGUNDO )

I, Cindy Mortesen, City Clerk of the City of El Segundo, California, do hereby certify that the whole number of members of the City Council of said City is five; that the foregoing Ordinance No. ________ was duly introduced by said City Council at a regular meeting held on the _____ day of __________________, 2010, and was duly passed and adopted by said City Council, approved and signed by the Mayor, and attested to by the City Clerk, all at a regular meeting of
said Council held on the _____ day of______________, 2010, and the same was so passed and adopted by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

______________________________
Cindy Mortesen, City Clerk
ORDINANCE NO. __________

AN ORDINANCE ADOPTING THE 2010 EDITION OF THE CALIFORNIA MECHANICAL CODE WITH AMENDMENTS.

The Council of the City of El Segundo does ordain as follows:

SECTION 1: FINDINGS. The City Council finds and declares as follows:

A. Health and Safety Code § 17958 requires the City is required to adopt certain uniform codes that are set forth in Health and Safety Code § 17922 and published in the California Code of Regulations;

B. Pursuant to Government Code §§ 50022.2, et seq., the City may adopt other uniform codes by reference;

C. It is in the public interest to adopt the 2010 Edition of the California Mechanical Code ("CMC") with the changes set forth in this Ordinance;

D. Amendments have been made to Codes 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.

E. At least one copy of the CMC was filed with the City Clerk of the City was available for public inspection for at least fifteen (15) days preceding the date of the hearing

SECTION 2: Chapter 6 to Title 13 of the El Segundo Municipal Code ("ESMC") is amended in its entirety to read as follows:

CHAPTER 6

MECHANICAL CODE

SECTION:

13-6-1: California Mechanical Code Adopted.
13-6-2: Amendments to California Mechanical Code.

13-6-1: ADOPTION OF CALIFORNIA MECHANICAL CODE, 2010 EDITION. Pursuant to California Government Code §§ 50022.1 to 50022.8, the California Mechanical Code, 2010 Edition,
published at Title 24, Part 4, of the California Code of Regulations, including Appendices A through D ("CMC") is adopted by reference, subject to the amendments, additions and deletions set forth below. One true copy of the CMC, is on file in the office of the Building Official and is available for public inspection as required by law.

SECTION 3: ESMC Section 13-6-2 is amended to the California Mechanical Code including the adopted appendices is hereby amended as follows:

Section 110.0 of the CMC is hereby amended to read as follows:

CMC Section 110.0, Board of Appeals, is deleted in its entirety. The 2010 California Building Code, as incorporated into the El Segundo Municipal Code, will govern the administration of the CMC.

Section 114.0 of the CMC is hereby amended to read as follows:

CMC Section 114.0 Permits, is deleted in its entirety. The 2010 California Building Code, as incorporated into the El Segundo Municipal Code, will govern the administration of the CMC.

Section 115.0 of the CMC is hereby amended to read as follows:

CMC Section 115.0 Fees, is deleted in its entirety. The 2010 California Building Code, as incorporated into the El Segundo Municipal Code, will govern the administration of the CMC.

SECTION 4: CALIFORNIA ENVIRONMENTAL QUALITY ACT EXEMPTION. The City Council determines that this ordinance is exempt from review under the California Environmental Quality Act (California Public Resources Code §§ 21000, et seq., "CEQA") and the regulations promulgated thereunder (14 California Code of Regulations §§ 15000, et seq., the "CEQA Guidelines") because it consists only of minor revisions and clarifications to an existing code of construction-related regulations and specification of procedures related thereto and will not have the effect of deleting or substantially changing any regulatory standards or findings required therefor. This ordinance, therefore, is an action being taken for enhanced protection of the environment and that does not have the potential to cause significant effects on the environment. Consequently, it is categorically exempt in accordance with CEQA Guidelines §§ 15301 as a minor alteration of existing public or private structures involving no expansion of use; 15305 as a minor alteration in land use limitations which do not result in any changes in land use or density; and 15308 as an action taken by a regulatory agency as authorized by California law to assure maintenance or protection of
the environment.

SECTION 5: SAVINGS CLAUSE. Repeal of any provision of the ESMC or any other city ordinance herein will not affect any penalty, forfeiture, or liability incurred before, or preclude prosecution and imposition of penalties for any violation occurring before, this Ordinance’s effective date. Any such repealed part will remain in full force and effect for sustaining action or prosecuting violations occurring before the effective date of this Ordinance.

SECTION 6: SEVERABILITY. If any part of this Ordinance or its application is deemed invalid by a court of competent jurisdiction, the city council intends that such invalidity will not affect the effectiveness of the remaining provisions or applications and, to this end, the provisions of this Ordinance are severable.

SECTION 7: VALIDITY OF PREVIOUS CODE SECTIONS. If this the entire Ordinance or its application is deemed invalid by a court of competent jurisdiction, any repeal of the ESMC or other the city ordinance by this Ordinance will be rendered void and cause such ESMC provision or other the city ordinance to remain in full force and effect for all purposes.

SECTION 8: EFFECTIVE DATE. This Ordinance will take effect on January 1, 2011.

PASSED AND ADOPTED this _____ day of __________, 2010.

____________________________________
Eric Busch,
Mayor

APPROVED AS TO FORM
MARK HENSLEY, CITY ATTORNEY

By: __________________________________________
    Karl H. Berger
    Assistant City Attorney

ATTEST:

STATE OF CALIFORNIA )
COUNTY OF LOS ANGELES )    SS
CITY OF EL SEGUNDO )

I, Cindy Mortesen, City Clerk of the City of El Segundo, California, do hereby certify that the whole number of members of the City Council of said City is five; that the foregoing Ordinance No. ________ was duly introduced by said
City Council at a regular meeting held on the _____ day of ________________, 2010, and was duly passed and adopted by said City Council, approved and signed by the Mayor, and attested to by the City Clerk, all at a regular meeting of said Council held on the _____ day of ________________, 2010, and the same was so passed and adopted by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

________________________________________
Cindy Mortesen, City Clerk
ORDINANCE NO.-XXX

AN ORDINANCE ADOPTING BY REFERENCE THE 2010 EDITION OF THE CALIFORNIA FIRE CODE, CHAPTERS 1, 3, and 4, Appendix J OF THE INTERNATIONAL FIRE CODE, 2009 EDITION, AND AMENDING THESE CODES THROUGH EXPRESS FINDINGS OF LOCAL NECESSITY.

The Council of the city of El Segundo does ordain as follows:

SECTION 1: FINDINGS. The City Council finds that certain local climatic, geological, or topographical conditions exist as follows:

A. Climatic - The City experiences periods of extremely high temperatures accompanied by low humidity and high winds each year. These conditions could create an environment in which the Fire Department may be unable to control fires occurring in vegetation as well as structures not having built-in fire protection.

B. Geological - The City is located in a seismically active area. A significant earthquake could render the Fire Department incapable of providing adequate fire protection. In that instance, built-in fire protection would be relied upon for controlling most structural fires.

C. After due consideration, the City Council finds and determines that due to these local climatic, geological, or topographical conditions that amendments, additions, and deletions to the California Fire Code, 2007 Edition, are reasonably necessary to provide sufficient and effective levels of fire safety for the protection of life, health and property. Specifically, these amendments are made as follows:

1. CFC § 503.1.1, 5.3.2.1, 503.2.1.1, 503.2.1.2, 503.2.4, 503.4, 505.1, 505.1.1 - Provides a means of ensuring that fire department access to buildings and fire hydrants is provided uniformly in the City during periods of low humidity and high winds, potential seismic activity, or in areas of restricted access present in the City.

2. CFC § 507.5.1. - Provides a means of ensuring fire hydrants in the City are located a maximum distance to buildings and structures to allow for efficient firefighting operations during periods of low humidity and high winds, potential seismic activity, or in areas of restricted access present in the City.

3. CFC § 510.1. - Provides a means of ensuring that safe and efficient firefighting operations are conducted in buildings with limited radio reception during periods of low humidity and high
winds, potential seismic activity, or in areas of restricted access present in the City.

4. CFC § 901.4.1.1 – 910.1. Provides a means of ensuring that fire protection systems are installed and maintained in a manner that will provide adequate protection during periods of low humidity and high winds, potential seismic activity, or in areas of restricted access present in the City.

5. CFC § 915.1 – 915.8.2.6. Requires the installation of fire protection and life safety equipment in new mid-rise buildings/structures that increase the fire and life safety of the structures/buildings in order to provide adequate fire protection during periods of low humidity and high winds, potential seismic activity, or in areas of restricted access present in the City.

6. CFC § 1030.9. Requires fire escapes to be kept clear, maintained and an annual inspection by a certified individual to ensure the fire escapes are operable due to potential seismic activity.

7. CFC § 3301.2 and 3310 Prohibits the general use of fireworks, including “Safe and Sane” fireworks and authorizes the fire code official to confiscate fireworks in order to reduce the danger from fire during periods of low humidity and high winds, potential seismic activity, or in areas of restricted access present in the City.

8. CFC Appendix B § B105.2. Reduces the available fire flow reduction to 50 percent to increase site available fire flow to provide adequate fire protection and life safety during periods of low humidity and high winds, potential seismic activity, or in areas of restricted access present in the City.

9. CFC § 105.7.11.1, 304.1.1.1, 504.4 and Appendix M requires roof top obstructions (solar voltaic systems, roof top gardens, and landscaped roofs) that limit firefighting operations to have minimum clearances and identification to provide adequate firefighting access during periods of low humidity and high winds, potential seismic activity or in areas of restricted access present in the City.

SECTION 2: Chapter 10 to Title 13 of the El Segundo Municipal Code ("ESMC") is amended in its entirety to read as follows:

"CHAPTER 10
13-10-2: FIRE CODE

A. SECTIONS:

Page 2 of 29
13-10-1: ADOPTION OF CODES.
13-10-2: AMENDMENTS, ADDITIONS, AND DELETIONS.
13-10-3: ADDING APPENDIX M TO THE CFC.
13-10-4: GEOGRAPHICAL LIMITS.

13-10-1: ADOPTION OF CODES.
Pursuant to California Government Code §§ 50022.1 to 50022.8, the City adopts and incorporates by reference the California Fire Code, 2010 Edition ("CFC"), including Appendixes A, B, and C published drafted and published by the International Code Council, 500 New Jersey Avenue NW, 6th Floor, Washington DC, 20001-2070 and the California Building Standards Commission, 2525, Natoma Park Drive, Ste 130, Sacramento, California 95833. The City also adopts and incorporates by reference Chapters 1, 3, 4, and Appendix J of the International Fire Code, 2009 Edition, published by the International Code Council, not included in the California Building Standards Code, as modified and amended by this chapter. Should the changes set forth below conflict with the provisions of any other locally adopted code, these changes will prevail. The CFC and the IFC will apply to all occupancies within the City's jurisdiction. One (1) true copy of each code is on file with the City Clerk and is available for public inspection as required by law.

13-10-2: AMENDMENTS, ADDITIONS, AND DELETIONS.
After due consideration, the City Council has found that as a result of existing local climatic, geological, or topographical conditions that amendments, additions, and deletions to the CFC are reasonably necessary to provide sufficient and effective levels of fire safety for the protection of life, health and property. Therefore, the CFC is amended, added to, or deleted from, as set forth below:

§ 102.8 Subjects Not Specifically Regulated by this Code. Where no applicable standards or requirements are set forth in this code, or contained within other laws, codes, regulations or ordinances, the fire code official may interpret, administer and enforce this Code by reference to the standards of the National Fire Protection Association and such other nationally recognized fire safety standards as are set out in Chapter 45. Any decision of the fire code official relating to the interpretation of this Code may be appealed to the Board of Appeals.

§ 104.10 Investigations. The Fire Department is authorized to promptly investigate the cause, origin and circumstances of each and every fire, explosion, unauthorized release of hazardous materials, or any other hazardous condition within the City. If it appears to the bureau of investigation that such fire is suspicious in origin, it is authorized to take immediate charge of all physical evidence relating to the cause of fire and to pursue investigation to its conclusion.

§ 104.10.1 Assistance from other agencies. The Police Department and other public agencies are authorized to assist the Fire Department in its investigations when requested to do so.
§ 104.10.2 Technical assistance. When there is a fire, explosion, hazardous materials incident or other potential life or serious property threatening situation, the fire code official can request the owner to or operator to hire a private fire protection or hazardous materials investigator, acceptable to the fire code official and at the expense of the owner or operator, to provide a full report of the incident, including, without limitation, such matters as origin, cause, circumstances or proposed solution to the problem.

§ 104.11.4 Financial Responsibility. Any person who personally, or through another, willfully, negligently, or in violation of law, sets a fire, allows a fire to be set, or allows a fire kindled or attended by him/her to escape from his/her control, allows any hazardous material to be handled, stored, disposed of, or transported in a manner not in accordance with this Code, State law or nationally recognized Standards, allows any hazardous material to escape from his/her control, allows continuation of a violation of this Code is liable for the expense of fighting the fire or for the expenses incurred during a hazardous materials incident, and such expense will be a charge against that person.

§ 105.2 Application for Permit. Applications for permits will be made to the fire prevention office in such form and detail as prescribed by the fire code official. Applications for permits must be accompanied by such plans as required by the fire code official. Any applicable permit fees must be paid at the time of application for the permit.

§ 105.6.48 Battery systems. To install or operate stationary storage battery systems having a liquid capacity of more than 50 gallons (189 L) for flooded lead acid, nickel cadmium (NiCad) and valve-regulated lead acid (VRLA), or 1,000 pounds (454 kg) for lithium-ion, used for facility standby power, emergency power or uninterruptible power supplies. See Section 608.

§ 105.6.49 Woodworking. To operate a business which conducts woodworking, or operates as a cabinet shop or other similar purposes.

105.7.11.1 Roof obstructions. A construction permit is required for installation of roof solar voltaic systems, roof gardens or a landscaped roof when constructed on a building that covers more than 50% or 10,000 square feet of the total roof surface area, whichever is less

Exception:
1. Buildings that are four or more stories in height and protected with an approved automatic fire extinguishing system throughout.

2. Non-habitable structures include, but are not limited to, shade structures, private carports, solar trellises, etc.
§ 106.2.1 Inspection requests. It is the duty of the holder of the permit or their duly authorized agent to notify the fire code official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspection of such work that are required by this code. Every request for inspection must be filed not less than two working days before such inspection is desired. Such request may be in writing or by telephone.

§ 108.4 Filing fee and application. The City will assess a fee in an amount set by resolution at the time that an appellant files an appeal of any order, decisions, or determination made by the fire code official relative to the application and interpretation of this Code. The fee is refundable should the appellant prevail in a decision by the Board. The appeal must be taken by filing a written notice of appeal, in letterform, to the Board of Appeals. The Board's decision constitutes the City's final decision.

§ 202 GENERAL DEFINITIONS are amended to add and/or modify the following definitions to read as follows:

“Administrator” means the City Manager, or designee, of the city of El Segundo.

“Building Access” means an exterior door opening conforming to all of the following:

1. Suitable and available for fire department use, opening onto or adjacent to a public way or a fire department access road as described in Section 902.

2. Located not more than 2 feet (609.6 mm) above adjacent ground level.

3. Leading to a space, room or area having foot traffic communication capabilities with the remainder of the building.

4. Designed to permit access with the use of keys available in an approved key lock box.

“Fire Code Official” is the Fire Chief or a duly authorized representative.

“Low-Rise Building” is any building that is less than four stories in height from the lowest level of fire department access. Measurement will be from the topside of the highest floor level that can be occupied to the lowest floor level of building access, as defined in Section 202.

“Mid-Rise Building” is any building having space used for human occupancy four complete stories or more in height while being 75 feet (22,860 mm) or less in height and not defined as a high-rise building by Section 202. Measurement will
be from the topside of the highest floor level that can be occupied to the lowest floor level of-building access, as defined in Section 202.

§ 304.1.1.1 Waste material near ground mounted photovoltaic array. Accumulation of waste material shall not be permitted underneath nor within 10 feet from a ground mounted photovoltaic array.

§ 405.2 Table 405.2 Footnote ‘a’
   a. The frequency in all school levels are allowed to be modified in accordance with Section 408.3.2. Secondary level schools need only conduct evacuation drills twice each school year.

§ 408.1 General. is deleted

§ 408.2 Group A occupancies. is deleted

§ 408.3 Group E occupancies and Group R-2 college and university buildings. is deleted

§ 408.5 I occupancies. is deleted

§ 408.6 Group I-2 occupancies. is deleted

§ 408.7 Group I-3 occupancies. is deleted

§ 408.8 Group R-1 occupancies. is deleted

§ 408.9 Group R-2 occupancies. is deleted

§ 408.10 Group R-4 occupancies. is deleted

§ 408.11 Covered mall buildings. is deleted

§ 503.1.1 Buildings and facilities. Approved fire apparatus access roads must be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road must comply with the requirements of this section and shall extend to within 150 feet (45,720 mm) of all portions of the facility and all portions of the exterior walls of the of the first story of the building as measured by an approved route around the exterior of the building or facility. The fire code official has the authority to designate fire apparatus access roads on private property.

   Exception: The fire code official is authorized to increase to dimension of 150 feet (45,720 mm) where:
1. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.1.2 or 903.3.1.3.

2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.

3. There are not more than two Group R-3 or Group U occupancies.

§ 503.2.1 Dimensions. Fire apparatus access roads must have an unobstructed width of not less than 20 feet (6096 mm) exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 15 feet (4572 mm).

   Exception:

   1. When serving only one Group R, Division 3 or Group U Occupancy the unobstructed width of the access road may be 12 feet (3658 mm).

§ 503.2.1.1 Access roads with vehicle parking. No access roads can be less than 32 feet (9754 mm) in width if the vehicle parking is permitted on one side of the access road and not less than 40 feet (12,192 mm) if vehicle parking is permitted on both sides of the access road. To permit the free passage of vehicles, access roads designated for vehicle parking on only one side must have signs or markings prohibiting the parking of vehicles on the traffic flow side of the roadway.

§ 503.2.1.2 Road divider. An access road divider into separate adjacent one-way traffic lanes by a curbed divider or similar obstacle must not be less than 15 feet (4572 mm) in unobstructed width on each side of the divider.

§ 503.2.4 Turning radius. The inside turning radius of a fire apparatus access road must be a minimum of 60 feet, outside and 40 feet, inside.

§ 503.4 Obstruction of fire apparatus access roads. Fire apparatus access roads cannot be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Section 503.2.1 must be maintained at all times. Speed bumps and speed humps must be approved before installation.

§ 504.4 Roof top access and safety. Roof top solar photovoltaic systems, roof gardens and landscaped roofs shall be in accordance with Appendix M.

§ 505.1 Address numbers. Approved address numbers and letters must be placed on all new and existing buildings and units in such a location as to be plainly visible and legible from the street or road fronting such buildings and units. Numbers and letters must be at least four (4) inches in height for residential, six (6) inches in height for commercial, and twelve (12) inches in height for industrial
buildings and units and may not be located on doors or other areas that can be obstructed from view. The numbers and letters will be in a color that contrasts with their background and must be in the City's approved numbering sequence. Commercial and industrial buildings and units that are served by an alley must also have approved address numbers and letters posted in a visible location near the primary door to the alley.

§ 505.1.1 Directory. For complexes and large buildings, a directory or premises map with approved addressing must be installed and maintained at a location and in format as approved by the fire code official.

§ 507.5.1 Additional On-site fire hydrants. When any portion of the facility or building protected is in excess of 150 feet (45 720 mm) from a water supply on a public street, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow must be provided when required by the fire code official. See Appendix C.

§ 510.1 Emergency responder radio coverage in buildings. All buildings, including existing buildings, shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communications systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication system.

Exceptions:

1. Where approved by the building official and the fire code official, a wired communication system in accordance with section 907.2.13.2 shall be permitted to be installed or maintained in lieu of an approved radio coverage system.

2. Where it is determined by the fire code official that the radio coverage system is not needed.

§ 805 Upholstered Furniture and Mattress In New and Existing Buildings. is deleted

§ 808 Furnishings Other Than Upholstered Furniture and Mattresses or Decorative Materials in New and Existing Buildings. is deleted

§ 901.4.5 Partial fire sprinkler systems. Where in this Code or the Building Code a partial fire sprinkler system is required, the fire sprinkler system must be installed, modified or extended to protect the entire building or structure.

§ 901.10 Problematic systems. In the event of a failure of a fire protection system or 2 or more alarms in a week where the fire code official finds no evidence of a
situation requiring a response, the fire code official is authorized to require the
building owner or occupant to provide a fire watch until the system is repaired. Fire
watch personnel must be provided with at least one approved means for notification
of the Fire Department and their only duty is to perform constant patrols of the
protected premises and keep watch for fires.

§ 903.2.11.3 Building 4 stories or more in height. An automatic sprinkler system
must be installed throughout all buildings having usable floor area four stories or
more above grade, or buildings attached thereto.

§ 903.2.19 Structures in the Smoky Hollow Specific Plan Area. An automatic
sprinkler system must be provided throughout every facility or building hereafter
constructed within the Smoky Hollow Specific Plan Area.

§ 903.3.1.2.2 Protection of attached garages. Residential occupancies protected
by an automatic sprinkler system in accordance with NFPA 13R must have
automatic sprinklers installed in attached garages and in other areas as required by
the fire code official.

§ 903.3.1.3.1 Protection of attached garages. Residential occupancies protected
by an automatic sprinkler system in accordance with NFPA 13D must have
automatic sprinklers installed in attached garages and in other areas as required by
the fire code official.

§ 905.5.3 Intentionally blank.

§ 910.1 General. Where required by this Code or otherwise installed, smoke and
heat vents or mechanical smoke exhaust systems and draft curtains must conform
to the requirements of this section.

Exceptions:

1. Frozen food warehouses used solely for storage of Class I and II
commodities where protected by an approved automatic sprinkler system.

2. Where areas of buildings are equipped with early suppression fast-response
(ESFR) sprinklers, smoke and heat venting must be provided by mechanical
smoke exhaust systems in accordance with Section 910.4 within these
areas.

SECTION 915 MID-RISE BUILDINGS

SECTION 915.1 General

§ 915.1.1 Scope. In addition to other applicable provisions of this code, other laws
and regulations, and any policies of the fire code official, the provisions of this article
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apply to every mid-rise building, of any type construction, newly constructed after the adoption of this Code, or which undergoes a complete renovation that requires the complete vacancy of the building.

Exceptions: The following structures, while defined as mid-rise buildings, will not be subject to the provisions of this article:

1. Buildings used exclusively as open parking garage;

2. Buildings where all floors above the third floor (9,144 mm) level are used exclusively as open parking garage;

3. Buildings such as power plants, lookout towers, steeples, grain houses, and similar structures with non-continuous human occupancy, when so determined by the fire code official;

4. Buildings used exclusively for jails, prisons and hospitals.

§ 915.1.2 Definitions. For definitions of MID-RISE BUILDING and BUILDING ACCESS, see Section 202.

§ 915.2 Building Access.

§ 915.2.1 Building Access. Building access must be provided and approved by the fire code official.

§ 915.3 Fire and Life Safety Requirements.

§ 915.3.1 Automatic Fire Sprinklers. Every mid-rise building must be protected throughout by an automatic fire sprinkler system that is designed and installed in conformance with NFPA 13. A shut-off valves and a water flow alarm device must be provided for each floor.

§ 915.3.2 Standpipes. Every mid-rise building must be provided with a class 1 standpipe system in each required stairway. The standpipe system must be interconnected with the fire sprinkler system. The system must consist of 2½ inch hose valves provided for each floor level above or below grade. Two hose outlets must also be located on the roof, outside of each stair shaft enclosure that penetrates the roof. Hose connections must be located in the exit vestibule, unless otherwise approved by the fire code official.

§ 915.3.3 Smoke Detection. Smoke detectors must be provided in accordance with this section. Smoke detectors must be connected to an automatic fire alarm system installed in accordance with NFPA 72. The actuation of any detector required by this section will operate the emergency voice alarm signaling system and will place into
operation all equipment necessary to prevent the circulation of smoke through air
return and exhaust ductwork.

§ 915.3.3.1 Location. Smoke detectors must be located as follows:

1. In every elevator machinery room and in all elevator lobbies. Elevator lobby detectors must be connected to an alarm verification zone or be listed as a releasing device.

2. In the main return-air and exhaust-air plenum of each air-conditioning system. Such device must be located in a serviceable area downstream of the last duct inlet.

3. At each connection to a vertical duct or riser serving two or more stories from a return-air duct or plenum of an air conditioning system. In Group R-1 and R-2 Occupancies, an approved smoke detector may be used in each return-air riser carrying not more than 5,000 cubic feet per minute and serving not more than 10 air inlet openings.

4. For Group R-1 and R-2 Occupancies, in all corridors serving as a means of egress for an occupant load for 10 or more.

§ 915.3.4 Smoke Control. A passive or active smoke control system must be provided for all mid-rise buildings whenever a complete floor is in excess of 55 feet (16,764 mm) from the lowest point of Fire Department access. Such system must be mechanical and must be designed, installed and tested to be in compliance with Section 909.

§ 915.3.5 Fire Alarm System. An approved and listed, automatic and manual, fully addressable and electronically supervised fire alarm system must be provided in conformance with this code and any policies of the Fire Prevention Division.

§ 915.3.6 Emergency voice alarm signaling system. The operation of any automatic or manual fire alarm initiating device must automatically sound an alert tone followed by a pre-recorded voice instruction giving appropriate information and direction on a general or selective voice basis to entire building, occupied and normally non-occupied areas.

§ 915.3.6.1 Pre-recorded instructions. The content of the voice alarm instruction must be approved by the El Segundo Fire Department.

§ 915.3.6.2 Manual override. A manual override for emergency voice communication must be provided for all paging zones.

§ 915.4 Central Control Station.
§ 915.4.1 General. A central control station room for fire department-operations must be provided. The location and accessibility of the central control station room must be approved by the fire department. The room must be separated from the remainder of the building by not less than one-hour, fire resistive occupancy separation. The room must be a minimum of 96 square feet with a minimum dimension of 8 feet. It must contain the following as a minimum:

1. The voice alarm and public address panels.
2. The fire alarm annunciator panel.
3. Elevator annunciator panel when the building exceeds 55 feet in height.
4. Status indicators and controls of air handling systems.
5. Controls for unlocking stairwell doors.
6. Annunciator panels for emergency and stand-by power status.
7. Annunciator panels for fire pump status.
8. Complete building plans set.
10. Elevator control switches for switching of emergency power.

§ 915.4.2 Annunciation identification. Control panels in the central control station must be permanently identified as to function. Water flow, automatic fire detection and manually activated fire alarms, supervisory and trouble signals must be monitored by an approved, UL listed Central Monitoring Station or Proprietary Monitoring Station and annunciated in the central control station by means of an audible and visual indicator. For the purposes of annunciation, zoning must be in accordance with the following:

1. When the system serves more that one building, each building must be considered separately.
2. Each floor must be considered a separate zone.
3. When one or more risers serve the same floor, each riser must be considered a separate zone.

§ 915.5 Elevators.

§ 915.5.1 Standards. Elevators and elevator lobbies be provided and must comply with the California Building Code and the following:

§ 915.5.2 General. At least one elevator cab must be assigned for Fire Department use, which must serve all floors of the building. All provisions hereinafter are in reference to said elevator cab(s).

§ 915.5.2.1 Size. The size of the elevator cab must have dimensions as specified in Section 915.5.2.1.1.

§ 915.5.2.1.1 Ambulance Stretcher. The elevator cab must be provided with adequate dimensions to accommodate an ambulance type stretcher in accordance with the provisions of Section 3002.4a.1 of California Building Code.
§ 915.6 Standby Power.

§ 915.6.1 General. An on-site standby power system conforming to the Electrical Code must be provided. In the event of failure of the normal power source, the standby power system must provide an alternate source of electrical power to serve at least the designated loads as set forth in Section 915.6.2 at full power. The system may consist of an on-site generator or a system of batteries, or both. The installation must be in accordance with this code, nationally recognized standards, and any policies of the fire code official.

§ 915.6.2 Loads. The power load requirements for sizing the standby power system must include, without limitation to the following:

1. Exit signs and exit path illumination;
2. Fire alarm system;
3. Elevator(s) assigned for fire department use;
4. Electrically driven fire pumps (if provided);
5. Smoke control systems;
6. Stairwell pressurization;
7. Lighting circuits supplying all elevator cabs, elevator lobbies, generator room, fire pump room, and other areas designated by the fire code official.

§ 915.6.3 Fuel Supplies. On-site fuel supplies for prime movers of a standby power generator must be sufficient for at least 48 hours at the generator's listed full load. Where fuel supplies require automatic transfer into a primary tank from a secondary fuel storage tank, the fuel transfer system must be provided with redundant fuel pumps to insure reliability. The fuel supply tank provided must be capable of storing at least 200% of the calculated amount of fuel needed.

§ 915.7 Emergency Electrical System

§ 915.7.1 General. Electrical systems and equipment specified in Section 915.6 are classed as emergency systems and must be installed in accordance with this code, NFPA 110, NFPA 111and policies of the fire code official. Such systems must operate within 10 seconds of failure to normal power supply. Such emergency power supply may be separate from the standby power required for fire pumps and elevators assigned for fire department use.

§ 915.7.2 Emergency Systems. The following are classed as emergency systems:
1. Exit signs and means of egress illumination
2. Fire alarm system
3. Fire detection system
4. Sprinkler alarm system
5. Elevator cab lighting
6. Smoke control systems.

§ 915.8 Means of Egress

§ 915.8.1 General. Means of egress must comply with the provisions of Section 915.8.

§ 915.8.1 Stairway enclosures. All stairways used for exiting must be protected by an exit enclosure designed in accordance with the California Building Code, Section 1020.1 and this Section.

§ 915.8.2.1 Construction. Construction of stairway enclosures must in accordance with the California Building Code, Section 1005.3.3.2.

§ 915.8.2.2 Extent of Enclosure. Stairway enclosures must be continuous and must fully enclose all portions of the stairway. Exit enclosure must exit directly to the exterior of the building or include an exit passageway on the ground floor, leading to the exterior of the building. Each exit enclosure must extend completely through the roof and be provided with a door that leads onto the roof.

§ 915.8.2.3 Openings and Penetrations. Openings and Penetrations must be as specified in the California Building Code, Section 1020.1.1.

§ 915.8.2.4 Pressurized Enclosures. A pressurized stairway enclosure must be provided for all mid-rise buildings whenever a complete floor is in excess of 55 feet (16.764 mm) from the lowest point of Fire Department access. The pressurized stairway must be designed and pressurized as specified in the California Building Code, Section 909.20.

§ 915.8.2.4.1 Vestibules. Pressurized stairway enclosures, serving Mid-Rise buildings must be provided with a pressurized entrance vestibule on each floor that complies with the California Building Code, Section 909.20.

§ 915.8.2.4.1.1 Vestibule Size. Vestibule size must be not less than 44 inches in width and not less than 72 inches in the direction of travel.
§ 915.8.2.4.1.2 Vestibule Construction. Vestibules must have walls, ceilings and floors of not less than two-hour fire resistive construction.

§ 915.8.2.4.1.3 Vestibule Doors. Vestibule doors must be in accordance with the California Building Code, Section 909.20.

§ 915.8.2.4.1.4 Pressure Differences. The minimum pressure difference within a vestibule must be in accordance with the California Building Code, Section 909.20.

§ 915.8.2.4.1.5 Standpipes. Fire Department standpipe connections and valves serving the floor must be within the vestibule and located in a manner so as not to obstruct egress when hose lines are connected and charged.

§ 915.8.2.5 Locking of Stairway doors. All stairway doors that are locked to prohibit access from the stairway side must have the capability of being unlocked simultaneously, without unlatching, upon a signal from the fire control room. Upon failure of normal electrical service, or activation of any fire alarm, the locking mechanism must automatically retract to the unlocked position. Hardware for locking of stairway doors must be State Fire Marshal listed and approved by the fire code official by permit before installation. Stairway doors located between the vestibules and stairway shaft must not be locked.

§ 915.8.2.6 Communications. A telephone or other two-way communications system connected to an approved emergency service which operates continuously must be provided at not less than every third floor in each required exit stairway vestibule.

§ 1030.9 Fire escape maintenance. Fire escapes must be kept clear and unobstructed at all times, must be maintained in good working order at all times and must receive an annual inspection by a Los Angeles Fire Department Regulation 4 certified individual. The inspection records must remain on site for Fire Department review.

§ 1404.8 Fire retardant plastic sheathing and tarpaulins. Fire retardant tarpaulins and sheeting must be used to barricade construction areas from occupied building spaces and to provide floor or wall protection in occupied buildings.

§ 2201.7 Class IIIB fuels. Where in this Chapter there is a requirement or restriction for Class IIIA fuels, the same requirement or restriction applies to Class IIIB fuels.

§ 2306.2 Table 2306.2, Footnote 'j' is amended to read as follows:

j. Smoke and heat removal must be accomplished by mechanical ventilation in accordance with Section 910.4 when storage areas are protected by early suppression fast response (ESFR) sprinkler systems installed in accordance with NFPA 13.
§ 3301.2 Fireworks. The manufacturing, possession, storage sale, use and handling of fireworks, including without limitation, “Safe and Sane” fireworks, is prohibited.

Exceptions:
1. Storage of fireworks in accordance with the requirements for low order explosives in Title 19, California Code of Regulations, Chapter 10.
2. Storage of fireworks, 1.4G in accordance with the Building Code.
3. Use and handling of fireworks for professional display in accordance with Title 19, California Code of Regulations, Chapter 6.

§ 3310 Seizure of Fireworks. The fire code official has the authority to seize, take and remove fireworks stored, sold, offered for sale, used or handled in violation of the provisions of Title 19, California Code of Regulations, Chapter 6 and California Health and Safety Code, Chapter 9.

Appendix B § B105.2 Buildings other than one- and two-family dwellings. The minimum fire-flow and flow duration for buildings other than one- and two-family dwellings is specified in Table B105.1

Exception: A reduction in required fire-flow up to 50 percent, as approved, is allowed when the building is protected with an approved automatic sprinkler system installed in accordance with Section 903.1.1 or 903.1.2. The resulting fire-flow must not be less than 1,500 gallons per minute (5678 L/min) for the prescribed duration as specified in Table B105.1

13-10-3: A new Appendix M Roof Obstructions is added to the CFC to read as follows:

APPENDIX M
ROOF OBSTRUCTIONS

SECTION M101

SCOPE

§ M101.1 Scope: This appendix shall apply to the design, construction, and installation of all solar photovoltaic systems, roof gardens and landscaped roofs when located on the roof of a building.

Exception:
1. Buildings that are four or more stories in height and protected with an approved automatic fire extinguishing system throughout.

2. Non-habitable structures include, but are not limited to, shade structures, private carports, solar trellises, etc.
§ M101.2 Permits. The fire code official shall review and approve the installation of roof solar photovoltaic systems, roof gardens, landscaped roofs on building that obstruct more than 50% or 10,000 square feet of the total roof surface area prior to the building code official issuing a permit for the installation for such roof obstructions. See section 105.7 for required construction permits.

§ M101.3 Required construction document information. All roof top installations submitted for approval shall include the following:

1. Site plan to scale depicting the following:
   a. Dimensions of the building
   b. Location of all structures on site.
   c. Street address of building.
   d. Access from street to building.
   e. Location of roof top solar arrays, gardens, or landscaped areas.
   f. Location of disconnects.
   g. Location of signage.
   h. Location of required access paths.
   i. Northern reference

2. Roof and Elevation plan showing the following:
   a. Array or landscape placement.
   b. Roof ridge lines.
   c. Eave lines.
   d. Equipment on roof.
   e. Vents, skylights, roof hatches, etc.

3. Location and wording of all markings, labels and warning signs.

4. Building photographs that may be useful in the evaluation of the garden, landscaping, or array placement.

SECTION M102
DEFINITIONS

§ M102.1 Definitions. For the purpose of this appendix, certain terms are defined as follows:

ACCESS PATHWAY. A required walking pathway that is designed to provide emergency access to firefighters.

ARRAY. An uninterrupted section of solar photovoltaic panels or modules or a group of interconnected sub-arrays.
GRID. The electrical system that is on the service side of the electric meter designation of ridge, hip, and valley does not apply to roofs with 2-in-12 or less pitch. All roof dimensions are measured to centerlines.

INVERTER. A device used to convert direct current (DC) electricity from the solar system to alternating current (AC) electricity for use in the building’s electrical system or the grid.

LANDSCAPED ROOF. Vegetative landscaping located on the roof of a building that utilizes growing media and structures or containers to support the growth of vegetation.

ROOF ACCESS POINT. An area that does not require ladders to be placed over building openings (i.e., windows, vents, or doors), and that are located at structurally strong points of building construction and in locations where ladders will not be obstructed by tree limbs, wires, signs or other overhead obstructions.

ROOF GARDEN. A garden located on the roof of a building that utilizes growing media and structures or containers to support the growth of vegetation.

SOLAR PHOTOVOLTAIC SYSTEM. A system of component parts that receives sunlight and converts it into electricity.

SUB-ARRAY. Uninterrupted sections of solar photovoltaic panels interconnected into an array.

TRAVEL DISTANCE. The walking distance between two points.

VENTING CUT OUT. Section(s) in an array that are designed to accommodate emergency ventilating procedures.

SECTION M103

ROOF SOLAR PHOTOVOLTAIC SYSTEMS

§ M103.1. Solar photovoltaic systems. The requirements of section K103 applies to all solar photovoltaic systems installed on the roof of buildings regardless of system size or if used for residential and commercial purposes. Roof solar photovoltaic systems shall be designed, constructed and installed in accordance with sections M103.2 through M103.5.3.

§ M103.2 Marking. Photovoltaic systems shall be marked. Marking is needed to provide emergency responders with appropriate warning and guidance with respect to isolating the solar electric system. This can facilitate identifying energized electrical lines that connect the solar panels to the inverter, as these should not be
cut when venting for smoke removal. Materials used for marking shall be weather resistant. UL 969 shall be used as a standard for weather rating (UL listing of markings is not required).

§ M103.2.1 Building’s electrical system main service disconnect marking. The buildings main electrical service disconnect shall be marked.

§ M103.2.1.1 Single and two dwelling unit residential buildings. The marking shall be placed within the main service disconnect.

Exception: If the main service disconnect is operable with the service panel closed, then the marking shall be placed on the outside cover.

§ M103.2.1.2 Commercial and industrial buildings. The marking shall be placed adjacent to the main service disconnect in a location clearly visible from the location where the lever is operated.

§ M103.2.1.3 Marking content and format. Marking content and format shall be as follows.

1. Marking content: “CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED"
2. Red background
3. White lettering
4. Minimum 3/8 inch letter height
5. All capital letters
6. Arial or similar font, non-bold
7. Reflective weather resistant material suitable for the environment (durable adhesive materials must meet this requirement)

§ M103.2.2 Photovoltaic circuits marking. Photovoltaic circuit marking is required on all interior and exterior photovoltaic DC circuit conduit, raceways, enclosures, cable assemblies and junction boxes to alert firefighters to avoid cutting them. Marking shall be placed every 10 feet, at turns, and above and/or below penetrations, and at all photovoltaic circuit combiner and junction boxes.

§ M103.2.2.1 Marking content and format. Marking content and format shall be as follows.

1. Marking content: “CAUTION: SOLAR CIRCUIT"
2. Red background
3. White lettering

4. Minimum 3/8 inch letter height

5. All capital letters

6. Arial or similar font, non-bold

7. Reflective weather resistant material suitable for the environment (durable adhesive materials must meet this requirement)

§ M103.2.3 Inverter marking. No markings are required for the inverter unless the inverter is used also as a required remote electrical disconnect.

§ M103.2.4 Remote electrical disconnect marking. Marking shall be located immediately next to the remote electrical disconnect control as follows:

1. Marking content: “CAUTION: SOLAR CIRCUIT DISCONNECT”
2. Red background

3. White lettering

4. Minimum 3/8 inch letter height

5. All capital letters

6. Arial or similar font, non-bold

7. Reflective weather resistant material suitable for the environment (durable adhesive materials must meet this requirement)

§ M103.3 Remote electrical disconnect. Photovoltaic circuits shall be equipped with a means for remote electrical disconnect located downstream from the photovoltaic array at the point where the photovoltaic circuit first enters the structure, or at another approved location. The manual control to operate the remote electrical disconnect shall be located within five feet of the building’s main electrical panel. The remote electrical disconnect shall be listed and meet the requirements of the California Electrical Code.

Exceptions:

1. Photovoltaic circuits contained in rigid or electrical metallic tubing running between the array combiner box and the main electrical panel which are entirely exterior to the building need not be equipped with a means of remote electrical disconnect other than the disconnects intrinsic to the system.
2. Photovoltaic circuits contained in rigid or electrical metallic tubing running between the array combiner box and the main electrical panel that run through the interior of the building when installed a minimum of 18 inches below the roof assembly when measured parallel to the surface of the roof.

3. The photovoltaic system inverter may be used for remote electrical disconnect when the inverter is located immediately upstream of the roof penetration where the circuit enters the structure.

§ M103.4 Access pathways and emergency ventilation. Access and spacing requirements shall be provided in order to ensure firefighter access to the roof, provide access pathways to specific areas of the roof, provide for venting cut out areas, and to provide emergency egress from the roof. For the purpose of access pathways and emergency ventilation, designation of ridge, hip, and valley does not apply to roofs with 2-in-12 or less pitch. All roof dimensions are measured to centerlines.

§ M103.4.1 Alternative materials and methods. Alternative materials and methods per Section 104.9 for access pathways or venting cut outs may be requested for approval by the fire code official due to:

1. Unique site specific limitations
2. Alternative access opportunities (as from adjoining roofs)
3. Ground level access to the roof area in question
4. Other adequate venting cut out opportunities when approved by the fire code official.
5. Adequate venting cut out areas afforded by panel set back from other roof top equipment (for example: shading or structural constraints may leave significant areas open for ventilation near HVAC equipment.)
6. Automatic ventilation device.
7. New technology, methods, or other innovations that ensure adequate fire department access pathways and ventilation opportunities.

§ M103.4.2 Single and two dwelling unit residential buildings access pathways and venting cut outs. Access pathways and venting cut outs for single and two dwelling unit residential buildings shall be provided as per Section M103.4.2.1 though M103.4.2.4.

§ M103.4.2.1 Hip roof layout. Solar modules shall be located in a manner that provides one three (3) foot wide clear access pathway from the eave to the ridge on
each roof slope where solar modules are located. The access pathway shall be located at a structurally strong location on the building, such as a bearing wall.

§ M103.4.2.2 Single roof ridge. Solar modules shall be located in a manner that provides two three (3) foot wide access pathways from the eave to the ridge on each roof slope where solar modules are located.

§ M103.4.2.3 Roof hips and valleys. Solar modules shall be located no closer than one and one half (1.5) feet to a hip or a valley if modules are to be placed on both sides of a hip or valley. If the solar modules are to be located on only one side of a hip or valley, that is of equal length then the panels may be placed directly adjacent to the hip or valley.

§ M103.4.2.4 Venting cut out areas. Solar modules shall be located no higher than three (3) feet below the ridge.

§ M103.4.3 Commercial and industrial buildings and multi-residential buildings containing three or more dwelling units required access pathways and venting cut outs. Access pathways and venting cut outs for commercial and industrial buildings and multi-residential buildings containing three or more dwelling units shall be provided as accordance with Section M103.4.3.1 through M103.4.3.2.6.

Exception: If the fire code official determines that the roof configuration is similar to that found in single and two dwelling unit residential buildings, the design requirements found in Section M103.4.2 may be utilized.

§ M103.4.3.1 Array dimension. Arrays shall be no greater than 150 feet by 150 feet in distance in either axis.

§ M103.4.3.2 Access pathways: Access pathways shall be established in the design of the photovoltaic system installation. Access pathways shall be provided in accordance with Section M103.4.3.2.1 through M103.4.3.2.5.

§ M103.4.3.2.1 Access pathways perimeter of the roof. There shall be a minimum six (6') foot wide clear perimeter around the edges of the roof.

Exception: If either axis of the building is 250 feet or less, there shall be a minimum four (4') feet wide clear perimeter around the edges of the roof.

§ M103.4.3.2.2 Access pathway location. The center line axis of access pathways shall run on structural members or over the next closest structural member nearest to the center lines of the roof.

§ M103.4.3.2.3 Access pathway center line. The center line axis of access pathways shall be provided in both axis of the roof.

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§ M103.4.3.2.4 Access pathway alignment. Access pathways shall be in a straight line and provide not less than four (4) feet clear to skylights, ventilation hatches or roof standpipes.

§ M103.4.3.2.5 Access pathway around roof access hatches. Access pathways shall provide not less than four (4) feet of clearance around roof access hatch with at least one not less than four feet (4) clear pathway to parapet or roof edge.

§ M103.4.3.2.6 Venting cut out areas. Venting cut outs between array sections shall be either:

1. An access pathway eight (8) feet or greater in width.
2. An access pathway that is four (4) feet or greater in width and bordering on existing roof skylights or ventilation hatches.

3. An access pathway that is four (4) feet or greater in width and bordering four (4) feet by eight (8') feet venting cut outs every twenty (20) feet on alternating sides of the access pathway.

§ M103.5 Location of conductors. Conduit, wiring systems and wiring raceways for photovoltaic circuits shall be provided in accordance with Section M103.5.1 through M103.5.3.

§ M103.5.1 Conductor location. Conduit, wiring systems, and wiring raceways shall be located as close as possible to the ridge or hip or valley and from the hip or valley as directly as possible to an outside wall to reduce trip hazards and maximize venting cut out areas.

§ M103.5.2 Conductors between sub arrays and DC combiner boxes. Conduit runs between sub arrays and to DC combiner boxes shall use the design that minimizes the total amount of conduit on the roof by taking the shortest path from the array to the DC combiner box. The DC combiner boxes are to be located such that conduit runs are minimized in the pathways between arrays.

§ M103.5.3 Conduit within enclosed spaces. To limit the hazard of cutting live conduit in venting operations, DC wiring shall be run in metallic conduit or raceways when located within enclosed spaces in a building and shall be run, to the maximum extent possible, along the bottom of load-bearing members.

SECTION M104

ROOF GARDEN AND LANDSCAPED ROOFS

§ M104.1 Roof gardens and landscaped roofs. The requirements of Section M104 applies to all roof gardens and landscaped roofs regardless of size or if used for residential and commercial purposes. Roof gardens and landscaped roofs shall be
designed, constructed and installed in accordance with Section M104.2 through M104.4.

§ M104.2 Access pathways and emergency ventilation. Access and spacing requirements shall be provided in order to ensure firefighter access to the roof, provide access pathways to specific areas of the roof, provide for venting cut out areas, and to provide emergency egress from the roof. For the purpose of access pathways and emergency ventilation, designation of ridge, hip, and valley does not apply to roofs with 2-in-12 or less pitch. All roof dimensions are measured to centerlines.

§ M104.2.1 Alternative materials and methods. Alternative materials and methods per Section 104.9 for access pathways or venting cut outs may be requested for approval by the fire code official due to:

1. Unique site specific limitations
2. Alternative access opportunities (as from adjoining roofs)
3. Ground level access to the roof area in question
4. Other adequate venting cut out opportunities when approved by the fire code official.
5. Adequate venting cut out areas afforded by panel set back from other roof top equipment (for example: shading or structural constraints may leave significant areas open for ventilation near HVAC equipment.)
6. Automatic ventilation device.
7. New technology, methods, or other innovations that ensure adequate fire department access pathways and ventilation opportunities.

§ M104.2.2 Single and two dwelling unit residential buildings. Installation of roof gardens and landscaped roofs on single and two dwelling unit residential buildings shall be in accordance with Section M104.2.2.1 through M104.2.2.3.

§ M104.2.2.1 Hip roof design: Planted sections shall be located in a manner that provides a three (3) foot wide clear access pathway from the eave to the ridge on each roof slope where the planted sections are located. The access pathway shall be located at a structurally strong location on the building such as a bearing wall.

§ M104.2.2.2 Single ridge roof design: Planted sections shall be located in a manner that provides two three (3) foot wide access pathways from the eave to the ridge on each roof slope where the planted sections are located.
§ M104.2.2.3 Hips and valleys: Planted sections shall be located no closer than one and one half (1.5) feet to a hip or a valley if planted sections are to be placed on both sides of a hip or valley. If the planted sections are to be located on only one side of a hip or valley that is of equal length then the planted sections may be placed directly adjacent to the hip or valley. Planted sections shall not be located closer than three (3) feet below the ridge.

§ M104.2.3 Commercial and industrial buildings and multi-residential buildings containing three or more dwelling units required access pathways and venting cut outs. Access pathways and venting cut outs for commercial and industrial buildings and multi-residential buildings containing three or more dwelling units. Access pathways shall be provided in accordance with Section M104.2.3.1 through M104.2.3.6.

Exception: If the fire code official determines that the roof configuration is similar to that found in single and two dwelling unit residential buildings, the design requirements found in section M104.2.2 may be utilized.

§ M104.2.3.1 Planted dimension. Planted sections shall be no greater than 150 feet by 150 feet in distance in either axis.

§ M104.2.3.2 Access pathways: Access pathways shall be established in the design of the roof garden or landscaped roof installation. Access pathways shall meet the requirements of this section.

§ M104.2.3.2.1 Access pathways perimeter of the roof. There shall be a minimum six (6) foot wide clear perimeter around the edges of the roof.

Exception: If either axis of the building is 250 feet or less, there shall be a minimum four (4) feet wide clear perimeter around the edges of the roof.

§ M104.2.3.2.2 Access pathway location. The center line axis of access pathways shall run on structural members or over the next closest structural member nearest to the center lines of the roof.

§ M104.2.3.2.3 Access pathway center line. The center line axis of the access pathways shall be provided in both axis of the roof.

§ M104.2.3.2.4 Access pathway alignment. Access pathways shall be in a straight line and provide not less than four (4) feet clear to skylights, ventilation hatches or roof standpipes.

§ M104.2.3.5 Access pathway around roof access hatches. Access pathways shall provide not less than four (4) feet of clearance around roof access hatch with at least one not less than four feet (4) clear pathway to parapet or roof edge.
§ M104.2.3.6 Venting cut out areas. Venting cut outs between planted sections shall be either:

1. An access pathway eight (8) feet or greater in width.

2. An access pathway that is four (4) feet or greater in width and bordering on existing roof skylights or ventilation hatches.

3. An access pathway that is four (4) feet or greater in width and bordering four (4') feet by eight (8) feet venting cut outs every twenty (20) feet on alternating sides of the access pathway.

§ M105.4 Roof garden or landscaped roof maintenance plan. The fire code official is authorized to require an approved maintenance plan for vegetation placed on roofs due to the size of the garden or landscaping area, or if materials and plants used may create a fire hazard to the building or exposures.

13-10-4: GEOGRAPHICAL LIMITS
Geographic limits referred to in certain sections of this Code are established as follows:

Establishment of limits of districts in which storage of flammable cryogenic fluids in stationary containers are prohibited.
The limits referred to in Section 3204.3.1.1 in which storage of flammable cryogenic fluids in stationary containers is prohibited are established as the City of El Segundo’s corporate boundaries.

Exceptions:
1. The storage of flammable cryogenic fluids in stationary containers is allowed in an M-1, MM, and MU-N Zone with a Conditional Use Permit issued by the Planning Department.

2. The storage of flammable cryogenic fluids in stationary containers is allowed in the M-2 Zone.

Establishment of limits of districts in which storage of flammable or combustible liquids in outside aboveground tanks is prohibited.
The limits referred to in Sections 3404.2.9.5.1 and 3406.2.4.4 in which the storage of Class I flammable liquids or Class II combustible liquids in aboveground tanks outside of buildings is restricted are established as the City of El Segundo’s corporate boundaries.

Exceptions: Such use is allowed in the following zoning districts:

1. The storage of Class I flammable liquids or Class II combustible liquids in aboveground tanks outside of buildings is allowed in M-1 and M-2, Zones;
2. The storage of Class II combustible liquids in aboveground tanks outside of
buildings is allowed in C-0, MM, MU-N, MU-S or P-F Zones;

Establishment of limits of districts in which storage of liquefied petroleum
gases is to be restricted.
The limits referred to in Section 3804.2, in which storage of liquefied petroleum gas
in excess of an aggregate of 2,000 gallons water capacity is restricted are
established as the City of El Segundo's corporate boundaries.

Exceptions:

1. The storage of liquefied petroleum gas in excess of an aggregate of 2,000
gallons water capacity is allowed in the M-2 Zone, when located at least
one-half (1/2) mile from property zoned or designated for residential use and
at least one-half (1/2) mile from existing residential development with a
density greater than one (1) dwelling unit per acre and at least one-half (1/2)
mile from any hotel or motel.

2. The storage of liquefied petroleum gas in excess of an aggregate of 2,000
gallons water capacity is allowed in M-1 Zone with a Conditional Use Permit
issued by the Planning Department.

SECTION 4: CALIFORNIA ENVIRONMENTAL QUALITY ACT EXEMPTION. The City
Council determines that this ordinance is exempt from review under the California
Environmental Quality Act (California Public Resources Code §§ 21000, et seq.,
"CEQA") and the regulations promulgated thereunder (14 California Code of
Regulations §§ 15000, et seq., the "CEQA Guidelines") because it consists only of
minor revisions and clarifications to an existing code of construction-related regulations
and specification of procedures related thereto and will not have the effect of deleting or
substantially changing any regulatory standards or findings required therefor. This
ordinance, therefore, is an action being taken for enhanced protection of the
environment and that does not have the potential to cause significant effects on the
environment. Consequently, it is categorically exempt in accordance with CEQA
Guidelines §§ 15301 as a minor alteration of existing public or private structures
involving no expansion of use; 15305 as a minor alteration in land use limitations which
do not result in any changes in land use or density; and 15308 as an action taken by a
regulatory agency as authorized by California law to assure maintenance or protection
of the environment.

SECTION 5: SAVINGS CLAUSE. Repeal of any provision of the ESMC or any other
city ordinance herein will not affect any penalty, forfeiture, or liability incurred before, or
preclude prosecution and imposition of penalties for any violation occurring before, this
Ordinance's effective date. Any such repealed part will remain in full force and effect for
sustaining action or prosecuting violations occurring before the effective date of this
Ordinance.

Page 27 of 29
SECTION 6: SEVERABILITY. If any part of this Ordinance or its application is deemed invalid by a court of competent jurisdiction, the city council intends that such invalidity will not affect the effectiveness of the remaining provisions or applications and, to this end, the provisions of this Ordinance are severable.

SECTION 7: VALIDITY OF PREVIOUS CODE SECTIONS. If this the entire Ordinance or its application is deemed invalid by a court of competent jurisdiction, any repeal of the ESMC or other the city ordinance by this Ordinance will be rendered void and cause such ESMC provision or other the city ordinance to remain in full force and effect for all purposes.

SECTION 8: The City Clerk is directed to certify the passage and adoption of this Ordinance; cause it to be entered into the City of El Segundo’s book of original ordinances; make a note of the passage and adoption in the records of this meeting; and, within fifteen (15) days after the passage and adoption of this Ordinance, cause it to be published or posted in accordance with California law.

SECTION 9: This Ordinance will become effective on January 1, 2010.

PASSED AND ADOPTED this ____ day of ________, 2010.

________________________________________
Eric Busch, Mayor
ATTEST:
STATE OF CALIFORNIA )
COUNTY OF LOS ANGELES ) SS
CITY OF EL SEGUNDO )

I, Cindy Mortesen, City Clerk of the City of El Segundo, California, do hereby certify that the whole number of members of the City Council of said City is five; that the foregoing Ordinance No. ________ was duly introduced by said City Council at a regular meeting held on the ______ day of ________________, 2007, and was duly passed and adopted by said City Council, approved and signed by the Mayor, and attested to by the City Clerk, all at a regular meeting of said Council held on the ______ day of ________________, 2007, and the same was so passed and adopted by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

______________________________
Cindy Mortesen, City Clerk

APPROVED AS TO FORM:
Mark D. Hensley, City Attorney

By: _________________________________
    Karl H. Berger
    Assistant City Attorney

P:\Planning & Building Safety\Building\Code Adoption\2007 Codes\CC 11-07-072007.11.07.ESMC Fire Code Ord 1413.doc
ORDINANCE NO.  

AN ORDINANCE ADOPTING THE 2010 EDITION OF THE CALIFORNIA ENERGY CODE WITH AMENDMENTS.

The Council of the City of El Segundo does ordain as follows:

SECTION 1: FINDINGS. The City Council finds and declares as follows:

A. Health and Safety Code § 17958 requires the City is required to adopt certain codes that are set forth in Health and Safety Code § 17922 and published in the California Code of Regulations;

B. Pursuant to Government Code §§ 50022.2, et seq., the City may adopt other uniform codes by reference;

C. It is in the public interest to adopt the 2010 Edition of the California Energy Code set forth in this Ordinance;

D. At least one copy of the California Energy Code was filed with the City Clerk of the City was available for public inspection for at least fifteen (15) days preceding the date of the hearing

CHAPTER 15

ENERGY CODE

SECTION 2: Chapter 15 is amended in its entirety in Title 13 of the El Segundo Municipal Code ("ESMC") to read as follows:


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SECTION 3: CALIFORNIA ENVIRONMENTAL QUALITY ACT EXEMPTION. The City Council determines that this ordinance is exempt from review under the California Environmental Quality Act (California Public Resources Code §§ 21000, et seq., “CEQA”) and the regulations promulgated thereunder (14 California Code of Regulations §§ 15000, et seq., the “State CEQA Guidelines”) because it consists only of minor revisions and clarifications to an existing code of construction-related regulations and specification of procedures related thereto and will not have the effect of deleting or substantially changing any regulatory standards or findings required therefor. This ordinance, therefore, is an action being taken for enhanced protection of the environment and that does not have the potential to cause significant effects on the environment.

SECTION 4: SAVINGS CLAUSE. Repeal of any provision of the ESMC or any other city ordinance herein will not affect any penalty, forfeiture, or liability incurred before, or preclude prosecution and imposition of penalties for any violation occurring before, this Ordinance’s effective date. Any such repealed part will remain in full force and effect for sustaining action or prosecuting violations occurring before the effective date of this Ordinance.

SECTION 5: SEVERABILITY. If any part of this Ordinance or its application is deemed invalid by a court of competent jurisdiction, the city council intends that such invalidity will not affect the effectiveness of the remaining provisions or applications and, to this end, the provisions of this Ordinance are severable.

SECTION 6: VALIDITY OF PREVIOUS CODE SECTIONS. If this the entire Ordinance or its application is deemed invalid by a court of competent jurisdiction, any repeal of the ESMC or other the city ordinance by this Ordinance will be rendered void and cause such ESMC provision or other the city ordinance to remain in full force and effect for all purposes.

SECTION 7: EFFECTIVE DATE. This Ordinance will take effect on January 1, 2011.

PASSED AND ADOPTED this _____ day of __________, 2010.

__________________________
Mayor
ATTEST:

STATE OF CALIFORNIA  )
COUNTY OF LOS ANGELES   )  SS
CITY OF EL SEGUNDO  )

I, Cindy Mortesen, City Clerk of the City of El Segundo, California, do hereby certify that the whole number of members of the City Council of said City is five; that the foregoing Ordinance No. ________ was duly introduced by said City Council at a regular meeting held on the _____ day of ________________, 2007, and was duly passed and adopted by said City Council, approved and signed by the Mayor, and attested to by the City Clerk, all at a regular meeting of said Council held on the _____ day of ________________, 2007, and the same was so passed and adopted by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

________________________
Cindy Mortesen, City Clerk

APPROVED AS TO FORM:     Mark D. Hensley, City Attorney

By:                        Karl H. Berger
                          Assistant City Attorney
ORDINANCE NO. __________

AN ORDINANCE INCORPORATING THE 2010 CALIFORNIA RESIDENTIAL CODE ("CRC") BY REFERENCE AND AMENDING THE CRC BASED UPON LOCAL CLIMATIC, TOPOGRAPHIC, AND GEOLOGICAL CONDITIONS.

The council of the city of El Segundo does ordain as follows:

SECTION 1: FINDINGS. The City Council finds and declares as follows:

A. In accord with Health & Safety Code § 17958.7, it is in the public interest to adopt the California Residential Code ("CRC") with the changes set forth in this Ordinance.

B. Pursuant to the requirements of Health & Safety Code Section 17958.7, the City Council finds that there are local geological conditions justifying the CBC amendments set forth below.

The City of El Segundo and the greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification emphasize that the design concern is for seismic-force-resisting elements and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Building Code. Experts predict a major earthquake in our area within the next 50 years. This situation creates the need for both additional fire protection measures and automatic on-site fire protection of building occupants since a multitude of fires may result from breakage of gas and electric lines as a result of an earthquake. After due consideration, the City Council finds and determines that due to local climatic, geological, or topographical conditions, the structural and fire protection amendments to the 2010 CBC are necessary to give buildings a reasonable degree of structural integrity and fire life safety to help protect public health and safety in the event of a seismic event;

Additional amendments have been made to Codes 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.

C. The specific amendments of the CRC that fulfill this requirement are:

1. Amend CRC Section R301.1.3.2 Woodframe Structures
2. Amend CRC Section R301.2.2.2.5 Irregular Buildings
3. Amend CRC Section R311.2.2.3.5.1 AISI S230 Section B1
4. Amend CRC Section R322.1.4.1 Design Flood Elevations
5. Amend CRC Section R322.1.4.1 Design Flood Elevations
6. Amend CRC Section R401.1 Foundation Application
7. Amend CRC Section R403.1 General Footings
8. Amend CRC Section R404.2 Wood Foundation Walls
9. Amend CRC Section R501.1 Application
10. Amend CRC Section R503.2.4 Openings In Horizontal Diaphragms
11. Amend CRC Table R602.3(1) Fastener Schedule
12. Amend CRC Table R602.3(2) Alternate Attachment
13. Amend CRC Table R602.10.1.2(2) Bracing Requirement
14. Amend CRC Table R602.10.2 Intermittent Bracing Method
15. Amend CRC Figure R602.10.3.2 Alternate Braced Wall Panel
16. Amend CRC Figure R602.10.3.3 Portal Frame
17. Amend CRC Section R602.10.3.3 Method PFH
18. Amend CRC Table R602.10.4.1 Continuous Sheathing
19. Amend CRC Figure R602.10.4.1.1 Method CS-PF
20. Delete CRC Section R602.10.7.1 Braced Wall Panel
21. Amend CRC Section R606.2.4 Parapet Walls
22. Amend CRC Section R606.12.2.2.3 Reinforcement for Masonry
23. Amend CRC Section R602.3.2 Single Top Plate
24. Amend CRC Table R802.5.1(9) Joist Heel Joint Connection
25. Amend CRC Section R802.8 Lateral Support
26. Amend CRC Section R802.10.2 Design of Wood Trusses
27. Add CRC Section R803.2.4 Openings in Horizontal Diaphragms
28. Amend CRC Section R1001.3.1 Vertical Reinforcing
D. At least one copy of the CBC was filed with the City Clerk of the City was available for public inspection for at least fifteen (15) days preceding the date of the hearing

SECTION 2: El Segundo Municipal Code ("ESMC") § 13-16-1 is added in its entirety to read as follows:

CHAPTER 16

RESIDENTIAL CODE

13-16-1: California Residential Code Adopted
13-16-2: Amendments to California Residential Code


SECTION 3: ESMC § 13-16-2 is added to read as follows:

“13-16-2: AMENDMENTS TO THE CALIFORNIA RESIDENTIAL CODE:

Section R301.1.3.2 of the 2010 Edition of the California Residential Code is amended to read as follows:

R301.1.3.2 Woodframe structures greater than two stories. The building official shall require construction documents to be approved and stamped by a California licensed architect or engineer for all dwellings of woodframe construction more than two stories and basement in height located in Seismic Design Category A, B or C. Notwithstanding other sections the law, the law establishing these provisions is found in Business and Professions Code Section 5537 and 6737.1.

The building official shall require construction documents to be approved and stamped by a California licensed architect or engineer for all dwellings of woodframe construction more than one story in height or with a basement located in Seismic Design Category D, D1, D2 or E.
Section R301.2.2.2.5 of the 2010 Edition of the California Residential Code is amended to read as follows:

1. When exterior shear wall lines or braced wall panels are not in one plane vertically from the foundation to the uppermost story in which they are required.

**Exception:** For wood light-frame construction, floors with cantilevers or setbacks not exceeding four times the nominal depth of the wood floor joists are permitted to support braced wall panels that are out of plane with braced wall panels below provided that:
1. Floor joists are nominal 2 inches by 10 inches (51 mm by 254 mm) or larger and spaced not more than 16 inches (406 mm) on center.
2. The ratio of the back span to the cantilever is at least 2 to 1.
3. Floor joists at ends of braced wall panels are doubled.
4. For wood-frame construction, a continuous rim joist is connected at ends to all cantilever joists. When spliced, the rim joists shall be spliced using a galvanized metal tie not less than 0.058 inch (1.5 mm) (16 gage) and 11/2 inches (38 mm) wide fastened with six 16d nails on each side of the splice or a block of the same size as the rim joist of sufficient length to fit securely between the joist space at which the splice occurs fastened with eight 16d nails on each side of the splice; and
5. Gravity loads carried at the end of cantilevered joists are limited to uniform wall and roof loads and the reactions from headers having a span of 18 feet (2438 mm) or less.

3. When the end of a braced wall panel occurs over an opening in the wall below and ends at a horizontal distance greater than 1 foot (305 mm) from the edge of the opening. This provision is applicable to shear walls and braced wall panels offset in plane and to braced wall panels offset out of plane as permitted by the exception to Item 1 above.

**Exception:** For wood light-frame wall construction, one end of a braced wall panel shall be permitted to extend more than one foot (305 mm) over an opening not more than 8 feet (2438 mm) wide in the wall below provided that the opening includes a header in accordance with the following:
1. The building width, loading condition and framing member species limitations of Table R502.6(1) shall apply; and
2. Not less than one 2x12 or two 2x10 for an opening not more than 4 feet (1219 mm) wide; or
3. Not less than two 2x12 or three 2x10 for an opening not more than 6 feet (1829 mm) wide; or
4. Not less than three 2x12 or four 2x10 for an opening not more than 8 feet (2438 mm) wide; and
5. The entire length of the braced wall panel does not occur over an opening in the wall below.

5. When portions of a floor level are vertically offset.

**Exceptions:**
1. Framing supported directly by continuous foundations at the perimeter of the building.
2. For wood light-frame construction, floors shall be permitted to be vertically offset when the floor framing is lapped or tied together as required by section R602.6.1.
Section R301.2.2.3.5.1 is added to Section 301.2.2.3.5 of the 2010 Edition of the California Residential Code as follows:

**R301.2.2.3.5.1 AISI S230, Section B1.** Modify AISI S230, Section B1 to read as follows:

Where No. 8 screws are specified, the required number of screws in a steel-to-steel connection shall be permitted to be reduced in accordance with the reduction factors in Table B1-1 when larger screws are used or when one of the sheets of steel being connected is thicker than 33 mils (0.84mm). When applying the reduction factor, the resulting number of screws shall be rounded up.
Section R322.1.4.1 of the 2010 Edition of the California Residential Code is amended to read as follows:

**R322.1.4.1 Determination of design flood elevations.** If design flood elevations are not specified, the building official is authorized to require the applicant to:

1. Obtain and reasonably use data available from a federal, state or other source; or
2. Determine the design flood elevation in accordance with accepted hydrologic and hydraulic undertakings by a registered design professional—civil engineer who shall determine that the technical methods used reflect currently accepted engineering practice. Studies, analyses and computations shall be submitted in sufficient detail to allow thorough review and approval.
Section R401.1 of the 2010 Edition of the California Residential Code is amended to read as follows:

**R401.1 Application.** The provisions of this chapter shall control the design and construction of the foundation and foundation spaces for all buildings. In addition to the provisions of this chapter, the design and construction of foundations in areas prone to flooding as established by Table R301.2(1) shall meet the provisions of Section R322. Wood foundations shall be designed and installed in accordance with AF&PA PWF.

**Exception:** The provisions of this chapter shall be permitted to be used for wood foundations only in the following situations:

1. In buildings that have no more than two floors and a roof.

2. When interior basement and foundation walls are constructed at intervals not exceeding 50 feet

(15 240 mm).

Wood foundations in Seismic Design Category D<sub>0</sub>, D<sub>1</sub> or D<sub>2</sub> shall be designed in accordance with accepted engineering practice not be permitted.

**Exception:** In non-occupied, single-story, detached storage sheds and similar uses other than carport or garage, provided the gross floor area does not exceed 200 square feet, the plate height does not exceed 12 feet in height above the grade plane at any point, and the maximum roof projection does not exceed 24 inches.
Sections R403.1.2, R403.1.3, R403.1.5 of the 2010 Edition of the California Residential Code are amended to read as follows:

R403.1.2 Continuous footing in Seismic Design Categories D₀, D₁ and D₂. The braced wall panels at exterior walls of buildings located in Seismic Design Categories D₀, D₁ and D₂ shall be supported by continuous footings. All required interior braced wall panels in buildings with plan dimensions greater than 50 feet (15240 mm) shall also be supported by continuous footings.

R403.1.3 Seismic reinforcing. Concrete footings located in Seismic Design Categories D₀, D₁ and D₂, as established in Table R301.2(1), shall have minimum reinforcement. Bottom reinforcement shall be located a minimum of 3 inches (76 mm) clear from the bottom of the footing.

In Seismic Design Categories D₀, D₁ and D₂ where construction joint is created between a concrete footing and a stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing, have a standard hook and extend a minimum of 14 inches (357 mm) into the stem wall.

In Seismic Design Categories D₀, D₁ and D₂ where a grouted masonry stem wall is supported on a concrete footing and stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing and have a standard hook.

In Seismic Design Categories D₀, D₁ and D₂ masonry stem walls without solid grout and vertical reinforcing are not permitted.

Exception: In detached one- and two-family dwellings located in Seismic Design Category A, B or C which are three stories or less in height and constructed with stud bearing walls, plain concrete footings without longitudinal reinforcement supporting walls and isolated plain concrete footings supporting columns or pedestals are permitted.

R403.1.5 Slope. The top surface of footings shall be level. The bottom surface of footings shall be permitted to have a slope not exceeding one unit vertical in 10 units horizontal (10-percent slope). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footing or where the surface of the ground slopes more than one unit vertical in 10 units horizontal (10-percent slope).

For structures located in Seismic Design Categories D₀, D₁ or D₂, stepped footings shall be reinforced with four 1/2-inch diameter (12.7 mm) deformed reinforcing bars. Two bars shall be place at the top and bottom of the footings as shown in Figure R403.1.5.
RECOMMEND: $a > b$
$b \leq 20'$

MIN. 2-3/4 REBAR (TOP & BOTTOM)

BOTTOM PLATE (TYP.)

GRACE

STEPPED FOUNDATIONS

FIGURE R403.1.5
STEPPED FOOTING
Section R404.2 of the 2010 Edition of the California Residential Code is amended to read as follows:

**R404.2 Wood foundation walls.** Wood foundation walls shall be constructed in accordance with the provisions of Sections R404.2.1 through R404.2.6 and with the details shown in Figures R403.1(2) and R403.2(3). Wood foundation walls shall not be used for structures located in Seismic Design Category D₀, D₁, or D₂.
Section R501.1 of the 2010 Edition of the California Residential Code is amended to read as follows:

R501.1 Application. The provision of this chapter shall control the design and construction of the floors for all buildings including the floors of attic spaces used to house mechanical or plumbing fixtures and equipment weighing less than 400 lbs and maximum height of 4 feet above the floor or attic level.
Section R503.2.4 is added to Chapter 5 of the 2010 Edition of the California Residential Code to read as follows:

**R503.2.4 Openings in horizontal diaphragms.** Openings in horizontal diaphragms with a dimension perpendicular to the joist that is greater than 4 feet (1.2 m) shall be constructed in accordance with Figure R503.2.4.

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**FIGURE R503.2.4**

**OPENINGS IN HORIZONTAL DIAPHRAGMS**

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For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. Blockings shall be provided beyond headers.

b. Metal ties not less than 0.058 inch (1.47 mm (16 gage)) by 1.5 inches (33 mm) wide with eight 16d common nails on each side of the header-joist intersection. The metal ties shall have a minimum yield of 33,000 psi (227 MPa).

c. Openings in diaphragms shall be further limited in accordance with Section R503.2.2.5.
Lines 34 thru 37 of Table R602.3(1) of the 2010 Edition of the California Residential Code are amended to read as follows:

<table>
<thead>
<tr>
<th></th>
<th>Other wall sheathing</th>
</tr>
</thead>
</table>
| 34 | 1/2" structural cellulose fiberboard sheathing  
1/2" galvanized roofing nail, 7/16" crown or 1"  
crown staple; 16 ga., 1 1/4" long.  | 3 6 |
| 35 | 25/32" structural cellulose fiberboard sheathing  
1 1/4" galvanized roofing nail, 7/16" crown or 1"  
crown staple; 16 ga., 1 1/2" long.  | 3 6 |
| 36 | 1/2" gypsum sheathing  
1 1/2" galvanized roofing nail, staple-galvanized,  
1 1/2" long, 1 1/4" screws, Type W or S | 7 7 |
| 37 | 5/8" gypsum sheathing  
1 3/4" galvanized roofing nail, staple-galvanized,  
1 5/8" long, 1 7/8" screws, Type W or S | 7 7 |
Table R602.3(2) of the 2010 Edition of the California Residential Code is amended to read as follows:

<table>
<thead>
<tr>
<th>Wood structural panels subfloor, roof and wall sheathing to framing and particleboard wall sheathing to framing</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to ( \frac{1}{12} )</td>
</tr>
<tr>
<td>( \frac{19}{32} ) and ( \frac{3}{8} )</td>
</tr>
<tr>
<td>( \frac{20}{32} ) and ( \frac{3}{4} )</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Floor underlayment; plywood—hardboard—particleboard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plywood</td>
</tr>
<tr>
<td>( \frac{1}{4} ) and ( \frac{5}{16} )</td>
</tr>
<tr>
<td>( \frac{1}{4} ) and ( \frac{5}{16} )</td>
</tr>
<tr>
<td>( \frac{11}{32}, \frac{3}{8}, \frac{15}{32} ) and ( \frac{1}{2} )</td>
</tr>
<tr>
<td>( \frac{11}{32}, \frac{3}{8}, \frac{15}{32} ) and ( \frac{1}{2} )</td>
</tr>
<tr>
<td>( \frac{19}{32}, \frac{5}{8}, \frac{23}{32} ) and ( \frac{3}{4} )</td>
</tr>
<tr>
<td>( \frac{19}{32}, \frac{5}{8}, \frac{23}{32} ) and ( \frac{3}{4} )</td>
</tr>
</tbody>
</table>

\( \frac{11}{32}, \frac{3}{8}, \frac{15}{32} \) and \( \frac{1}{2} \)
Table R602.10.1.2(2) of the 2010 Edition of the California Residential Code is amended to read as follows:

**TABLE R602.10.1.2(2)**
**BRACING REQUIREMENTS BASED ON SEISMIC DESIGN CATEGORY**
**(AS A FUNCTION OF BRACED WALL LINE LENGTH)**

<table>
<thead>
<tr>
<th>Seismic Design Category (SDC)</th>
<th>Story Location</th>
<th>Braced Wall Line Length</th>
<th>Method LIB</th>
<th>Methods(^d) DWB, SFB, GB, PBS, PCP, HPS</th>
<th>Method WSP</th>
<th>Continuous Sheathing</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDC D(_0) or D(_1)</td>
<td>10</td>
<td>NP</td>
<td>3.0</td>
<td>6.0</td>
<td>2.0</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>NP</td>
<td>6.0</td>
<td>12.0</td>
<td>4.0</td>
<td>3.4</td>
</tr>
<tr>
<td></td>
<td>30</td>
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\(^d\) Methods GB and PCP braced wall panel h/w ratio shall not exceed 1:1 in SDC D\(_0\), D\(_1\), and D\(_2\). Methods DWB, SFB, GB, PBS, PCP, and HPS are not permitted in SDC D\(_0\), D\(_1\), and D\(_2\).

Table R602.10.2 of the 2010 Edition of the California Residential Code is amended to read as follows:

**TABLE R602.10.2**
**INTERMITTENT BRACING METHODS\(^a\)**

Page 15 of 22
| WSP | Wood structural panel (see Section R604) | 3/8" | 15/32" | For exterior sheathing: see Table R602.3.3a
For interior sheathing: see Table R602.3.6a |
<table>
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<tr>
<td>SFB</td>
<td>Structural fiberboard sheathing</td>
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</tr>
<tr>
<td>GB</td>
<td>Gypsum board</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBS</td>
<td>Particleboard sheathing (see Section R605)</td>
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<tr>
<td>PCP</td>
<td>Portland cement plaster</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

- **WSP**
  - Wood structural panel (see Section R604)
  - 3/8" or 15/32" for maximum 16" stud spacing

- **SFB**
  - Structural fiberboard sheathing
  - 1/2" or 2 3/4" for maximum 16" stud spacing
  - 1 1/2" gaivanized roofing nails or 8d common (2 1/2" x 0.131") nails at 3" spacing (panel edges) at 6" spacing (intermediate supports)

- **GB**
  - Gypsum board
  - 1/2" or 3/8" for maximum 16" stud spacing

- **PBS**
  - Particleboard sheathing (see Section R605)
  - 3/8" or 1/2" for maximum 16" stud spacing

- **PCP**
  - Portland cement plaster
  - See Section R703.6
  - For maximum 16" stud spacing
  - 1 1/2" gaivanized roofing nails or 8d common (2 1/2" x 0.131") nails at 3" spacing (panel edges) at 6" spacing (intermediate supports)

### a. Methods GB and PCP braced wall panel h/w ratio shall not exceed 1:1 in SDC D0, D1, and D2. Methods LIB, DWB, SFB, PBS, HPS, and PFG are not permitted in SDC D0, D1, and D2.

Figure R602.10.3.2 of the 2010 Edition of the California Residential Code is amended to read as follows:

**TOP PLATES SHALL BE CONTINUOUS OVER A BRACED WALL PANEL**
Figure R602.10.3.2
ALTERNATE BRACED WALL PANEL

Figure R602.10.3.3 of the 2010 Edition of the California Residential Code is amended to read as follows:
EXTENT OF HEADER
DOUBLE Portal FRAME (TWO BRACED WALL PANELS)

EXTENT OF HEADER
SINGLE Portal FRAME (ONE BRACED WALL PANEL)

MIN. 3" x 11.25" NET HEADER
6' TO 18'

FASTEN TOP PLATE TO HEADER WITH TWO
ROWS OF 16D SINKER NAILS AT 3" O.C. TYP.
1000 LB STRAP OPPOSITE SHEATHING

FASTEN SHEATHING TO HEADER WITH 8D COMMON OR
SODIUM-ALUMINATED BOX NAILS IN 3" GRID PATTERN AS SHOWN AND
3" O.C. IN WALL FRAMING (STUDS, BLOCKING, AND SILLS) TYP.
MIN. WIDTH = 10" FOR ONE STORY STRUCTURE
MIN. WIDTH = 24" FOR USE IN THE FIRST OF TWO
CONSECUTIVE STRUCTURES
MIN. 2x4 FRAMING
MIN. THICKNESS WOOD
STRUCTURAL PANEL SHEATHING
MIN. 4200 LB TIE-DOWN DEVICE (EMBEDDED INTO
CONCRETE AND NAIL INTO FRAMING)
SEE SECTION R602.10.3.3

TYPICAL Portal FRAME
CONSTRUCTION
FOR A PANEL SPlice,
(If needed), PANEL
EDGES SHALL BE
BLOCKED, AND OCCUR
WITHIN 24" OF MID-
HEIGHT. ONE ROW OF
TYP. SHEATHING TO-
FRAMING NAILING IS
REQUIRED.

MIN. 1000 LB
TIE-DOWN
DEVICE

FIGURE R602.10.3.3
METHOD PFH: Portal FRAME WITH HOLD-DOWNS AT DETACHED GARAGE DOOR OPENINGS

Item 1 of Section R602.10.3.3 of the 2010 Edition of the California Residential Code is amended to read as follows:

1. Each panel shall be fabricated in accordance with Figure R602.10.3.3. The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with Figure R602.10.3.3. A spacer, if used with a built-up header, shall be placed on the side of the built-up beam opposite the wood structural panel sheathing. The header shall extend between the inside faces of the first full-length outer studs of each panel. One anchor bolt not less than 5/8-inch-diameter (16 mm) and installed in accordance with Section R403.1.6 shall be provided in the center of each sill plate. The hold-down devices shall be an embedded-strap type, installed in accordance with the manufacturer's recommendations. The panels shall be supported directly on a foundation that is continuous across the entire length of the braced wall line. The foundation shall be reinforced as shown on Figure R602.10.3.2. This reinforcement shall be lapped not less than 1624 inches (404 610 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

Table R602.10.4.1 of the 2010 Edition of the California Residential Code is amended to read as follows:
### TABLE R602.10.4.1
CONTINUOUS SHEATHING METHODS

<table>
<thead>
<tr>
<th>METHOD</th>
<th>MATERIAL</th>
<th>MINIMUM THICKNESS</th>
<th>FIGURE</th>
<th>CONNECTION CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS-WSP</td>
<td>Wood structural panel</td>
<td>15/32&quot;</td>
<td><img src="image1.png" alt="Diagram" /></td>
<td>6d common (2&quot; x 0.113&quot;) nails at 5&quot; spacing (panel edges) and at 12&quot; spacing (intermediate supports) or 16d galvanized staples at 2&quot; spacing (panel edges) and at 6&quot; spacing (intermediate supports).</td>
</tr>
<tr>
<td>CS-G</td>
<td>Wood structural panel adjacent to garage openings and supporting roof load only</td>
<td>15/32&quot;</td>
<td><img src="image2.png" alt="Diagram" /></td>
<td>See Method CS-WSP.</td>
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<tr>
<td>CS-PF</td>
<td>Continuous portal frame</td>
<td>See Section R602.10.4.1.1</td>
<td><img src="image3.png" alt="Diagram" /></td>
<td>See Section R602.10.4.1.1</td>
</tr>
</tbody>
</table>

Figure R602.10.4.1.1 of the 2010 Edition of the California Residential Code is amended to read as follows:

---

Section R602.10.7.1 of the 2010 Edition of the California Residential Code is deleted in its entirety:

**R602.10.7.1 Braced wall panel support for Seismic Design Category D**

In one-story buildings located in Seismic Design Category D, braced wall panels shall be supported on continuous foundations at intervals not exceeding 50 feet (15 240 mm). In two-story buildings located in Seismic Design Category D, all braced wall panels shall be supported on continuous foundations.

Page 19 of 22
Exception: Two-story buildings shall be permitted to have interior braced wall panels supported on continuous foundations at intervals not exceeding 50 feet (15,240 mm) provided that:
1. The height of cripple walls does not exceed 4 feet (1219 mm);
2. First-floor braced wall panels are supported on doubled floor joists, continuous blocking or floor beams;
3. The distance between bracing lines does not exceed twice the building width measured parallel to the braced wall line.

Section R606.2.4 of the 2010 Edition of the California Residential Code is amended to read as follows:

R606.2.4 Parapet walls. Unreinforced solid masonry parapet walls shall not be less than 8 inches (203 mm) thick and their height shall not exceed four times their thickness. Unreinforced hollow unit masonry parapet walls shall be not less than 8 inches (203 mm) thick, and their height shall not exceed three times their thickness. Masonry parapet walls in areas subject to wind loads of 30 pounds per square foot (1.44 kPa) or located in Seismic Design Category D0, D1 or D2, or on townhouses in Seismic Design Category C shall be reinforced in accordance with Section R606.12.

Section R606.12.2.2.3 of the 2010 Edition of the California Residential Code is amended to read as follows:

R606.12.2.2.3 Reinforcement of requirements for masonry elements. Masonry elements listed in Section R606.12.2.2 shall be reinforced in either the horizontal or vertical direction as shown in Figure R606.11(2) and in accordance with the following:

1. Horizontal reinforcement. Horizontal joint reinforcement shall consist of at least two longitudinal W1.7 wires spaced not more than 16 inches (406 mm) for walls greater than 4 inches (102 mm) in width and at least one longitudinal W1.7 wire spaced not more than 16 inches (406 mm) for walls not exceeding 4 inches (102 mm) in width, or at least one No. 4 bar spaced not more than 48 inches (1219 mm). Where two longitudinal wires or joint reinforcement are used, the space between these wires shall be the widest that the mortar joint will accommodate. Horizontal reinforcement shall be provided within 16 inches (406 mm) of the top and bottom of these masonry elements.

2. Vertical reinforcement. Vertical reinforcement shall consist of at least one No. 4 bar spaced not more than 48 inches (1219 mm). Vertical reinforcement shall be within 16-8 inches (406 mm) of the ends of masonry walls.

Exception of Section 602.3.2 of the 2010 Edition of the California Residential Code is amended to read as follows:

Exception: In other than Seismic Design Category D0, D1 or D2, a single top plate may be installed in stud walls, provided the plate is adequately tied at joints, corners and interesting walls by a minimum 3-inch-by-6-inch by a 0.036-inch-thick (76 mm by 152 mm by 0.914 mm) galvanized steel plate that is nailed to each wall or segment of wall by six 8d nails on each side, provided the rafters or joists are centered over the studs with a tolerance of no more than 1 inch (25 mm). The top plate may be omitted over lintels that are adequately tied to adjacent wall sections with steel plates or equivalent as previously described.

Footnote "i" is added to Table R802.5.1(9) of the 2010 Edition of the California Residential Code to read as follows:

i. Edge distances, end distances and spacings for nails shall be sufficient to prevent splitting of the wood.
Section R802.8 of the 2010 Edition of the California Residential Code is amended to read as follows:

**R802.8 Lateral support.** Roof framing members and ceiling joists having a depth-to-thickness ratio exceeding 62 to 1 based on nominal dimensions shall be provided with lateral support at points of bearing to prevent rotation. For roof rafters with ceiling joists attached per Table R602.3(1), the depth-thickness ratio for the total assembly shall be determined using the combined thickness of the rafter plus the attached ceiling joist.

Section R802.10.2 of the 2010 Edition of the California Residential Code is amended to read as follows:

**R802.10.2 Design.** Wood trusses shall be designed in accordance with accepted engineering practice. The design and manufacture of metal-plate-connected wood trusses shall comply with ANSI/TPA 1. The truss design drawings shall be prepared by a registered professional where required by the statutes of the jurisdiction in which the project is to be constructed in accordance with Section R106.1.

Section R803.2.4 is added to Chapter 8 of the 2010 Edition of the California Residential Code to read as follows:

**R803.2.4 Openings in horizontal diaphragms.** Openings in horizontal diaphragms shall conform with Section R503.2.4.

Section R1001.3.1 of the 2010 Edition of the California Residential Code is amended to read as follows:

**R1001.3.1 Vertical reinforcing.** For chimneys up to 40 inches (1016 mm) wide, four No. 4 continuous vertical bars adequately anchored into the concrete foundation shall be placed between wythes of solid masonry or within the cells of hollow unit masonry and grouted in accordance with Section R609. Grout shall be prevented from bonding with the flue liner so that the flue liner is free to move with thermal expansion. For chimneys more than 40 inches (1016 mm) wide, two additional No. 4 vertical bars adequately anchored into the concrete foundation shall be provided for each additional flue incorporated into the chimney or for each additional 40 inches (1016 mm) in width or fraction thereof.

**SECTION 3: CALIFORNIA ENVIRONMENTAL QUALITY ACT EXEMPTION.** The City Council determines that this ordinance is exempt from review under the California Environmental Quality Act (California Public Resources Code §§ 21000, et seq., “CEQA”) and the regulations promulgated thereunder (14 California Code of Regulations §§ 15000, et seq., the “State CEQA Guidelines”) because it consists only of minor revisions and clarifications to an existing code of construction-related regulations and specification of procedures related thereto and will not have the effect of deleting or substantially changing any regulatory standards or findings required therefor. This ordinance, therefore, is an action being taken for enhanced protection of the environment and that does not have the potential to cause significant effects on the environment.

**SECTION 4: SAVINGS CLAUSE.** Repeal of any provision of the ESMC or any other city ordinance herein will not affect any penalty, forfeiture, or liability incurred before, or preclude prosecution and imposition of penalties for any violation occurring before, this Ordinance’s
effective date. Any such repealed part will remain in full force and effect for sustaining action or prosecuting violations occurring before the effective date of this Ordinance.

SECTION 5: SEVERABILITY. If any part of this Ordinance or its application is deemed invalid by a court of competent jurisdiction, the city council intends that such invalidity will not affect the effectiveness of the remaining provisions or applications and, to this end, the provisions of this Ordinance are severable.

SECTION 6: VALIDITY OF PREVIOUS CODE SECTIONS. If this entire Ordinance or its application is deemed invalid by a court of competent jurisdiction, any repeal of the ESMC or other the city ordinance by this Ordinance will be rendered void and cause such ESMC provision or other the city ordinance to remain in full force and effect for all purposes.

SECTION 7: EFFECTIVE DATE. This Ordinance will take effect on January 1, 2011.

PASSED AND ADOPTED this ___ day of __________, 2010.

________________________
Eric Busch, Mayor

________________________
Cindy Mortesen
City Clerk

APPROVED AS TO FORM
MARK HENSLEY, CITY ATTORNEY

By: _________________________
Karl H. Berger
Assistant City Attorney
ORDINANCE NO. ______

AN ORDINANCE ADOPTING THE 2010 EDITION OF THE CALIFORNIA GREEN BUILDING STANDARDS CODE WITH AMENDMENTS.

The Council of the City of El Segundo does ordain as follows:

SECTION 1: FINDINGS. The City Council finds and declares as follows:

A. Health and Safety Code § 17958 requires the City is required to adopt certain codes that are set forth in Health and Safety Code § 17922 and published in the California Code of Regulations;

B. Pursuant to Government Code §§ 50022.2, et seq., the City may adopt other uniform codes by reference;

C. It is in the public interest to adopt the 2010 Edition of the California Energy Code set forth in this Ordinance;

D. At least one copy of the California Energy Code was filed with the City Clerk of the City was available for public inspection for at least fifteen (15) days preceding the date of the hearing

SECTION 2: Chapter 17 is amended in its entirety in Title 13 of the El Segundo Municipal Code ("ESMC") to read as follows:

CHAPTER 17

GREEN BUILDING STANDARDS CODE

SECTION 3: CALIFORNIA ENVIRONMENTAL QUALITY ACT EXEMPTION. The City Council determines that this ordinance is exempt from review under the California Environmental Quality Act (California Public Resources Code §§ 21000, et seq., “CEQA”) and the regulations promulgated thereunder (14 California Code of Regulations §§ 15000, et seq., the “State CEQA Guidelines”) because it consists only of minor revisions and clarifications to an existing code of construction-related regulations and specification of procedures related thereto and will not have the effect of deleting or substantially changing any regulatory standards or findings required therefor. This ordinance, therefore, is an action being taken for enhanced protection of the environment and that does not have the potential to cause significant effects on the environment.

SECTION 4: SAVINGS CLAUSE. Repeal of any provision of the ESMC or any other city ordinance herein will not affect any penalty, forfeiture, or liability incurred before, or preclude prosecution and imposition of penalties for any violation occurring before, this Ordinance’s effective date. Any such repealed part will remain in full force and effect for sustaining action or prosecuting violations occurring before the effective date of this Ordinance.

SECTION 5: SEVERABILITY. If any part of this Ordinance or its application is deemed invalid by a court of competent jurisdiction, the city council intends that such invalidity will not affect the effectiveness of the remaining provisions or applications and, to this end, the provisions of this Ordinance are severable.

SECTION 6: VALIDITY OF PREVIOUS CODE SECTIONS. If this the entire Ordinance or its application is deemed invalid by a court of competent jurisdiction, any repeal of the ESMC or other the city ordinance by this Ordinance will be rendered void and cause such ESMC provision or other the city ordinance to remain in full force and effect for all purposes.

SECTION 7: EFFECTIVE DATE. This Ordinance will take effect on January 1, 2011.

PASSED AND ADOPTED this ___ day of __________, 2010.

______________________________
Eric Busch, Mayor
ATTEST:

STATE OF CALIFORNIA       )
COUNTY OF LOS ANGELES    )    SS
CITY OF EL SEGUNDO       )

I, Cindy Mortesen, City Clerk of the City of El Segundo, California, do hereby certify that the whole number of members of the City Council of said City is five; that the foregoing Ordinance No. ________ was duly introduced by said City Council at a regular meeting held on the ______ day of __________________, 2007, and was duly passed and adopted by said City Council, approved and signed by the Mayor, and attested to by the City Clerk, all at a regular meeting of said Council held on the ______ day of_______________, 2010, and the same was so passed and adopted by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

__________________________________________
Cindy Mortesen, City Clerk

APPROVED AS TO FORM: Mark D. Hensley, City Attorney

By: Karl H. Berger
    Assistant City Attorney
AGENDA DESCRIPTION:
Consideration and possible by action to indicate a willingness to establish lifeline rates in the event that trash rates are ultimately imposed by the City after the Proposition 218 process has been completed (Fiscal Impact: Unknown, but estimated to be approximately $3,000.00 in lost revenue).

RECOMMENDED COUNCIL ACTION:
1. Consideration and possible by action to indicate a willingness to establish lifeline rates in the event that trash rates are ultimately imposed by the City after the Proposition 218 process has been completed.
2. Alternatively, discuss and take other action related to this item.

ATTACHED SUPPORTING DOCUMENTS:
None

FISCAL IMPACT: Budget Adjustment Required

Amount Budgeted: $  
Additional Appropriation: Yes Pending outcome of Prop 218 ballot protest results
Account Number(s): 

ORIGINATED BY: Stephanie Katsouleas, Director of Public Works
REVIEWED BY: Mark Hensley, City Attorney
APPROVED BY: Jack Wayt, City Manager

BACKGROUND AND DISCUSSION:
Lifeline financial assistance for water and sewer fees has been effective since 1995, when the City Council adopted Resolution No. 3922. Currently, there are 32 residential properties who qualify according to the following household size and income requirements:¹

$31,300 for 1-2 persons
$36,800 for 3 persons
$44,400 for 4 persons
$52,000 for 5 persons
$59,600 for 6 persons
$7,400 for each additional person

¹ El Segundo’s lifeline household size and income requirements are consistent with those set by Southern California Edison, the Los Angeles Department of Water and Power and the Gas Company.
These participants receive a water rate reduction of 50% for the first 1000 cubic ft/month used and a 50% reduction of their total sewer fees. Water use above 1000 cubic ft is charged at the fully loaded rate.

The City is currently undertaking a Proposition 218 protest ballot process with regard to potentially requiring residents to pay for trash service. Council requested at its last meeting that staff bring an item back for Council consideration regarding the potential of allowing for trash lifeline rates in the event that trash fees are ultimately imposed by the City. Until the Proposition 218 process is completed, the City does not have the ability to impose lifeline or any other rates with regard to trash service for residents. However, Council can indicate that it will likely implement lifeline rates in the event that the City does impose trash fees after completion of the Proposition 218 process. Staff will be recommending upon the conclusion of the Proposition 218 process, assuming that there is not a majority protest, that City Council consider adopting similar guidelines for residential trash collection lifeline rates such that there is a 50% fee reduction on the actual cost of the service provided for qualifying households (see table below). Staff estimates this will cost approximately $3,000.00 in lost revenue.

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<tr>
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<tr>
<td>Flat Rate</td>
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<tr>
<td>January 1 – July 31, 2011</td>
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<tr>
<td>January 1 – July 31, 2011 (Lifeline)</td>
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<tr>
<td>August 1, 2011 – December 31, 2015</td>
</tr>
<tr>
<td>August 1, 2011 – December 31, 2015 (Lifeline)</td>
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<tr>
<td>Each Additional Cart</td>
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</tbody>
</table>

Please note that staff cannot anticipate whether other additional residents will apply and qualify for lifeline assistance, but believes that the estimated cost is close to the expected revenue reduction.
3. Consideration and possible action to either (1) accept proposal from Firefighters Association to reduce budgeted employment costs for the Fire Department, or (2) direct staff to implement layoff procedures and layoffs of Fire Department employees to reduce employment costs for the Fire Department

Recommendation – (1) Accept proposal from Firefighters Association to reduce budgeted employment costs for the Fire Department; or (2) Direct staff to implement layoff procedures and layoffs of Fire Department employees to reduce employment costs for the Fire Department; or (3) Alternatively, discuss and take other action related to this item.
<table>
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<tr>
<th>Code</th>
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<th>Balance</th>
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<td>104</td>
<td>TRAFFIC SAFETY FUND</td>
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<td>STATE GAS TAX FUND</td>
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<td>108</td>
<td>ASSOCIATED RECREATION ACTIVITIES FUND</td>
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<td>EXPENDABLE TRUST FUND - DEVELOPER FEES</td>
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<td></td>
<td>TOTAL WARRANTS</td>
<td>$ 953,727.74</td>
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</table>

**State of California**
**County of Los Angeles**

Information on actual expenditures is available in the Director of Administrative Services office in the City of El Segundo.

I certify as to the accuracy of the Demands and the availability of fund for payment thereof.

For Approval: Regular checks held for City council authorization to release.

**CCodes:**
- **R** = Computer generated checks for all non-emergency/urgency payments for materials, supplies and services in support of City Operations
- **A** = Payroll and Employee Benifit checks
- **F - E** = Computer generated Early Release disbursements and/or adjustments approved by the City Manager. Such as: payments for utility services, petty cash and employee travel expense reimbursements, various refunds, contract employee services consistent with current contractual agreements, instances where prompt payment discounts can be obtained or late payment penalties can be avoided or when a situation arises that the City Manager approves.
- **H** = Handwritten Early Release disbursements and/or adjustments approved by the City Manager.

**Finance Director:** [Signature]  
**Date:** 10/7/10

**City Manager:** [Signature]  
**Date:** [Signature]
## CITY OF EL SEGUNDO
### PAYMENTS BY WIRE TRANSFER
#### 10/8/10 THROUGH 10/21/10

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<td>457 payment Vantagepoint</td>
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<td>Workers Comp Activity</td>
<td>37,166.26</td>
<td>SCRMA checks issued</td>
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**Total Payments by Wire:** 4,371,095.70

**Date of Ratification:** 11/16/10

Certified as to the accuracy of the wire transfers by:

Deputy City Treasurer

Date

Director of Finance

Date

City Manager

Date

Information on actual expenditures is available in the City Treasurer's Office of the City of El Segundo.
REGULAR MEETING OF THE EL SEGUNDO CITY COUNCIL
TUESDAY, OCTOBER 19, 2010 – 5:00 P.M.

5:00 P.M. SESSION

CALL TO ORDER – Mayor Busch at 5:00 p.m.

ROLL CALL

Mayor Busch - Present
Mayor Pro Tem Fisher - Present
Council Member Brann - Present
Council Member Fuentes - Present
Council Member Jacobson - Present

PUBLIC COMMUNICATION – (Related to City Business Only – 5 minute limit per person, 30 minute limit total) Individuals who have received value of $50 or more to communicate to the City Council on behalf of another, and employees speaking on behalf of their employer, must so identify themselves prior to addressing the City Council. Failure to do so shall be a misdemeanor and punishable by a fine of $250.

SPECIAL ORDER OF BUSINESS:

Mark Hensley, City Attorney, announced that Council would be meeting in Closed Session pursuant to the items posted on the agenda.

CLOSED SESSION:
The City Council may move into a closed session pursuant to applicable law, including the Brown Act (Government Code Section §54960, et seq.) for the purposes of conferring with the City’s Real Property Negotiator; and/or conferring with the City Attorney on potential and/or existing litigation; and/or discussing matters covered under Government Code Section §54957 (Personnel); and/or conferring with the City’s Labor Negotiators; as follows:

CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION (Gov’t Code §54956.9(a) -1- matter

City of El Segundo vs. City of Los Angeles, et. al. LASC Case No. BS094279

CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION
Significant exposure to litigation pursuant to Government Code §54956.9(b): -0- potential case (no further public statement is required at this time); Initiation of litigation pursuant to Government Code §54956.9(c): -0- matter.
APPOINTMENT AND PERFORMANCE EVALUATION OF PUBLIC EMPLOYEE (Gov't. Code § 54957) -0- matter

CONFERENCE WITH CITY'S LABOR NEGOTIATOR (Gov't Code §54957.6): -2- matters

Represented Group: Police Support Services Employees Association (PSSEA), City Employees Association (CEA), Firefighters Association (FFA), Police Managers Association (PMA), Police Officers Association (POA), Supervisory and Professional Employees (S&P)

Negotiators: Jack Wayt, Bob Hyland and Richard Kreisler

2. Unrepresented Group: Management Confidential Group
   Negotiator: Jack Wayt

CONFERENCE WITH REAL PROPERTY NEGOTIATOR (Gov't Code §54956.8): -0- matters

Council recessed at 6:50 p.m.
REGULAR MEETING OF THE EL SEGUNDO CITY COUNCIL
TUESDAY, OCTOBER 19, 2010 - 7:00 P.M.

7:00 P.M. SESSION

CALL TO ORDER – Mayor Busch at 7:00 p.m.

INVOCATION – Deputy City Clerk, Cathy Domann

PLEDGE OF ALLEGIANCE – Council Member Suzanne Fuentes

PRESENTATIONS

a. Council Member Fuentes made a Presentation proclaiming October 24, 2010 World Polio Day.

b. Presentation from the Recreation & Parks Department to recognize the following: Hacienda Hotel & Conference Center; Embassy Suites Los Angeles International Airport / South; and ArcLight Cinemas Beach Cities as the 2010 Halloween Frolic Sponsors, and to Individual Donor Ralph Lanphere for his contributions to the Aquatics Program.

ROLL CALL

Mayor Busch - Present
Mayor Pro Tem Fisher - Present
Council Member Brann - Present
Council Member Fuentes - Present
Council Member Jacobson - Present

PUBLIC COMMUNICATIONS – (Related to City Business Only – 5 minute limit per person, 30 minute limit total) Individuals who have received value of $50 or more to communicate to the City Council on behalf of another, and employees speaking on behalf of their employer, must so identify themselves prior to addressing the City Council. Failure to do so shall be a misdemeanor and punishable by a fine of $250. While all comments are welcome, the Brown Act does not allow Council to take action on any item not on the agenda. The Council will respond to comments after Public Communications is closed.

Mike Robbins, resident, spoke regarding CalPERS pension costs.

Loretta Frye, resident, spoke regarding increasing costs for seniors. Also spoke regarding the Proposition 218 Trash Protest Ballot.

Liz Garnholz, resident, spoke regarding Unfinished Business Item No. 1, Consent Agenda Item No. 4, and Consent Agenda Item No. 10.
Marc Rener, resident, spoke regarding Special Compensation for city employees.

Ron Swanson, resident, spoke regarding the Proposition 218 Trash Protest Ballot.

A. PROCEDURAL MOTIONS

Consideration of a motion to read all ordinances and resolutions on the Agenda by title only.

MOTION by Council Member Brann, SECOND by Council Member Jacobson to read all ordinances and resolutions on the agenda by title only. MOTION PASSED BY UNANIMOUS VOICE VOTE. 5/0

SPECIAL ORDERS OF BUSINESS (PUBLIC HEARING)

B. SPECIAL ORDERS OF BUSINESS

C. UNFINISHED BUSINESS

1. Consideration and possible action to receive and file a report and response to the Mayor's request providing information regarding employee benefits and salary information. (Fiscal Impact: None)

Deborah Cullen, Finance Director, gave a report.

Council consensus to receive and file staff report in response to the October 5, 2010 City Council Meeting request regarding employer CalPERS compensation rates and types of compensation for which PERS contributions are paid by the City.

D. REPORTS OF COMMITTEES, COMMISSIONS AND BOARDS

E. CONSENT AGENDA

All items listed are to be adopted by one motion without discussion and passed unanimously. If a call for discussion of an item is made, the item(s) will be considered individually under the next heading of business.

2. Approved Warrant Numbers 2579303 to 2579478 on Register No. 1 in the total amount of $769,050.99 and Wire Transfers from 09/24/10 through 10/07/10 in the total amount of $1,205,862.11. Authorized staff to release. Ratified: Payroll and Employee Benefit checks; checks released early due to contracts or agreement; emergency disbursements and/or adjustments; and wire transfers.


4. PULLED FOR DISCUSSION BY MAYOR BUSCH
5. Awarded a three (3) year Landscape Maintenance Agreement to the lowest responsible bidder, TrueGreen LandCare for the City’s landscape maintenance services. (Fiscal Impact: $137,322.00) Authorized the City Manager to execute a three year Landscape Maintenance Agreement in a form as approved by the City Attorney in the amount of $137,322.00;

6. PULLED FOR DISCUSSION BY COUNCIL MEMBER JACOBSON

7. PULLED FOR DISCUSSION BY COUNCIL MEMBER JACOBSON

8. Adopted Resolution No. 4688 which replaces Resolution 3784 designating the Los Angeles County Department of Public Health as the enforcement agency to carry out the provisions of the Z’berg-Kapiloff Solid Waste Control Act of 1976 and the subsequent California Integrated Waste Management Act of 1989.

9. Approved a five-year Lease No. 4093, in a form approved by the City Attorney, with Oce North America for a multifunctional digital document copier to be used by the City Clerk’s Office for printing, copying, scanning, and faxing. (Fiscal Impact: Not to exceed $9,000 per year)

10. ITEM PULLED FROM AGENDA BY THE CITY ATTORNEY – TO BE ADDRESSED AT A LATER DATE

MOTION by Mayor Pro Tem Fisher, SECONDED by Council Member Fuentes to approve Consent Agenda Items 2, 3, 5, 8, and 9. MOTION PASSED BY UNANIMOUS VOICE VOTE. 5/0

CALL ITEMS FROM CONSENT AGENDA

4. Consideration and possible action to authorize the City Manager to execute a Public Service Agreement, in a form approved by the City Attorney, with South Bay Children’s Health Center Association/The South Bay Youth Project to provide on-site counseling services at El Segundo Unified School District. (Fiscal Impact: $33,018)

MOTION by Mayor Busch, SECONDED by Mayor Pro Tem Fisher to authorize the City Manager to execute Public Service Agreement No. 4094, in a form approved by the City Attorney, with South Bay Children’s Health Center Association/The South Bay Youth Project to provide on-site counseling services at El Segundo Unified School District. MOTION PASSED BY UNANIMOUS VOICE VOTE. 5/0

6. Consideration and possible action to adopt Ordinance No. 1448 approving Environmental Assessment EA 723 to amend the El Segundo Municipal Code (“ESMC”) §15-27-6(D) and §15-27A-6(E) regulating the collection of impact fees. (Fiscal Impact: N/A)
MOTION by Council Member Brann, SECONDED by Mayor Busch to adopt Ordinance No. 1448 approving Environmental Assessment EA 723 to amend the El Segundo Municipal Code ("EMSC") §15-27-6(D) and §15-27A-6(E) regulating the collection of impact fees. MOTION PASSED BY THE FOLLOWING VOICE VOTE: AYES: MAYOR BUSH, MAYOR PRO TEM FISHER, AND COUNCIL MEMBER BRANN; NOES: COUNCIL MEMBER JACOBSON AND COUNCIL MEMBER FUENTES. 3/2

7. Consideration and possible action to adopt a Resolution amending the City’s existing procedures for mailing, handling and counting of Proposition 218 protest ballots to include residential (solid waste) trash collection service fees. (Fiscal Impact: None)

MOTION by Mayor Busch, SECONDED by Council Member Brann to adopt Resolution No. 4689 amending the City’s existing procedures for mailing, handling and counting of Proposition 218 protest ballots to include residential (solid waste) trash collection service fees. MOTION PASSED BY THE FOLLOWING VOICE VOTE: AYES: MAYOR BUSH, MAYOR PRO TEM FISHER, AND COUNCIL MEMBER BRANN; NOES: COUNCIL MEMBER JACOBSON AND COUNCIL MEMBER FUENTES. 3/2

Staff was directed to return at the next Council meeting with an agenda item regarding lifeline trash rates for eligible senior citizens.

F. NEW BUSINESS

REPORTS – CITY MANAGER - NONE

REPORTS – CITY ATTORNEY - NONE

REPORTS – CITY CLERK - NONE

REPORTS – CITY COUNCIL MEMBERS

Council Member Fuentes – Thanked everyone for their support over the last few weeks in the passing of her Mother.

Council Member Brann – Noted that on August 17, 2010 Council voted to return in November 2010 with an agenda item regarding negotiations with Los Angeles County Fire. He also spoke on the 2008 Police and Fire Association negotiations.

Council Member Jacobson – NONE

Mayor Pro Tem Fisher – NONE

Mayor Busch – Thanked companies for their contributions to Recreation and Parks programs.
PUBLIC COMMUNICATIONS – (Related to City Business Only – 5 minute limit per person, 30 minute limit total) Individuals who have receive value of $50 or more to communicate to the City Council on behalf of another, and employees speaking on behalf of their employer, must so identify themselves prior to addressing the City Council. Failure to do so shall be a misdemeanor and punishable by a fine of $250. While all comments are welcome, the Brown Act does not allow Council to take action on any item not on the agenda. The Council will respond to comments after Public Communications is closed.

Mike Robbins, resident, spoke regarding negotiations with employee groups.

Loretta Frye, resident, spoke regarding senior lifeline rates for proposed trash fees.

Liz Gaminholz, resident, spoke regarding the need to educate the public on items being considered by the City Council.

Marc Rener, resident, spoke regarding dissemination of information to the public. Also spoke regarding trash pick up and waste recycling.

MEMORIALS – NONE

CLOSED SESSION – NONE

ADJOURNMENT at 8:37 p.m.

______________________________
Cathy Domann
Deputy City Clerk
AGENDA DESCRIPTION:

Consideration and possible action to approve an addendum, in a form approved by the City Attorney, to Agreement No. 4077 with Advance Sewer Technologies, Inc. The amendment would add the Cleaning and Closed Circuit Television (CCTV) inspection of sewer lines east of Sepulveda Boulevard between Rosecrans Avenue and Imperial Highway. (Project No.: PW 10-02) (Fiscal Impact: $54,172.21)

RECOMMENDED COUNCIL ACTION:

1. Authorize the City Manager or designee to execute an amendment, in a form as approved by the City Attorney, to Agreement No. 4077 with Advanced Sewer Technologies, Inc., in the amount of $49,247.46

2. Alternatively, discuss and take other action related to this item.

ATTACHED SUPPORTING DOCUMENTS:

Location Map

FISCAL IMPACT: Included in Adopted Budget

Amount Requested: $54,172.21
Additional Appropriation: No
Account Number(s): 502-400-8204-8654

ORIGINATED BY: Maryam M. Jonas, Principal Engineer
REVIEWED BY: Stephanie Katsouleas, Public Works Director
APPROVED BY: Jack Wayt, City Manager

BACKGROUND AND DISCUSSION:

On June 15, 2010, the City Council awarded a contract in the amount of $167,023.65 for the cleaning and closed circuit television inspection of sewer mains west of Sepulveda Boulevard, between El Segundo Boulevard and Imperial Avenue. The City Council also approved (10%) for construction contingencies and adopted plans and specifications for the CCTV of the sewer mains east of Sepulveda Boulevard between Rosecrans Avenue and Imperial Highway.

Advanced sewer technologies, Inc., agreed to perform the additional work (the CCTV of the sewer mains east of Sepulveda Boulevard between Rosecrans Avenue and Imperial Highway) for the same unit price cost. The cost for CCTV of the sewer mains based on the measured quantities for this portion is $49,247.46. The amount requested ($54,172.21) includes 10% for contingencies.
In accordance with §3.2 of the Standard Specifications for Public Works Construction (aka, the “Green Book”) which is incorporated into the City’s standard public works contacts, changes to the scope of work that exceed 25% of the original contract price requires an amendment to the contract.

No appropriation of funding is required for approval of the additional work. The original budget allocation for the CCTV project was $300,000.00 from the El Segundo Sewer Enterprise Funds. The total project costs including contingencies for CCTV of the entire City Sewer mains is estimated at $238,123.32. The fund savings will be returned to the enterprise fund for future sanitary sewer projects.
AGENDA DESCRIPTION:
Consideration and possible action regarding a new Alcoholic Beverage Control (ABC) license for on-site sale of alcohol for on-site and off-site consumption for an accessory tasting room within a proposed brewery, El Segundo Brewery, (Type 23 – Beer Manufacturer) located at 140 Main Street. Applicant: Robert Croxall (Fiscal Impact: N/A)

(Fiscal Impact: N/A)

RECOMMENDED COUNCIL ACTION:
1. Receive and file this report without objecting to a new Type 23 ABC license at 140 Main Street; and/or,
2. Alternatively, discuss and take other possible action related to this item.

ATTACHED SUPPORTING DOCUMENTS:
1. Crime and Arrest Statistics by Reporting Districts (RD)
2. Police Reporting Districts Map
3. Planning Commission Staff Report and Resolution, dated October 14, 2010

FISCAL IMPACT: None
Amount Budgeted: N/A
Additional Appropriation: N/A
Account Number(s): N/A

ORIGINATED BY: Kimberly Christensen, AICP, Planning Manager
REVIEWED BY: Greg Carpenter, Planning and Building Safety Director
APPROVED BY: Jack Wayt, City Manager

BACKGROUND AND DISCUSSION:

I. Background

In 1995, the City Council directed staff to bring all future ABC licenses to it for review. For alcohol sales at bars, California regulations require a 30-day review and comment period after notifying local police and planning departments. The grounds of a protest, if any, should relate to public health, safety or welfare concerns. Based upon previous Council direction, staff is providing background information regarding this application.

II. Analysis

According to the most recent Crime and Arrest statistics report (January 2010 – June 2010, Exhibit 1) prepared by the Police Department, the proposed brewery and accessory tasting room
is located in Reporting District (RD) 113. Based on the January – June 2010 reported data prepared by the Police Department, the district had a total of 9 Part I crimes (criminal homicide, forcible rape, robbery, aggravated assault, burglary, larceny-theft, motor vehicle theft and arson) and 28 Part II crimes for a total of 37 crimes. The Reporting District is considered a high crime area with a total of 37 crimes reported between January and June 2010. However, the Police Department and the Planning and Building Safety Department do not object to a new Type 23 ABC license for the proposed brewery and accessory tasting room.

This license request will allow the sale of alcohol for on-site and off-site consumption and allow the manufacture of beer. A request for a new Type 23 license is for this location. The tasting room is limited to the hours of 4 p.m. to 8 p.m. on Fridays, and 1 p.m. to 6 p.m. on Saturdays and Sundays. The brewery will operate Mondays through Fridays from 8 a.m. to 5 p.m.

On October 14, 2010, the Planning Commission approved the Conditional Use Permit application (EA No. 886 and CUP No. 10-11) for 140 Main Street with the attached Conditions of Approval. ABC license review requires mandatory findings that are regulated by the Department of Alcoholic Beverage Control. The City’s CUP process is separate. The Department of Alcoholic Beverage Control (ABC) is responsible for running a complete background check on all alcohol license applicants, as well as conducting site inspections, before issuing any type of alcohol license.

III. Conclusion

Planning staff recommends that the Council receive and file this report without objecting to a new Type 23 ABC license at 140 Main Street.
## PART I AND PART II CRIMES STATISTICAL REPORT
REPORTED PERIOD: JANUARY – JUNE, 2010

### HIGH CRIME AREA BY REPORTING DISTRICT

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<tr>
<td>323</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

**Number of Reporting Districts = 51**

**Total Part I Crimes and Part II Crimes = 905**

**City Average for all Reporting Districts (905 / 51) = 18**

**High Crime Area per E&P Code Section 23958.4 (18 x 120%) = 22**

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Records/eg  
Page 1  
7/12/2010
CITY OF EL SEGUNDO

PLANNING COMMISSION STAFF REPORT

PUBLIC HEARING: October 14, 2010

SUBJECT: Environmental Assessment No. 886 and Conditional Use Permit No. 10-11

APPLICANT: Robert Croxall of El Segundo Brewing Co. LLC

PROPERTY OWNER: David B. Taylor

REQUEST: A Conditional Use Permit request to allow an approximately 350 square-foot on-site tasting room within an approximately 2,640 square-foot brewery to be located in an existing 4,900 square-foot, multi-tenant warehouse building and to allow the sale of alcohol for on-site and off-site consumption (Type 23 Alcoholic Beverage Control (ABC) License).

PROPERTY INVOLVED: 140 Main Street

I. Introduction

The proposed project is a request for a Conditional Use Permit to allow an approximately 350 square-foot on-site tasting room within an approximately 2,640 square-foot brewery to be located in an existing 4,900 square-foot, multi-tenant warehouse building. The applicant is applying for a Type 23 ABC license (Small Beer Manufacturer) to allow the on-site and off-site sale of alcohol. Brewery operations will be daily and will consist of brewing, transferring beer between tanks, and kegging. The proposed hours of operation for the tasting room are 4:00 p.m. to 8:00 p.m. on Fridays and 1:00 p.m. to 6:00 p.m. on Saturdays and Sundays. No food service will be provided. In addition to on-site tasting, the applicant proposes to sell beer for off-site consumption. The proposed project is located at 140 Main Street in the Main Street Transitional District of the Downtown Specific Plan. The property is located on the block bounded by Main Street on the west, Standard Street on the east, Franklin Avenue on the north, and El Segundo Boulevard on the south.
II. **Recommendation**

Planning staff recommends that the Planning Commission, review the facts and findings contained within this report, and adopt Resolution No. 2683 approving Environmental Assessment No. 886 and CUP No. 10-11.

III. **Analysis**

The applicant is requesting approval of a Conditional Use Permit to allow an approximately 350 square-foot tasting room within an approximately 2,640 square-foot brewery to be located in an existing 4,900 square-foot, multi-tenant warehouse building for the sale of beer for on-site and off-site consumption (Type 23 ABC license). Brewery operations will occur daily and will consist of brewing, transferring beer between tanks, and kegging. Actual brewing days will be approximately once a week. Production volume will be roughly 90 barrels (2,790 gallons) per month in the first year.

The brewery and tasting room occupies the front portion of the building facing Main Street. The rear section of the building is an existing warehouse that will not be affected by this proposed project. Currently, the proposed space is vacant but was previously used for a freight forwarding operation. The proposed tasting room is an accessory use to the brewery and will be open to the public. The brewery will operate typically Mondays through Fridays between 8 a.m. and 5 p.m. The proposed hours of operation for the tasting room are on Fridays from 4:00 p.m. to 8:00 p.m. and on Saturdays and Sundays from 1:00 p.m. to 6:00 p.m. The brewery will include a 15 barrel brewhouse (mash/lauter tun and kettle), 5 fermentation tanks, and a glycol chilling system. A beer dispensing system will be required for the tasting room and will consist of refrigeration equipment, beer service towers, and a CO2 system. An accessory office for the brewery will be located on the second floor.

The proposed project site is located in the Main Street Transitional District (MTSD) in the Downtown Specific Plan (DSP) Zone. Pursuant to the Downtown Specific Plan, bars require the approval of a conditional use permit. The proposed 350 square-foot tasting room is analogous to a bar since the service of alcohol is for on-site consumption with no food service. The tasting room serves the beer that is brewed on the premises. The tasting room consists of one table and a maximum of 16 seats. The applicant expects to serve a maximum of 26 patrons at any given time. The brewery is allowed by-right as an industrial use (manufacturing) as it replaces another industrial use, specifically, a freight-forwarding company that is a non-conforming use.
The surrounding land uses are as follows:

<table>
<thead>
<tr>
<th>Land Uses</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>North: Commercial Office</td>
<td>DSP - MTSD</td>
</tr>
<tr>
<td>South: Restaurant</td>
<td>DSP - MTSD</td>
</tr>
<tr>
<td>East: Commercial</td>
<td>CRS</td>
</tr>
<tr>
<td>West: Restaurant</td>
<td>DSP - MTSD</td>
</tr>
</tbody>
</table>

**Off-street Parking**

There are four existing off-street parking spaces on the property and two loading spaces. No accessible spaces are currently provided. The applicant will not alter the configuration of the existing parking and loading spaces. The brewery is considered a manufacturing use. The tasting room is an accessory use and requires no additional parking. The parking requirements for the uses on the site are as follows:

<table>
<thead>
<tr>
<th>Proposed Use</th>
<th>Size</th>
<th>Off-street parking spaces required</th>
<th>Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>4,900 square feet</td>
<td>One (1) space per 500 square feet for the first 50,000 square feet</td>
<td>4</td>
</tr>
</tbody>
</table>

The Downtown Specific Plan allows existing uses in an existing building to change to any other permitted use without providing additional parking spaces provided that the existing spaces remain available. Additionally, one industrial use is replacing another industrial use, therefore no additional parking spaces are required. The uses comply with the El Segundo Municipal Code (ESMC) by providing four parking spaces. The two loading spaces provided exceed that required by the ESMC since buildings 15,000 square feet or less require no loading spaces. The two loading spaces provided are approximately 15.5' in width and 40' in length and comply with the minimum dimensions for required small truck loading spaces. The brewery will use a small truck or SUV for deliveries.

**Conditional Use Permit**

The application includes a request for approval of a Conditional Use Permit for the tasting room to serve alcohol for on-site consumption. Pursuant to the Downtown Specific Plan, tasting rooms (same as a bar) require the approval of a CUP in the Main Street Transitional District.
RESOLUTION NO. 2683

A RESOLUTION APPROVING ENVIRONMENTAL ASSESSMENT NO. 886 AND CONDITIONAL USE PERMIT NO. 10-11 TO ALLOW AN APPROXIMATELY 350 SQUARE-FOOT TASTING ROOM WITHIN AN APPROXIMATELY 2,640 SQUARE-FOOT BREWERY FOR ON-SITE SALE OF ALCOHOL FOR ON-SITE AND OFF-SITE CONSUMPTION (TYPE 23 ABC LICENSE-SMALL BEER MANUFACTURER) TO BE LOCATED AT 140 MAIN STREET

The Planning Commission of the City of El Segundo does resolve as follows:

SECTION 1: The Planning Commission finds and declares that:

A. On September 1, 2010 Robert Croxall of El Segundo Brewing Co., LLC filed an application for an Environmental Assessment and a Conditional Use Permit to operate a tasting room as an accessory use to a brewery for on-site sale of alcohol for on-site and off-site consumption at 140 Main Street in the Main Street Transitional District (MSTD) Zone within the Downtown Specific Plan Zone;

B. The application were reviewed by the City’s Planning and Building Safety Department for, in part, consistency with the General Plan and conformity with the El Segundo Municipal Code (“ESMC”);

C. In addition, the City reviewed the project’s environmental impacts under the California Environmental Quality Act (Public Resources Code §§ 21000, et seq., “CEQA”), the regulations promulgated thereunder (14 Cal. Code of Regulations §§15000, et seq., the “CEQA Guidelines”), and the City’s Environmental Guidelines (City Council Resolution No. 3805, adopted March 16, 1993);

D. The Department of Planning and Building Safety completed its review and scheduled a public hearing regarding the application before this Commission for October 14, 2010;

E. On October 14, 2010, the Commission held a public hearing to receive public testimony and other evidence regarding the application including, without limitation, information provided to the Commission by Robert Croxall, representing El Segundo Brewing Co., LLC; and

F. The Commission considered the information provided by City staff, public testimony, and Robert Croxall. This Resolution, and its findings, are made based upon the evidence presented to the Commission at its October 14, 2010 hearing including, without limitation, the staff report submitted by the Planning and Building Safety Department.
<table>
<thead>
<tr>
<th>Yonce</th>
<th>Investment Banking</th>
<th>Goldman Sachs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fred and Sandra Young</td>
<td>Services</td>
<td>Diversified Search, LLC provides senior-level executive and corporate board search services in the United States and internationally. It provides recruitment services for various organizations in consumer and industrial, education, not-for-profit, arts and culture, financial and professional services, business, healthcare and human services, life sciences, media and entertainment, sports and leisure, energy and utilities, private equity, retail, and technology and communications industries.</td>
</tr>
</tbody>
</table>

353  Like  2K
SECTION 2: Factual Findings and Conclusions. The Commission finds that the following facts exist:

A. The proposed project is a tasting room as an accessory use to a brewery for on-site sale of alcohol for on-site and off-site consumption at 140 Main Street in the Main Street Transitional District (MSTD) within the Downtown Specific Plan (DSP) Zone;

B. The surrounding land uses are urbanized and include commercial uses in the Main Street Transitional District (MSTD) to the north, south, and west, and an industrial building in the Downtown Commercial (C-RS) Zone to the east;

C. The subject site consists of one existing 4,900 square-foot multi-tenant building situated on an approximately 6,913 square-foot lot;

D. The proposed brewery will replace a former non-conforming industrial freight-forwarding use as a non-conforming industrial use permitted by right in the MSTD of the Downtown Specific Plan (DSP) Zone;

E. The project will meet the parking requirements for the proposed uses with four off-street parking spaces, and two loading spaces provided on site;

F. The tasting room and brewery will occupy approximately 350 square feet and 2,640 square feet of the building respectively;

G. The tasting room will consist of a table and 16 seats but no food service. The tasting room is analogous to a bar, which requires a Conditional Use Permit in the Downtown Specific Plan (DSP) Zone; and

H. The proposed project would involve remodeling the interior of the existing building and would not include any additions to the existing building nor alter the land.

SECTION 3: Environmental Assessment. Because of the facts identified in Section 2 of this Resolution, the proposed project is categorically exempt from the requirements of the California Environmental Quality Act (CEQA) pursuant to 14 California Code of Regulations § 15301 as a Class 1 categorical exemption (Existing Facilities) as it involves the minor interior alteration of an existing private facility. The project is not anticipated to have any significant impacts with regard to traffic, noise, air quality, or water quality. Moreover, the project is proposed to be built on a site of not more than five acres surrounded by urban uses. Further, the site has no value as habitat for endangered, rare, or threatened species. There are adequate utilities and public services to serve the project.
SECTION 4: General Plan and Zoning. The proposed project conforms with the City's General Plan and the zoning regulations in the ESMC as follows:

A. The General Plan Land Use Designation of the project site is Downtown Specific Plan. The proposed project is consistent with the goals, objectives, and policies of the General Plan. Specifically, the project is consistent with Goal ED3 and Objective ED3-1 in that the proposed uses are the kinds of uses that create an economically viable and stable Downtown area that uniquely contributes to El Segundo’s commercial options.

B. The project conforms to Downtown Specific Plan (DSP) Economic Development Goal and Objective ED3, in that it creates an economically viable and stable Downtown area that uniquely contributes to El Segundo’s commercial options.

C. The project conforms to the DSP Land Use Goal LU4 by providing a stable tax base for the City through development of new commercial uses, primarily within a mixed-use environment. Specifically, it conforms to Objective LU4-2, Policy LU4-2.1 in which that the proposed use revitalizes and upgrade commercial areas, making them part of a viable, attractive and people-oriented commercial district.

D. The ESMC zoning classification for the project site is Downtown Specific Plan, which allows for tasting rooms (a bar use) with approval of a Conditional Use Permit in conformance with ESMC Chapter 15-23;

E. The proposed project complies with the applicable provisions of ESMC Chapter 14-1, since proper notification and a public hearing were provided, proper hearing decision and records will be complied with and the required findings will be considered.

SECTION 5: Conditional Use Permit Findings. After considering the above facts regarding proposed Environmental Assessment No. 886 and Conditional Use Permit No. 10-11, the Planning Commission finds as follows:

A. That the proposed location of the conditional use is in accord with the objectives of this Title and the purposes of the zone in which the site is located;

The Main Street Transitional District (MSTD) in the DSP requires the approval of a CUP for bars which are similar to the proposed tasting room as the alcohol is served for on-site sale and for on-site and off-site consumption. The retail nature of the brewery satisfies the purpose of the MSTD.

The proposed tasting room within the brewery is an incidental use of the premises when limited in area, time, and frequency of activity. Type 23 ABC
licenses are permitted within the MSTD of the DSP Zone subject to approval of a conditional use permit.

B. That the proposed location of the conditional use and the conditions under which it would be operated or maintained will not be detrimental to the public health, safety or welfare, or materially injurious to properties or improvements in the vicinity;

The attached conditions of approval establish limits to the operation’s hours and activities. There is no new construction proposed. The location is several hundred feet from any residential areas in a mixed commercial and industrial area with existing restaurants, offices and light manufacturing. The proposed operations are inside the building and not visible from major city thoroughfares. Additionally, the site has legal non-conforming number of parking spaces.

The proposed tasting room within the brewery is an incidental use of the premises when limited in area, time, and frequency of activity. Planning Commission approval of a Conditional Use Permit is required for businesses seeking a Type 23 ABC license and located in the MSTD of the DSP Zone. The location, size, design and operating characteristics of the tasting room will not create conditions which may be objectionable, detrimental to the public health, safety and welfare or incompatible with other permitted uses in the vicinity. Furthermore, conditions of approval are incorporated to minimize any impacts from the proposed activity. Therefore, the project will not be materially injurious to property or improvements in the vicinity.

C. That the proposed conditional use will comply with each of the applicable provisions of this Chapter.

The proposed conditional use complies with the applicable provisions of ESMC Chapter 15-27 since proper notice and hearing were provided, and proper hearing decision and records will be complied with, and the required findings will be considered.

SECTION 6: Approval. Subject to the conditions listed in the attached Exhibit “A,” which are incorporated into this Resolution by reference, the Planning Commission approves Environmental Assessment No. 886 and Conditional Use Permit No. 10-11.

SECTION 7: This Resolution will remain effective unless superseded by a subsequent resolution.

SECTION 8: The Commission Secretary is directed to mail a copy of this Resolution to SRES Inc. and to any other person requesting a copy.

SECTION 9: This Resolution may be appealed within ten (10) calendar days after its adoption. All appeals must be in writing and filed with the City Clerk within this time
period. Failure to file a timely written appeal will constitute a waiver of any right of appeal.

SECTION 10: Except as provided in Section 9, this Resolution is the Planning Commission's final decision and will become effective immediately upon adoption.

PASSED AND ADOPTED this 14th day of October, 2010.

David Wagner, Chair
City of El Segundo Planning Commission

ATTEST:

Greg Carpenter, Secretary

Wagner  -
Barbee  -
Baldino  -
Fellhauer  -
Newman  -

APPROVED AS TO FORM:
Mark D. Hensley, City Attorney

By: Karl H. Berger, Assistant City Attorney
PLANNING COMMISSION RESOLUTION NO. 2683

Exhibit A

CONDITIONS OF APPROVAL

In addition to all applicable provisions of the El Segundo Municipal Code ("ESMC"), SPCS California, LLC agrees that it will comply with the following provisions as conditions for the City of El Segundo’s approval of Environmental Assessment No. 886 and Conditional Use Permit No. 10-11 ("Project Conditions").

Planning Division

1. Before building permits are issued, the applicant must develop plans, showing that the facility substantially conforms with plans approved and on file with the Planning and Building Safety Department. Any subsequent modification to the project as approved, including the site plan, floor plan, elevations, landscaping and materials, must be referred to the Director of the Planning and Building Safety Department for a determination regarding the need for Planning Commission review of the proposed modification.

2. Before building permits are issued, the applicant must obtain all the necessary approvals, licenses and permits and pay all the appropriate fees as required by the City of El Segundo.

3. The Conditional Use Permit allows for the operation of a tasting room which is an accessory use to the brewery. Operation of the tasting room requires the continuous operation of the brewery as the main use.

4. Hours of operations for the tasting room must be limited to Fridays from 4 p.m. to 8 p.m., and Saturdays and Sundays from 1 p.m. to 6 p.m. Any change to the hours of operation or the hours that alcohol may be served is subject to review and approval by the Director of Planning and Building Safety.

5. A trash and recycling enclosure must be provided and shown on the site plan that is sufficiently large enough to store the necessary bins required for the regular collection of commercial solid waste and recyclable materials. The site plan with the location and dimensions of the trash and recycling enclosure and an elevation view of the enclosure must be provided to the Planning and Building Safety Department for review and approval before the City issues building permits.

6. Modifications to the floor plan and site plan require the approval of the Planning and Building Safety Director. Significant changes to the size of the areas designated for each use as determined by the Director of Planning and Building Safety require review by the Planning Commission.
7. A minimum of 4 parking spaces and 2 loading spaces must be maintained on-site.

8. Taxicab phone numbers must be posted in a conspicuous location at all times in the area(s) where alcohol is served to customers.

9. The premises must be maintained in a litter and graffiti-free manner. Any graffiti that should appear on the premises must be removed within 48 hours.

10. The applicant must obtain and maintain all licenses required by the Alcoholic Beverage Control Act (Business & Professions Code §§ 23300 et seq.). The applicant must obtain and maintain a Type 23 license.

11. The brewery and tasting room operations must comply with ESMC §§ 7-2-1, et seq. regulating noise and vibration.

12. The Planning and Building Safety Department and the Police Department must be notified of any change of ownership of the approved use in writing within 10 days of the completion of the change of ownership. A change in project ownership may be cause to schedule a hearing before the Planning Commission regarding the status of the conditional use permit.

13. The applicant must comply with all regulations of the Alcoholic Beverage Control Act and the regulations promulgated by the Alcoholic Beverage Control Board including, without limitation, the regulations set forth in 4 Cal. Code of Regs. §§ 55, et seq.

14. The applicant must post a sign in a clear and conspicuous location listing a phone number at which a responsible party may be contacted during all open hours of the establishment to address any concerns of the community regarding noise in the brewery, tasting room and parking lot. Said contact's name and phone number must also be available through the restaurant staff at all times.

15. The applicant must, at all times, display a Designated Driver sign of at least ten inches by ten inches (10" X 10") in the tasting room at eye level. The sign must be worded in a way that reminds patrons who are consuming alcohol to designate a non-drinking driver.

16. There must be no exterior advertising of any kind or type, including advertising directed to the exterior from within, promoting or indicating the availability of alcoholic beverages. Interior displays of alcoholic beverages which are clearly visible to the exterior constitute a violation of this condition.

17. All employees serving alcoholic beverages to patrons must enroll in and complete a certified training program approved by the State Department of Alcoholic Beverages Control (ABC) for the responsible sales of alcohol. The training must be offered to new employees on not less than a quarterly basis.
18. Any and all employees hired to sell alcoholic beverages must provide evidence that they have either:

a. Completed training from the State of California Department of Alcoholic Beverage Control (ABC), Long Beach/Lakewood District Office administered Leadership and Education in Alcohol and Drugs (LEAD) Program in the form of an ABC-issued certificate; or,

b. Completed an accepted equivalent by the ABC, Long Beach/Lakewood District Office to ensure proper distribution of beer, wine and distilled spirits to adults of legal age. If any prospective employee designated to sell alcoholic beverages does not currently have such training, then;

c. The ABC-licensed proprietors must have confirmed with the Planning and Building Safety Department within fifteen (15) days of the Director's decision, or by final project approval, that a date certain has been scheduled within the local ABC Office to complete the LEAD course.

d. Within thirty (30) days of taking said course, the employees, or responsible employer must deliver each required certificate showing completion to the Police Department.

19. The applicant must have readily identifiable personnel to monitor and control the behavior of customers inside the building premises. Staff must monitor activity outside in the parking lot and any adjacent property under the establishment's control to ensure the areas are generally free of people and are cleared of patrons and their vehicles one-half hour after closing.

20. If complaints are received regarding excessive noise, parking availability, lighting, building access, and the like associated with the tasting room, the city may, in its discretion, take action to review the Conditional Use Permit, including without limitation, adding conditions or revoking the permit.

Building Department


Miscellaneous Conditions

22. Robert Croxall and David B. Taylor agrees to indemnify and hold the City harmless from and against any claim, action, damages, costs (including, without limitation, attorney's fees), injuries, or liability, arising from the City's approval of
Environmental Assessment No. 886 and Conditional Use Permit No. 10-11. Should the City be named in any suit, or should any claim be brought against it by suit or otherwise, whether the same be groundless or not, arising out of the City approval of Environmental Assessment No. 886 and Conditional Use Permit No. 10-11, Robert Croxall and David B. Taylor agrees to defend the City (at the City's request and with counsel satisfactory to the City) and will indemnify the City for any judgment rendered against it or any sums paid out in settlement or otherwise. For purposes of this section “the City” includes the City of El Segundo’s elected officials, appointed officials, officers, and employees.

Robert Croxall, El Segundo Brewing Co., LLC and David B. Taylor must acknowledge receipt and acceptance of the Project Conditions by executing the acknowledgement below. By signing this document, Robert Croxall, El Segundo Brewing Co., LLC and David B. Taylor certifies that it has read, understood, and agrees to the Project Conditions listed in this document.

___________________________
Robert Croxall, President
El Segundo Brewing Co., LLC

___________________________
David B. Taylor, Property Owner

{If Corporation or similar entity, needs two officer signatures or evidence that one signature binds the company}
AGENDA DESCRIPTION:
Consideration and possible action regarding the purchase of new hardware for an audio/video security system for the police station using funds from the Citizens Option for Public Safety (COPS) Grant and the Justice Assistance Grant (JAG). (Fiscal impact to the city is $99,364.35).

RECOMMENDED COUNCIL ACTION:
1. Approve the purchase of the hardware for an audio/video security monitoring system from Metro Video using funds from COPS and JAG grants.
2. Alternatively, discuss and take other action related to this item.

ATTACHED SUPPORTING DOCUMENTS:
Quotation from Metro Video.
Bid Protest from SimplexGrinnell.

FISCAL IMPACT:
Amount Budgeted: None.
Additional Appropriation: Yes, $99,364.35.
Account Number(s): COPS Grant Fund (120-400-0000-8104)
JAG Fund (124-400-3710-8104)

ORIGINATED BY: Brian Evanski, A/Police Captain
REVIEWED BY: Mitch Tavera, Police Chief
APPROVED BY: Jack Wayt, City Manager

BACKGROUND AND DISCUSSION:
The police department is currently utilizing an antiquated audio/video system with limited VHS recording capabilities, inefficient camera coverage, and inadequate monitoring hardware. An up to date system is necessary for better recording technology, station surveillance, and mass digital evidence storage. The proposed new system would enhance investigations, upgrade security in our jail facility, and evidence management, and improve the chain of custody for criminal proceedings.

This police station audio/video system is one component of a larger video security project that is being funded with Buffer Zone Protection (BZPP) grant funds. The BZPP project will include the purchase of a previously approved Dell Equallogic Server, storage network and other supporting hardware at an approximate cost of $182,563. The goal of this larger project is to stream disparate video from offsite critical infrastructures for immediate review and monitoring.
by police personnel. This project will streamline investigations, improve security in and around critical infrastructure sites, and bring our surveillance technology to the 21st Century.

With the assistance of a consultant and the City's Technology Committee, a Request for Quote was drafted and sent to nearly five-hundred companies requesting quotes for the necessary security and surveillance hardware. As a result, the City received sixteen responses and following a review of all quotes submitted, Staff deemed seven of those sixteen responses complete.

Listed are the seven companies who submitted responsive quotes in ascending order:

1. Metro Video $99,364.35
2. Sigmanet Inc. $104,368.92
3. Direct AV $104,707.01
4. Advanced Electronics $105,878.02
5. Quicknets $106,736.35
7. SimplexGrinnell LP $126,089.65

Based on the aforementioned, Staff recommends purchasing the equipment from Metro Video utilizing a combination of COPS and JAG grant funding. The specific request to utilize COPS grant monies for this audio/video security equipment was approved by City Council during the October 6, 2009 meeting.

On September 29, 2010, the City received and reviewed a bid protest from SimplexGrinnell LP. Staff determined the protest was based on minor irregularities and requests that the City Council waive these minor irregularities.
CITY OF EL SEGUNDO
REQUEST FOR BID #10-08
Police Station Surveillance Equipment

August 3, 2010

Provide your bid ON THIS AND ATTACHED EQUIPMENT SHEET (EXHIBIT A) for the materials listed below in accordance with the terms and specifications noted. Responses must include (4) sets including one original and three copies including brochures.

*ALL BIDS SHALL BE F.O.B. DESTINATION and include all costs delivered to the City of El Segundo*

RETURN COMPLETED BID TO: City of El Segundo 350 Main St., El Segundo, CA 90245
Attn. City Clerk’s Office

Bid return deadline on or prior to Tuesday, August 17, 2010 @ 11:00 A.M., P.S.T.
Any questions regarding this bid can be made to the Purchasing Agent, J. Richard Hogate @ (310) 524-2339

The City of El Segundo has determined the following specifications on (Exhibit A) for bid purposes. To standardize the network infrastructure within El Segundo, the following parts have been pre-approved. The specifications referenced are not intended to be restrictive but descriptive of the type and quality the City of El Segundo desires to purchase. Quotes for similar items of like quality will be considered if the bid is fully noted with the manufacturer's brand name, model including a detailed listing of their specifications and associated product brochures. The City of El Segundo reserves the right to determine products of equal value. Vendors will not be allowed to make unauthorized substitutions after award is made.

See attached equipment list (Exhibit A) for completion and return with this page. Please transfer information from Exhibit A page:

Subtotal: $90,537.50
9.75% Sales Tax: $8,827.53
Total: $99,364.33
Grand Total: $99,364.33

Bid Submitted by:
Company Name: Metro Video Systems, Inc.
Authorized Company Bidder Signature: [Signature]
City / State / Zip: El Segundo, CA 90245 Date: 8-17-2010 Ph: (310) 640-9250

PLEASE FILL IN TERMS & DELIVERY:
Terms: __________% __________days, net __________days; or net 30 days

Delivery: To be made on or before: __________________________ or 5-7 days after receipt of order.

TERMS:
The City of El Segundo reserves the right to reject any or all bids, or to accept separate items in bid unless this right is conditioned by the bidder.
In case of default, the City of El Segundo may procure its materials/services from other sources and shall hold the original bidder or contractor liable for resulting increased costs.
Quantities and optional items listed are the city's best estimate for bid purposes, actual order quantities and options may vary.
Samples, if requested, must be furnished at the bidder's expense and if not destroyed in testing or retained as a standard, will be returned at bidder's cost, if requested.
Quote on each article separately. All or none bids may not be accepted.
During the performance of this contract, the vendor/contractor warrants that it will provide equal opportunities, and that the vendor/contractor and each subcontractor will take affirmative action to ensure that its employment practices, persons are employed and employees are treated equally and without regard to, or because of race, creed, color, national origin, sex, age, physical handicap, or medical condition. This provision applies to work or services performed or materials manufactured or assembled in the United States.
The vendor/contractor warrants that it possesses legally adequate Workers' Compensation Insurance.
The vendor/supplier will supply Material Safety Data Sheets with all product deliveries.

2010-08-03 Bid #10-08 Police Station Surveillance System Equip.doc
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<th>P/N</th>
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<th>QTY</th>
<th>UNIT COST</th>
<th>EXTENDED $</th>
<th>MATCHES SPECIFICATION (CIRCLE ONE)</th>
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MUST BE AN AUTHORIZED (PLEASE ATTACH DOCUMENTED PROOF FOR EACH COMPANY): GRAND TOTAL: $95,387.00

ONSSI PARTNER/RESELLER TO SUPPLY THE ONSSI SOFTWARE AND LICENSES. (YES) OR NO

AXIS COMMUNICATIONS PARTNER TO PROVIDE THE SPECIFIED CAMERA HARDWARE. (YES OR NO)

CISCO PARTNER/RESELLER TO SUPPLY CISCO HARDWARE, SOFTWARE, MAINTENANCE, AND LICENSES. (YES) OR NO

EACH "NO" ANSWER MUST INCLUDE DETAILED INFORMATION IDENTIFYING WHAT'S BEING QUOTED AND JUSTIFICATION.

Company Name: Metro Video Systems, Inc. Authorized Company Bidder Signature: Timothy D. Wei Date: 8-17-2010
September 2, 2010

City of El Segundo – Police Department
350 Main Street
El Segundo, CA 90245

Attention: Lt. Brian Evanski

Subject: RFQ #10-08 – Police Station Surveillance Equipment
Cisco Reseller Info.

Dear Lt. Evanski:

Metro Video Systems, Inc., is pleased to submit information concerning the above, per our conversation earlier this week.

We hope to work with you and your staff on this equipment procurement project.

If you should have any questions or need any further information, please do not hesitate to contact me at your convenience.

Thank you,

Tim Weir  
Vice President
Welcome to Cisco

Cisco.com Profile Manager

Choose Language: English

Your Profile

Welcome James Sage!

This is your most current profile, containing information you've given us about yourself. Update your profile at anytime by selecting "Edit This Info" in the relevant areas below.

Return to Referring Page

Contact Information
User ID: jim@metrovideosystems.com
Name: James Sage
Business/Primary Email Address: jim@metrovideosystems.com
Alternate Email Address:
Company/Organization Name: Metro Video Systems Inc.
Business/Primary Address: 1220 E. Imperial Ave., El Segundo, Ca., 90245, UNITED STATES
Business/Primary Phone Number: +1 310-640-9250
Alternate Phone Number:
Fax Number:
Mobile Phone Number:
Home Address:

Organization Information
Job Role: Operations/Support
Job Title: Operations Manager
Job Level: Management
Industry: Professional Services
Number of Employees: <100
Relationship to Cisco: Reseller

Additional Access

Interests & Preferences
Language Preference: English
Spoken Language: English
Display number of Search Results: 10
Display Results with Highlighting:
Display Summary with Results:

Password Management

Contacts | Feedback | Help | Site Map
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August 10, 2010

Reference: OnSSI CCP Program
Metro Video Systems, Inc.

To Whom It May Concern:

Pursuant to your request for information pertaining to the OnSSI Partner Program and validation of an affiliated integration partner the following is applicable:

*OnSSI maintains an extensive network of dealers and integrators through its Channel Partner Program. Organizations involved in delivering video surveillance and security solutions to the end-user community may join our Channel Partner Program and enjoy its benefits.*

*OnSSI offers two levels of participation in its Channel Partner Program – ‘Channel Partner’ and ‘Certified Channel Partner’. Each level entails different benefits and requirements.*

*To be approved as an OnSSI Channel Partner, you must have a proven track record in marketing video surveillance and security systems to end users. Additionally, Certified Channel Partners must have, in active employment, at least one (1) technical support person that has been trained and certified by OnSSI to support all OnSSI’s product lines.*

Currently, Metro Video Systems, Inc., at 1220 imperial Avenue, El Segundo, CA 90245 is listed as an OnSSI Certified Channel Partner.

Please call our Sales Administration team at 845-732-7900 if we may be of any further assistance.

Regards,

Kevin Bradley
Director of Sales, North America

cc. T. Marolf, OnSSI
T. Cabot, Bassett Sales Corp.
is pleased to recognize

Metro Video Systems

as an

Authorized Partner
in the
Axis Channel Partner Program

on this 1st day of July, 2008

Larry Newman
Director of Sales
AXIS P13 Network Camera Series

Superb image quality for video surveillance in any environment.

AXIS P13 Network Camera Series comprises of indoor and outdoor-ready fixed cameras that deliver superb image quality with H.264 compression and are ideal for high-performance surveillance in any indoor or outdoor environment. The megapixel models also deliver HDTV video.

AXIS P13 Series ranges from VGA-resolution cameras to 5-megapixel AXIS P1347 and AXIS P1347-E cameras, which also provide HDTV 1080p video. Most models are available in both indoor and "-E" outdoor-ready versions. The SVGA and megapixel cameras provide wide dynamic range, and day and night functionality for superb image quality in daylight and dark conditions.

The 3- and 5-megapixel cameras also offer the unique and revolutionary P-Iris control, which allows the cameras to precisely control the iris position to optimize depth of field and lens resolution for optimal image sharpness.

All AXIS P13 cameras deliver multiple H.264 and Motion JPEG video streams. H.264 greatly reduces bandwidth and storage needs without compromising image quality. With AXIS P1311, MPEG-4 Part 2 is also supported.

All SVGA and megapixel models have a remote back focus function that enables the focus to be fine-tuned from a computer. The same models also offer digital pan/tilt/zoom, and the 3- and 5-megapixel cameras additionally provide multi-view streaming.

AXIS P13 cameras support Power over Ethernet (PoE) for easy installation. The outdoor-ready models operate using PoE and High PoE in temperatures from -40 °C to 50 °C (-40 °F to 122 °F).
High-performance indoor/outdoor cameras

AXIS P13 Series offers fixed network cameras suitable for a range of video surveillance applications, including government and industrial buildings, retail environments, airports, railway stations and schools.

Easy installation with focus assistant, remote focus and pixel counter
Setting the focus on all AXIS P13 cameras is made easy with the focus assistant, which indicates with a flashing green LED when an image is in focus after manually adjusting the lens. Additionally, the SVGA and megapixel models offer remote focus, which allows the focus to be fine-tuned from a computer. The pixel counter further helps the installer verify that the pixel resolution of an object fulfills regulatory or customer requirements, for example, for facial identification.

Outdoor-ready models
AXIS P13-E Network Cameras save installation time and costs since they are ready out of the box for mounting outdoors. The IP66-rated cameras have protection against dust, rain, snow and sunlight, and can operate in temperatures as low as -40 °C (-40 °F). The cameras are powered by Power over Ethernet, which makes installation easy since there is no need for a separate power cable. An integrated dehumidifying membrane eliminates any humidity caught in the camera enclosure during installation. The cameras enable easy mounting of an infrared illuminator under the enclosure. They come with a wall mount bracket, sunshield and an Ethernet cable with a pre-mounted gasket.

Digital PTZ and multi-view streaming
The SVGA and megapixel camera models support digital pan/tilt/zoom, which allows a selected area of interest to be cropped from the full view for viewing or recording, thereby minimizing the bit rate and storage needs. The 3- and 5-megapixel cameras also support multi-view streaming, which allows several cropped view areas to be streamed simultaneously, simulating up to eight virtual cameras.

Multi-view streaming with AXIS P1346/-E and AXIS P1347/-E Network Cameras

One camera
Full overview enabling cropped view areas
Multiple virtual camera views (up to eight views possible)

P-Iris control
The 3-megapixel AXIS P1346/-E and the 5-megapixel AXIS P1347/-E cameras feature a new and advanced precise iris control, P-Iris, that sets new image quality standards for fixed cameras. It comprises a special P-Iris lens together with specialized software in the camera to enable the camera to set the best iris position for optimal image contrast, clarity, resolution, and depth of field. Having good depth of field—where objects at different distances from the camera are in focus simultaneously—allows more of a scene to be clearly visible.

P-Iris is especially beneficial for megapixel cameras as it can help the cameras maintain the delivery of crisp, high-resolution images, even in difficult lighting situations. P-Iris uses the same type of connector and cable as the traditional DC-iris control, which is also supported by the 3- and 5-megapixel cameras for backward compatibility.

For more on P-Iris and iris controls, go to:
www.axis.com/corporate/corp/tech_papers.htm
## Technical Specifications – AXIS P13 Network Camera Series

### Camera

**Models: indoor**
- **AXIS P1311**: VGA resolution, day and night
- **AXIS P1334**: SVGA resolution, day and night
- **AXIS P1344**: 1 Mpix HD/1080p, day and night
- **AXIS P1346**: 3 Mpix HD/1080p, day and night
- **AXIS P1347**: 5 Mpix HD/1080p, day and night

**Models: outdoor**
- **AXIS P1343-E**: SVGA resolution, day and night
- **AXIS P1344-E**: 1 Mpix HD/1080p, day and night
- **AXIS P1346-E**: 3 Mpix HD/1080p, day and night
- **AXIS P1347-E**: 5 Mpix HD/1080p, day and night

**Image sensor**
- **AXIS P1311**: Progressive scan RGB CMOS 1/4”
- **AXIS P1343-E**: Progressive scan RGB CMOS 1/4”
- **AXIS P1344-X**: Progressive scan RGB CMOS 1/3”
- **AXIS P1347-E**: Progressive scan RGB CMOS 1/3” (effective)

**Lens**
- All AXIS P13 cameras use CS-mount lenses
  - **AXIS P1311**: 4.0 mm; 48° view, F1.2, fixed iris
  - **AXIS P1343-E**: Varifocal 3-8 mm; 59° - 25° view, F1.4, DC-iris
  - **AXIS P1344-E**: Varifocal 3-8 mm; 72° - 28° view, F1.2, DC-iris
  - **AXIS P1346-E**: Varifocal 4-10 mm; 61° - 29° view, F1.8, F-iris
  - **AXIS P1347-E**: Varifocal 3.5-10 mm; 77° - 28° view, F1.8, F-iris

**Day and night**
- **AXIS P1343-E, P1344-E, P1346-E, P1347-E**: Automatically removable infrared-cut filter

**Minimum illumination**
- **AXIS P1311**: Color: 0.8 - 3000 Lux, F1.2
- **AXIS P1343-E**: Color: 0.3 lux, B/W: 0.05 lux, F1.4
- **AXIS P1344-E**: Color: 0.3 lux, B/W: 0.05 lux, F1.2
- **AXIS P1346-E**: Color: 0.8 lux, B/W: 0.08 lux, F1.4
- **AXIS P1347-E**: Color: 0.8 lux, B/W: 0.08 lux, F1.6

**Shutter time**
- **AXIS P1311**: 1/5000 to 1/1 s
- **AXIS P1343-E, P1344-E**: 1/25000 to 1/6 s
- **AXIS P1346-E**: 1/5000 to 1/6 s
- **AXIS P1347-E**: 1/25000 to 1/6 s

### Video

**Video compression**
- **AXIS P1311**: H.264/MPEG-4 Part 10/AVC, Motion JPEG, MPEG-4 Part 2
- **AXIS P1343-E, P1344-E, P1346-E, P1347-E**: H.264 (MJPEG-4 Part 10/AVC), Motion JPEG

**Resolutions**
- **AXIS P1311**: 640x480 (VGA) to 160x120
- **AXIS P1343-E**: 800x600 (SVGA) to 128x96
- **AXIS P1344-E**: 1280x960 (1 Mpix) to 160x90
- **AXIS P1346-E**: 2048x1536 (3 Mpix) to 160x90
- **AXIS P1347-E**: 2560x1920 (5 Mpix) to 160x90

**Frame rate**
- **MPEG-4 Part 2**: 30 fps in all resolutions
- **H.264**: 30 fps in all resolutions
- **Motion JPEG**: 20 fps in all resolutions; HD/1080p (1920x1080) mode and 2 MP 4:3 (1600x1200) mode: 20 fps in all resolutions

**Video streaming**
- **AXIS P1311**: H.264/MJPEG (as well as MPEG-4 Part 2 with AXIS P1311)
- **AXIS P1343-E, P1344-E, P1346-E, P1347-E**: Controllable frame rate and bandwidth

**Multi-view streaming**
- **AXIS P1311**: Up to 6 views concurrently at 12 fps in H.264/MJPEG (as well as MPEG-4 Part 2 with AXIS P1311)
- **AXIS P1343-E, P1344-E, P1346-E, P1347-E**: Digital PTZ, preset positions, guard tour

**Image settings**
- **Compression, color, brightness, sharpness, contrast, white balance, exposure control**, exposure zones, backlight compensation, fine tuning of behavior at low light, rotation

### Audio

**Audio streaming**
- Two-way

**Audio compression**
- AAC LC 8/16 kHz, G.711a, 8 kHz, G.726 ADPCM 8 kHz

**Audio input/output**
- External microphone input or line input, line output

**Network**
- **Security**: Password protection, IP address filtering, digest authentication, HTTPS encryption*, IEEE 802.1X network access control*, user access log
- **Protocols**: IPv4/IPv6, HTTP, HTTPS*, 802.3f, SMTP, Bonjour, UPnP, SNMP v1/v2/v3 (MB-69), DNS, Syslog, NTFS, RIPv2, RIPv1, UDP, IGMP, ICMP, DHCP, ARP, NTP, SSOCS

### System integration

**Application**
- Open API for software integration, including Axis APIX from Axis

**Interface**
- Axis Communications, available at www.axis.com

**Intelligent video**
- Video motion detection, active tampering alarm, audio detection

**Alarm triggers**
- Intelligent video, external input

**Alarm events**
- File upload via FTP, HTTP and e-mail notification via email, HTTP and TCP; external output activation; video recording to local storage

**Video buffer**
- **AXIS P1311**: 16 MB pre- and post alarm
- **AXIS P1343-E, P1344-E, P1346-E**: 40 MB pre- and post alarm
- **AXIS P1347-E**: 64 MB pre- and post alarm

**Installation aids**
- Focus assist, pixel counter

### General

**Casing**
- Camera: Metal (aluminum)

**Processor and memory**
- **AXIS P1311**: ATmega-8, 64 MB RAM, 32 MB flash
- **AXIS P1343-E, P1344-E**: ATmega-3, 128 MB RAM, 128 MB flash
- **AXIS P1346-E, P1347-E**: ATmega-3, 256 MB RAM, 128 MB flash

**Power**
- **AXIS P1311**: 10-24 V DC or 80 - 264 VAC
- **AXIS P1343-E**: 80-264 VAC
- **AXIS P1346-E**: 100-240 VAC
- **AXIS P1347-E**: 100-240 VAC
- **PoE**: IEEE 802.3af or 802.3at

**Connectors**
- **RJ-45 10BASE-T/100BASE-TX PoE**: 3.5 mm jack, 2.5 mm male line out

**Local storage**
- SD/SDHC memory card slot (card not included)

**Operating conditions**
- **AXIS P1311**: 0°C - 40°C, 95% non-condensation
- **AXIS P1343**: -5°C to 55°C, 85% (14°F to 122°F)
- **AXIS P1346**: -10°C to 50°C (32°F to 122°F)
- **AXIS P1347**: -20°C to 50°C (-4°F to 122°F)

**Approvals**
- EN 50122 Class B, EN 61000-3-2, EN 61000-3-3, EN 55024, FCC Part 15 Subpart B Class B, ICES-003 Class B, VCCI Class B
- **C-Lock**: SVHS2, E2K, EN 50200-1
- **AXIS P1346-E**: KY Class B

### Weight
- **AXIS P1311**: 0.6 kg (1.3 lb)

**Included accessories**

**More information is available at www.axis.com**
Dimensions: AXIS P13 Network Cameras

AXIS P1311 lens
26 mm (1.0")

AXIS P1344-E lens
42 mm (1.6")

AXIS P1344-E lens
55 mm (2.2")

AXIS P1346-E lens
40 mm (1.6")

AXIS P1347-E lens
56 mm (2.2")

Dimensions: AXIS P13-E Network Cameras and wall mount bracket with internal cable channel

Without sunshield

With sunshield

Wall mount arm

Back side of wall mount bracket

Optional accessories

AXIS PoE Midspan 1-port

AXIS T8123 High PoE 30 W Midspan 1-port

AXIS T80A Illuminators

Lenses

AXIS T8412 Installation Display

Optional mounting accessories for outdoor models

Wall bracket accessories

Adapter plate

Pole mount

Corner mount

Ceiling brackets with ball joint

Column mount with ball joint

For information on AXIS Camera Station and video management software from Axis' Application Development Partners, see www.axis.com/products/video/software/
AXIS P33 Network Camera Series
Fixed domes for any environment with remote focus and zoom.

AXIS P33 Network Cameras constitute a series of indoor and outdoor-ready fixed domes designed for efficient installation. Offering high performance video, including HDTV image quality and multiple H.264 streams, these cameras are ideal for unobtrusive video surveillance in exposed areas such as airports, subways, retail stores, schools and university campuses.

AXIS P33 Series delivers superb video quality in 30 frames per second in full resolution. AXIS P3343 Network Cameras provide SVGA resolution, whereas the AXIS P3344 models offer 1MP, or HDTV 720p in compliance with the SMPTE standard in resolution, color representation and frame rate.

AXIS P33 Network Cameras support automatic day and night functionality with removable infrared-cut filter for increased light sensitivity.

AXIS P33 Series provides multiple, individually configurable video streams in H.264 compression, which greatly optimizes bandwidth and storage without compromising image quality. Motion JPEG is also supported for increased flexibility.

The remote focus feature allows for convenient installation eliminating the need for hands-on focusing at the camera, and the remote zoom and pixel counter features ensure that the camera’s viewing angle is optimized for the scene and pixel resolution.

AXIS P33 Network Cameras range from standard indoor models to vandal-resistant outdoor models, perfectly adapted for harsh environments. All models in AXIS P33 Series have low, environment friendly power consumption, supplied by standard Power over Ethernet (IEEE 802.3af). This is the case even for the weather-proof models that operate in extreme temperatures from -40° to 55°C (-40° to 131°F).
Fixed domes designed for efficient installation
- indoors or outdoors

AXIS P33 Series is the perfect choice for a wide range of demanding video applications in outdoor and indoor environments. AXIS P33 Network Cameras are designed for professional video surveillance with easy and reliable installation in focus.

Outdoor-ready installation for extreme temperatures
The outdoor models of AXIS P33 Series are specially designed for reliable, vandal-resistant and weatherproof installation, with pre-installed heater and fan, and an integrated dehumidifying membrane eliminating any humidity caught in the camera casing during installation. These cameras come with a 5 m (16 ft.) Ethernet cable with a pre-mounted, specially designed gasket, enabling flush wall mounting and requiring no additional sealant. A weather shield is also included for effective protection against reflections from sunlight, or build-ups of rain or snow.

Mounting options
AXIS P33 Series offers a wide range of optional indoor and outdoor mounting kits for installation in a drop ceiling or on a wall, pole, corner or junction box, etc. Both indoor and outdoor camera models include a smoked transparent cover as an alternative to the clear cover, for additional flexibility.

Easy installation with remote focus and zoom
AXIS P33 Network Cameras offer unique installation capabilities with remote focus and zoom. The remote focus feature enables convenient focusing over the network, eliminating the need for hands-on fine-tuning at the camera. The remote zoom functionality ensures that the viewing angle is optimized for the area to be monitored.

Unique pixel counter feature
The unique pixel counter offered in AXIS P33 Series allows the installer to easily verify that the camera installation fulfills any regulatory or specific customer requirements, for example calculating the pixel resolution of the face of a person passing a doorway monitored by the camera.
Optional accessories for outdoor models

Pendant adapter kit including weather shield

AXIS T91A Brackets

Wall

Corner

I/O audio cable, 5 m (16 ft.)

Optional accessories for indoor models

AXIS T91A Brackets

Mounting bracket

Drop-ceiling mount kit with transparent or smoked cover

Ceiling

Wall

Pendant adapter kit

For information on AXIS Camera Station and video management software from Axis' Application Development Partners, see www.axis.com/products/video/software/
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<tr>
<th><strong>Camera</strong></th>
<th><strong>Network</strong></th>
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<td><strong>Security</strong></td>
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</tr>
<tr>
<td>AXIS P3344-V: 1MP/1642C 720p, vandal-resistant, outdoor</td>
<td><strong>System Integration</strong></td>
</tr>
<tr>
<td>6mm or 12mm as suffix specifies lens option</td>
<td>Application: Open API for software integration, including VAPIX® from Axis Communications available at <a href="http://www.axis.com">www.axis.com</a></td>
</tr>
<tr>
<td>Note: AXIS P3343-V and AXIS P3344-V are not part of AXIS P33 Series</td>
<td>Interface: Intelligent video, external alarm</td>
</tr>
<tr>
<td><strong>Image sensor</strong></td>
<td>Alarm triggers: Video motion detection, active tampering alarm, audio detection</td>
</tr>
<tr>
<td>1/4&quot; Progressive scan RGB CMOS</td>
<td><strong>Alarm events</strong></td>
</tr>
<tr>
<td><strong>Lens</strong></td>
<td>File upload via FTP, HTTP and email</td>
</tr>
<tr>
<td>Varifocal, DC-iris, remote focus and zoom</td>
<td>Notification via email, HTTP and TCP</td>
</tr>
<tr>
<td>AXIS P3343-V/-V/-VE 6mm: 2.5-6 mm, F1.2, angle of view*: 34°-72°</td>
<td>External output activation</td>
</tr>
<tr>
<td>AXIS P3343-V/-V/-VE 12mm: 3.3-12 mm, F1.4, angle of view*: 17°-54°</td>
<td>Video recording to local storage</td>
</tr>
<tr>
<td>AXIS P3344-V/-V/-VE 6mm: 2.5-6 mm, F1.4, angle of view*: 40°-87°</td>
<td><strong>Video buffer</strong></td>
</tr>
<tr>
<td>AXIS P3344-V/-V/-VE 12mm: 3.3-12 mm, F1.6, angle of view*: 20°-70°</td>
<td>48 MB pre- and post alarm</td>
</tr>
<tr>
<td><strong>Day and night</strong></td>
<td><strong>General</strong></td>
</tr>
<tr>
<td>Automatically removable infra-red-cut filter</td>
<td><strong>Casing</strong></td>
</tr>
<tr>
<td><strong>Illumination</strong></td>
<td>Polycarbonate transparent cover</td>
</tr>
<tr>
<td>AXIS P3343-V/-V/-VE 6mm: Color: 0.2 lux, F1.2, B/W: 0.04 lux, F1.2</td>
<td>Aluminum inner camera module with encapsulated electronics</td>
</tr>
<tr>
<td>AXIS P3343-V/-V/-VE 12mm: Color: 0.3 lux, F1.4, B/W: 0.05 lux, F1.4</td>
<td>AXIS P3343-V/-V/-VE 1000 kg (2200 lb) impact-resistant aluminum casing</td>
</tr>
<tr>
<td><strong>Shutter time</strong></td>
<td>AXIS P3344-V/-V/-VE 1000 kg (2200 lb) impact-resistant IP66- and NEMA 4X-rated aluminum casing with integrated dehumidifying membrane</td>
</tr>
<tr>
<td>1/50000 to 1/6 s</td>
<td><strong>Processor and memory</strong></td>
</tr>
<tr>
<td><strong>Camera angle adjustment</strong></td>
<td>ARTPEC-3, 128 MB RAM, 128 MB Flash</td>
</tr>
<tr>
<td>Pan 360°, tilt 170°, rotation 340°</td>
<td><strong>Power</strong></td>
</tr>
<tr>
<td><strong>Pan/Tilt/Zoom</strong></td>
<td>Power over Ethernet (IEEE 802.3af)</td>
</tr>
<tr>
<td>Digital PTZ, preset positions, guard tour</td>
<td>AXIS P3343-V and AXIS P3344-V: Class 2</td>
</tr>
<tr>
<td><strong>Video</strong></td>
<td>AXIS P3343-V/EP3344-VE: Class 3</td>
</tr>
<tr>
<td>Video compression</td>
<td><strong>Connectors</strong></td>
</tr>
<tr>
<td>H.264 (MPEG-4 Part 10/AVC)</td>
<td>RJ-45 10BASE-T/100BASE-TX PoE</td>
</tr>
<tr>
<td>Motion JPEG</td>
<td>Terminal block for 1 alarm input and 1 output</td>
</tr>
<tr>
<td>Resolutions</td>
<td>3.5 mm mini-jack in, 3.5 mm line out</td>
</tr>
<tr>
<td>AXIS P3343-V/-V/-VE: 800x600 to 1600x900</td>
<td><strong>Local storage</strong></td>
</tr>
<tr>
<td>AXIS P3344-V/-V/-VE: 1280x800 to 1920x1080</td>
<td>SD/SDHC memory card slot [card not included]</td>
</tr>
<tr>
<td><strong>Frame rate</strong></td>
<td><strong>Operating conditions</strong></td>
</tr>
<tr>
<td>H.264</td>
<td>AXIS P3343-V and AXIS P3344-V: 0 to 50 °C (32 to 122 °F)</td>
</tr>
<tr>
<td>30 fps in all resolutions</td>
<td>Humidity 20 ~ 90% RH (non-condensing)</td>
</tr>
<tr>
<td><strong>Frame rate</strong></td>
<td>AXIS P3343-V/EP3344-VE: -40 to 55 °C (−40 to 131 °F)</td>
</tr>
<tr>
<td>Motion JPEG</td>
<td><strong>Approvals</strong></td>
</tr>
<tr>
<td>30 fps in all resolutions</td>
<td>EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 55024, FCC Part 15 Subpart B Class B, ICES-003 Class B, VCCI Class B, C-TEC AXIS CSIP 22, EN 60950-1, AXIS P3343-V/EP3344-VE: IEC 60065 IEC 60065 IEC 60065 Type 4X</td>
</tr>
<tr>
<td><strong>Video streaming</strong></td>
<td><strong>Weight</strong></td>
</tr>
<tr>
<td>Multi-stream H.264 and Motion JPEG</td>
<td>AXIS P3343/EP3344: 446 g (1.0 lb)</td>
</tr>
<tr>
<td>Controllable frame rate and bandwidth</td>
<td>AXIS P3343-V/EP3344-V: 690 g (1.5 lb)</td>
</tr>
<tr>
<td>VBR/CBR H.264</td>
<td>AXIS P3343-V/EP3344-VE: 1.4 kg (3.1 lb)</td>
</tr>
<tr>
<td>Figures below specify the number of individually configurable streams provided in full resolution and frame rate (see details above) when using one compression format. More streams can be achieved if identical or limited in frame rate/resolution.</td>
<td><strong>Included accessories</strong></td>
</tr>
<tr>
<td>AXIS P3344-V/-V/-VE: H.264: 1 stream (2 streams in HDTV 720p); Motion JPEG: 1 stream</td>
<td>AXIS P3343-VE/EP3344-V: Mounting bracket, cable shield, weather shield, 5 m (16.4 ft) network cable with pre-mounted gasket</td>
</tr>
</tbody>
</table>

*This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. ([www.openssl.org](http://www.openssl.org))

More information is available at www.axis.com
AXIS P5534 PTZ Dome Network Camera
HDTV pan/tilt/zoom camera with 18x zoom for indoor applications.

AXIS P5534 PTZ Dome Network Camera offers superb HDTV-quality video and 18x zoom for indoor surveillance applications. With an IP51-rated protection against dust and dripping water, it is ideal for use at airports, train stations, warehouses, shops and schools.

AXIS P5534 provides HDTV 720p in compliance with SMPTE 296M standard of 1280 x 720 pixel resolution, full frame rate, HDTV color fidelity and a 16:9 format. The camera has day and night functionality for high image quality in low light conditions. It can also deliver multiple H.264 and Motion JPEG streams simultaneously. H.264 greatly optimizes bandwidth and storage without compromising image quality.

The camera's IP51 rating ensures reliable operation even in dusty and potentially wet indoor conditions. Support for High Power over Ethernet also makes installation easy since only one cable is needed for carrying power, video and PTZ commands. A High PoE midspan is supplied with the camera.

The PTZ camera provides 18x optical and 12x digital zoom with autofocus. It can pan 360° due to the unique Auto-flip functionality, which allows the camera to simulate a continuous pan.

AXIS P5534 offers the Advanced Gatekeeper functionality, which enables the camera to automatically move to a preset position when motion is detected in a pre-defined area and return to the home position after a set time. Other features include two-way audio and audio detection, in addition to four configurable inputs/outputs for connection to external devices such as sensors and relays. Local storage with SD/SDHC memory card is also supported.
### Technical specifications – AXIS P5534 PTZ Dome Network Camera

#### Camera

<table>
<thead>
<tr>
<th>Models</th>
<th>AXIS P5534 60 Hz, AXIS P5534 50 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image sensor</td>
<td>1/3” Progressive scan, 1.3 Megapixel</td>
</tr>
<tr>
<td>Lens</td>
<td>Zoom: 4.7 - 84.6 mm, F1.6 - 2.8, autofocus, automatic daylight</td>
</tr>
<tr>
<td></td>
<td>Horizontal angle of view: 3.2° - 55.2°</td>
</tr>
<tr>
<td>Minimum illumination</td>
<td>Color: 0.74 lux at 50 Hz, F1.6</td>
</tr>
<tr>
<td></td>
<td>B/W: 0.04 lux at 50 Hz, F1.6</td>
</tr>
<tr>
<td>Shutter time</td>
<td>1/10 000 s to 1/4 s</td>
</tr>
<tr>
<td>Pan/Tilt/Zoom</td>
<td>E-flip, Auto-flip, 100 preset positions</td>
</tr>
<tr>
<td></td>
<td>Pan: 360° (with auto-flip), 0.2° - 300°/s</td>
</tr>
<tr>
<td></td>
<td>Tilt: 180°, 0.2° - 300°/s</td>
</tr>
<tr>
<td></td>
<td>16x optical zoom and 12x digital zoom, total 216x zoom</td>
</tr>
<tr>
<td></td>
<td>Advanced Gatekeeper, guard tour, control queue</td>
</tr>
<tr>
<td></td>
<td>On-screen directional indicator</td>
</tr>
</tbody>
</table>

#### Video

<table>
<thead>
<tr>
<th>Resolution</th>
<th>H.264 (MPEG-4 Part 10/AVC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame rate</td>
<td>Multiple, individually configurable streams in H.264 and Motion JPEG</td>
</tr>
<tr>
<td></td>
<td>Controllable frame rate and bandwidth</td>
</tr>
<tr>
<td></td>
<td>VBR/CBR H.264</td>
</tr>
<tr>
<td></td>
<td>Manual shutter time, compression, color, brightness, sharpness, white balance, exposure control, exposure zones, backlight compensation, fine tuning of behavior at low light, rotation, text and image overlay, privacy mask, image freeze on PTZ</td>
</tr>
</tbody>
</table>

#### Audio

<table>
<thead>
<tr>
<th>Audio streaming</th>
<th>Two-way</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio compression</td>
<td>AAC-LC 8/16 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz</td>
</tr>
<tr>
<td>Input/output</td>
<td>Requires multi-connector cable (not included) for external microphone input or line input and line output</td>
</tr>
</tbody>
</table>

#### Network

<table>
<thead>
<tr>
<th>Security</th>
<th>Password protection, IP address filtering, HTTPS encryption, IEEE 802.1X network access control, digest authentication, user access log</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supported protocols</td>
<td>IPv4/6, HTTP, HTTPS*, SS/TLS*, QoS Layer 3 DiffServ, FTP, SMTP, Bonjour, UPnP, SNMPv3/IPv4v6v3 (MB-II), DNS, DynDNS, NTP, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS</td>
</tr>
</tbody>
</table>

#### System integration

<table>
<thead>
<tr>
<th>Application</th>
<th>Open API for software integration, including VAPIX® from Axis Communications, available at <a href="http://www.axis.com">www.axis.com</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Program/running Interface</td>
<td>Support for AXIS Video Hosting System (AVHS) with One-Click Camera Connection</td>
</tr>
<tr>
<td>Intelligents</td>
<td>Video motion detection, audio detection</td>
</tr>
<tr>
<td>Alarm triggers</td>
<td>Intelligent video, external input, PTZ position, temperature, memory card full</td>
</tr>
<tr>
<td>Alarm events</td>
<td>File upload via FTP, HTTP and email</td>
</tr>
<tr>
<td></td>
<td>Notification via email, HTTP and TCP</td>
</tr>
<tr>
<td></td>
<td>External output, PTZ position, local storage, play audio clip</td>
</tr>
<tr>
<td>Video buffer</td>
<td>96 MB pre- and post-alarm</td>
</tr>
</tbody>
</table>

#### General

<table>
<thead>
<tr>
<th>Casing</th>
<th>IP66-rated, metal casing (aluminum), acrylic (PMMA) clear dome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processors and memory</td>
<td>ARTPEC-3, 256 MB RAM, 128 MB Flash</td>
</tr>
<tr>
<td>Power</td>
<td>High Power over Ethernet IEEE 802.3at</td>
</tr>
<tr>
<td></td>
<td>AXIS T8123 High PoE Midspan 1-port included: 100-240 V AC 24-34 V DC, max. 17 W; 20-24 V AC, max. 23.8 VA</td>
</tr>
<tr>
<td>Connectors</td>
<td>RJ-45 for 10BASE-T/100BASE-TX PoE</td>
</tr>
<tr>
<td></td>
<td>Multi-connector (cable not included) for power in, 4 configurable alarm inputs/outputs, mic in, line mono input, line mono output to active speaker</td>
</tr>
<tr>
<td>Local storage</td>
<td>SD/SDHC memory card slot (card is not included)</td>
</tr>
<tr>
<td>Operating conditions</td>
<td>0 °C to 50 °C (32 °F to 122 °F)</td>
</tr>
<tr>
<td></td>
<td>Humidity 20 - 80% RH (non-condensing)</td>
</tr>
<tr>
<td>Approvals</td>
<td>EN 65022 Class B, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, EN 55024, FCC Part 15 Subpart B Class B, IEC/EN-55020 Class B, VCCI Class B, C-tick AS/NZS CISPR 22, EN 60950-1, KCC Class B</td>
</tr>
<tr>
<td></td>
<td>IEC 60721-4-3 Class J3, S3, SM, EN/IEC 60068-2-2 Midspan: EN 60950-1, BS, UL, cUL, CE, VCCI CB, KCC</td>
</tr>
<tr>
<td>Weight</td>
<td>Camera: 1.9 kg (4.2 lb) Camera with drop-ceiling mount: 2.3 kg (5.1 lb)</td>
</tr>
<tr>
<td>Included accessories</td>
<td>AXIS T8123 High PoE Midspan 1-port, mounting kit for hard and drop ceilings, clear and smoked dome cover, Installation Guide, CD with User's Manual, recording software, installation and management tools, Windows decoder 1-user license</td>
</tr>
</tbody>
</table>

Video management software (not included)

| Video management software from Axis Application Development Partners. For more information, see www.axis.com/products/video/softwarue/ |

#### Dimensions

- Hard-ceiling mount
- Drop-ceiling mount

#### Optional accessories

- AXIS T81A Brackets for indoor installation
- AXIS T900A Illuminators
- AXIS 295 Video Surveillance Joystick
- Multi-connector cable for power, inputs, and audio

#### Outdoor Kit

- AXIS T854 Series Dome Housing

*This product includes software developed by the OpenSSL Project for use in the
OpenSSL Toolkit. (www.openssl.org)

More information is available at www.axis.com

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**AXIS 215 PTZ Network Camera**

Compact pan/tilt/zoom camera for 360° video surveillance.

AXIS 215 PTZ Network Camera, with its unique pan/tilt/zoom capabilities and tamper-resistant design, is the perfect solution for video surveillance in retail stores, banks, receptions and schools.

The camera offers advanced remote monitoring with pan, tilt and zoom over IP networks. The total magnification capacity of 48x (12x optical zoom and 4x digital zoom) increases monitoring options with the ability to show a detailed and precise view of the zoomed-in area.

AXIS 215 PTZ has 360° pan capability, thanks to the unique Auto-flip function. Auto-flip allows the camera to simulate a continuous pan beyond the mechanical stop, thereby enabling an operator to continuously follow an object.

The E-flip function flips the image electronically 180°, allowing a person or object to be followed when passing directly below the camera in the correct orientation without a repositioning delay.

The camera has automatic day and night functionality with a removable IR-cut filter, providing color video when there is sufficient light and high quality black and white video in dark conditions.

AXIS 215 PTZ can send an alarm at a configurable audio detection level. Its two-way audio support allows users to communicate with visitors and intruders.

Simultaneous MPEG-4 and Motion JPEG video streams allow for optimization in both image quality and bandwidth efficiency.
## Technical specifications – AXIS 215 PTZ Network Camera

### Camera

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macrolens</td>
<td>AXIS 215 PTZ 60 Hz/NTSC</td>
</tr>
<tr>
<td>AXIS 215 PTZ 60 Hz/PAL</td>
<td></td>
</tr>
<tr>
<td>Image sensor</td>
<td>1/2.8&quot; Interlaced CCD</td>
</tr>
<tr>
<td>Lens</td>
<td>3.8 - 46 mm, f1.6 - F2.7, automatic day/night, autofocus</td>
</tr>
<tr>
<td>Angle of view, horizontal</td>
<td>4.4° - 51.6°</td>
</tr>
<tr>
<td>Minimum illumination</td>
<td>Color: 1 lux at 30 IRE, F1.8</td>
</tr>
<tr>
<td>Shutter time</td>
<td>NTSC: 1/50000 to 4/3 s, PAL: 1/50000 to 8/3 s</td>
</tr>
<tr>
<td>Pan/Tilt/Zoom</td>
<td>20 preset positions</td>
</tr>
<tr>
<td></td>
<td>Auto-flip, E-flip</td>
</tr>
<tr>
<td></td>
<td>±170° (290° via Auto-flip) pan range, 180°/s pan speed</td>
</tr>
<tr>
<td></td>
<td>180° tilt range, 140°/s tilt speed</td>
</tr>
<tr>
<td></td>
<td>12x optical, 4x digital zoom</td>
</tr>
<tr>
<td>Control queue, image freeze, sequence mode</td>
<td>Support Windows compatible joystick</td>
</tr>
<tr>
<td></td>
<td>Designed for operator control</td>
</tr>
</tbody>
</table>

### Video

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video compression</td>
<td>MPEG-4 Part 2 (ISO/IEC 14496-2)</td>
</tr>
<tr>
<td></td>
<td>Motion JPEG</td>
</tr>
<tr>
<td>Resolutions</td>
<td>NTSC: 704x480 to 176x120, PAL: 704x576 to 176x144</td>
</tr>
<tr>
<td>Frame rate</td>
<td>Up to 30/25 (NTSC/PAL) in 4CIF, CIF, CIFExp</td>
</tr>
<tr>
<td>Frame rate</td>
<td>Up to 30/25 (NTSC/PAL) in all resolutions</td>
</tr>
<tr>
<td>Motion JPEG</td>
<td></td>
</tr>
<tr>
<td>Video streaming</td>
<td>Simultaneous MPEG-4 and Motion JPEG</td>
</tr>
<tr>
<td></td>
<td>Controllable frame rate and bandwidth</td>
</tr>
<tr>
<td></td>
<td>VBR/CBR 4CIF, ISMA compatible</td>
</tr>
<tr>
<td>Image settings</td>
<td>Compression, color, brightness, sharpness, white balance, exposure control,</td>
</tr>
<tr>
<td></td>
<td>backlight compensation, day/night</td>
</tr>
<tr>
<td></td>
<td>Rotation Off: 180°</td>
</tr>
<tr>
<td></td>
<td>Aspect ratio correction</td>
</tr>
<tr>
<td></td>
<td>Text and image overlay</td>
</tr>
<tr>
<td></td>
<td>De-interlace (4CIF resolution)</td>
</tr>
</tbody>
</table>

### Audio

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio streaming</td>
<td>Two-way, full or half duplex</td>
</tr>
<tr>
<td>Audio compression</td>
<td>G.711 PCM 8 kHz, 64 kbps</td>
</tr>
<tr>
<td></td>
<td>G.726 RPECM 6 kHz, 32 or 24 kbps</td>
</tr>
<tr>
<td>Audio input/output</td>
<td>External microphone input or line input, line level output</td>
</tr>
</tbody>
</table>

### Network

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security</td>
<td>Password protection, IP address filtering, HTTPS encryption, IEEE 802.1X</td>
</tr>
<tr>
<td></td>
<td>network access control</td>
</tr>
<tr>
<td>Supported protocols</td>
<td>IP-4/6, HTTP, HTTPS, IPv4, IPv6, OS-Layer 2, OSPF, ARP, FTP, SMTP, Bonjour,</td>
</tr>
<tr>
<td></td>
<td>UPnP, SNMPv1/v2/v3, IBMS, DNS, DynDNS, HTTP, FTP, TCP, UDP, ICMP, RTP,</td>
</tr>
<tr>
<td></td>
<td>RIPv1, IGMP, RTSP, DHCP, ARP, SOCKS</td>
</tr>
</tbody>
</table>

### System/Integration

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>Open API for software integration, including VAPIX®</td>
</tr>
<tr>
<td>Programming Interface</td>
<td>from Axis Communications available at <a href="http://www.axis.com">www.axis.com</a></td>
</tr>
<tr>
<td>Intelligent video</td>
<td>Video motion detection, audio detection</td>
</tr>
<tr>
<td>Alarm triggers</td>
<td>Intelligent video and external input</td>
</tr>
<tr>
<td>Alarm events</td>
<td>File upload via FTP, HTTP and email</td>
</tr>
<tr>
<td></td>
<td>Notification via email, HTTP and TCP</td>
</tr>
<tr>
<td></td>
<td>External output activation</td>
</tr>
<tr>
<td>Video buffer</td>
<td>9 MB pre- and post alarm</td>
</tr>
</tbody>
</table>

### General

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processors and memory</td>
<td>ETRAX 5S, ARTPEC-2, 32 MB RAM, 8 MB Flash</td>
</tr>
<tr>
<td>Power</td>
<td>12 V DC ±5%, max. 14.5 W</td>
</tr>
<tr>
<td>Connectors</td>
<td>RJ-45 for 10BASE-T/100BASE-TX</td>
</tr>
<tr>
<td></td>
<td>Terminal block for 1 alarm input, 1 output and power cut for I/O</td>
</tr>
<tr>
<td></td>
<td>3.5 mm mic/line in, 3.5 mm line out</td>
</tr>
<tr>
<td>Operating conditions</td>
<td>0 - 45 °C (32 - 113 °F)</td>
</tr>
<tr>
<td></td>
<td>Humidity 20 - 80% RH (non-condensing)</td>
</tr>
<tr>
<td>Approvals</td>
<td>EN 55012 Class B, EN 55024, EN 61000-3-2, EN 61000-1-3, EN 60950-1, FCC</td>
</tr>
<tr>
<td></td>
<td>Part 15 Subpart B Class B, IEC 62305-1, C-class AS/NZS 3548</td>
</tr>
<tr>
<td></td>
<td>Power supply: UL, CSA, CE</td>
</tr>
<tr>
<td>Weight</td>
<td>720 g (1.6 lb) incl. hard ceiling cover</td>
</tr>
<tr>
<td></td>
<td>1260 g (2.8 lb) incl. drop ceiling mounting bracket and cover</td>
</tr>
<tr>
<td>Included accessories</td>
<td>Installation Guide, CD with User’s Manual, recording software,</td>
</tr>
<tr>
<td></td>
<td>Installation and management tools, hard ceiling and drop ceiling mount kits,</td>
</tr>
<tr>
<td></td>
<td>indoor power supply, transparent and smoked domes, Windows decoder 1-user license</td>
</tr>
</tbody>
</table>

More information is available at www.axis.com

## Optional accessories

### Various housings

#### AXIS 295 Video Surveillance Joystick

#### AXIS T90A Illuminators

For information on AXIS Camera Station and video management software from Axis' Application Development Partner, see www.axis.com/products/video/softwar/
AXIS M7001 Video Encoder and Covert Surveillance Kit

The smallest video encoder with H.264.

The one-channel AXIS M7001 Video Encoder offers a highly compact design with superb H.264 performance, providing an easy and cost-effective solution for integrating small or large numbers of analog CCTV cameras into an IP-based video surveillance system.

The palm-sized, standalone AXIS M7001 is designed for installation close to an analog camera. It supports all types of analog cameras including PTZ (pan/tilt/zoom) and PTZ domes.

AXIS M7001 is perfect for small and large analog video installations, especially where an IP network infrastructure is already in place. Its small size also makes it ideal for use in discreet surveillance applications, for example, in retail stores and banks, and in camera housings.

The H.264 video compression format drastically reduces bandwidth and storage requirements without compromising image quality. Motion JPEG is supported for increased flexibility. The video encoder also provides video motion detection.

AXIS M7001 is powered over Ethernet using the same cable as for data transmission, which simplifies installation. The video encoder can, in turn, feed power to the small covert camera that is included in the AXIS M7001 Covert Surveillance Kit.

AXIS M7001 can deliver two simultaneous video streams, one in H.264 and another in Motion JPEG, at full frame rate in all resolutions up to D1 (720x480 in NTSC, 720x576 in PAL).
### Technical specifications – AXIS M7001 Video Encoder

<table>
<thead>
<tr>
<th>Video compression</th>
<th>H.264 (MPEG-4 Part 10(AVC)) Motion JPEG</th>
</tr>
</thead>
</table>
| Resolutions       | NTSC: 720x480 to 176x134
                    | PAL: 720x576 to 176x144 |
| Frame rate H.264  | 30/25 (NTSC/PAL) fps in all resolutions |
| Frame rate Motion JPEG | 30/25 (NTSC/PAL) fps in all resolutions |
| Video streaming   | Two simultaneous streams, one in H.264 and one in Motion JPEG, in all resolutions
                    | Controllable frame rate and bandwidth |
| VBR/CBR           | H.264 |
| Image settings    | Compression, color, brightness, contrast, saturation, rotation
                    | Aspect ratio correction, mirroring of images
                    | Text overlay
                    | Privacy mask
                    | Deinterlace filter |
| Pan/Tilt/Zoom      | Wide range of analog PTZ cameras supported (drivers available for download at www.axis.com)
                    | 20 presets, guard tour, PTZ control queue
                    | Supports Windows compatible josticks |
| Network            | Password protection, IP address filtering, HTTPS encryption, digest authentication, user access log |
| Security           | IPv4/IPv6, DHCPv6, HTTPS, GSM layer 3 DiffServ, FTP, SMTP, Bonjour,
                    | UPnP, SNMPv1/v2c/v3(MIB-II), DNS, DynDNS, NTP, RTSP, RTP,
                    | SIP, H.323, T.38
| Supported protocols| RS-422/485, RS-485 |

### System integration

| Application       | Open API for software integration, including VAPIX®
|-------------------| from Axis Communications available at www.axis.com |
| Programming Interface | Video motion detection |
| Intelligent video | Intelligent video |
| Alarm triggers    | File upload via FTP, HTTP and email
                    | Notification via email, HTTP and TCP
                    | PTZ presets |
| Video buffer      | 20 MB pre- and post-alarm |

### Specifications

**Casing**
- Standalone or wall mount

**Processors and memory**
- ARTPEC-3, 64 MB RAM, 128 MB Flash

**Power**
- Power over Ethernet IEEE 802.3af Class 2
- Connected
- Analog composite video BNC input, NTSC/PAL auto-sensing RJ-45 10BaseT/100BaseTX PoE
- 2.5 mm (0.1") analog composite video line plug input RS-422/RS-485

**Operating conditions**
- Temperature: 0 – 50 °C (32 – 122 °F)
- Humidity: 20 – 90% RH (non-condensing)

**Approvals**
- E55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 65024, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class B, ICES-003 Class B, VCCI Class B, C-tick AS/NZS CISPR 22, EN 60950-1

**Weight**
- 82 g (0.18 lb) per unit

**Included accessories**

### Dimensions for AXIS M7001 Video Encoder

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>37.4 mm (1.5&quot;)</td>
<td>Width</td>
</tr>
<tr>
<td>30.1 mm (1.2&quot;)</td>
<td>Height</td>
</tr>
<tr>
<td>86 mm (3.4&quot;)</td>
<td>Depth</td>
</tr>
</tbody>
</table>

**Covert camera**
- Dimensions: 15.3 x 28.4 mm (0.6 x 1.1”), Ø 15 mm (0.59”)
- 51° horizontal angle of view, fixed iris
- 1 lux minimum illumination, IP66-rated
- 1.5 m (4.9") cable with 2.5 mm (0.1”) analog composite video line plug output

More information is available at www.axis.com

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Drop ceiling mounts

AXIS 225FD Drop Ceiling Mount
Part No. 5003-001
Description Bracket and cover plate for the AXIS 225FD drop ceiling mount.
Compatibility AXIS 225FD

Drop ceiling mount kit with clear transparent cover
Part No. 5005-031
Compatibility AXIS 216FD
AXIS 216MFD
AXIS M3203
AXIS M3204
AXIS P3301

Drop ceiling mount kit with smoked transparent cover
Part No. 5005-041
Compatibility AXIS 216FD
AXIS 216MFD
AXIS M3203
AXIS M3204
AXIS P3301

Drop Ceiling Mount for AXIS P3343 and AXIS P3344 Clear
Part No. 5502-361
Description Drop ceiling mount for AXIS P3343 and AXIS P3344 including clear transparent bubble. For indoor use.
Compatibility AXIS P3343
AXIS P3344

Drop Ceiling Mount for AXIS P3343 and AXIS P3344 Smoked
Part No. 5502-371
Description Drop ceiling mount for AXIS P3343 and AXIS P3344 including smoked transparent bubble. For indoor use.
Compatibility AXIS P3343
AXIS P3344
Sound Surveillance™

ETS
Electronic Technical Services Inc.
211 Conchas SE
Albuquerque, NM 87123
PH 505-888-3923 FAX 505-888-3926
Website: www.etsnm.com

SM5
Audio Surveillance Kit

Description
Single zone audio surveillance system designed to connect directly to an audio recorder, video recorder, DVR, CCTV monitor (with a built in speaker), remote monitoring equipment, etc.

Kit Includes
- SM1 Pre-amplified microphone.
- SM1 mounting screws.
- SM2 Interface adapter.
- 12 VDC AC adapter.
- 3' RCA or 3.5mm Patch cable.
- Warning label.
- Installation instructions.

Options
SPECIFY: RCA output connectors OR 3.5mm when ordering.

Wiring Requirements
- Stranded 22-gauge, 2-conductor shielded cable with drain wire.
  Max. cable length: 1500'.

Caution
it is the responsibility of the installation company and end user to comply with state and federal privacy laws regarding the use of audio surveillance equipment. If you are unfamiliar with these laws, consult a qualified attorney. In most cases, posting the provided warning label in plain view is all that is required.

Warranty
1 year parts and labor. Made in U.S.A.

SM1 Microphone Specifications
- Omni-directional Electret element.
- 25' range in all directions.
- Frequency response: 200-16KHz.
- Low noise MOSFET pre-amplifier.
- Line level, unbalanced output.
- Adjustable gain.
- Treble boost circuit. Selectable on/off. Enhances clarity of time lapse recordings.
- Limiter circuit. Selectable on/off.
- 3 position Euro-style connector makes cable termination fast and clean.
- Flush mountable. Can be mounted on a single gang electrical box.
- Power: 12 VDC @ 10mA
- See SM1 data sheet for more information.

SM2 Interface Adapter Specifications
- Standard RCA or 3.5mm (please specify) jack for connection to DVRs, etc.
- 3 position Euro-style connector makes cable termination fast and clean.
- LED power indicator.
- Power: 12 VDC @ 10mA
- Reverse polarity protected and fused.
- Dimensions L 2.7 x W 1.7 x H 1.2
- See SM2 data sheet for more information.

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Ocularis™ - Specifications Sheet

Version 1.0 SP3, June 2010

For full list of features, see the Ocularis Architecture & Engineering (A&E) document, available by request.

General

Ocularis is a comprehensive video-centric Physical Security Information Management (PSIM) platform which provides management and coordination of integrated physical security, content analytic, radiation and other sensor detection, transaction and other enterprise systems; full VMS functionality with centralized management of cameras, connected devices, recording servers and redundant servers; and centralized event, end-user rights and video recording and distribution management.

The Ocularis-integrated VMS component enables the user to view, manage, and record video from an unlimited number of IP and non-IP video surveillance cameras at multiple sites, manage short- and long-term video storage, and combine video with non-video alerts, resulting in automatic video delivery to subscribers of interest.

Major System Components

Ocularis is a unified, modular software platform that consists of a number of components:

1. **Ocularis Base**: Provides system-wide management, user access, shared event management, alarm and event correlation, video access, and distribution rights.

2. **Ocularis Recorder (NetEVS/NetDVMS)**: provides video recording, storage management, video delivery to users and camera management.

3. **Ocularis Client**: Access to video, management of alerts and shared event handling is done through the unified Video Client software, for desktop and control room video wall environments.

4. **Add-Ons and Integrated Applications**: Video Wall management; Video Content Analytics; forensics applications; and integrated physical security solutions (access control, radiation detection, contact closure, etc.)

System Highlights

- **Video-Centric Physical Security Information Management (PSIM)**: Ocularis manages video and event data from multiple DVR, NVR and VMS systems as well as physical security, content analytic, environmental detection, transaction and other enterprise systems.

- **Designed for Integration**: Ocularis allows the integration of a host of add-on components via integration tools including Data Link Integration events, API commands, Contact Closure and more. An optional Software Development Kit (SDK) enables integration of 3rd-party components.

- **Choice of Scalable, Multi-Site/Multi-Server recorders**: Ocularis was designed to support multiple network video recorder (NVR) and video management systems (VMS) as the video recording component. These include OnSSI’s market-leading NetDVMS and NetEVS, which support unlimited cameras and integrated devices and systems, connected to multiple recording servers at multiple sites. Video from any camera (including two-way audio) can be accessed by authorized users from anywhere in the network, through multiple video clients for desktop, video wall and mobile (handheld) operation. Additional functionality provided by NetEVS includes central recording server management, failover for both recording servers and the administration server, multicasting and unicasting in all video compression formats, dual-stream support, and more.

- **Open-Architecture, Non-Proprietary Technology**: Ocularis runs on off-the-shelf PC hardware; and supports all leading manufacturers’ cameras and devices (over 500 models) as well as all industry-standard compression formats (MPEG4, MJPEG, H.263 and H.264).

- **Per-Camera Configuration of All Video Streaming, Recording and Archiving Parameters**: Optimized system resources is enabled through per-camera configuration for compression level/format, image resolution, bandwidth, framerate, conditional recording, retention time, archiving frequency, archiving location and more.
• **Flexible storage allocation**: storage, based on either size or retention period, is allocated per camera or camera group, with prioritization of important cameras. Video can be stored on local or network drives, using a database structure that eliminates the distinction between ‘live recording’ and ‘archived’ video.

• **Central Management for Alerting, Shared Event Handling, Client Asset and User Authorization Data**: All recording servers and Ocularis Client users are managed by the Ocularis Base, which coordinates all event and alert handling, manages users’ rights to specific cameras and functions system wide (Active Directory supported), and distributes all shared assets.

• **Highly Intuitive Unified Video Client**: Ocularis Client offers a user-friendly operator interface, for both desktop and control room video-wall environments, with only minutes of training required for full proficiency.

• **Live Monitoring with Instantaneous Investigation**: While monitoring live video feeds, users can perform basic investigation on individual cameras – playback, digital PTZ and optical PTZ (for PTZ cameras) - without the need to switch to a dedicated investigation mode.

• **Multiple Investigation Tools**: Ocularis’s investigation tools, include the Kinetic Motion Timeline, multi-parameter motion detection, the Time Slicer and the Motion Slicer, as well as the optional VideoSynopsis and Video Content Analytics add-ons.

• **Shared Event Handling**: Recorded events are handled simultaneously by multiple operators, bookmarked and exported as evidence in multiple formats, all within minutes.

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**Detailed Features and Functionality**

**Ocularis Base**

The VC-PSIM Base Application manages the flow of event, user and system status data from the various system components.

• **Event Management**: All events within the Ocularis platform, as well as messages received from external devices and systems, are managed through the Ocularis Base administrator. These include camera connected I/O messages; motion detection events; camera status events and others.

• **Composite Events** (‘Event Fusion’): Composite Events are created by linking two camera events or alerts, configured by sequence order, time interval and logical conditioning (e.g. ‘If Door A opens, but no motion detection on Camera N, within 15 seconds’). Composite Events can be fused with other events to create complex detection scenarios, and assigned priority for push video and handling by Ocularis Client operators.

• **Automatic Push Video Alerting** (Blank Screen Monitoring): Upon event, a push-video alert of the camera that triggered the alert, or any other camera, can be sent to users running the Ocularis Client application. In addition, the alert can be configured to trigger alarms or send notifications to users.

• **Management** of Users, User Groups and Authorizations: Users are assigned to Active Directory-supported authorization groups, granting users rights for accessing cameras, operating specific camera and video wall functions (including PTZ controls and presets, accessing recorded video and initiating recording for specific cameras).

• **Schedule-Based Distribution of Events to Users**: Multiple activity ranges for each day of the week, as well as for overriding holidays, are configured through a simple GUI.

• **Camera Array Views for Video Client User**: By logging in to the Ocularis Base, users gain access to Views – arrays of different dimension and pane size combination, containing camera streams, hotspots, carousels, web pages and images, and push-video panes. View panes can be configured for image resolution, framerate, carousel dwell time, etc.

• **Repository for Shared Assets System-Wide**: Shared asset management, for video wall maps and icons and events tagging/classification tables.
Ocularis Recorder - NetDVMS

- **Scalable Architecture:** unlimited number of cameras, connected to multiple recording servers (up to 64 cameras per server) at multiple sites; support for MJPEG, MPEG4, H.263 and H.264 compression formats, at image resolutions up to 5MP and framerates of 30 fps; support for analog cameras via a wide range of IP video encoders.

- **Administrator Application:** feature-rich administration interface for each recording server, for setup and configuration of cameras and I/O devices, camera event settings, archive settings, scheduling, and soft buttons for manually triggered events.

- **Recording and Archiving:** per-camera configuration for compression format (for multiple format cameras); image resolution; frame rate; image parameters (brightness, contrast), archiving retention time, and archiving location.

- **Maintenance-Free, Transparent Archiving:** Multiple archiving instances per day on local or remote (network) drives. The archive for each camera is stored in a separate database. No down-time during transfer for video to archive.

- **Recording Viewer:** Dedicated application for viewing exporting multi-camera video databases.

- **Optimized bandwidth and hardware utilization:** Optional monitoring and recording at two different frame rates and image resolution settings.

- **Recording Settings:** Individual cameras can be configured for recording on motion, continuous recording, or either based by schedule; and for pre- and post-recording (buffer) on motion/event. Optional speed-up recording on event.

- **PTZ Preset Settings:** 50 presets per PTZ camera, controllable from each camera’s view pane in Ocularis Client.

- **Audio:** Two way audio (from camera/IP device-connected microphones and to camera/IP device-connected PA system); audio from cameras is recorded and included in export of evidence (as AVI file).

- **Networking:** Support for Multi-Network operation; Network Addressing Translation (NAT); and SNMP (for camera status and camera event alerting).

- **Network Topology:** Support for segmented (VLAN or dedicated network) or shared networks, for physical network separation between the camera and the recording servers and video clients.

- **Outside Network Access:** the NetDVMS administrator is able to allow/prevent access from outside the local IP address range. The configuration settings allows selecting an Outside IP Address, Outside IP Port, Local IP Ranges, Maximum Number of Clients.

- **User Authentication:** Via MS Active Directory user accounts and groups/Windows accounts; user administration via Ocularis Base.

- **Logging:** Detailed logging, including Overall System log, Event log and Audit log

- **Virtualization:** Support for VMware and MS Virtual PC®

- **Background Operation:** NetDVMS runs as a Windows® service, with no need for user login. Service can be stopped/started, and provides system status and logging information.
Ocularis Recorder - NetEVS

- **Unlimited scalability:** no limit on number of NetEVS recording servers at multiple sites, and no software-imposed limits on number of cameras per recording server.

- **Simultaneous support for multiple video compression formats:** MJPEG, MPEG4, MPEG-4 ASP, MxPEG and H.264

- **Central Management:** All recording servers and connected devices are centrally managed by the NetEVS Management Server, for setup and configuration of cameras and I/O devices, camera event settings, archive settings, scheduling, and soft buttons for manually triggered events. All configuration data is stored in a central SQL database. Management application runs as Windows service under local windows account or via Active Directory.

- **System status notification:** Management application features desktop icon tray notification, for status and start/stop service.

- **Flexible rule-based management:** camera definitions, output actions and storage location can dynamically adjust based on schedule (multiple time profiles) or on-event via an MS Outlook-style administration interface. The NetEVS rules wizard provides rule validation for detecting faulty or contradicting rules.

- **Preview windows for camera settings:** allows instant verification of video settings, per camera

- **User Authentication:** Via MS Active Directory user accounts and groups/Windows accounts; user administration via Ocularis Base.

- **Simultaneous configuration of entire device groups:** cameras and devices connected to multiple recorders can be configured directly from the NetEVS administration application, eliminating the need to log in to each recording server.

- **Push software upgrades to remote recorders:** eliminates the need to update each recorder locally.

- **Simple bulk device connection:** multiple cameras can be added simply by assigning an IP range (NetEVS stores each manufacturer's default username & password.)

- **Automatic detection, model identification and MAC address registration of connected devices:** NetEVS will scan the entire camera network or IP address range to identify new or modified cameras and encoders, with a clear graphical representation, including thumbnail view of the camera stream, of all edge devices at each recording server.

- **Easy setup and configuration of recorders:** recorders may be downloaded and installed directly from the management server, via a dedicated intranet.

- **Full automatic failover capability for recording servers:** single or multiple failover servers can be configured to automatically activate in the event of a recording server failure, with no gap or data loss.

- **Failover for Management Server:** a failover server can be configured for the NetEVS Administration server, based on Windows Server clustering.

- **System and Hardware Events notifications:**
  - Plug-ins: Motion started, motion stopped
  - Hardware: Audio falling, audio passing, audio rising, images received, input activated, input changed, input deactivated, motion started (HW), motion stopped (HW), tampering, temperature, video lost
  - Built-in: Communication error, communication started, communication stopped, feed overflow started, feed overflow stopped, live client feed requested, live client feed terminated, output activated, output changed, output deactivated, PTZ manual session started, PTZ manual session stopped, recording started, recording stopped, settings changed, settings changed error
  - Recording server: Archive available, archive unavailable, database disk full, database repair, database storage area available, database storage area unavailable, failover started, failover stopped
  - User-defined events
  - Start actions: Start recording, start feed, set live frame rate, set recording frame rate, start patrolling, pause patrolling, move to PTZ preset position, move to default PTZ preset position, set output, send notification, make log entry, generate alert, start plug-in, stop plug-in, apply settings on device, send matrix command
Stop actions: Stop recording, stop feed, restore live frame rate, restore recording frame rate, stop patrolling, resume patrolling, move to PTZ preset position, move to default PTZ preset position, set output, start plug-in, stop plug-in, apply settings on device, send matrix command

**Recording Settings**: Individual cameras can be configured for recording on motion, continuous recording, or either based by schedule, and for pre- and post-recording (buffer) on motion event. Optional speed-up recording on event.

**PTZ Preset Settings**: 50 presets per PTZ camera, controllable from each camera’s view pane in Ocularis Client.

**PTZ Patrol Settings**: multiple patrol schemes per camera, with adjustable wait times between presets, scheduled for time of day or weekend schedule.

**Audio**: Two way audio (from camera/IP device-connected microphones and to camera/IP device-connected PA system); audio from cameras is recorded and included in export of evidence (as AVI file).

**Flexible storage/archiving allocation**: storage, based on either size or retention period, is allocated per camera or camera group, with prioritization of important cameras. Video can be stored on local or network drives using a database structure that eliminates the distinction between 'live' recording and 'archived' video. Scheduled Archiving multiple times a day, with no data loss whatsoever during archiving, to local or networked drives.

**Detailed auditing tools**: all management operations, including system configurations, event definitions, rules and alerts, are logged at a central SQL database, with local offline log caching. Logs may be capped for size and time for efficient database management.

**Support for both Multicast and Unicast**
- Multicasting allows many Ocularis Client users to view a single video feed, while optimizing server load and bandwidth, enabled in all compression formats, including MJPEG & H.264. (Multicasting must be supported by the network infrastructure.)
- Unicast sends a unique stream, on demand and upon authorization, allowing the user to take control of the video stream. Multiple unicast streams, replicated by the server, can be sent to multiple clients, rather than limited to a single user.

**SNMP support**: enables receiving system and device health data.

**Multiplex-stream support**: separate video streams, at different resolution, video format and frame rate settings, can be assigned for live monitoring and recording (e.g. MJPEG for live, MPEG4 for recording), for maximizing CPU, bandwidth and storage resources.

**Support for IPv4 and IPv6** (128-bit addressing), as well as DNS and NAT (Network Address Translation.)

**Single or Multi-Network support**: allows managing cameras, recorders and clients on the same or on separate networks; increases security and improves bandwidth management by separating camera network from the client network.

**Networking**: Support for Multi-Network operation; Port Forwarding (for access from outside a NAT firewall); and SNMP (for camera status and camera event alerting).

**Network Topology**: Support for segmented (VLAN or dedicated network) or shared networks, for physical network separation between the camera and the recording servers and video clients.

**Outside Network Access**: the NetEVS administrator is able to allow/prevent access from outside the local IP address range. The configuration settings allows selecting an Outside IP Address, Outside IP Port, Local IP Ranges, Maximum Number of Clients.

**Port forwarding**: provides access to recording servers from outside a Network Address Translation (NAT) firewall.

**Virtualization**: Support for VMware and MS Virtual PC®

**Background Operation**: NetEVS runs as a Windows® service, with no need for user login. Service can be stopped/started, and provides system status and logging information.
Ocularis Client and Ocularis Viewer

Ocularis Client

- **Unified Client for Ocularis**: Ocularis Client is the main video client for all OnSSI Ocularis solutions.
- **Unlimited Concurrent Users**: No limit on the number of concurrent client users, and no incremental cost for additional Ocularis Clients.
- **User Authentication**: Basic or Windows Active Directory-supported
- **Touchscreen-Enabled, intuitive Interface**: Ocularis Client's intuitive, touchscreen-enabled GUI reacts to the user's actions, presenting only the controls and tools required by the current mode of operation.
- **Multiple Screen Support**: for dual-screen and quad-screen monitoring workstations.
- **Mixed Content Views**: Users can select among unlimited private or administrator-configured pane arrays of different sizes (up to 8x8 panes), consisted of camera streams, carousels, hotspots, web browser/static image/flash animation (requires file support on client machine), and panes for receiving automatic (on-event) and manual (peer-to-peer) push-video alerts.
- **Pane View/Full Screen Toggle**: Any view pane can be toggled between pane and full-screen viewing modes.
- **Live Monitoring Assisted by Instantaneous Investigation**: Asynchronous live monitoring, with per-camera controls for playback, pause/live, digital PTZ, optical PTZ and PTZ presets (for PTZ cameras) and dedicated parsing controls for cameras equipped with 360-degree (Panamorphic) lens.
- **Digital PTZ**: Applicable in all viewing modes, and assisted by PIP (Picture-in-Picture) for easy orientation. Control methods include draw rectangle, mouse wheel zoom in/out, and dragging selected PTZ region in PIP window.
- **Unified Optical PTZ Control**: All PTZ cameras are manipulated using the same controls, regardless of make/model. Controls include: mouse wheel (zoom in/out), variable zoom ribbon, zoom in/out buttons, point-to-center, click-draw rectangle, PTZ preset list (unlimited presets) virtual joystick and physical joystick.
- **PTZ Prioritization**: Users, within user groups, are assigned priority levels for controlling PTZ cameras.
- **360-Degree Lens Controls**: Special controls are provided for parsing views from fixed cameras equipped with 360-degree (Panamorphic) lens. The parsed view emulates a PTZ camera, with simulated pan, tilt and zoom. 360-degree parsing is available for both wall or ceiling mounted cameras, in single or quad view within a single camera pane, with playback and digital zoom controls.
- **Smart Carousel Monitoring**: Carousel panes, displaying cameras in a predefined sequence, include controls for pause/restart rotation, next and previous camera.
- **Change Cameras on the Fly**: In all viewing modes, the current camera can be instantly replaced by selecting another camera from a drop-down list.
- **Manual Push-Video Alerting**: users are able to send a live push-video alert to other Ocularis Client users (selectable from a drop-down list). Pushed video alerts can be investigated using playback, digital PTZ and Optical PTZ controls.
- **Copy Current Camera View to Clipboard**: users are able to copy live or recorded camera views, for pasting in other documents or editing using image editing software.
- **Switch Audio Streams**: Audio streams from camera-connected microphones can be switched on and off, selectable from a menu list.
- **Activate Outputs**: I/O devices can be activated directly from Ocularis Client, including visual and audio alarms, contact closure, etc.
- **Investigation and Access to Events**: Multiple tools are provided for quickly accessing and investigating video of incidents:
  - **Synchronous Camera View**: Current live monitoring view will carry upon transitioning to Browse mode, with synchronous playback, skip to next/previous event and skip to next/previous event sequence.
  - **Go to Time/Date**: Through 'odometer'-style control
- **Kinetic Motion Timeline**: scalable horizontal timeline, with kinetic variability (responding to the momentum and speed of the user’s ‘swiping’ movement). Allows reviewing extended periods of recorded video in a short time, with color indicators for recorded video and detected motion.

- **Highly Configurable Motion Detection**: calibrated for percentage of changed pixels within the motion detection zone; sensitivity and detection sampling time interval.

- **‘Time Slicer’ Tool Set**: The Time Slicer tool set auto-generates thumbnails for rapid drill-down to the moment of an event, based on time interval, motion detection, camera alerts and alert sequences. All Time Slicer tool enable the application of digital PTZ to all slices, by drawing a region in the Timeslicer main pane.

- **Shared Event Handling**: All events generated within the Ocularis system, or detected by external/add-on devices, are entered in a dynamically-updated, shared among all authorized users. Users are able to access, investigate and handle events directly from a dedicated event handling interface, with an on-map indicator of the camera that triggered the event and dual video panes displaying the recorded event and a live stream. Handled events may be accessed by the administrator for continued handling.

- **Event Bookmarking and Export of Evidence**:
  - Segments of video for bookmarking and exported are graphically selected on the Kinetic Motion Timeline.
  - Bookmarks are tagged, classified and commented by users, and copied into a Bookmark database. Bookmarked events are presented along all event information and thumbnail of the incident.
  - Video evidence is exported as annotated still image report; multiple still frames; audio-included AVI file with annotated preamble, and court-admissible, multi-camera video database package, which includes a dedicated player.

- **Map-based Navigation and Video Wall Management**: cameras and camera arrays are accessible through a map-based interface, used also for Video Wall management (requires optional Ocularis VideoWall add-on).
  - Multiple maps, with hyperlinked icons to other maps, cameras and camera groups. Map images are scalable and movable.
  - On-map live preview windows of cameras and camera groups, with full playback, digital PTZ and optical PTZ (where available) controls.
  - Cameras and camera groups are pushed to local displays or remote video wall (optional; requires Ocularis VideoWall add-on) displays by simple drag-and-drop. Cameras displayed on video walls are located on their respective maps via a Locator control.
  - Views sent to remote video walls are controlled for playback, digital PTZ and optical PTZ, via a dedicated control panel.

- **Private View Configuration**: users are able to configure private views, from within the client, combining camera streams, carousels, push video alerts (automatic and manual), hotspots and webpage/image panes.

**Ocularis Viewer**

- The Ocularis Viewer is a standalone application that allows viewing multi-camera video databases, without the need for an installed video client application. The Viewer is uploaded to, and runs directly from, the portable media used for exporting video evidence.

  Video database export is used typically where an AVI file is not acceptable as evidence, or for exporting multiple camera streams within the same file.

- **Features of the Video Database Viewer include**:
  - Comprehensive set of playback controls: play, frame-by-frame, skip to end/beginning of video or go to specific time stamp. Playback is synchronous for all cameras displayed.
  - Scalable timeline, color coded for motion activity and areas of recorded video. The timeline can be dragged to control multi-camera synchronous playback.
  - Digital PTZ (pan, tilt & zoom).
- Export video of selected camera as AVI file, optionally preceded by a preamble including video and camera data as well as user's annotations.
- Export still-image (.jpg) annotated incident report, or multiple-frame still image folder.

**Ocularis VideoWall (optional)**

- Allows sending video to video wall monitors and remote displays anywhere on the network, all from the Ocularis Client's intuitive, map-based controller interface.
- Instantly push cameras and camera groups to any display on the network.
- Accommodates any number of cameras, displays and simultaneous operators at multiple sites.
- Eliminates the need for analog multiplexing hardware.
- Ideal for command and control centers, central station and remote alarm monitoring operations.

**Ocularis Analytics (optional)**

- **Video Content Analytics:** Ocularis Analytics, an optional add-on for Ocularis, provides automated detection of targeted movements and behaviors by people and vehicles. Analytics-generated alerts can be pushed automatically to users' Video Clients, together with a graphical metadata overlay indicating the object or movement that triggered the event.
  - Multiple detectors, for a variety of behaviors, can be applied to a single camera.
  - Compatible with on-edge processing, providing the advantage of processing raw (pre-compression) video data.
  - PTZ Analytics functionality, including PTZ tracking and motion detection on PTZ presets.
  - Detection, alerting and reporting modules for a variety of human & vehicular behaviors, including movement in zone, line crossing, crowding, tailgating, loitering, grouping, object counting, stickiness, moving water vessel, object left behind, stopped vehicle, road obstacle and asset protection.
Hardware Requirements for Ocularis v1.0 SP3 components

Ocularis Base Server:
- CPU: Intel® Xeon®, minimum 2.0 GHz (Dual Core or better recommended)
- RAM: Minimum 2 GB
- Software: Microsoft .NET 3.5 SP1 Framework; IIS 6.0 or newer

Ocularis Admin:
- CPU: Intel® Core2 Duo CPU 2.8 GHz
- RAM: Minimum 2 GB
- Operating System: Microsoft® Windows® XP Professional SP3, Windows Vista Business, Ultimate or Windows 7 Business or Ultimate
- Graphics Adapter: Adapter: PCI-Express, 128 MB RAM, Direct 3D supported

Ocularis Recorder – NetDVMIS
- CPU - Intel® Xeon Processor (Intel Core 2 Duo recommended)
- RAM - Minimum 2 GB
- Network - Ethernet, 1 GB
- Hard Disk Type - SATA, SCSI, SAS.
- Hard Disk Space - Minimum 80 GB free (depends on number of cameras and recording settings).
- Internet Information Services (IIS) 5.0 or later and Microsoft .NET Framework 1.1, required for running NetPDA Server
- Software: Microsoft .NET 3.5 SP1 Framework; IIS 6.0 or newer

Ocularis Recorder - NetEVS Recording Server:
- CPU – Dual Core Intel® Xeon, minimum 2.0 GHz (Quad Core recommended)
- RAM - Minimum 4 GB
- Network - Ethernet, 1 GB recommended
- Hard Disk Type - SATA, SCSI, SAS.
- Operating System - Microsoft® Windows® Server 2003 or Server 2008, (32 or 64 bit)
- Software: Microsoft .NET 3.5 SP1 Framework; IIS 6.0 or newer

Ocularis Recorder – NetEVS Management Client:
- CPU – Intel® Xeon®, minimum 2.0 GHz (Dual Core or better recommended)
- RAM - Minimum 2 GB
- Network - Ethernet, 1 GB recommended
- Hard Disk Type - SATA, SCSI, SAS.
- Operating System - Microsoft® Windows® Server 2003 or Server 2008, (32 or 64 bit)
- Software: Microsoft .NET 3.5 SP1 Framework; IIS 6.0 or newer

Ocularis Client:
- Intel® Core2 Duo CPU 2.8 GHz
- RAM: Minimum 2 GB
- Network: Ethernet(100 Mb or higher recommended)
- Operating System: Microsoft® Windows® XP Professional SP3, Windows Vista Business, Ultimate or Windows 7 Business or Ultimate
- Graphics adapter: PCI-Express, minimum 256 MB RAM, Direct 3D supported. Guidelines for Video RAM Requirements:
  - 20 simultaneous Video Channels: 512 MB
  - 35 simultaneous Video Channels: 1 GB
  - 50 simultaneous Video Channels: 1.6 GB
  - 64 simultaneous Video Channels: 2 GB
- Video RAM requirements are regardless of number of attached monitors. Additional factors may affect video RAM requirements, including megapixel cameras, compression format, as well as video card and other system hardware specifications

Ocularis Viewer:
- CPU: Intel® Core 2 Quad CPU 2.8 GHz
- RAM: Minimum 2 GB
- Network: Ethernet (100 Mb or higher recommended)
- Operating System: Microsoft® Windows® XP Professional SP2 or Vista, both 32 bit
- Graphics Adapter: PCI-Express, 256 MB RAM, Direct 3D supported

Ocularis Analytics Server

<table>
<thead>
<tr>
<th>No. of Devices</th>
<th>1-50</th>
<th>50-100</th>
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<td>2GHz, Quad Core</td>
<td>Dual 2GHz, Quad Core</td>
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<tr>
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<td>2003 Server Standard</td>
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<td>Database</td>
<td>SQL 2005 Express</td>
<td>SQL 2005 Standard or Express</td>
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</tr>
<tr>
<td>Graphics Adapter</td>
<td>64MB RAM; 128MB if running the Analytic Configuration Client</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
City of El Segundo
City Clerk's office
City Hall
350 Main Street
El Segundo, Ca. 90245-3813

Subject: Bid Protest of bid 10-08 Police Station Surveillance Equipment

Mr. Richard Hogate Purchasing Manager,

Thank you for the opportunity to respond to Bid # 10-08 Police Station Surveillance Equipment. After a conversation with Ms. Shilling of the City Clerk's office on the protest process she stated our firm would have to submit a formal letter to the City Clerk's office, since no procedures or guidelines are mentioned on the City of El Segundo's web site, your subsequent confirmation verified via a phone voice mail on September 22, 2010 confirmed Ms. Shilling's statement. We would like to protest the bid process and the pending award to Metro Video for the following reasons.

We understood, at bid time, the evaluation process was based upon the opening of the submitted bid documents and the announcement of the bidders pricing with further vetting of each bidder to occur in order to verify submitted documentation for responsiveness and completeness. This was to include the confirmation of brochures and authorized partner vendor reseller certifications, original & copy quantities as requested in the RFB specifically exhibit A.

After a chance to review the submitted bid documents in the City Clerk's office that were received by the City with a due date of August 17, 2010 11:00 am P.S.T. SimplexGrinnell was only able to verify the single copies of each submitted RFB provided for review by the City Clerk's office from each bidder. SimplexGrinnell was not able to verify that (4) sets submitted one original and three copies as requested per the RFB.

Based on our review of the public documents each bidder failed to follow your directions with the exception of SimplexGrinnell. Part of the RFB was to include/provide Brochures for all equipment and to attach documented proof of our authorized partner/reseller status as mentioned at the bottom of exhibit A.

Our expected outcome of this RFB process and protest is to seek award as the lowest most responsible and complete bidder at time of bid opening. At all of the Municipal bid openings that we attend bidders who do not follow the RFB/RFP process directions for submitting requested documentation are immediately disqualified or disqualified upon further review for being non responsive to the RFP/RFB process at time of the bid. SimplexGrinnell looks forward to your response to our letter of protest. We understand that this is a timely process for the City to administer a RFB.
Our missions as a company is to fully understand and exceed our customers' needs, wants and preferences and provide greater value to our customers than our competition while adhering to the highest standards of corporate governance by establishing processes and practices that promote and ensure integrity, compliance and accountability.

SimplexGrinnell looks forward to understanding your evaluation process/ criteria for determining your current intended award.

Best regards,

[Signature]

Lyle Nielsen
SimplexGrinnell
lnielsen@simplexgrinnell.com
AGENDA DESCRIPTION:
Consideration and possible action to adopt a resolution supporting the Southern California Association of Governments Economic Growth Strategic Plan for Economic Growth Strategy. (Fiscal Impact: None)

RECOMMENDED COUNCIL ACTION:
1. Adopt the attached resolution;
2. Alternatively, discuss and take other action related to this item.

ATTACHED SUPPORTING DOCUMENTS:
1. SCAG Southern California Economic Growth Strategy report
2. Draft Resolution

FISCAL IMPACT: None

Amount Budgeted: $N/A
Additional Appropriation: N/A
Account Number(s):

ORIGINATED BY: Bill Crowe, Assistant City Manager
REVIEWED BY: Bill Crowe, Assistant City Manager
APPROVED BY: Jack Wayt, City Manager

BACKGROUND AND DISCUSSION:

At the May 6th SCAG General Assembly, information was provided by economic experts about the severe economic challenges facing the cities, counties and residents of Southern California. These reports included dim prospects for significant regional economic growth unless there was a concerted leadership effort to reduce impediments for creating jobs and stimulating economic investments through incentives. Subsequently, within the SCAG community there was concurrence developed that SCAG should identify areas where the agency could be helpful by partnering with others to reduce impediments to regional economic growth and develop a better understanding of the common regional economic objectives established by the cities and counties in the SCAG region.

On December 2, 2010, SCAG will host The Southern California Road to Economic Recovery Summit at the Wilshire Grand Hotel in Downtown Los Angeles. The purpose of the summit is for SCAG’s Regional Council to (1) discuss key findings, (2) identify high priority state impediments to economic recovery, and (3) build consensus among state leaders and business
leaders for a potential agreement to removing impediments. The Governor-elect, state legislative leaders, key business leaders, cities, and counties will be invited to participate in the discussion.

In order to demonstrate Southern California’s commitment to economic recovery, SCAG staff is requesting that the cities and counties in Southern California adopt “Business Friendly Principles” by resolution. It is intended that the compendium of Resolutions would be presented to the Governor-elect and the state legislative leaders at the Summit. Having a compendium of the 189 SCAG cities’ and counties’ resolutions of support for the December 2nd Summit is intended to demonstrate to state leaders that municipalities and SCAG Regional Council are serious about working together in the next legislative session to find ways together to increase economic growth.
DATE: September 2, 2010

TO: Regional Council

FROM: Hasan Ikhrata, Executive Director

SUBJECT: Southern California Economic Growth Strategy – Business Friendly Principles

EXECUTIVE DIRECTOR’S APPROVAL:

RECOMMENDED ACTION:
In preparation for the December 2nd Southern California Road to Economic Recovery Summit, approve the attached draft resolution for “Business Friendly Principles” and authorize staff to encourage SCAG’s member cities and counties to pass a supporting resolution within 60 days.

EXECUTIVE SUMMARY:
Per discussion at the SCAG May Annual meeting and the direction of the Regional Council, staff continues to work with other key stakeholders on a Regional Economic Growth Strategy. On December 2, 2010, it is planned for the Governor-elect, state legislative leaders, the Regional Council, cities, counties and business leaders to discuss preliminary findings of the Southern California Regional Economic Growth Strategy. The meeting entitled, Southern California Road to Economic Recovery, is intended to discuss how to work together in the next year to remove economic impediments to economic growth. A similar federal summit is planned for later in the Fiscal Year. To demonstrate Southern California’s commitment at the December 2nd Summit, staff is proposing that it’s member cities and counties consider having ready for the Summit a regional commitment from the cities and the counties supporting “Business Friendly Principles”. If approved, the Regional Council members are asked to seek their respective council(s) support within 60 days in order to present at the December 2nd meeting.

STRATEGIC PLAN:
Goal 1 - Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies

BACKGROUND:
At the May 6, 2010 General Assembly, information was provided by economic experts about the severe economic challenges facing the cities, counties and residents of Southern California. Their remarks included a dim prospect for significant regional economic growth unless there was a concerted leadership effort to reduce impediments for creating jobs and stimulating economic investments through incentives. At the subsequent Regional Council May 7th Board retreat, there was concurrence that SCAG should identify areas where the agency could be helpful by partnering with others to reduce impediments to regional economic growth and develop a better understanding of the common regional economic objectives established by the cities and counties in the SCAG region as well as Kern and San Diego due to the interconnectivity of Southern California’s economy.
Developing this regional growth strategy is being done in the context of the brutal recession that has impacted both the nation and Southern California. Economists agree that the recovery will be slow and challenging, and that some industries have been permanently changed. Worse, other states and regions are conducting sophisticated business recruitment efforts to extract businesses out of Southern California.

As a metropolitan planning organization with a focus on transportation, understanding the economic drivers and trends of Southern California are important to developing a successful Regional Transportation Plan as all of the major industries of Southern California depend on an efficient transportation system to survive.

The project is divided into two phases. The first phase focuses on; collecting economic data and existing economic development plans at the county and city level, and preparing a proposed regional action plan to bring to the Regional Council for approval which identifies areas where SCAG can partner with member cities, counties, business leaders and other key stakeholders to reduce or remove high priority economic challenges to Southern California economic recovery. Working with key business stakeholders, and upon Regional Council approval, the second phase will suggest ways to better "brand" and understand the Southern California economy, in order to increase investments in business opportunities from outside the region. To assist staff in supporting the above objectives, SCAG released a Request-for-Qualifications and formed a panel of renowned regional economic experts.

On December 2, 2010, SCAG will host The Southern California Road to Economic Recovery Summit at the Wilshire Grand Hotel in Downtown Los Angeles (9am-1 pm). The purpose of the summit is for SCAG's Regional Council to discuss key findings, high priority state impediments to economic recovery, and potential for agreement to removing impediments with state leaders and business leaders. The Governor-elect, state legislative leaders, key business leaders, cities, and counties will be invited to participate in the discussion. It is anticipated that the Summit would result in identifying key economic impediment challenges where by all parties can work together to remove impediments to spur economic growth and recovery.

In order to demonstrate Southern California's commitment to economic recovery, staff is proposing that the cities and counties in Southern California consider adopting "Business Friendly Principles" by resolution. It is intended that the compendium of Resolutions would be presented to the Governor elect and the state legislative leaders at the Summit. Staff requested city manager input on the attached draft resolution. It is understood that most of the cities are currently performing the attached business friendly practices (and more). Having a compendium of the 189 cities and counties resolutions of support for the December 2nd Summit is intended to demonstrate to state leaders that municipalities and SCAG Regional Council are serious about working together in the next legislative session to find ways together to increase economic growth.

FISCAL IMPACT:

ATTACHMENT:
Sample resolution RC use for the cities/counties adoption
A RESOLUTION OF THE CITY OF EL SEGUNDO
IN SUPPORT OF "BUSINESS FRIENDLY PRINCIPLES" AS PART OF SCAG'S
DEVELOPMENT OF A SOUTHERN CALIFORNIA ECONOMIC GROWTH
STRATEGY

BE IT RESOLVED by the Council of the City of El Segundo as follows:

SECTION 1: The City Council finds as follows:

A. The Southern California Association of Governments (SCAG) is
   engaged in the development of a Southern California Economic
   Growth Strategy; and

C. The City of El Segundo supports working with SCAG and other key
   economic stakeholders to improve the Southern California
   economy; and

D. The City of El Segundo has a well-established reputation as a
   business friendly municipality and has numerous practices in place
   to encourage economic growth within its community; and

E. The City of El Segundo was designated by the Los Angeles County
   Economic Development Corporation (LAEDC) as its inaugural Most
   Business Friendly City.

SECTION 2: The City Council of the City of El Segundo endorses and supports
the following "Business Friendly Principles" as incorporated in SCAG's Southern
California Economic Growth Strategy:

**Principle One – Economic Development as a Priority** – The City of El
Segundo strives to demonstrate commitment to economic development as
a priority.

**Principle Two - Business Partnership** – The City of El Segundo strives
to provide quality municipal services to attract and retain businesses and
employees.

**Principle Three - Business Responsive Processes** – The City of El
Segundo strives to communicate effectively with businesses including
processes to increase its responsiveness to businesses that are seeking
or doing business within its jurisdiction (commitments include responding
to business inquires within an established time period and offering an
expedited permitting process for new businesses).
Principle Four – Attractiveness to Business Investment – The City of El Segundo strives to streamline operations for efficient and responsive business assistance in areas of licensing, permitting, inspections and other municipal services and will seek to improve its attractiveness to new and existing businesses within its jurisdiction (commitments include striving to maintain competitive taxes and fees and establishing good communications with business base via e-newsletters or our elsegundobusiness.com website).

SECTION 3: The City Clerk is directed to certify the adoption of this Resolution; record this Resolution in the book of the City's original resolutions; and make a minute action of the adoption of the Resolution in the City Council’s records and the minutes of this meeting.

SECTION 4: The City Clerk is directed to submit a copy of this resolution to SCAG in time for SCAG’s Regional Economic Summit currently scheduled for December 2, 2010.

PASSED AND ADOPTED this 2nd day of November 2010.

________________________________________
Eric Busch
Mayor

ATTEST:

________________________________________
Cindy Mortesen,
City Clerk

APPROVED AS TO FORM:
Mark D. Hensley, City Attorney

By: _______________________________________
   Karl H. Berger
   Assistant City Attorney
AGENDA DESCRIPTION:

RECOMMENDED COUNCIL ACTION:
1. Approve the Side Letter between the City of El Segundo and City of El Segundo Police Managers’ Association.
2. Alternatively discuss and take other action related to this item.

ATTACHED SUPPORTING DOCUMENTS:

FISCAL IMPACT:

Amount Budgeted: 
Additional Appropriation: None
Account Number(s): 

ORIGINATED BY: Martha Skokstra, Human Resources Manager
REVIEWED BY: Bob Hyland, Human Resources Director
APPROVED BY: Jack Wayt, City Manager

BACKGROUND AND DISCUSSION
Pursuant to Council direction, representatives of the City of El Segundo began discussions with the employee groups to determine what concessions can be made to address the City’s budget shortfall for FY 2009/2010 and FY 2010/2011. The El Segundo Police Managers’ Association has agreed to a number of salary and benefit concessions to address the budget shortfall as described in the Side Letter.
SIDE LETTER AGREEMENT TO THE
JULY 1, 2008 – SEPTEMBER 30, 2011 COMPREHENSIVE
MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY
OF EL SEGUNDO AND THE EL SEGUNDO POLICE
MANAGERS’ ASSOCIATION (“ESPMA”)

EFFECTIVE: UPON CITY COUNCIL APPROVAL

This side letter memorializes an agreement reached between the City of El Segundo (“City”) and the El Segundo Police Managers’ Association (“ESPMA”), to reflect agreed upon amendments to the July 1, 2008 – September 30, 2011 Comprehensive Memorandum of Understanding (“MOU”) entered into between the City and ESPMA. All other terms and conditions of the existing MOU shall remain in full force and effect. The changes are as follows:

Section 15.02 shall be replaced by the following:

Section 15.02 Vacation and Accrual Schedule

Affected employees shall accrue vacation time according to the following schedule:

A. Ninety-six (96) hours per year with full salary for first five (5) years of continuous service with the City.

B. One hundred-twenty (120) hours per year with full salary after five (5) years and until the completion of ten (10) years of continuous service.

C. One hundred forty-four (144) hours per year with full salary after eleven (11) years and until the completion of fourteen (14) years of continuous service.

D. Two hundred (200) hours per year with full salary after fourteen (14) years of continuous service.

Effective November 1, 2010, the accrued leave banks for each employee shall be permanently reduced by 104 (one hundred and four) hours.

Section 15.04 shall be replaced by the following:

Section 15.04 Vacation Time Accrual – Payment in Lieu of

Affected employees who have completed one (1) year of service may receive payment in lieu of accrued vacation time up to a maximum of one hundred
percent (100%) the annual accrual to which they are entitled by length of service. Effective August 1, 2010 and for the remainder of the duration of this MOU, no employees may receive payment in lieu of accrual of vacation time.

Section 25.02 shall be replaced by the following:

**Section 25.02 Deferred Compensation Plan (401a)**

The City will pay an amount equal to the affected employee’s contribution to deferred compensation up to a maximum of one percent (1%) of the affected employee’s total pay, for all Association employees participating in City approved deferred compensation plans.

Effective October 1, 2010 and for the remainder of the duration of this MOU, the City shall make no matching contributions to an employee’s deferred compensation account.

Article 32 is added to the MOU as follows:

**ARTICLE 32 FURLOUGHS**

**Section 32.01 Mandatory Unpaid Furloughs**

Between October 1, 2010 and September 30, 2011, each employee shall schedule sixty-five (65) total hours of unpaid furloughs. The employee shall not receive base pay during his or her furlough hours, but shall continue to receive all special pays and other forms of compensation as well as maintain all insurance benefits. Furlough hours shall be scheduled with the primary concern being the needs of the Department and shall be approved by the Chief of Police.

Article 33 is added to the MOU as follows:

**ARTICLE 33 LIMITED LAYOFFS**

**Section 33.01 No Layoffs Before September 30, 2011**

The City agrees to guarantee that no layoffs of unit members will occur during the remainder of Fiscal Year 2010/2011 unless at any time during the remainder of the fiscal year general fund revenues fall ten percent (10%) below the adopted budgets as to any quarter in the fiscal year.
El Segundo Police Managers' Association
By: 
Captain Robert Turnbull, 
PMA President
Date: 10.27.10

City of El Segundo
By: 
Jack Waxy, City Manager
AGENDA DESCRIPTION:

RECOMMENDED COUNCIL ACTION:
1. Approve the Side Letter between the City of El Segundo and City of El Segundo Police Officers Association.
2. Alternatively discuss and take other action related to this item.

ATTACHED SUPPORTING DOCUMENTS:

FISCAL IMPACT:

   Amount Budgeted: 
   Additional Appropriation: None
   Account Number(s): 

ORIGINATED BY: Martha Bjorkstra, Human Resources Manager
REVIEWED BY: Bob Hyland, Human Resources Director
APPROVED BY: Jack Wayt, City Manager

BACKGROUND AND DISCUSSION
Pursuant to Council direction, representatives of the City of El Segundo began discussions with the employee groups to determine what concessions can be made to address the City's budget shortfall. The El Segundo Police Officers Association has agreed to a number of salary and benefit concessions as described in the Side Letter,
SIDE LETTER AGREEMENT TO THE
JULY 1, 2008 – SEPTEMBER 30, 2011 COMPREHENSIVE
MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY
OF EL SEGUNDO AND THE EL SEGUNDO POLICE
OFFICERS’ ASSOCIATION

EFFECTIVE: UPON CITY COUNCIL APPROVAL

This side letter memorializes an agreement reached between the City of El Segundo (“City”) and the El Segundo Police Officers’ Association (“ESPOA”), to reflect agreed upon amendments to the July 1, 2008 – September 30, 2011 Comprehensive Memorandum of Understanding (“MOU”) entered into between the City and ESPOA. All other terms and conditions of the existing MOU shall remain in full force and effect. The changes are as follows:

Section 7.02 shall be replaced with the following:

Section 7.02 Court On-Call Pay

A. Except as set forth below, off-duty personnel who are placed in on-call status for court during either the morning or the afternoon session will receive three hours of paid overtime at a rate of time and one-half his/her regular rate of pay as defined in this MOU for each session the officer is in an on-call status. Off duty personnel who are placed in on-call status for court during both the morning and the afternoon sessions will receive six hours of paid overtime at a rate of time and one-half his/her regular rate of pay. During the remainder of the term of this MOU, employees eligible for court on-call pay shall receive limited use time off (as defined below) in lieu of pay on a time and one-half basis.

Officers will not receive on-call pay or limited use time off in lieu of pay if they are:

1. Called into court that session (in which case the employee will receive call-back pay);
2. Ordered to report to work;
3. Already receiving pay from the City for any other reason (e.g., IOD, administrative leave).

A. Officers shall not have the option of reporting to work in lieu of being in an on-call status.

B. Officers who are in an on-duty status are not eligible for court on-call pay.
Limited use time off is time off that can be taken only when no overtime backfill is required. Limited use time may not be cashed out, although any unused limited use time in one calendar year may be carried over to the next calendar year.

Section 7.04 shall be replaced with the following:

Section 7.04 Court Call-Back Pay

A. An officer called into court while off duty shall be paid overtime for all time served plus travel time (per Department General Order) or three hours (at time and one-half), whichever is greater. “Off-duty” for the purposes of this section means the officer is not on duty, on paid administrative leave, on paid IOD leave, or being paid for any other reason. During the remainder of the term of this MOU, employees eligible for court call-back pay shall receive limited use time off (as defined in Section 7.02 above) in lieu of pay at the same rate.

B. The City will pay $2.00 per meal for police officers required to be in attendance at court during meal periods.

Section 10.03 shall be replaced with the following:

Section 10.03 Firearms Qualifications

Police Officers and Police Sergeants will be compensated at their regular hourly rate of pay for firearms qualification as follows:

<table>
<thead>
<tr>
<th>Class</th>
<th>Hours per Quarter (3 Calendar Months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinguished Expert</td>
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<tr>
<td>Expert.</td>
<td>6 hours</td>
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<tr>
<td>Sharpshooter</td>
<td>4 hours</td>
</tr>
<tr>
<td>Marksman</td>
<td>2 hours</td>
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<tr>
<td>Qualifying</td>
<td>0 hours</td>
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</table>

During the remainder of the term of this MOU, employees eligible for Firearms Qualification compensation shall receive limited use time off (as defined in Section 7.02) at the same rate in lieu of pay.
Section 12.04 shall be replaced with the following:

Section 12.04 Annual Sick Leave Payout

On or about December 10 of each year, employees who maintain a balance of 1056 hours of sick leave accrual shall be paid for one half the sick leave accumulated and not used during the preceding twelve month period. Effective July 15, 2006, the annual sick leave payout will be increased to 75%. During the remainder of this MOU, effective with the payout in December 2010, employees shall receive limited use time off (as defined in Section 7.02) in lieu of pay on a straight time basis.

Section 13.03 shall be replaced with the following:

Section 13.03 Vacation Sell Back

The City will allow employees in the Association to sell back 100% of their annual vacation accrual at the regular rate of pay during a single payroll period to be determined each fiscal year by the employee. The vacation sell back option is available for use by the employee after completion of one year of service with the City. The vacation sell back option shall not be allowed during the remainder of the term of this MOU.

Section 17.01 shall be replaced with the following:

Section 17.01 Provision & Annual Allowance

The City shall provide required uniforms and safety equipment to eligible employees. For purposes of this article, safety equipment shall include a weapon selected by the Police Chief. Employees eligible for a uniform cleaning allowance shall receive $325.00 per year. Effective August 1, 2004, the uniform cleaning allowance will be increased to $450.00 per year. Effective August 1, 2005, the uniform cleaning allowance will be increased to $500.00 per year. Effective July 15, 2006, the uniform cleaning allowance will be increased to $675.00 per year. Effective July 15, 2007, the uniform cleaning allowance will be increased to $715.00 per year. Uniform cleaning allowances shall not be paid during the remainder of the term of this MOU.

Section 18.02 shall be replaced with the following:

Section 18.02 PERS Pickup Reported as “Compensation Earnable”

The City shall pay on behalf of each employee his or her required 9% “employee contribution” to CalPERS. Additionally, the City shall report a set dollar amount equal to the nine percent (9%) “employee contribution” to the California Public Employees' Retirement System as compensation earnable. Said contributions
will also be paid on holiday pay received by eligible employees. For the remainder of the term of this MOU, the City shall pay on behalf of each employee, either:

a. 6% of the required employee contribution (with the employee paying the other 3%); or

b. 7% of the required employee contribution (with the employee paying the other 2%). Under this option, the employee agrees to another 20 (twenty) unpaid furloughs hours in addition to the unpaid furlough hours required under Section 27.01 of this MOU and subject to the same conditions. Employees shall choose either option and may not change their choice once made. An employee who does not make a choice within two (2) weeks of ratification by the City Council of the side letter adopting these options, shall be placed in option (a) for the duration of the term of this MOU.

Article 27 is added to the MOU as follows:

ARTICLE 27 FURLoughs

Section 27.01 Mandatory Unpaid Furloughs

During the remainder of the term of this MOU, each unit employee shall have 93 (ninety-three) unpaid furlough hours. Furlough hours shall be scheduled with the primary concern being the needs of the Department and shall be approved by the Chief of Police.

During any furlough period, the employee shall not receive his or her base pay, but shall receive all special pays and other forms of compensation, as well as maintain all insurance benefits.

Patrol Division – In the event that a patrol shift falls below Departmental staffing needs on a previously scheduled furlough day, personnel from other Divisions may be temporarily re-assigned to augment the patrol function.

The City shall monitor the number of furlough hours taken during the remainder of the MOU. If the City determines that it is unlikely that the number of furlough hours will meet the ninety-three (93) hour per employee requirement before the September 30, 2011 deadline, employees shall authorize the City to reduce the employee’s check by amount needed to cover the unpaid furlough hours.
Article 28 is added to the MOU as follows:

**ARTICLE 28 LIMITED LAYOFFS**

Section 28.01 No Layoffs Before September 30, 2011

The City agrees to guarantee that no layoffs of unit members will occur during the remainder of Fiscal Year 2010/2011 unless at any time during the remainder of the fiscal year general fund revenues fall ten percent (10%) below the adopted budgets as to any quarter in the fiscal year.

El Segundo Police Officers' Association

By: _________________
Sgt. Mike Gill, POA President

Date: 9/6/2010

City of El Segundo

By: _________________
Jack Wayt, City Manager

10/28/10