

# City Hall Seismic Evaluation

October 22, 2013





## Previous City Council Presentations

- February 21, 2006
- May 15, 2007
- June 21, 2011
- February 12, 2013
  - In 2013, City Council requested a new study/peer review of the original 2005/6 seismic study



## 2013 Study

- Nabih Youssef Associates (NYA) was hired to do the new study
- NYA has extensive experience in large scale seismic assessments and engineering consulting for new and existing buildings including:
  - Los Angeles City Hall
  - Dodger Stadium
  - LA Live
  - Long Beach Veterans Administration building
  - Governor George Deukmejian Courthouse



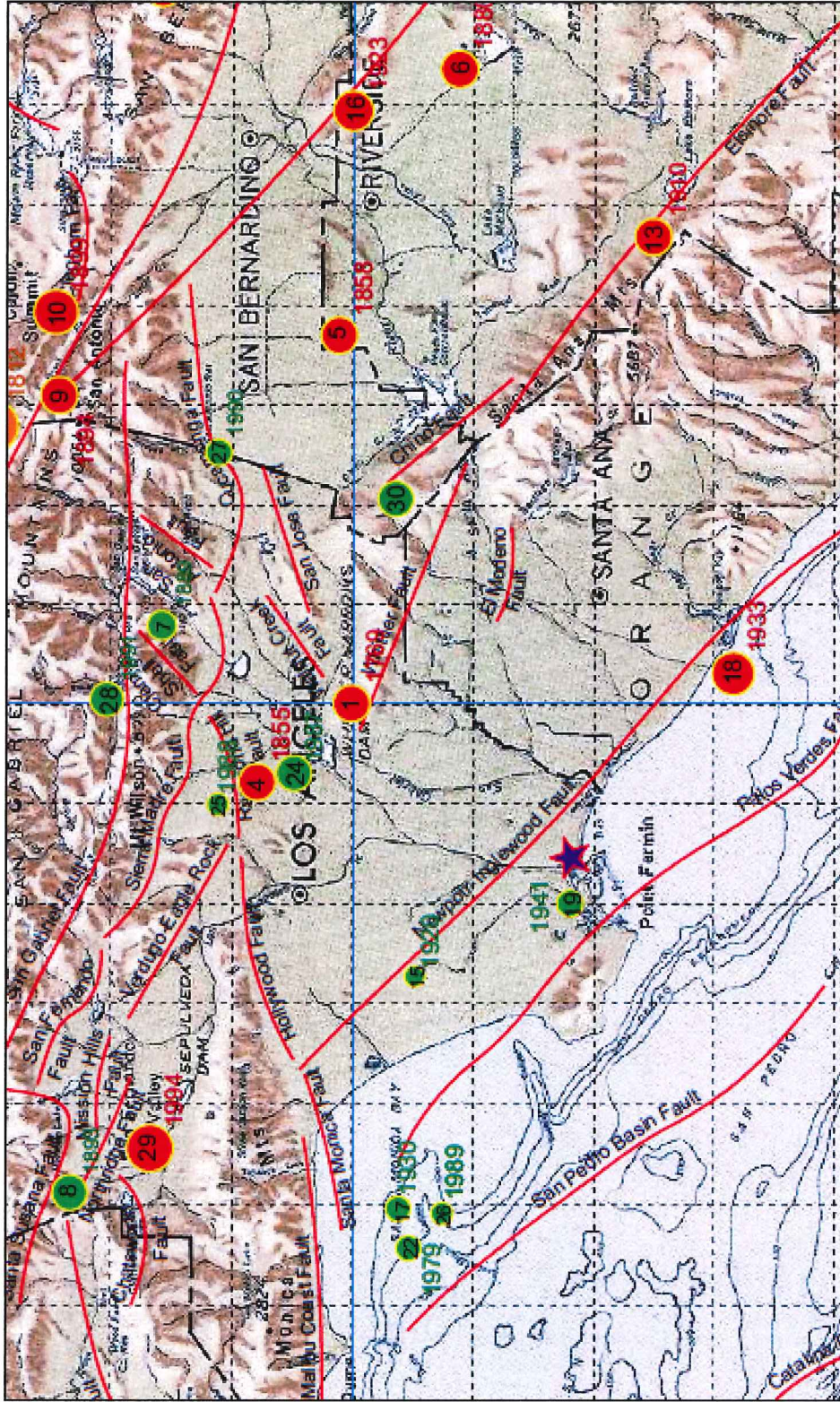
## City Hall Design

- Built in 1977 under 1970 Uniform Building Code
- 15 Stories above grade and basement
- Square (112' X 112') footprint
- Rectangular (36' X 30') wings at each corner
- 225,000 useable square feet
- Height above plaza level: 248 feet





# Long Beach Area Faults





# Long Beach Area Faults

Fault	Approx. Distance (mi)	Est. Magnitude
Newport-Inglewood (LA Basin)	2.8 mi	7.1
Palos Verdes	4.3 mi	7.3
Puente Hills	13.1 mi	7.1
San Joaquin Hills	16.0 mi	6.6
San Andreas	50.5 mi	8.0





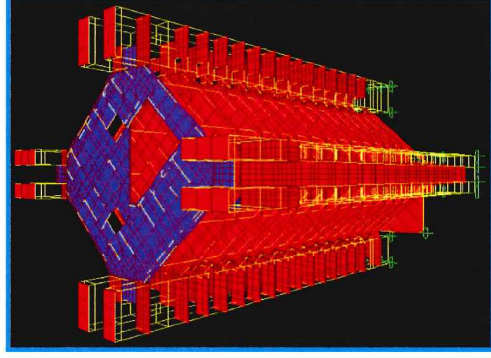
# Historical Earthquake Experience

Earthquake	Distance (mi)	Magnitude
Northridge: January 17, 1994	36 mi	6.7
Big Bear: June 28, 1992	84 mi	6.5
Sierra Madre: June 28, 1991	36 mi	5.8
Whittier: October 1, 1997	21 mi	6.1
Long Beach: March 10, 1933	--	6.4



# Original 2005/06 Study

- Tier 2 Life-Safety Review Conducted in 2005/06 used FEMA 310 standard
- City Hall did not meet FEMA 310 guidelines for seismic sufficiency







## 2013 NYA Study

- Evaluation Criteria: ASCE 31/41 Seismic Rehabilitation of Existing Buildings which is the new standard for Federal and State governments
- Looked at impact of both initial earthquake and likely aftershocks
- Study evaluated the potential impact of seven recent earthquakes and scaled them to represent a 10% probability of occurrence in 50 years
- In 4 of 7 analyzed potential earthquakes, the results indicate the building is likely to sustain excessive drift

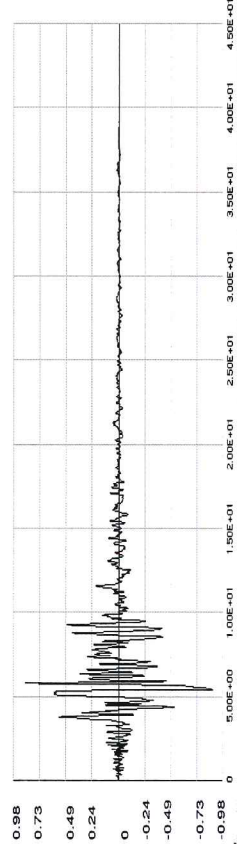
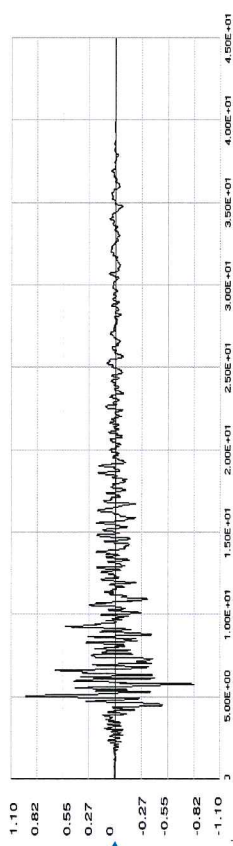
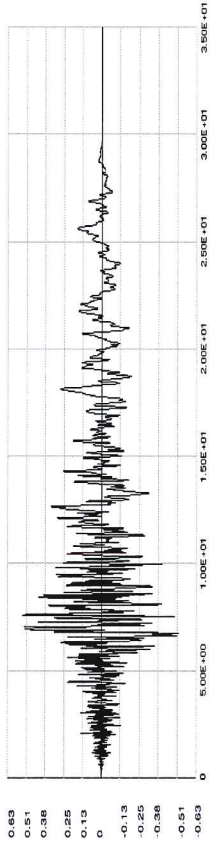


# 2013 NYA Study (Cont'd)

- Seven earthquakes were selected and scaled to represent a 10% probability of occurrence in 50 years

- Earthquake records:

- Imperial Valley (1979)
- Superstition Hills (1987)
- Loma Prieta (1989)
- Erzican (1992)
- Northridge (1994)
- Kobe (1995)
- Duzce (1999)





## 2013 NYA Study (Cont'd)

### Identified deficiencies:

- Significant movement and strength loss in building connections
- Excessive movement between 4th and 7th floors which could lead to structural failure
- Weak structural areas at Lobby and Mezzanine from overstressed trusses and columns





# Conclusion

Must act now to address conditions:

1. Seismically retrofit the building immediately:
  - Strengthen connections between columns and beams on all floors
  - Strengthen Lobby and Mezzanine transfer elements
  - Strengthen pre-cast concrete panel connections at building wings
2. Relocate City Hall to a new facility
3. Build a new City Hall in the Civic Center



# Civic Center Alternatives

October 22, 2013



# Retrofit Alternative

	2006 Report		2013 Report
	2006 Costs	2013 Costs	
Seismic Renovations	\$50M	2006 costs with 5% annual escalation	\$67M
Building Systems & Code Upgrades	\$30M		\$65M
Permitting, Construction Mgmt. & Temporary Relocation	\$39M		\$62M
<b>TOTAL</b>	<b>\$119M</b>	<b>\$170M</b>	<b>\$194M</b>

\$194M divided by 283,268 gross sq. ft. = \$685 per sq. ft.





# Retrofit Alternative

- The Facility Condition Index, or "FCI," describes the relative state of building condition against a cost model of a similar building as if it were at the beginning of useful life

0% - 5%	Good
6% - 10%	Fair
11% - 24%	Poor
25% - 49%	Very Poor
50% & Above	Replace

- The FCI for City Hall is 52% and the FCI for the Main Library is 73%, indicating both should be replaced rather than repaired



## RFP Alternative

- On February 12, 2013, the City Council directed staff to prepare and release an RFQ for a development partner to design, build, finance, operate, and maintain a new Civic Center, including:
  - ✓ New City Hall
  - ✓ New Main Library
  - ✓ New parking facilities
  - ✓ Re-activated Lincoln Park
  - ✓ Incorporation of the old Courthouse site



## Guiding Principles

- Redevelop the Civic Center into a vibrant mix of public and private space
- Improve connections between the new Civic Center and Downtown
- Consider the inclusion of a new Port permanent Headquarters
- Revitalize Lincoln Park to a destination park with amenities appropriate for visitors, residents and Downtown workers
- Reduce maintenance costs, increase energy efficiency, consolidate offsite leases, and remain cost neutral
- Consider a private development element and/or disposition of surplus property for private development





## Key Project Goal

- Ensure the City's cost to operate and occupy a new City Hall is no greater than its current costs, but including CPI increases
- These costs are estimated at \$12.6 million annually, which includes off-site annual lease costs of \$2.13 million



## Short List of RFQ Respondents

- Related California, LLC
- Plenary-Edgemoor Civic Partners, LLC
- Long Beach CiviCore Alliance, LLC



## RFP Alternative

- The next step is to prepare and release a Request for Proposals (RFP) to design, build, operate, finance, and maintain a new Civic Center, and issue the RFP to the short list of RFQ respondents
- Staff is also recommending the creation of a Civic Center Re-visioning Committee to:
  - ✓ Receive the results of community outreach efforts
  - ✓ Review conceptual design guidelines
  - ✓ Provide suggestions and modifications
  - ✓ Approve RFP prior to its release



## Conclusion

- The Retrofit Alternative is estimated to cost \$194 million dollars, or \$685 per square foot, just for City Hall
- The Retrofit Alternative does not guarantee that City Hall will be inhabitable after a seismic event
- City Hall will remain functionally obsolete, continue to sustain high energy costs and increasing maintenance costs, and cannot absorb offsite leases
- The Facilities Condition Index for City Hall and the Main Library indicate that City Hall and the Main Library should be replaced rather than repaired
- There is no identified source to fund the retrofit cost





# Conclusion

- Staff recommends proceeding expeditiously with the preparation and release of an RFP to the Short List of RFQ Respondents, leading to a Design, Build, Finance Operate, and Maintain approach for a new Civic Center and possible new Main Library