390 Main

Seismic Retrofit Performance Criteria & Retrofit Design

Presented to: BAHA Board

June 26, 2013

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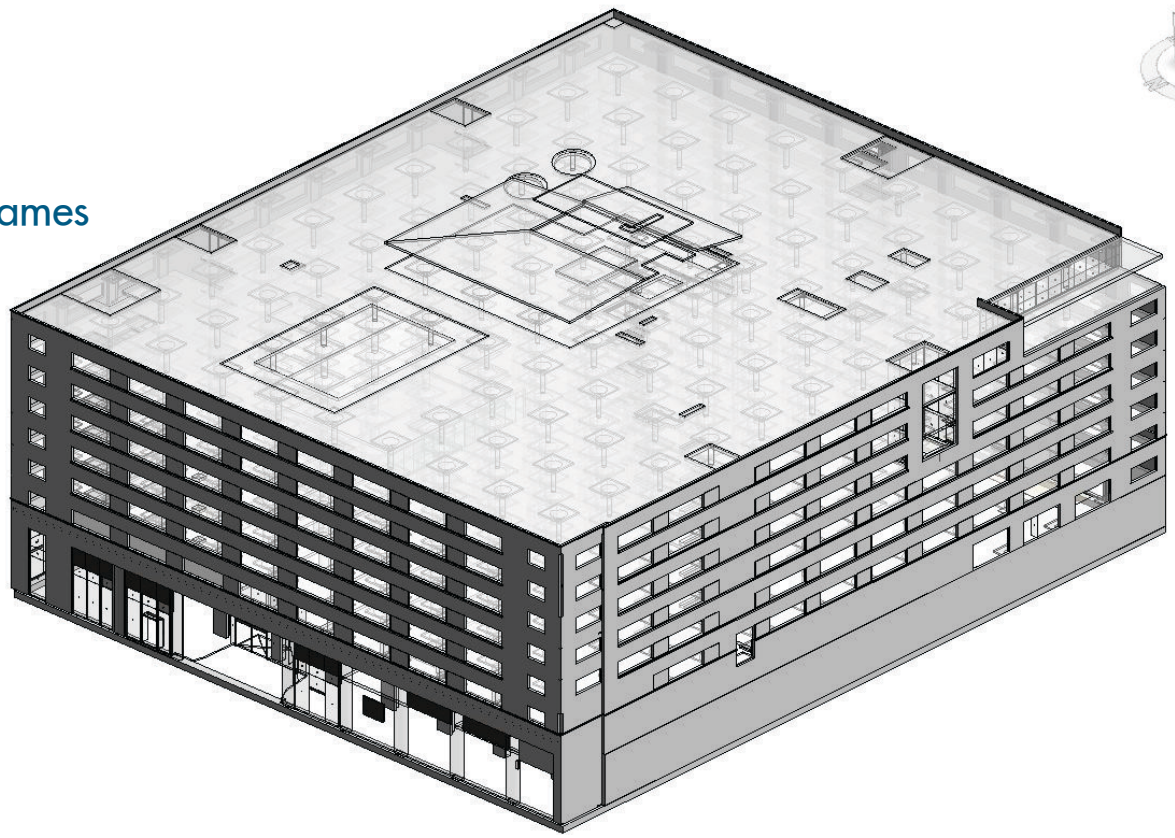
Agenda

- 390 Main : Existing Condition
- Seismic Retrofit Performance Criteria
- Seismic Retrofit Design
- Anticipated Performance

390 Main: Existing Conditions

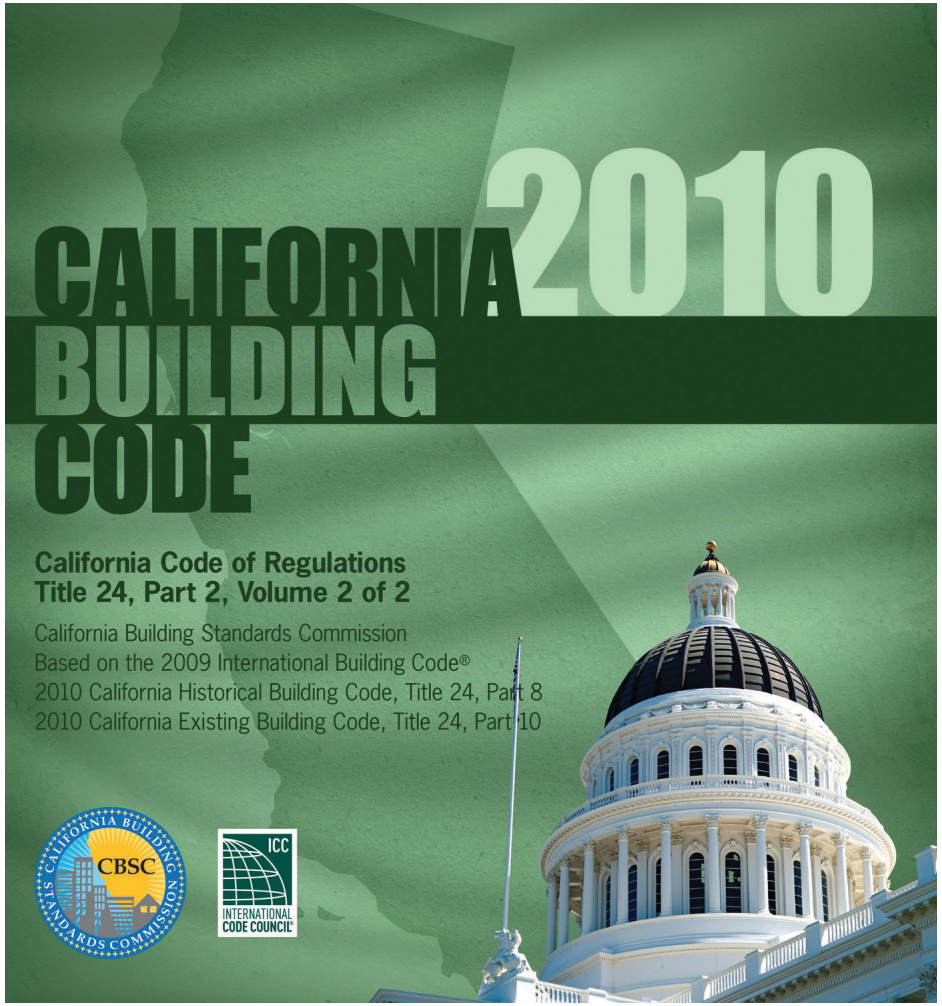
GRAVITY SYSTEM:
- Concrete slabs (2-way)
- Concrete columns
- Shallow & Piles Foundations

LATERAL SYSTEM:
- Pier & Spandrel perimeter frames



390 Main: Existing Conditions

Performance Criteria

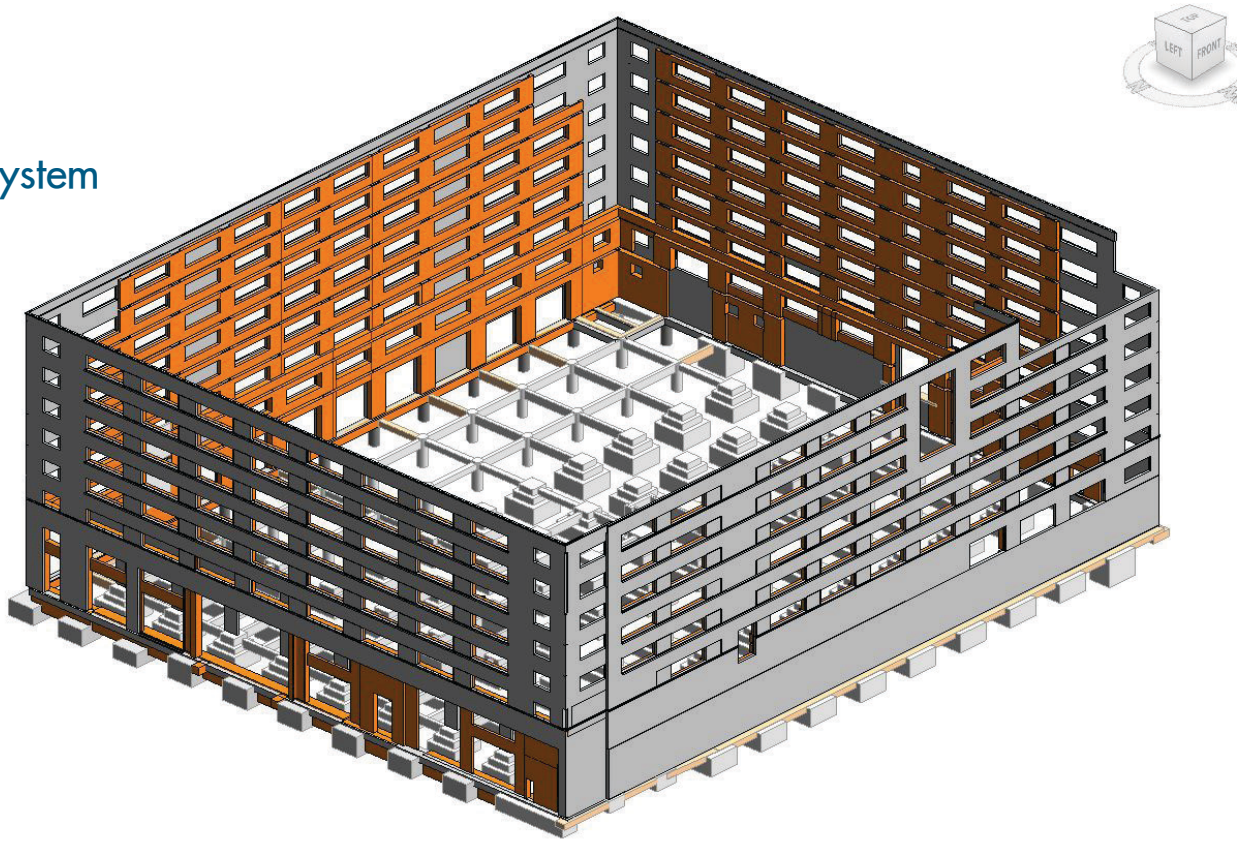


CALIFORNIA BUILDING CODE 2010
- at 100% force level

390 Main - Seismic Retrofit Design

GRAVITY SYSTEM:
- Modifications to vertical circulation
- Tenant improvements

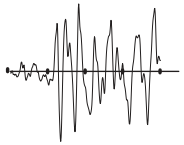
LATERAL SYSTEM:
- Enhancement of existing system
- Inherent redundancy



390 Main - Seismic Retrofit Design

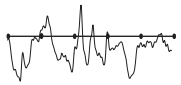
390 Main - Anticipated Performance

1906 earthquake
Magnitude 7.9
as felt in San Francisco



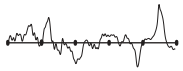
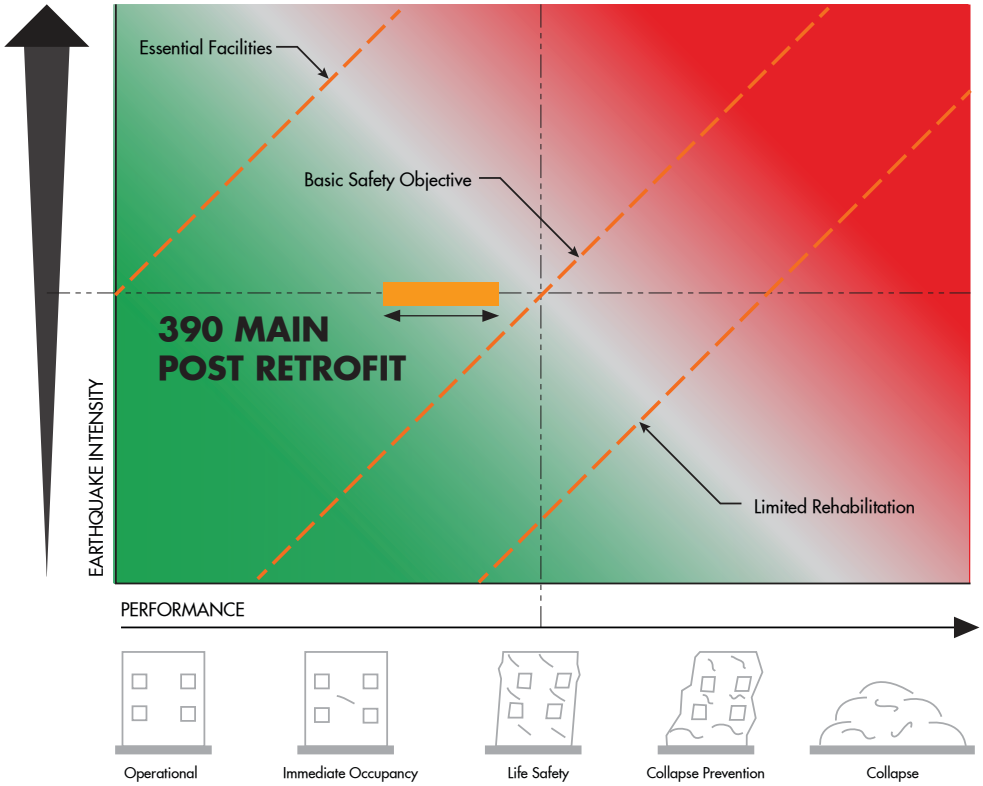
Very Rare and Extreme

Magnitude 7.2 on San Francisco Peninsula fault,10 miles from downtown San Francisco



Rare and Large

1989 Loma Prieta earthquake
Magnitude 6.9
60 miles away from San Francisco



Small and Frequent