



City of Culver City

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Staff Report

File #: 20-356, **Version:** 1

Item #: A-2.

CC - (1) Discussion of Findings of Soft Story Seismic Retro-fit Building Survey and Report Prepared by Degankolb Engineers; and (2) Direction to the City Manager as Deemed Appropriate.

Meeting Date: October 14, 2019

Contact Person/Dept: Stuart Tom, Building Official Consultant
Sol Blumenfeld, CDD Director

Phone Number: (310) 253-5802
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Fiscal Impact: Yes ☒ No ☐

General Fund: Yes ☐ No ☐

Public Hearing: ☐

Action Item: ☐

Attachments: Yes ☒ No ☐

Commission Action Required: Yes ☐ No ☒

Public Notification: (E-Mail) Meetings and Agendas - City Council (10/09/19)

Department Approval: Sol Blumenfeld, Community Development Director (10/06/19)

RECOMMENDATION

Staff recommends the City Council (1) receive a presentation and discuss the findings of the soft story retro fit building survey and report prepared by the City's engineering consultant, DeganKolb Engineers (Degankolb); and (2) provide direction to the City Manager as deemed appropriate.

BACKGROUND

On December 10, 2018, the City Council selected DeganKolb to prepare a citywide survey of commercial and residential structures in order to identify those that had soft story characteristics that make them vulnerable in earthquakes. Over the past several months DeganKolb has surveyed all commercial and residential properties in the City to identify those that may be characterized as soft story buildings and may require seismic retro fit. DeganKolb will also work with staff to prepare a soft story retro-fit program that includes community outreach and a draft ordinance amending the Building Code for City Council consideration.

DISCUSSION

Pursuant to Degankolb's project scope of work, the project was scheduled in two phases. Phase One involves citywide survey mapping and a summary report on findings presented to City Council. Phase Two involves community outreach meetings; preparation of a preliminary draft technical ordinance; review of the technical ordinance with City stakeholders, a Technical Advisory Group (selected by City Council), and peer cities involved in similar ordinances; finalization of the draft technical ordinance; and final presentation to City Council.

Degankolb has completed Phase One of its work and has prepared the citywide survey, which consisted of a parcel level review of the year of building construction and a field survey (driving and walking the City) to verify the electronic data collection for all commercial and residential properties. The data collection found that a total of 609 buildings are potentially vulnerable to seismic damage or collapse associated with soft story building characteristics.

Of the 609 identified buildings, the vast majority are structures that were constructed before 1978. Building code standards began to significantly improve seismic design criteria after 1978, and most municipalities that have implemented soft story retrofit ordinances utilize 1978 as a cut-off date and exclude buildings constructed after that date.

493 of the 609 identified buildings were constructed prior to 1978, which indicates that an overwhelming 81% of the structures were constructed prior to the development of stricter building code standards. If a cut-off date of 1978 is applied (similar to other Southern California jurisdictions) the remaining 19% of the identified buildings would not be subject to a proposed citywide retrofit mandate.

Effect On Small Residential Buildings

Figure 9 in the attached report reveals that 378 of the buildings (62%) contain six or fewer dwelling units. These constitute small apartment buildings that are sometimes characterized as "Mom & Pop" rental income property as well as other modest residential income investment properties. Severe damage to these buildings could result in the loss of housing for more than 1,000 Culver City residents.

It is notable that all jurisdictions with soft story retrofit programs have exempted single family dwellings. This is likely the result of a number of considerations as follows:

- Single family dwellings have traditionally performed relatively well during seismic events. Past seismic experience has revealed that the mode of structural failure for single family dwellings is not likely to be related to a soft story condition. Lack of foundation bolts and/or unbraced cripple walls are a more likely cause of failure.
- Unlike rental property, single family dwellings are more likely to be owner-occupied. Consequently, single family dwellings are much less likely to generate a revenue stream for the property owner to offset the cost of structural retrofit.
- The residential density of single family dwellings is low compared to the density of multi-family

residential buildings. Jurisdictions that are seeking the most effective means of protecting their communities have focused their attention on buildings that will benefit a higher number of occupants per building.

The field data and electronic data collected during the survey included the following:

- Building address
- Parcel number
- Year of construction
- Number of stories
- Number of units
- Building square footage
- Building use
- Number of parking spaces
- Parking impacts of potential retrofits
- Photo documentation
- Primary construction material
- Soft story characteristics (if any)

The survey work progress has been posted on the City's website with contact information for questions by the public.

FISCAL ANALYSIS

The cost for the Soft Story Seismic Retro-fit survey and related consultant services is \$173,000. The future cost impacts related to implementation of a seismic retro fit program will be determined once the seismic retrofit requirements have been established.

As part of the survey, Degenkolb classified each potential soft story building into one of twelve different "Types", which help to characterize the nature of a structure's seismic vulnerability. Approximately 79% of the buildings fall into either "Type A", "Type B" or "Type RD1" which are all characterized by a single "weak story line" (unsupported upper level section of the building) along the exterior ground floor of the building.

Retrofit of buildings that fall into "Type A", "Type B" and "Type RD1" usually consists of the installation of one or more steel moment frames, which have an average installed cost of approximately \$40,000 per frame. Degenkolb estimates the cost to retrofit most buildings will fall between \$40,000 to \$160,000, with an average cost of approximately \$80,000 per individual building.

City-wide, the approximate cost impact to retrofit all 609 identified buildings is \$48.7M; the approximate city-wide cost to retrofit the 493 buildings constructed prior to 1978 is \$39.4M. All retrofit costs are expected to be carried out by the owners of the affected properties.

Since 62% of the buildings identified as vulnerable contain six or fewer dwelling units, the cost of retrofit is disproportionately borne by this type of building and may present some degree of financial

difficulty for “Mom and Pop” rental income properties based on the typical rental revenue stream associated with small rental properties, particularly those which are subject to the City’s recent rent cap. As a result, if the City Council determines to move forward with considering the implementation of a soft story retro-fit program, it may want to also consider whether to allow property owners to pass through a portion of the retro fit costs to tenants over some amortized period.¹

ATTACHMENTS

1. 2019-10-14_ATT - Degankolb Survey and Findings

NOTES

1. The City of Los Angeles passed an Ordinance that allows the owners of residential rental property to pass a portion of the seismic retrofit costs to their tenants in rent-controlled buildings.

MOTIONS

That the City Council:

1. Discuss the findings of the soft story retro fit building survey and report prepared by DeganKolb Engineers; and
2. Provide direction to the City Manager as deemed appropriate.