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201 NORTH FIGUEROA STREET
LOS ANGELES, CA 90012

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GENERAL MANAGER
SUPERINTENDENT OF BUILDING

JOHN WEIGHT
EXECUTIVE OFFICER

Seismic Systems Service
225 Simi Village Dr, Suite #941988
Simi Valley, CA 93094
Attn: Maria Husband
Phone: (805) 531-9994
Fax: (805) 531-9984

RESEARCH REPORT: RR 25694
(CSI # 13440)
Expires: March 1, 2023
Issued Date: April 20, 2021
Code: 2020 LABC

GENERAL APPROVAL – Renewal and Clerical Modification - GSR-18IAB Strong Motion Recorder.

DETAILS

The GSR-18 Strong Motion Recorder as manufactured by Geosig, Ltd., is an approved strong motion recorder when complying with the following:

A. Instrument Package Requirements:

1. Maintenance and servicing of the instrument shall be in accordance with Information Bulletin P/BC 2020 - 048, and Section 1613.10 of the 2020 Los Angeles City Building Code.
2. These instruments shall meet all specifications contained in Information Bulletin P/BC 2020-048 including power supplied by battery with a trickle charger.
3. The Power Supply shall be UL listed.

B. Site Installation Requirements:

1. **Location:**
Strong Motion Recorder are to be located as required by the Department. It is desirable to locate the upper instruments at a point that will give representative vibration patterns for the building as a whole (i.e. - not adjacent to an extremely stiff shear wall, or on cantilever projections where torsional effects are excessive).

Each instrument shall be located in an area that is protected from shock other than due to earthquake and from handling by unauthorized persons. The instrument

RR 25694
Page 1 of 3

shall be accessible for servicing by an accelerograph maintenance agency approved by the City of Los Angeles.

2. Space Requirements:

- i. The minimum space required for the installation is 4' 3" x 5' 0" x 4' 0" high.
- ii. Clear space of at least 2' 6" shall be provided at the recorder end and at the left side of the instrument when looking from the recorder to the seismometers. Minimum space of one foot shall be provided on the other two sides.
- iii. Space access shall be arranged so that the instrument may be easily serviced by Los Angeles City approved accelerograph maintenance agency.
- iv. The instruments, batteries, and trickle charger shall be protected by being located in a locked closet with no other use, or covered with a cage that is locked in place.

3. Attachment:

Each strong motion recorder must be securely anchored to the concrete floor system. If an accelerometer is installed on a wall, it should be attached using an L-shaped (or 90 degree) aluminum bracket.

4. Orientation of Instrument:

The strong motion recorders are recommended to be aligned with the principal axis of the building.

5. Electrical Inter-Connection:

- Strong Motion Recorder sites - multiple Strong Motion Recorders shall be electrically inter-connected with wire assembly installed in rigid metal conduit of ½" minimum diameter with the approval from a Los Angeles City licensed accelerograph maintenance agency.
- All interconnecting conductors to remote sensors and the GPS unit, shall be listed and installed in Rigid Metal Conduit (RMC), Intermediate Metal Conduit (IMC) or Electrical Metallic Tubing (EMT) in accordance with the requirements of California Electrical Code (CEC).
- A electrical permit is required for said installations.

6. Electrical Outlets:

A 110 Volt electrical outlet shall be provided adjacent to each instrument for trickle charger and servicing needs.

7. Qualified Installers:

The strong motion recorder shall only installed, maintained and used by qualified and trained personnel.

C. Certification:

The manufacturer shall submit a written certification to Chief of Engineering Bureau, 201 N. Figueroa Street, Room 1030, Los Angeles, California, 90012, stating that the required instruments are properly installed and operational prior to the issuance of the Certificate of Occupancy.

DISCUSSION

The clerical modification is to update the report to the 2020 Los Angeles City Building Code.

The report is in compliance with the 2020 Los Angeles City Building Code.

The GSR-18 Strong Motion Recorder has been demonstrated to show that it exceed the minimum specifications for strong motion recorder as outlined in Information Bulletin P/BC 2020-048 and section 1613.10 of the 2020 Los Angeles Building Code.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.

This general approval of an equivalent alternate to the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this approval have been met in the project in which it is to be used.

QUAN NGHIEM, Chief
Engineering Research Section
201 N. Figueroa St., Room 880
Los Angeles, CA 90012
Phone- 213-202-9812
Fax- 213-202-9943

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