

## **SEISMIC SHELVING OPM-0426**

**NOTE:** The seismic floor plate kits in this document are intended for use with free standing, floor anchored Super Erecta<sup>®</sup>, Super Adjustable Super Erecta<sup>®</sup>, MetroMax<sup>®</sup> i and MetroMax<sup>®</sup> Q shelving units. The part numbers identified in this document have earned OPM# 0426 Preapproval and are valid for the 2019 California Building Code (CBC) which governs new building projects in the state of CA designed to the requirements of the 2019 CBC. These parts may also be used to earn site specific approvals for other jurisdictions.



**GENERAL NOTES:** For a full copy of the OSHPD Drawings, click here <<u>OPM# 0426</u>>.

This OSPHD Preapproval of manufacturer's certification (OPM) is based on the CBC 2019. The demand (design forces) for use with this OPM shall be based on the CBC 2019.

- A1. The Preapproval is only for supports and attachments of InterMetro shelving to the structure. The engineer of record for a site specific project must substantiate adequacy of the supporting structure.
- A2. The Preapproval is only for shelving loaded with 20 psf maximum and located in areas noted by the OPM drawings.
- A3. Installations require a maximum 20 psf capacity, a posting shall be required which states "max. Loading 20 psf".
- A4. Special inspection requirements of section 1705A.3, 2019 CBC, as applies to concrete anchor bolt installation and section 1910A.5, 2019 CBC.
- A5. Concrete anchors shall be as called for on the details.

## A. Expansion Anchors

Expansion anchors shall be HILTI KB-TZ2 TZ, ICC-ES ESR-4266 unless otherwise noted.

Avoid cutting or damaging existing slab reinforcing.

Minimum concrete slab-on-grade thickness shall be 4".

Minimum 3-1/4" normal weight or sand light weight concrete over a 20 GA minimum steel deck with 1-1/2" Minimum high flutes.

Minimum concrete edge distance from center of anchor shall be 5"

Minimum spacing between anchors to be 4"

Proof load test bolt to a minimum load of 1600 lbs. Tension-proof

Load tests shall be done by an approved independent testing agency employed by the facility owner per CBC 1704A & 1910A.5 and CAC 7-149.

- A6. Additional test specifications per 1910A.5, 2019 CBC and as follows:
  - 1. Anchor diameter refers to the thread size for the wedge anchors
  - 2. Apply proof test loads to anchors with nut in place
  - Test loads shall be as follows: Anchor - 3/8" HILTI KB-TZ2; Test Load (N.W. CONC.) - 1600 lbs; Test Load (Sand L.W. CONC.); Installation Torque - 25 ft-lbs
  - 4. Reaction loads from test fixtures may be applied close to the anchor being tested provided the anchor is not restrained by the fixture.
  - 5. Test 50% of the installed anchors, or alternate bolts in a group, including at least one-half of the anchors in each group per CBC 1910A.5.3, 2019 CBC.
  - 6. Testing shall occur 24 hours minimum after installation
  - 7. If any anchor fails testing, all anchors in the same category shall be tested until 20 consecutive anchors, not previously tested, pass, then resume the initial test frequency.
  - 8. The following criteria apply for the acceptance of installed anchors:
    - a. Hydraulic ram method: the anchor should have no observable movement at the applicable test load after 15 seconds that is, the washer under the nut should not become loose.
    - b. Torque wrench method: the applicable test torque must be reached within one-quarter (1/4) turn of the nut.
  - 9. All tests shall be performed in the presence of the special inspector. All reports shall be sent to the inspector of record, owner, and the architect or engineer in responsible charge.

## ASSEMBLY OF SEISMIC SHELVING:

- 1. Locate rebar and mark off floors.
- 2. Using foot plates as templates, mark anchor locations and install anchors.
- 3. Anchor the foot plates.
- 4. Assemble the configuration.







5. Add Seismic labels to each shelving unit.



**NOTE:** For triangular foot plates that are anchored in two hole locations, cover the third hole with the provided hole covers.





## WORKING AROUND REBAR

Rotating the foot plates to avoid rebar in an orientation different from the shown layout on page 2 and 3 is possible. However, the final installation may require an approval from the Inspector of Record (IOR).



\* Save this document for future application, load rating and/or safety reference.

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