TO: Distribution

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SUBJECT: EARTHQUAKE CODE -- LOCAL LAW #17/95--ENLARGEMENTS

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PURPOSE: To provide guidelines to Professional Engineers (P.E.) and Registered Architects (R.A.) in the interpretation and application of Reference Standard RS 9-6, §2312 (a) (1) enacted with Local Law #17/95, the Earthquake Code.

EFFECTIVE: Immediately

SPECIFICS:

The Earthquake Code, Local Law #17/95, was promulgated for new construction; it does not affect an alteration where there is no enlargement of the existing structure. When proposed work includes an enlargement of the existing structure, compliance with Local Law #17/95 is required when new foundations are constructed or when existing foundations are reinforced to carry the enlarged portion of the building. In addition, the Commissioner will require that any enlargement in and of itself comply with Reference Standard RS 9-6 when the cost of the enlargement exceeds 60% of the value of the building, pursuant to §27-119 of the Code, within any twelve-month period, unless a waiver is granted by the Commissioner.
When compliance with RS 9-6 is required, consideration must be given to the interface between the existing and enlarged portion of the building. If a seismic joint (separation) is utilized, then only the new construction must comply with RS 9-6.

When no seismic joint is provided, the computed seismic forces of the entire proposed structure, (existing building plus the proposed enlargement), must be compared to the computed forces for the existing portion alone. The forces referred to herein are either base shear or overturning moment. If the increase in any seismic force resulting from the enlargement is less than 20%, compliance with RS 9-6 is required only for the new construction. If either of the seismic forces attributable to the enlargement increase by more than 20%, then the design force shall be the lesser of the following:

1. Two-thirds (2/3) of the combined force resulting from the combination of the new and existing construction but not less than the seismic force resulting from consideration of only the new construction;

2. Twice the seismic force resulting from consideration of only the new construction.

This design force shall be resisted by either the enlargement alone or a combination of the existing building and the enlargement depending on the design professional's choice of load resisting system and force distribution.

A flow chart illustrating the above requirements is attached.
PROPOSED SEISMIC REGULATIONS FOR ENLARGEMENTS

ENLARGEMENT

1. NEW FOUNDATION ELEMENTS AND/OR EXISTING FOUNDATION ELEMENTS REINFORCED

2. NO NEW FOUNDATION ELEMENTS, NO REINFORCING OF EXISTING FOUNDATION

3. ENLARGEMENT DOES EXCEED 60% OF BUILDING VALUE IN ANY 12 MONTH PERIOD

4. ENLARGEMENT DOES NOT EXCEED 60% OF BUILDING VALUE IN ANY 12 MONTH PERIOD

5. DO NOT CONFER WITH THE COMMISSIONER

6. CONFER WITH THE COMMISSIONER

7. COMPLIANCE WITH RS9-6 REQUIRED AS SET FORTH BELOW

8. COMPLIANCE WITH RS9-6 NOT REQUIRED

9. DO NOT PROVIDE SEISMIC JOINT

10. PROVIDE SEISMIC JOINT

11. SEISMIC FORCES INCREASE LESS THAN 20% DUE TO THE ENLARGEMENT

12. SEISMIC FORCES INCREASE MORE THAN 20% DUE TO THE ENLARGEMENT

13. COMPLIANCE WITH RS9-6 REQUIRED ONLY FOR THE NEW CONSTRUCTION

14. COMPLIANCE WITH RS9-6 REQUIRED ONLY FOR THE NEW CONSTRUCTION

15. COMPLIANCE WITH RS9-6 REQUIRED AS SET FORTH BELOW

16. DESIGN THE BUILDING ENLARGEMENT AND/OR THE EXISTING BUILDING FOR THE LESSER OF THE FOLLOWING FORCES:

   1. 2/3 OF THE COMBINED FORCE RESULTING FROM THE COMBINATION OF THE NEW AND EXISTING CONSTRUCTION BUT NOT LESS THAN THE SEISMIC FORCE RESULTING FROM CONSIDERATION OF ONLY THE NEW CONSTRUCTION.

   2. TWICE THE SEISMIC FORCE RESULTING FROM CONSIDERATION OF ONLY THE NEW CONSTRUCTION.