

requirements should be carefully considered before specifying them:

- A) Vertical loads exceeding 2,250,000 kg.
- B) Horizontal loads exceeding 225,000 kg.
- C) The simultaneous application of horizontal and vertical loads where the horizontal loads exceeds 75% of the vertical loads.
- D) Triaxial test loading.
- E) The requirement for dynamic rotation of the test bearing while under vertical load.

603.07 BEARING SCHEDULE

A bearing schedule shall be included in the contract drawings and documents and shall contain the following as a minimum:

1. A schedule of all minimum and maximum vertical and horizontal service loads.
2. Minimum Structure and Construction Rotation requirements.
3. Magnitude and direction of movements at all bearing support points.
4. Quantity, type (fixed, expansion or guided expansion).
5. Plan view, alignment and location of all bearing units.
6. Allowable upper and lower bearing contact pressure.
7. Fixing or anchorage details and/or requirements.
8. Grades, bevels and slopes of all bearings.

9. Allowable coefficient of friction of slide surfaces.

10. Surface coating requirements and the appropriate specifications.

11. Seismic requirements, if any.

12. Uplift details, temporary attachments or other requirements.

13. Installation scheme.

14. Bearing preset details, if required.

Design rotation, movement and other requirements in the Bearing Schedule should only refer to the requirements of the structure where the bearings are to be used.

604 RESTRAINING DEVICES

604.01 GENERAL

Restraining devices are meant to prohibit movement in a specified direction. Restraining devices shall be designed to resist the imposed loads including earthquake as specified in AASHTO and as modified in Section 200 of this manual.

Restraining devices could include concrete shear keys or end blocks, horizontal or vertical cable restrainers or mechanical restraining devices which could be an integral part of a bearing or a separate system. Restraining devices to prohibit vertical displacement at expansion ends, shall be designed to allow for inspection and future replacement of bearings.

Allowable restraining devices include, but are not limited to the following: Vertical Fixed Restrainers, Vertical Expansion Restrainers, External Shear Keys, Internal Shear Keys and Keyed Hinges.

604.02 VERTICAL FIXED RESTRAINERS

Vertical fixed restrainers consist of cable and appropriate hardware and are designed to allow