CHECKLIST #0400 FOR THE APPROVAL OF: ANCHORS

- ❑ Basic Requirements Checklist.
- ❑ One set of the manufacturer's 'approval document' including:
  a) Details of each model including dimensions and material specifications,
  b) Tension and shear capacity of each anchor for different strengths of concrete (in cracked or un-cracked concrete as applicable) and/or masonry blocks,
  c) Minimum edge distance and spacing distance between anchors, and
  d) Relationship between design resistance & temperature for adhesive anchors.
- ❑ One set of manufacturer's design drawings marked and verified by the testing laboratory.
- ❑ Manufacturer's brochure with specifications and installation instructions specifying use in *un-cracked concrete* or *cracked and un-cracked concrete*.

The following current laboratory tests and test reports in compliance with protocol TAS 301.

- ❑ Mechanical expansion and undercut anchors in concrete: test per ACI 355.2
- ❑ Mechanical screw-type anchors in concrete: test per ACI 355.2 and ASTM E 488 (See note 1)
- ❑ Mechanical expansion, undercut and screw-type anchors in masonry: test per ASTM E 488 (See note 1)
- ❑ Adhesive anchors in concrete: test per ACI 355.4
- ❑ Adhesive anchors in masonry: test per ASTM E 488 and ASTM E 1512 (See note 1)
- ❑ Compressive strength test of concrete & grout used on anchor test per ASTM C-39. Minimum compressive strength of concrete shall be 2500 psi. Concrete and grout shall be tested the date the anchor test starts. (See note 3)
- ❑ Test each model for corrosion resistance in compliance with ASTM G 85, Annex 5, 140 cycles as detailed in TAS 114, Appendix E. Stainless steel bolts and screws must be tested per ASTM F 593. Austenitic Stainless Steels must be tested per ASTM A 262, Practice A or E as applicable.

Notes:

1. A minimum of five specimens of each model shall be tested to the ultimate load. If any individual test varies by more than 20% from the average, five additional tests shall be made. Ultimate load shall be the average of the first 5 samples if each specimen falls within plus or minus 20 % of the average or shall be the average of 8 samples after eliminating the highest and the lowest specimen. For anchors in masonry, the allowable design load shall be given in the 'approval document' using an applied safety factor of five to one. Test report shall specify the type of drill used (rotary or hammer) to install test specimens.
2. Approval of anchors to be used in groups will require specific load testing for this use.
3. Anchors tested in concrete block (masonry) shall record the embedment on the face wall and on the grout. Concrete block grout shall have a minimum compressive strength of 2000 psi.
4. Laboratory test reports are to contain a graph plotting ultimate load vs. displacement for each specimen tested.