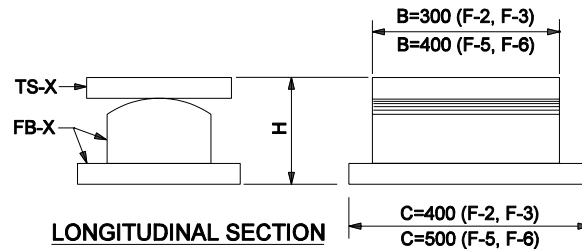
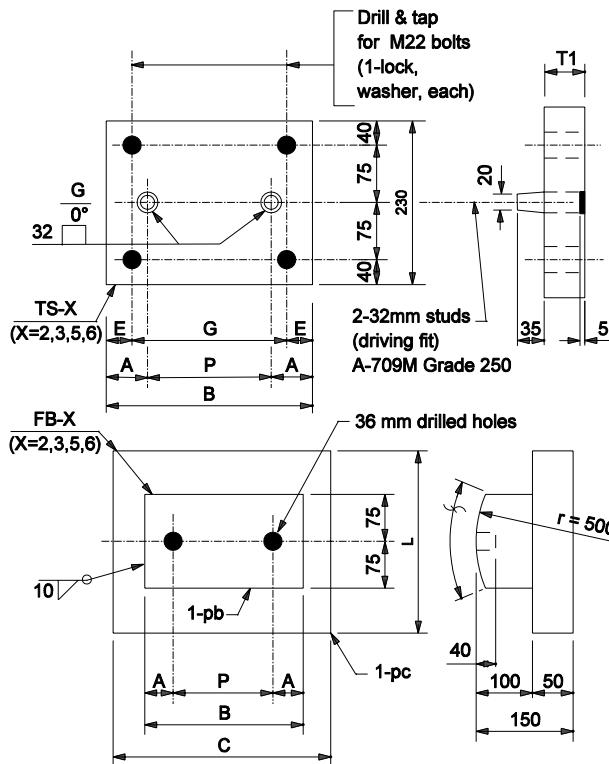


**FIXED SHOE ASSEMBLY**



**LONGITUDINAL SECTION**

| Shoe Type | Maximum Reaction | Shoe Assembly |      | H   |
|-----------|------------------|---------------|------|-----|
|           |                  | TS-X          | FB-X |     |
| F-2       | 1787 kN          | TS-2          | FB-2 | 200 |
| F-3       | 1090 kN          | TS-3          | FB-3 | 195 |
| F-5       | 1000 kN          | TS-5          | FB-5 | 200 |
| F-6       | 1375 kN          | TS-6          | FB-6 | 195 |

| TS-X  | B   | T1 | E  | G   | A  | P   | Section    | Material         |
|-------|-----|----|----|-----|----|-----|------------|------------------|
| TS-1* | 305 | 45 | 55 | 190 | 55 | 190 | ℙ 230 x 45 | A-709 Grade 250  |
| TS-2  | 305 | 50 | 55 | 190 | 65 | 180 | ℙ 230 x 50 | A-709 Grade 345W |
| TS-3  | 305 | 50 | 55 | 190 | 70 | 160 | ℙ 230 x 50 | A-709 Grade 690  |
| TS-4* | 405 | 45 | 75 | 250 | 75 | 250 | ℙ 230 x 45 | A-709 Grade 250  |
| TS-5  | 405 | 50 | 75 | 250 | 85 | 240 | ℙ 230 x 50 | A-709 Grade 345W |
| TS-6  | 405 | 50 | 75 | 250 | 95 | 220 | ℙ 230 x 50 | A-709 Grade 690  |

\* Top shoe used with Expansion Steel Shoe only.

**TOP SHOE**

| FB-X | C   | L   | B   | A  | P   | Sections    |            |
|------|-----|-----|-----|----|-----|-------------|------------|
|      |     |     |     |    |     | pb          | pc         |
| FB-2 | 400 | 300 | 300 | 60 | 180 | ℙ 150 x 100 | ℙ 300 x 50 |
| FB-3 | 400 | 400 | 300 | 70 | 160 | ℙ 150 x 100 | ℙ 400 x 50 |
| FB-5 | 500 | 300 | 400 | 80 | 240 | ℙ 150 x 100 | ℙ 300 x 50 |
| FB-6 | 500 | 400 | 400 | 90 | 220 | ℙ 150 x 100 | ℙ 400 x 50 |

**FIXED BASE**

**NOTES :**

- Curved surfaces of shoes to be machined after weldments have been completed. At the contractor's option the following substitutions of materials will be allowed at no increase in unit price of material:
  - A-709M Grade 345W steel may be used in lieu of A-709M Grade 250 steel.
  - A-709M Grade 690 steel may be used in lieu of A-709M Grade 345W or A-709M Grade 250 steels.
- Section "pb" to be finished from 100 mm thickness while Section "pc" is to be straightened.
- Maximum horizontal thrust per Fixed Shoe = 22kN.

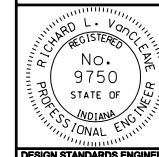
All Dimension are in mm unless otherwise specified

INDIANA DEPARTMENT OF TRANSPORTATION

**FIXED STEEL SHOE DETAILS**

MARCH 2005

STANDARD DRAWING NO. 711-BSTS-01



/s/ Richard L. VanCleave 3-01-05  
DESIGN STANDARDS ENGINEER DATE

/s/ Richard Smutzer 3-01-05  
CHIEF HIGHWAY ENGINEER DATE

DESIGN STANDARDS ENGINEER