8-HOLE PUNCH TIE PLATE
WITH HOLD-DOWN SPIKE HOLE

NOTES FOR THE PLATE:

1. TIE PLATE SPRING FOR PLATES WITH HOLD-DOWN SPIKE HOLE
   - FIGURES 1, 2 & 3: 4 SPIRES REQUIRED (1 LINE & 2 HOLD-DOWN)
   - FIGURES 4 & 5: 4 SPIRES REQUIRED (1 LINE & 2 HOLD-DOWN)
   - .75 SPIRES REQUIRED (4 LINE & 2 HOLD-DOWN)

2. ANY VARIATIONS IN THE SPIRE PATTERN ILLUSTRATED IN FIGURES 1 THRU 3 SHALL BE APPROVED BY THE CALTRAIN DESIGN DIRECTOR OF ENGINEERING.

3. CUT SPIRES MAY BE USED ON PANDROL PLATE SQUARE HOLES FOR TEMPORARY ASSEMBLY OF TRACK. THE CUT SPIRES WILL NOT BE REMOVED AFTER INSTALLATION OF SOFT STEEL TRACK SPIKES.

4. SPIRES SMALL CONFORM TO CURRENT ARENA FOR SOFT STEEL TRACK SPIKES

SECTION A-A
PANDROL TIE PLATE

NOTES FOR PANDROL PLATE

1. TOLERANCES FOR CHECKING AND PUNCHING WILL BE IN ACCORDANCE WITH ARENA FOR STANDARD TIE PLATE SECTIONS.
2. SQUARE HOLES SHALL BE USED FOR INITIAL ATTACHMENT OF PLATES USING ALL SPIRES. CUT SPIRES WILL NOT BE REMOVED ONCE INSTALLED.
3. 8" LONG SCREW SPARKS WITH SQUARE HEAD SHALL BE USED FOR STANDARD TRACK SECTIONS AND 8 1/2" LONG GEARED-GALVANIZED SCREW SPARKS SHALL BE USED FOR 8 1/2" GAUGE CARRIERS (5/8"
4. SCREW SPARK MATERIAL SHALL BE AMERICAN IRON AND STEEL INSTITUTE (AISI) 1045 STEEL MEETING OR EXCEEDING THE FOLLOWING MINIMUM MECHANICAL REQUIREMENTS:
   - TENSILE STRENGTH: 440,000 psi
   - YIELD STRENGTH: 105,000 psi
   - TENSILE STRENGTH: 33,000 psi

5. THE FOLLOWING INFORMATION TO BE FORGED INTO HEAD OF THE SCREW SPARKS:
   - MANUFACTURER'S NAME OR INITIALS
   - YEAR OF MANUFACTURE
   - SIZE OF SCREW MUST BE HOT FORGED AND CENTERED RELATIVE TO Shank

6. MINIMUM THICKNESS 3/16" WITH DIA., 1/8" TO A DEPTH OF 1/2" FROM TOP OF TIE. DO NOT PUNCH BUTTON TOP.

7. FOR USE IN PLATES WITH 17 ROUND HOLES

PENINSULA CORRIDOR JOINT POWERS BOARD

STANDARD DRAWINGS

TRACK
RAILS, RES., AND FASTENERS
FASTENING ASSEMBLIES
PANDROL PLATES AND TIE PLATES

DRAWING NO. SE-2221
DATE 06/2001
SHEET 01/01

APPORVED BY:

[Signatures]

[Stamp]