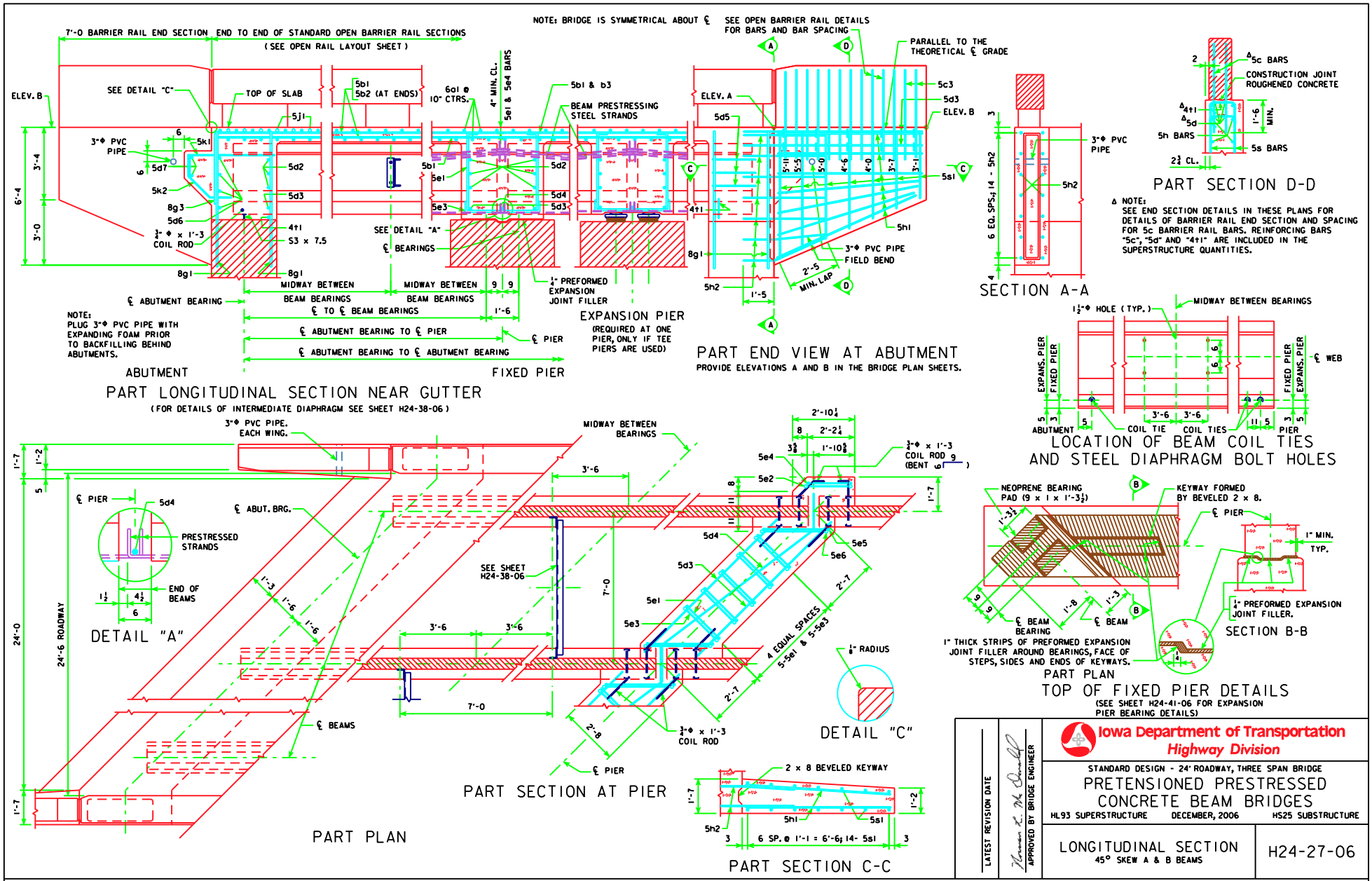
7'-0 BARRIER RAIL END SECTION
END TO END OF STANDARD OPEN BARRIER RAIL SECTIONS
(SEE OPEN RAIL LAYOUT SHEET)
NOTE: BRIDGE IS SYMMETRICAL ABOUT ℄
SEE OPEN BARRIER RAIL DETAILS FOR BARS AND BAR SPACING
PARALLEL TO THE THEORETICAL ℄ GRADE
ELEV. B
SEE DETAIL "C"
TOP OF SLAB
5b1 5b2 (AT ENDS)
6a1 @ 10" CTRS.
4" MIN. CL.
5e1 & 5e4 BARS
5b1 & b3
BEAM PRESTRESSING STEEL STRANDS
ELEV. A
5c3
5d3
ELEV. B
3"Φ PVC PIPE
5d7
5k2
8g3
5d6
3/4"Φ x 1'-3 COIL ROD
5k1
5j1
5d2
5d3
4t1
S3 x 7.5
8g1
SEE DETAIL "A"
℄ BEARINGS
5b1
5e1
5e3
5d4
5d3
4t1
8g1
5d5
5s1
5h1
3"Φ PVC PIPE
FIELD BEND
2'-5 MIN. LAP
5h2
1'-5
1/4" PREFORMED EXPANSION JOINT FILLER
℄ ABUTMENT BEARING
MIDWAY BETWEEN BEAM BEARINGS
℄ TO ℄ BEAM BEARINGS
℄ ABUTMENT BEARING TO ℄ PIER
℄ ABUTMENT BEARING TO ℄ ABUTMENT BEARING
℄ PIER
NOTE: PLUG 3"Φ PVC PIPE WITH EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.
ABUTMENT
FIXED PIER
PART LONGITUDINAL SECTION NEAR GUTTER
(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE SHEET H24-38-06)
EXPANSION PIER
(REQUIRED AT ONE PIER, ONLY IF TEE PIERS ARE USED)
PART END VIEW AT ABUTMENT
PROVIDE ELEVATIONS A AND B IN THE BRIDGE PLAN SHEETS.
SECTION A-A
6 EQ. SPS.; 14 - 5h2
3"Φ PVC PIPE
5h2
5c BARS
CONSTRUCTION JOINT ROUGHENED CONCRETE
4t1
5d
5h BARS
5s BARS
2 3/4 CL.
1'-6 MIN.
PART SECTION D-D
NOTE: SEE END SECTION DETAILS IN THESE PLANS FOR DETAILS OF BARRIER RAIL END SECTION AND SPACING FOR 5c BARRIER RAIL BARS. REINFORCING BARS "5c", "5d" AND "4t1" ARE INCLUDED IN THE SUPERSTRUCTURE QUANTITIES.
1 1/2"Φ HOLE (TYP.)
MIDWAY BETWEEN BEARINGS
EXPANS. PIER
FIXED PIER
℄ WEB
3'-6
3'-6
ABUTMENT
COIL TIE
COIL TIES
PIER
LOCATION OF BEAM COIL TIES AND STEEL DIAPHRAGM BOLT HOLES
3"Φ PVC PIPE, EACH WING.
MIDWAY BETWEEN BEARINGS
℄ PIER
5d4
PRESTRESSED STRANDS
END OF BEAMS
DETAIL "A"
℄ ABUT. BRG.
SEE SHEET H24-38-06
24'-0
24'-6 ROADWAY
℄ BEAMS
PART PLAN
2'-10 1/4
2'-2 1/4
1'-10 5/8
3/4"Φ x 1'-3 COIL ROD (BENT 90°)
5e4
5e2
5d4
5d3
5e1
5e3
5e5
5e6
4 EQUAL SPACES 5-5e1 & 5-5e3
3/4"Φ x 1'-3 COIL ROD
℄ PIER
PART SECTION AT PIER
1/8" RADIUS
DETAIL "C"
2 x 8 BEVELED KEYWAY
5h1
5s1
5h2
6 SP. @ 1'-1 = 6'-6; 14- 5s1
PART SECTION C-C
NEOPRENE BEARING PAD (9 x 1 x 1'-3 1/2)
KEYWAY FORMED BY BEVELED 2 x 8.
℄ PIER
℄ BEAM BEARING
℄ BEAM
1" THICK STRIPS OF PREFORMED EXPANSION JOINT FILLER AROUND BEARINGS, FACE OF STEPS, SIDES AND ENDS OF KEYWAYS.
PART PLAN
1" MIN. TYP.
1/4" PREFORMED EXPANSION JOINT FILLER.
SECTION B-B
TOP OF FIXED PIER DETAILS
(SEE SHEET H24-41-06 FOR EXPANSION PIER BEARING DETAILS)
LATEST REVISION DATE
APPROVED BY BRIDGE ENGINEER
Iowa Department of Transportation
Highway Division
STANDARD DESIGN - 24' ROADWAY, THREE SPAN BRIDGE
PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES
HL93 SUPERSTRUCTURE
DECEMBER, 2006
HS25 SUBSTRUCTURE
LONGITUDINAL SECTION
45° SKEW A & B BEAMS
H24-27-06