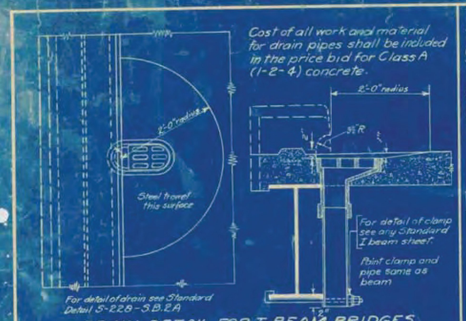
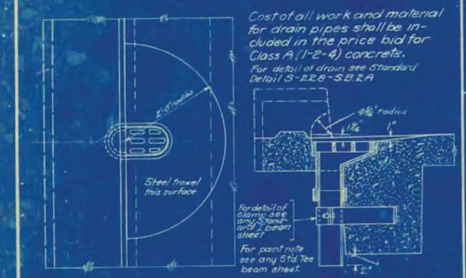


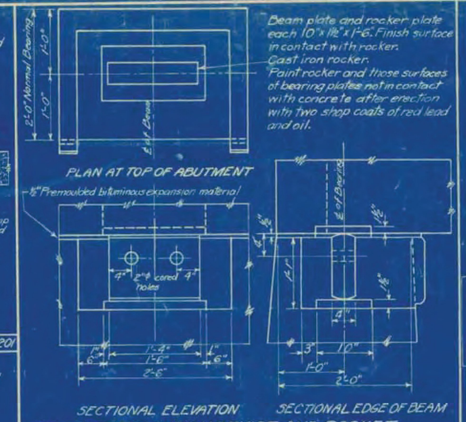
DRAIN DETAIL FOR I-BEAM BRIDGES

STANDARD DETAIL-S201



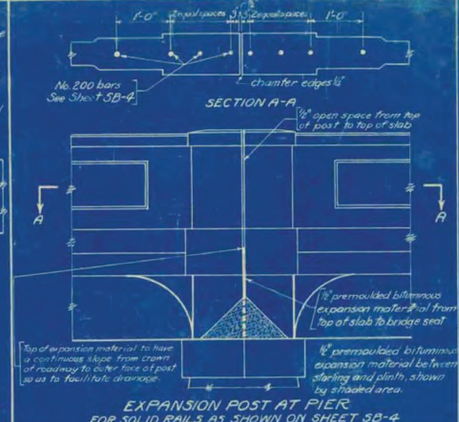
DRAIN DETAIL FOR TEE BEAM BRIDGES

STANDARD DETAIL-S202



ROCKER EXPANSION DEVICE AND POCKET FOR TEE BEAM SPANS OF 45' AND OVER

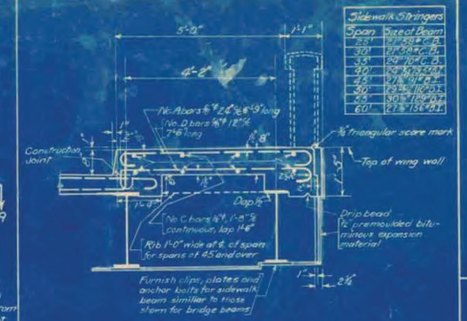
STANDARD DETAIL-S 205



EXPANSION POST AT PIER FOR SOLID RAILS AS SHOWN ON SHEET SB-4

Condition shown is for one span expanding on pier. If two spans expand on pier increase ½" dimensions to 1".

STANDARD DETAIL-S210



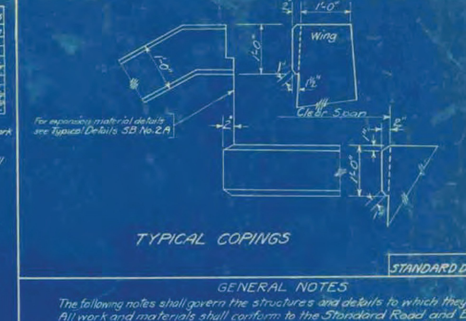
Sidewalk Stringers	
Span	Size of Beam
25	12"x25#x1'-8½"
30	12"x25#x1'-8½"
35	12"x31#x1'-8½"
40	12"x35#x1'-8½"
45	12"x35#x1'-8½"
50	12"x40#x1'-8½"
55	12"x40#x1'-8½"
60	12"x45#x1'-8½"

SIDEWALK DETAIL FOR STANDARD I BEAM BRIDGES

Quantities to be Added per Sidewalk to Roadway Quantities			
Span	Conc. Class A	Plain Steel	Struc. Steel
25	4.2	428	1600
30	5.0	508	1825
35	5.7	587	2015
40	6.5	667	3380
45	7.4	759	4410
50	8.1	832	5840
55	8.9	913	7540
60	9.7	993	9900

For detail of D bars see S 212.

STANDARD DETAIL-S 213



TYPICAL COPINGS

STANDARD DETAIL-S220

GENERAL NOTES

The following notes shall govern the structures and details to which they apply.

All work and materials shall conform to the Standard Road and Bridge Specifications of the Vermont Highway Department, 1929.

Any suitable structure excavation used by the contractor for any purpose other than for backfill or approach fill shall be replaced by an equivalent quantity of borrow by the contractor as his expense unless same is ordered wasted by the Engineer.

Piles shall be provided where foundation cannot be obtained within a reasonable depth. They shall be spaced not closer than 2'-6" ℄ except as noted on plans or as directed by the Engineer. Where jetting is necessary, use Standard Detail S206.

Foundations on ledge should preferably be sloped toward the back of the footing about 1" per foot and footings shown on plans for other conditions may be revised at the direction of the Engineer.

All concrete for piers and gravity abutments shall be class B (1-2½-5) concrete unless otherwise noted or directed.

All concrete for reinforced abutments shall be class C (1-2-4) concrete unless otherwise noted or directed.

All concrete for Tee, I Beam and Slab bridges, curbs and rails shall be class A (1-2-4) concrete and shall be paid for at the unit price for class A concrete.

All reinforcing steel for bridges and abutments shall be deformed bars, except as noted, and shall conform to the Standard Specifications for Billet Steel Concrete Reinforcement Bars, Structural or Intermediate Grade, of the American Society for Testing Materials, Serial Designation A15-14.

4" weep holes shall be provided in main abutment and wings spaced not further apart than 10'-0" ℄ symmetrically about the ℄ of abutment, pitched 1" per foot upward from front to back. The lower end of the weep hole shall be 2'-6" above footing. The cost of work and materials for weep holes shall be included in the unit price bid for concrete.

The premoulded bituminous expansion material between superstructure and substructure at expansion and fixed end, shall be included and paid for in price bid for class A (1-2-4) concrete.

All work and materials for expansion device to be included in and paid for at the unit price bid for reinforcing steel for Tee beam bridges.

Concrete chairs for supporting reinforcing steel shall be made to the dimensions shown on the Standard Chair sheet.

Structural steel for I beam bridges shall be painted as specified under Item 36 A-B, Pamphlet I of the Specifications unless otherwise directed.

All exposed edges shall be chamfered. The face dimension of chamfer to be 1".

Where pipes, existing or required, pass through abutments, they shall be of the materials and in the locations as directed by the Engineer. The [illegible] shall be included in and paid for under the unit bid for abutment concrete. Where pipes are to be carried [illegible] shall be supported as and where directed by the Engineer and the cost of all work and materials shall be paid [illegible] superstructure reinforcing steel.

In case lighting is required for superstructure, special details will be furnished [illegible] for such lighting shall be paid for under a separate lump sum bid, unless otherwise provided for.

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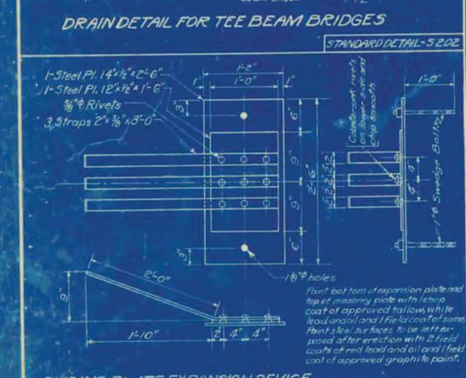
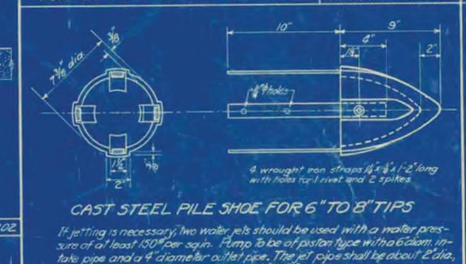
Sheet 70 of 76
For Reference Only

STANDARD DETAIL - S221



SLIDING PLATE EXPANSION DEVICE FOR 35' & 40' SPAN TEE BEAMS

STANDARD DETAIL-S203



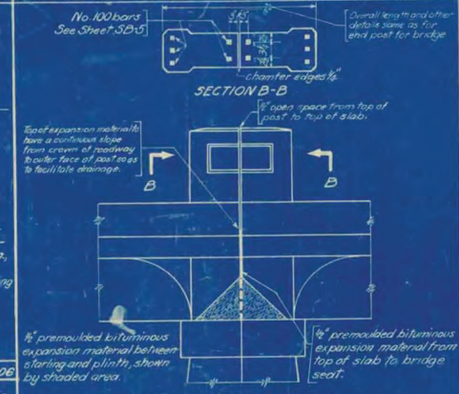
CAST STEEL PILE SHOE FOR 6" TO 8" TIPS

If jetting is necessary, two water jets should be used with a water pressure of at least 150# per sq.in. Pump to be of piston type with a 6" diam. intake pipe and a 4" diameter outlet pipe. The jet pipe shall be about 2" dia., nozzle to be circular in section and ½" to ⅝" in diameter.

Unit price bid for piles shall include jetting if necessary, and furnishing and setting pile shoes.

Pile shoes as per sketch to be used as directed by the Engineer.

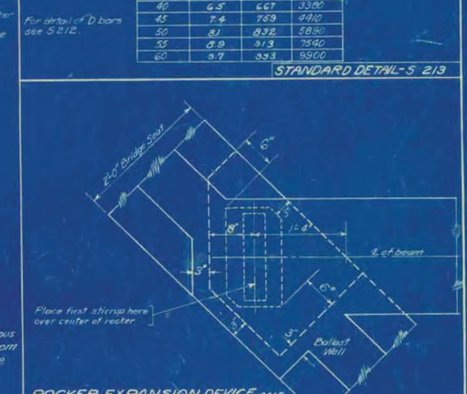
STANDARD DETAIL-S206



EXPANSION POST AT PIER FOR CABLE RAILS AS SHOWN ON SHEET SB-5

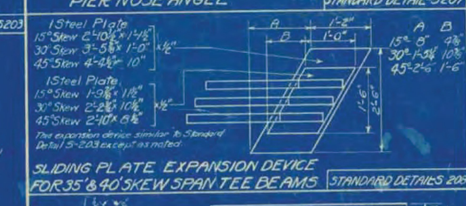
Condition shown is for one span expanding on pier. If two spans expand on pier increase ½" dimensions to 1".

STANDARD DETAIL-S211



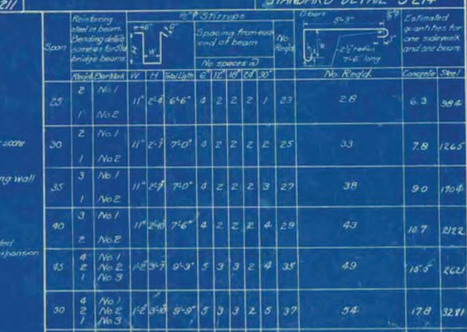
ROCKER EXPANSION DEVICE AND POCKET FOR 45° SKEW

STANDARD DETAIL - S 214



PIER NOSE ANGLE

STANDARD DETAIL-S207



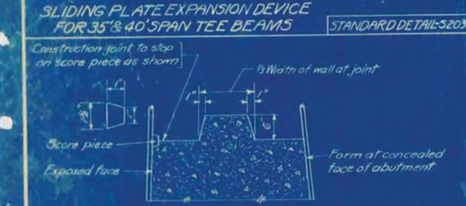
SIDEWALK DETAIL FOR STANDARD TEE BEAM BRIDGES

Span	Reinforcing steel in beam. Bending diagrams shown for one bridge beam		W	H	Bar length A	B	C	D	E	F	G	H	No. Stirrups	Spacing from end of beam (No. spaces @)		Other		No. Rods	Concrete	Steel
	Abut.	Pier Abut.																			
25	2	No. 1	11"	2'-4	6'-6"	4	2	2	2	1			23	2.8					6.3	3864	
	1	No. 2																			
30	2	No. 1	11"	2'-7	7'-0"	4	2	2	2	2			25	3.3					7.8	12645	
	1	No. 2																			
35	3	No. 1	11"	2'-9	7'-0"	4	2	2	2	3			27	3.8					9.0	17064	
	1	No. 2																			
40	3	No. 1	11"	3'-0	7'-6"	4	2	2	2	4			29	4.3					10.7	21222	
	2	No. 2																			
45	4	No. 1	1'-8	3'-7	9'-3"	5	3	3	2	4			35	4.9					13.5	26000	
	2	No. 2																			
	1	No. 3																			
50	4	No. 1	1'-8	3'-8	9'-9"	5	3	3	2	5			37	5.4					17.8	32811	
	2	No. 2																			
	1	No. 3																			
55	4	No. 1	1'-8	3'-9	10'-3	5	4	4	2	5			41	5.9					24.3	39419	
	4	No. 3																			

No. number of A bars required as there are D bars.
Estimated quantities to be added to quantities already given on Standard Bridge sheets.
Sidewalk beam reinforcement placed similar to Standard Bridge beam reinforcement.

SIDEWALK BEAM REINFORCEMENT FOR STANDARD TEE BEAM BRIDGES

STANDARD DETAIL-S212



DETAILS-SCORE MARKS & CONSTRUCTION JOINTS FOR PIERS & ABUTMENTS

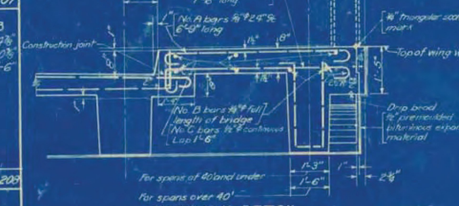
Unless otherwise directed by the Engineer, score pieces shall be equally spaced vertically at about 1'-9" for abutments up to 20' in height and 2'-6" for abutments above 20' in height, shall stop at underside of copings and shall be carried around ends of walls or piers where they may be exposed to view. Score marks shall line horizontally and shall be at same levels in all piers and abutments on the job. Construction joint may be made at any score mark.

Note: This detail is identical with S.B.-sheet S.B.-1

STANDARD DETAIL-S204

SLIDING PLATE EXPANSION DEVICE FOR 35' & 40' SKEW SPAN TEE BEAMS

STANDARD DETAIL-S 209



ROCKER EXPANSION DEVICE AND POCKET FOR TEE & I BEAM SKEW SPANS OF 45' AND OVER

STANDARD DETAIL-S208

DETAILS FOR 45° I BEAM BRIDGE

STANDARD DETAIL-S215

TYPICAL DETAILS
TEE AND I BEAM BRIDGES AND ABUTMENTS
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

CORRECT: A. D. Bishop
BRIDGE ENGINEER

Corrected to March 1, 1929

Surveyed by
Designed by
Drawn by M.L.W. & P.T.F. O.K.
Traced by C.P.L. and
Checked by
Series S.B. No. 2