See Camber Diagram on Sheet No.3
Fin. Grade 102.08
Sta. 2+65 ℄ Bearing
Sta. 4+25 ℄ Bearing
Fin. Grade 102.08
Sta. 4+55 ℄ Bearing
Fin. Grade 101.36
+2.4%
-2.4%
Expansion End
Max. High Water
Normal High Water
Normal Water
Low Water
Fixed End
Expansion End
Ledge
ELEVATION OF BRIDGE
Scale 1" = 20'
Top of Drain Pipe is 1" below Roadway Surface at this point
2'-0" Radius
Standard 4" Galvanized Pipe - 4'-6" long Supported by Strap to Stringer, furnished and installed by the Structural Steel Contractor
Required: One Drain at each side of Bridge in each Panel. Drains located at mid-length of Panels
No depression at this point
2'-0" Radius
1" Depression at this point
Curb
DRAINAGE DETAIL
REINFORCING STEEL DETAILS
All steel to be deformed bars.
Reinforcing Steel to conform to Standard Specifications for Billet Steel Concrete Reinforcing Bars of the American Society for Testing Materials, Serial Designation A15-14. Reinforcing Bars shall be of Structural or Intermediate Grade steel.
The correctness of this steel schedule is not guaranteed and no claim will be allowed on account of any inaccuracy therein.
No 20 Bar 5/8 Round 190 Required
Total Length 20'-9"
18'-3"
No.21 Bars 5/8 Round 189 Required
Total Length 19'-6"
18'-6"
No.22 Bars 5/8 Round 190 Required
18'-9"
1/2 Round
No.23 Bars 21'-3" Long 152 Required
No.24 Bars 16'-3" Long 38 Required
3/4 Round No.25 Bars 21'-3" Long 32 Req'd.
No.26 Bars 16'-3" Long 8 Req'd.
3/8" Plate
For Collision Rail see Bridge Floor Section
9" CB @ 29#
24" CB @ 76#
4 1/2" Pin
Distance from ℄ of Pin to Crown of Road = 3'-4"
Distance from Bridge Seat to Crown of Road = 4'-9"
1 1/2" Swedge Bolts as detailed Hexagonal Nuts - 5/8 Washers
Swedge Bolt
DETAIL OF FIXED END
No.22 Bars are directly over No.20 Bars
1L 4"x3"x3/8"
2L 4"x3"x5/16" (riveted)
1-6" I @ 8.2#
Collision Rail Connect at each Truss Member
℄ Bridge
18'-0"
1-2-4 Mix Concrete
No.23 Bars
8 1/2" Floor Slab
Dap Concrete 1/2" at all Stringers
27" CB @ 91#
18" CB @ 51#
2'-10"
1'-10 1/2"
5'-8"
5'-8"
5'-8"
1'-10 1/2"
20'-9"
BRIDGE FLOOR SECTION
Scale 1/2" = 1'-0"
9'-8"
3/8" Plate
Collision Rail - both sides of Bridge
Clip Angle
Posts 10'-0" c/c See Sheet 3
18'-0" Roadway
9'-0"
9'-0"
2" Crown
8 1/2" Floor Slab
See Bridge Section for Reinforcing Steel in Slab
2-3/4" Anchor Bolts 2'-6"
9"x5/16" Plate
4 Ls - 6x3 1/2x5/16
2 Ls - 6x3x5/16
24" CB @ 76#
4" I @ 7.7#
24" CB @ 76#
4" I @ 7.7#
4" I @ 7.7#
2'-10"
5'-8"
5'-8"
5'-8"
No.20, 21 and 22 Bars as per Bridge Floor Section at Left
In Approach Span use No.24 Bars, 1/2" Round, 16'-3" long, in place of No.23 Bars in Bridge Floor Section at Left
Reinforcing Steel Dimensions as given in Bridge Floor Section apply also to Approach Span Section
APPROACH SPAN SECTION
Scale 1/2" = 1'-0"
Floor concrete shall be 1:2:4 mix. All concrete poured in cold weather shall conform to special provisions in the Proposal, entitled "Concreting in Cold Weather."
Bore for 4 1/2" Pin
Finish
Finish
1 1/2" Swedge Bolts as detailed Hexagonal Nuts - 5/8 Washers
1'-6"
2'-2"
PEDESTAL DETAIL AT EXPANSION END
1 Pl. 21"x3/4"x2'-0" long
DETAIL OF MASONRY PLATE UNDER END FLOOR BEAM AT PIER
2'-0"
℄ Bolts
At Expansion End use a 3/4" x 18" x 19'-0" Apron Plate bolted to End Floor Beam Flange.
Use a 6"x3 1/2"x3/8"x19'-0" long guard angle with anchors at Abutment Ballast Wall, similar to that shown at Expansion End of Approach Span.
1 Plate 12"x1/2"x19'-0"
1L 6"x3 1/2"x3/8" x19'-0" long
1L - 6"x3 1/2"x3/8", 4'-10" long between flanges of 24"CB. Rivet to plate and bolt plate to 24" CBs
Bend Apron Plate and Curb Angle to fit underside of Floor Slab
Abutment Ballast Wall
Weld, or rivet
2"x1/4" Strap Anchor 18" long 2'-6" c/c
Sole Pl. 16"x3/4"x1'-2" Slotted Holes
Bed Pl. 16"x3/4"x1'-2"
ROADWAY EXPANSION JOINT
APPROACH SPAN
Lump Sum Bid To Include Setting Anchor Bolts
Slotted hole
VIEW "A-A"
REFERENCE SHEET 2 OF 11
SHEET 69 OF 78
PLAN OF NEWFANE - BROOKLINE BRIDGE OVER WEST RIVER BROOKLINE, VT.
BRIDGE NO.7 - DISTRICT NO.2
FRA9A
160'
1-2-4 Concrete 111 Cu. Yds.
Reinforcing Steel 15500 Lbs.
Structural Steel 200,000 Lbs.
Surveyed by Helyar
Designed by Shoemaker
Drawn by Woodruff + Taylor
Traced by R.F.T.
Checked by M. R. Woodruff
Series 2 No. 7-21 Filed
Sheet 4 of 8 Sheets