

INDEX OF SHEETS

1. TITLE SHEET
2. PLAN (20 SCALE)
3. PROFILE & BORING LOG
4. BRIDGE QUANTITY SHEET
5. PLAN & ELEVATION
6. SUPERSTRUCTURE DETAILS
7. ABUTMENT DETAILS
8. REINFORCING STEEL SCHEDULE
- 9 & 10. TH 29 X-SECTIONS
- 11 & 12. CHANNEL X-SECTIONS
13. STD. DWG. SCB-D1-75 REV. 23 APR 75
14. STD. DWG. SCB-D2-71 REV. 29 DEC 75
15. STD. DWG. SCB-D6-73 REV. 23 DEC 75
16. STD. DWG. SCB-D7-71 REV. 22 JAN 73
17. STD. DWG. SCB-D8-71 REV. 21 SEP 72
18. STD. DWG. SCB-D9-71 REV. 21 JAN 73
19. STD. DWG. SCB-R6-76 APP. 8 JAN 76
20. STD. DWG. E-3 REV. 12 DEC 75
21. STD. DWG. E-6 REV. 14 MAY 74
22. STD. DWG. E-7 REV. 19 SEP 73
23. STD. DWG. G-1a REV. 23 MAY 74

GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED JANUARY 1972, AND ITS LATEST REVISIONS, AND THE FHSDO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 1973, AND ITS LATEST REVISIONS. DESIGN IS FOR H20-44 LIVE LOADING WITH AN ALLOWANCE OF 25 LBS. PER SQ. FT. MADE FOR FUTURE PAVING.
2. GENERAL NOTES PERTAINING TO SPECIFICATIONS AND CONSTRUCTION NOT SHOWN ON THESE PLANS ARE ON STD. SHEET SCB-D1-75. NOTES SHOWN ON THIS STANDARD WHICH APPLY TO THIS PROJECT ARE: NO'S 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 & 14.

(GENERAL NOTES CONTINUED ON SHEET 5)

CONVENTIONAL SIGNS

- COUNTY LINE
- TOWN LINE
- LIMITS OF ACCESS
- POINT OF ACCESS
- FENCE LINE
- STONE WALL
- TRAVELED WAY
- GUARD RAIL
- RAILROAD
- SURVEY LINE
- CULVERT
- POWER POLE
- TELEPHONE POLE
- TREES
- T & CONCT IDENTIFICATION SIGNS
- PROPERTY LINE
- ROW TAKING LINE
- SLOPE RIGHTS
- TOP OF CUT
- TOE OF SLOPE

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS



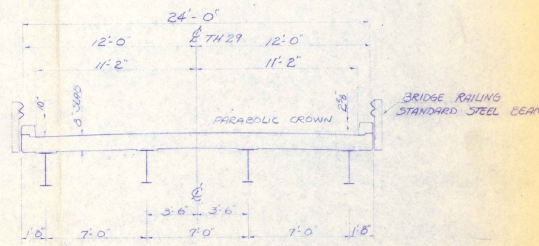
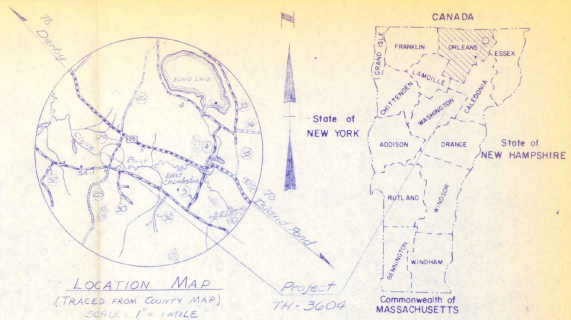
PROPOSED IMPROVEMENT

BRIDGE PROJECT
TOWN OF CHARLESTON
COUNTY OF ORLEANS
ROUTE No: TH[#]29 C1.3 BRIDGE No: 20

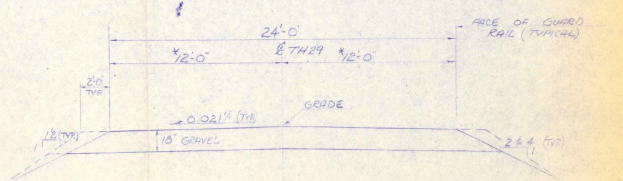
PROJECT LOCATION: BEGINNING AT A POINT ON TH 29 APPROXIMATELY 0.150 MILE NORTHEASTERLY OF THE INTERSECTION OF TH 29 AND TH 1 (CL 2) AND EXTENDING ALONG TH 29 IN A NORTHEASTERY DIRECTION FOR 0.062 MILE.

PROJECT DESCRIPTION: REMOVAL OF THE EXISTING STRUCTURE, CONSTRUCTION OF A NEW COMPOSITE W/ BEAM BRIDGE WITH RELATED ROADWAY AND CHANNEL WORK.

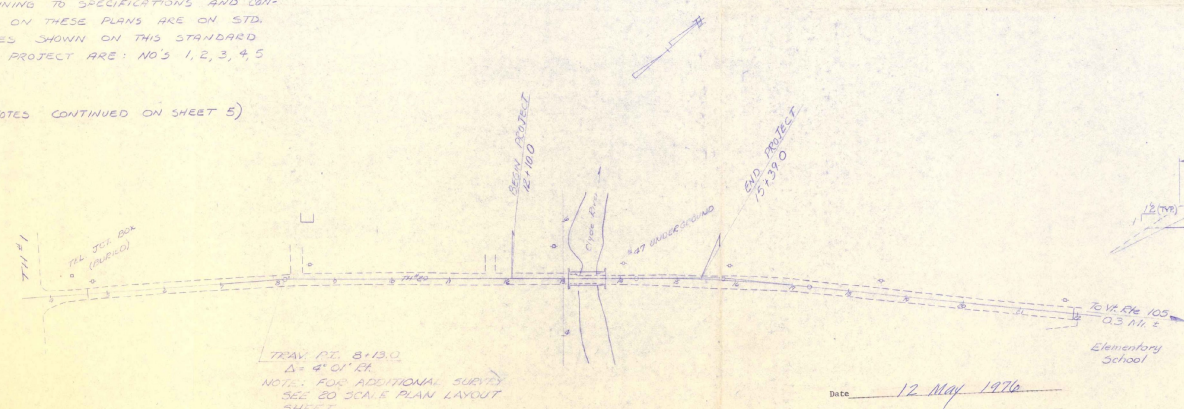
LENGTH OF STRUCTURE: 64.0 FEET
LENGTH OF PARTICIPATION ROADWAY: 200.0 FEET
LENGTH OF NON-PARTICIPATION ROADWAY: 65.0 FEET
LENGTH OF PROJECT: 329.0 FEET



TYPICAL BRIDGE SECTION
SCALE: 1/4" = 1'-0"



TYPICAL ROADWAY SECTION
SCALE: 1/4" = 1'-0"



Scale: 1" = 100'

Date: 12 May 1976
Contractor: James McDaniel
Signature: [Signature]
Title: [Title]
Acting Commissioner's signature: [Signature]

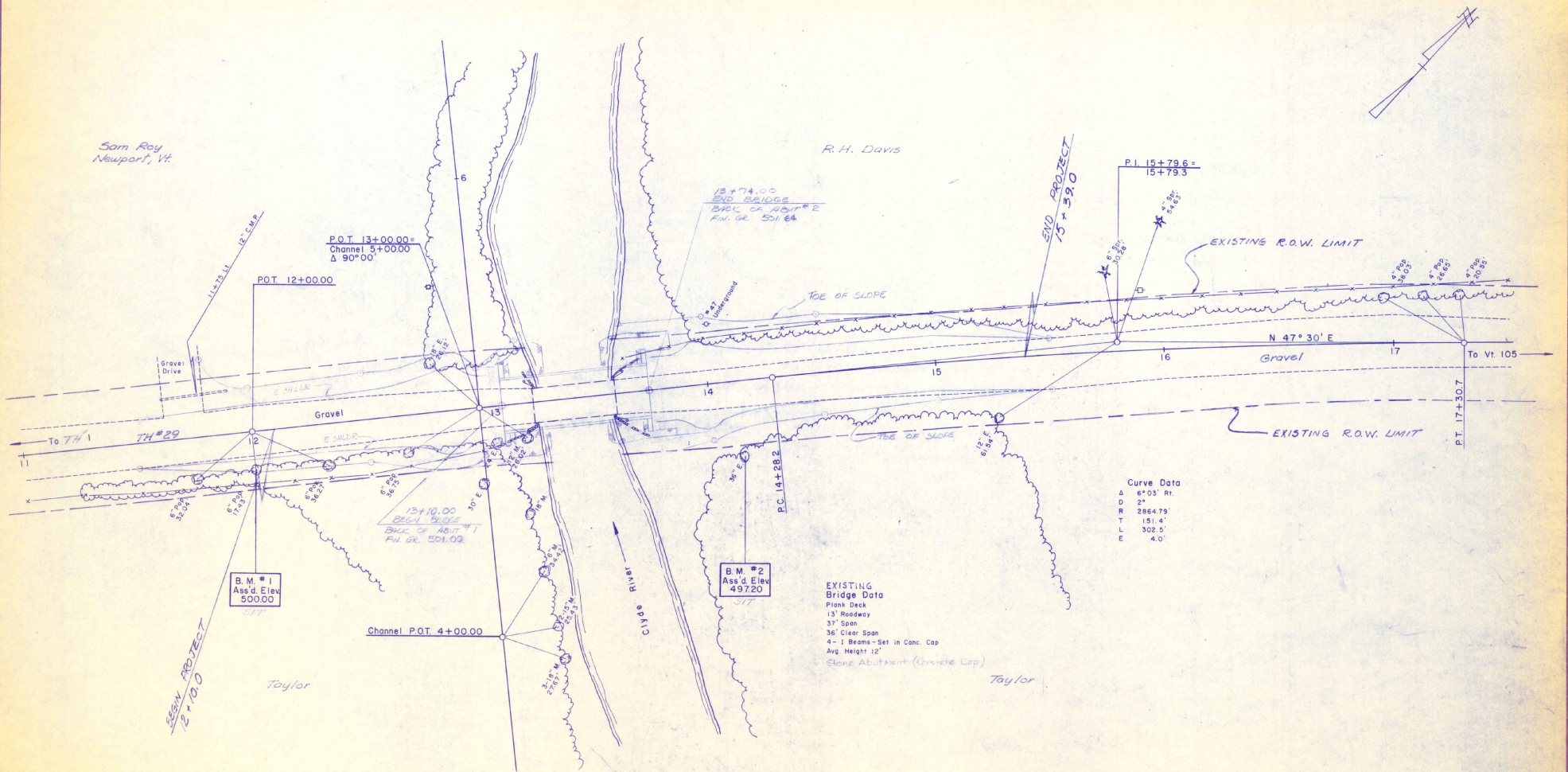
SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD
APPROVED: E.D. O'Steeney DATE: 4/6/76
CHIEF ENGINEER

PROJECT No. CHARLESTON TH 3604
SHEET 1 OF 23 SHEETS

1017

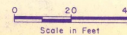
Sam Roy
Newport, Vt.

R. H. Davis



Curve Data
Δ 6°03' Rt.
D 24'
R 2864.79'
T 151.4'
L 302.0'
E 4.0'

EXISTING
Bridge Data
Plank Deck
13' Roadway
37' Span
36' Clear Span
4-1 Beams - Set in Conc. Cap
Avg. Height 12'
Stone Abutment (Concrete Cap)



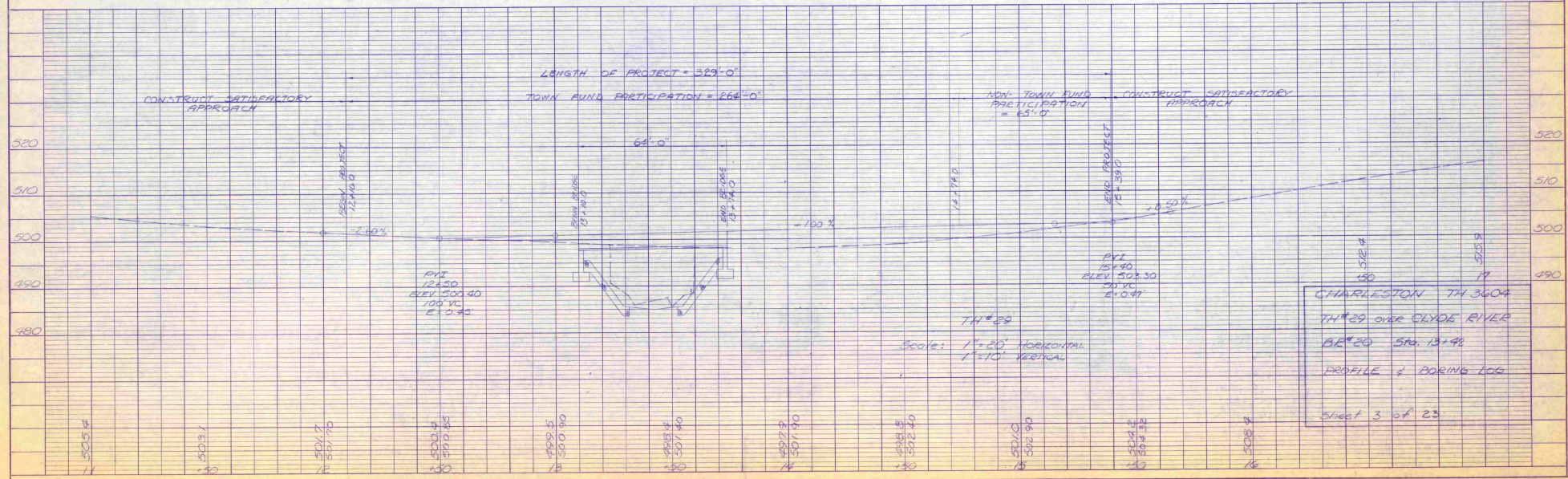
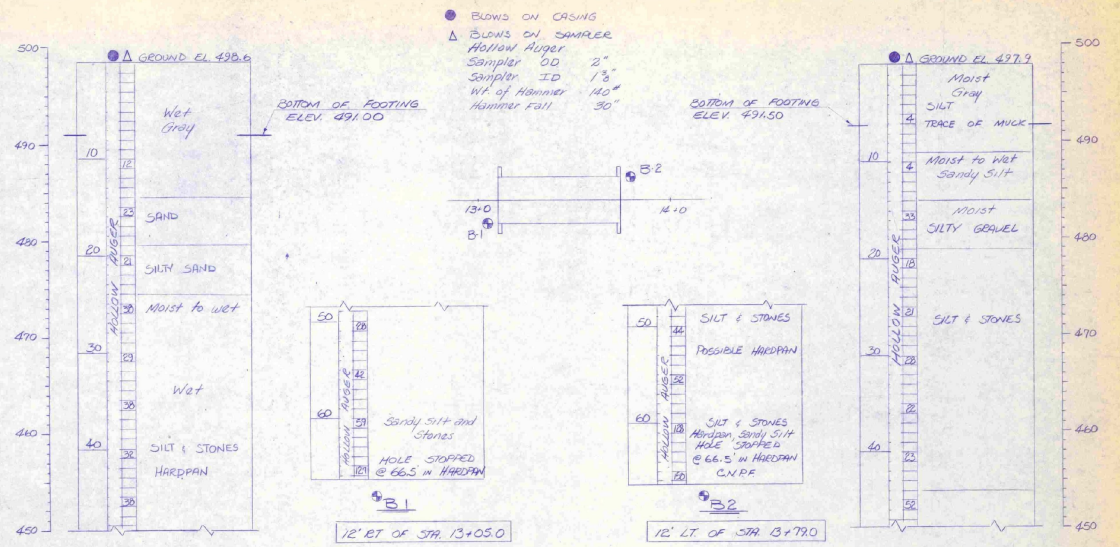
CHARLESTON
SURVEYED BY FANTONI DATE 7/75
DRAWN BY FROMBLY DATE 8/75
TRACED BY DUFFY DATE 8/75
PROJ. TH NO. 3604
SHEET 2 OF 23

PLAN
 DATE
 BY
 CHECKED
 APPROVED
 TITLE BOOK NO. OR W/C ORDER NO.

PROFILE
 DATE
 BY
 CHECKED
 APPROVED
 TITLE BOOK NO. OR W/C ORDER NO.

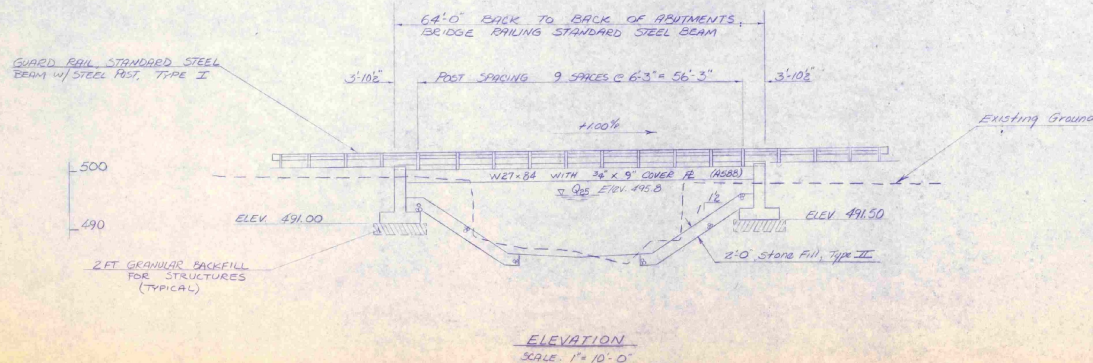
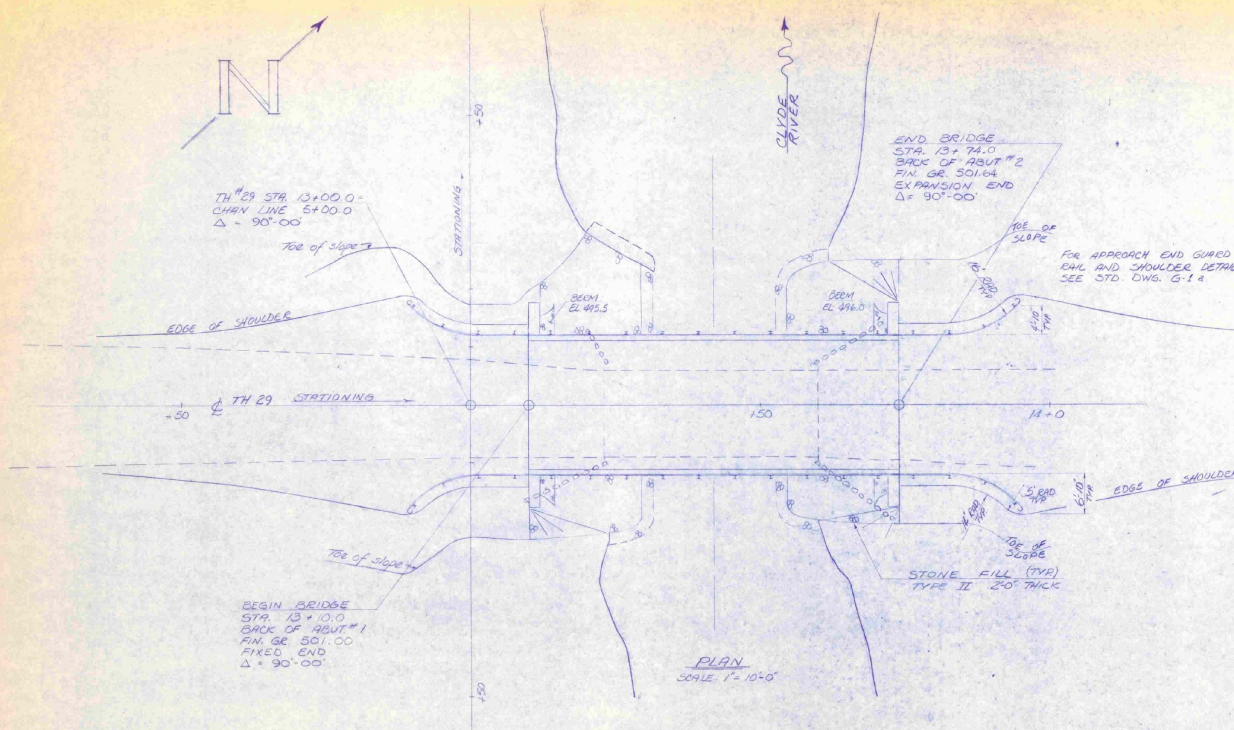
HYDRAULIC DATA

Drainage Area = 95 sq mi (246 sq km)
 $Q_{10} = 2900$ cfs (82 cms) Headwater Elev 494.8
 $Q_{25} = 3500$ cfs (99 cms) Headwater Elev 495.8
 $Q_{50} = 4200$ cfs (119 cms) Headwater Elev 496.9
 $Q_{100} = 4900$ cfs (139 cms) Headwater Elev 497.9
 Tailwater Elevation @ $Q_{25} = 495.5$
 Outlet Velocity @ $Q_{25} = 8.8$ fps (2.5 mps)

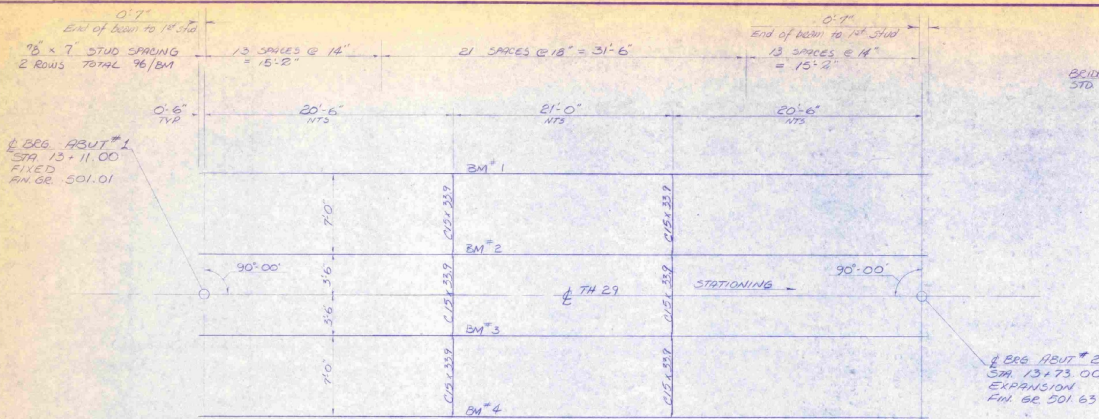


GENERAL NOTES (cont.)

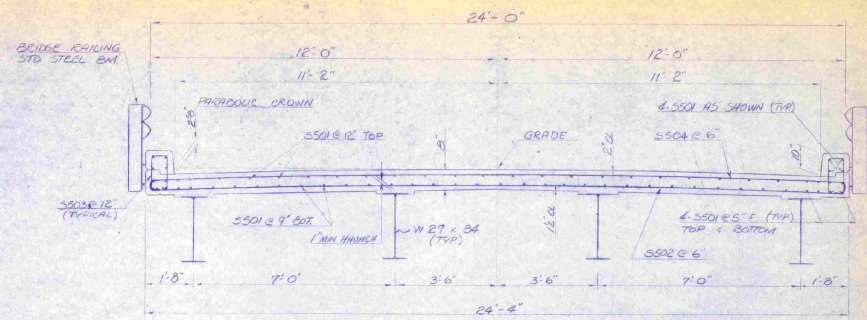
3. THE CONTRACTOR SHALL NOTIFY THE DISTRICT HIGHWAY ENGINEER ONE (1) WEEK PRIOR TO THE START OF CONSTRUCTION SO THAT HE CAN ARRANGE WITH THE TOWN FOR THE PROPER SIGNS TO BE ERRECTED AT THE TERMINI OF TOWN HIGHWAY 29 TO INDICATE THAT THE ROAD IS TO BE CLOSED DUE TO BRIDGE CONSTRUCTION. THIS REQUIREMENT SHALL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY FOR MAINTAINING PROPER SIGNS, LIGHTS, AND BARRICADES AT THE PROJECT.
4. THE PRESENT BEAMS, RAIL DECKING AND OTHER MATERIALS DEEMED SALVAGEABLE BY THE TOWN OF CHARLESTON SHALL BE REMOVED BY THE CONTRACTOR AND STOCKPILED ON THE PROJECT FOR REUSE BY THE TOWN. THE EXISTING ABUTMENTS SHALL BE REMOVED UNDER UNCLASSIFIED CHANNEL EXCAVATION. SUITABLE STONE REMOVED FROM THESE ABUTMENTS MAY BE USED AS STONE FILL, TYPE II.
5. ALL STRUCTURAL STEEL, PRIOR TO LEAVING THE FABRICATING SHOP, SHALL BE CLEANED (USING ANY METHOD SPECIFIED IN SECTION 508.03, SWEEP PREPARATION). AFTER ALL CONCRETE ON THE BRIDGE HAS BEEN PLACED, AND PRIOR TO FINAL ACCEPTANCE, THE PASCAL BEAMS SHALL BE CLEANED AS SPECIFIED IN SUB-SECTION 508.53, UNPAINTED STEEL CONSTRUCTION REQUIREMENTS (8.) CLEANING OF STEEL, OR AS DIRECTED BY THE ENGINEER.
6. ALL CHANNEL EXCAVATION AND PLACEMENT OF STONE FILL TYPE II MUST BE COMPLETED BY 1 JULY 1976.



STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
TOWN OF CHARLESTON	Bridge No. 20
HIGHWAY NO. TH 29, CL 3	Log Sta.
TOWN HIGHWAY 29 OVER CLYDE RIVER	Surv. Sta. 13+420
PLAN & ELEVATION	
Designed by ROUCHESNEAU	Drawn by ROUCHESNEAU
Checked by G. ROGERS	Bridge Design Supervisor
date MAR 76	F.W. Balkum date 3/76
PROJECT CHARLESTON	PROJECT NO. TH 3604
Bridge Sheet No.	Sheet 5 of 23

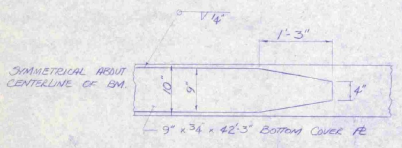


FRAMING PLAN
SCALE: 1" = 5'-0"

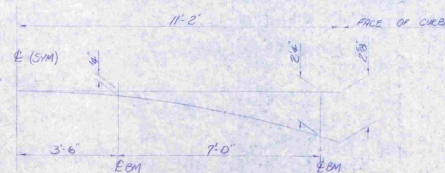


TYPICAL SECTION
SCALE: 1/2" = 1'-0"

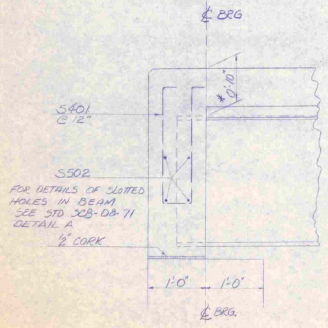
Note: Camber Beams 5/8"



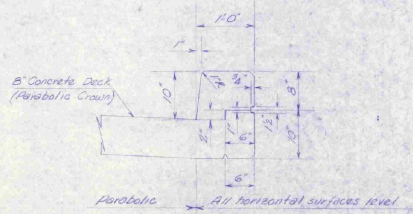
COVER PLATE DETAILS
SCALE: 1" = 1'-0"



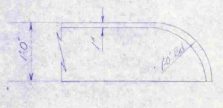
PARABOLIC DETAIL



CURTAIN WALL DETAILS
SCALE: 1" = 1'-0"



FASCIA DETAIL
SCALE: 1" = 1'-0"



END CURB DETAIL
SCALE: 1" = 1'-0"

NOTES

- For shear connector details and beam haunch details, see std. SCB-DE-71 details (a) & (b) respectively.
- Diaphragms shown in the Framing Plan shall be connected as shown on SCB-D7-71 detail (D).
- For bridge railing details see STD SB-106-76 Detail Type A. No offset blocks required.
- For details of fixed and expansion end bearing devices see SCB-DO-71 detail (A).
- For curtain wall details at bearing devices, see SCB-D9-71 detail (A).
- If flanging type brackets are used to support the bridge deck overhang, their maximum spacing shall be 4'-0". Different beam sizes may be used as long as the beam holes used for the flanging bracket supports meet both shall conform to ASTM A-365, Type III. The rest is to be subsidiary to structural steel.
- The Charpy V-Notch test of structural steel is not required.
- Design Bending Moments, Reactions and Deflections

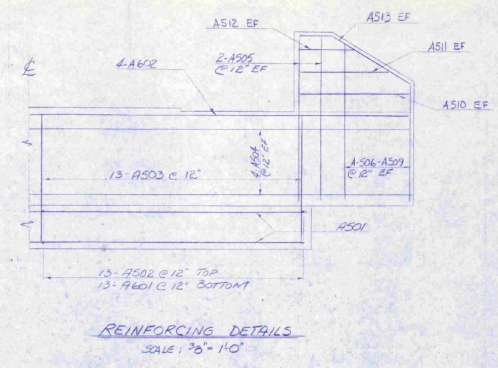
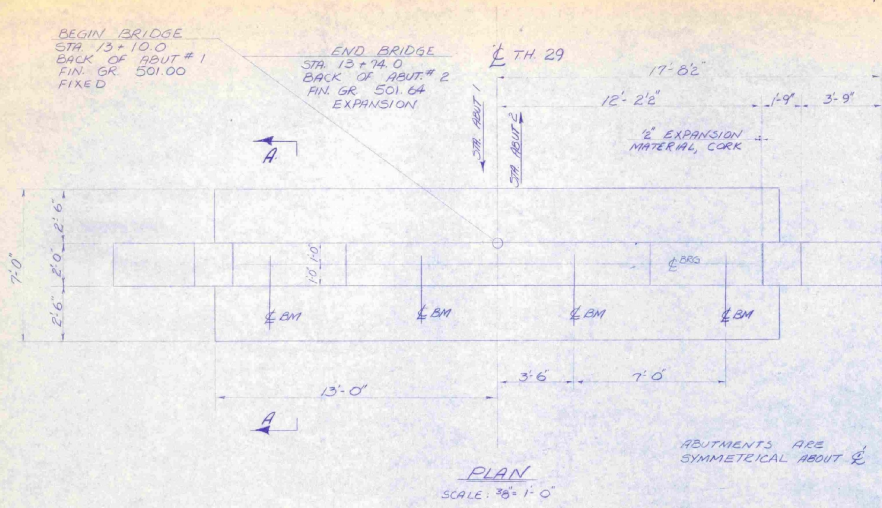
DL	LL+I	SDL	
400	456	104	MAX. BENDING MOM. (FT. KIPS)
24	31	7	MAX. REACTION (KIPS)
2.49	0.51	0.25	MAX. DEFLECTION (INCHES)

* CALCULATED SUPERSTRUCTURE DEPTH

- 3" Slab
- 1" Min Haunch
- 1" Permanent Camber
- 10'
- 0% Camber Tolerance
- 0% Beam Mill Tolerance
- 25% Beam Depth
- 2E Bearing Device
- 0b Bearing Pad

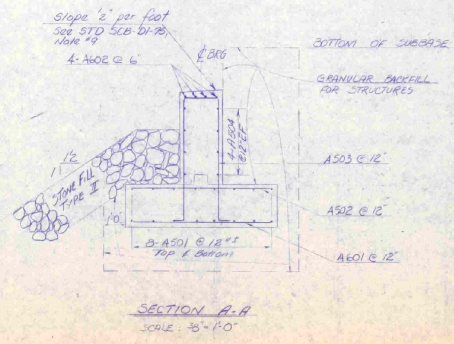
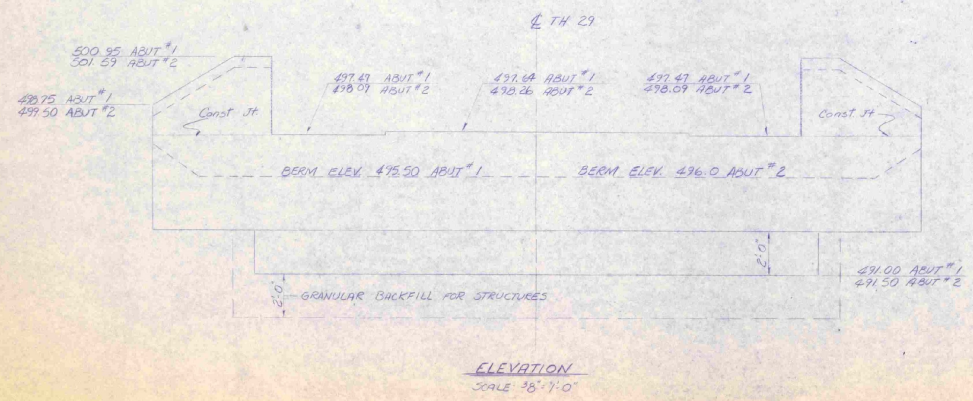
Total Depth = 40 1/2" = 3.35 FT
= Distance from finish grade to bridge seat elevations

STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
TOWN OF CHARLESTON	Bridge No. 20
HIGHWAY NO. TH 29, CL 3	Log Sta. 13+42.0
TOWN HIGHWAY 29 OVER CLYDE RIVER	Surv. Sta. 13+42.0
SUPERSTRUCTURE DETAILS	
Designed by ROVERSENEAU	Drawn by ROVERSENEAU
Checked by G. Rogers	Bridge Design Supervisor
date 3-7-76 F.W. Balkum date 3/76	
PROJECT CHARLESTON	PROJECT NO. 74 3604
Bridge Sheet No.	Sheet 6 of 23

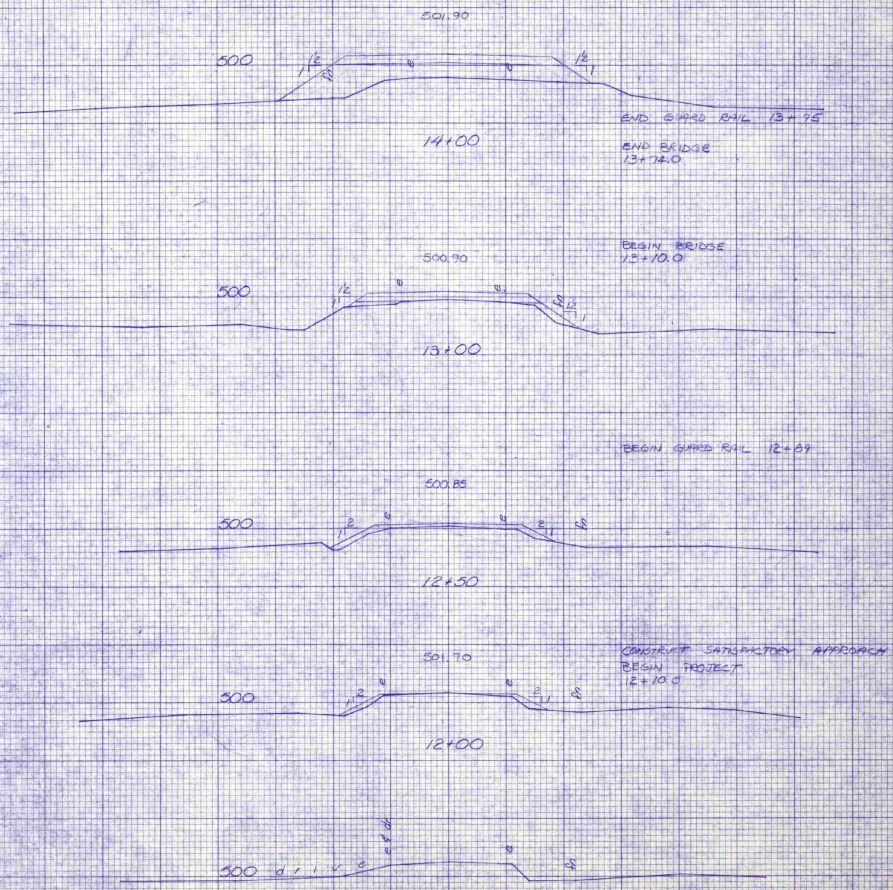
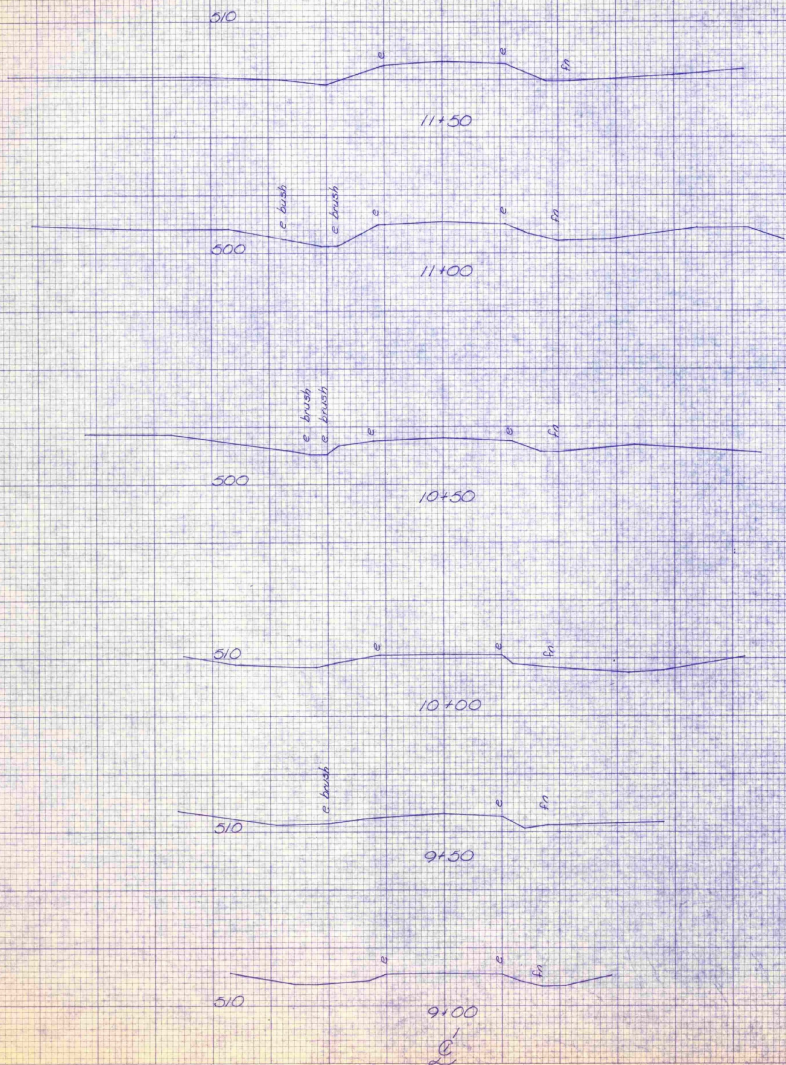


NOTES

1. For construction joint details see 50B-D6-73.

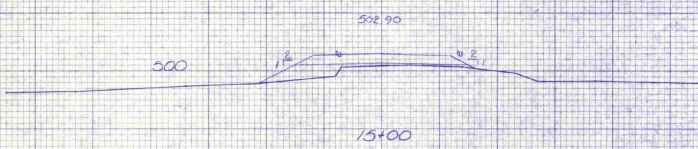
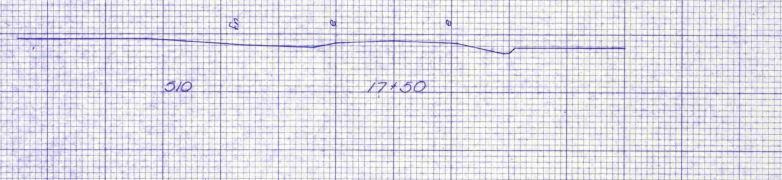
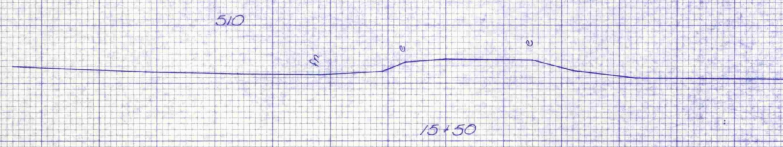
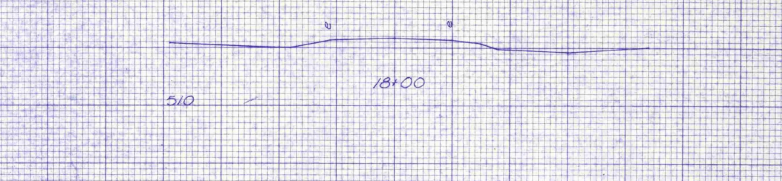
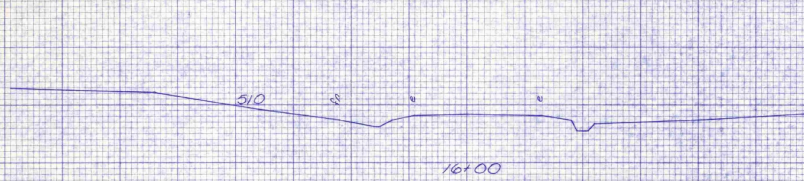


STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
TOWN OF CHARLESTON	Bridge No. 20
HIGHWAY NO. TH 29, CL 3	Log Sta.
	Surv. Sta. 13+82.0
TOWN HIGHWAY 29 OVER THE LLOYDE RIVER ABUTMENT DETAILS	
Designed by P. DUCHESNEAU	Drawn by P. DUCHESNEAU
Checked by G. ROGERS	Bridge Design Supervisor
	date MAR 76 F.W. EOL/KUJ date 3/76
PROJECT CHARLESTON	PROJECT NO.
Bridge Sheet No.	Sheet 7 of 23

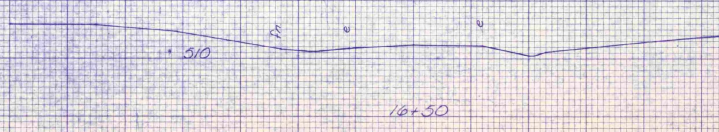
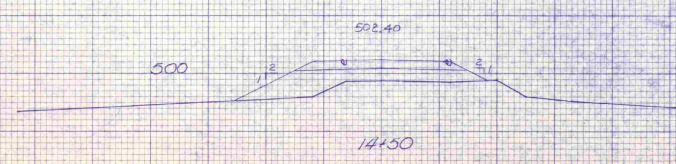


BR#20 - TH#29

STA: 9100	STA: 14100
TOWN: CHARLESTON	
PROJECT: T.H. NO. 3604	
SHEET: 9	23 SHEETS
DRAWN BY: [Signature]	
CHECKED BY: [Signature]	
APPROVED BY: [Signature]	
SURVEYED BY: Fontenay DATE 7/75	



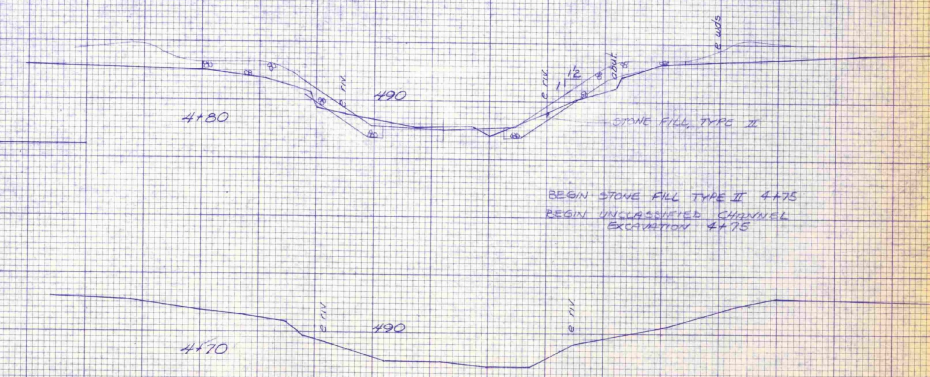
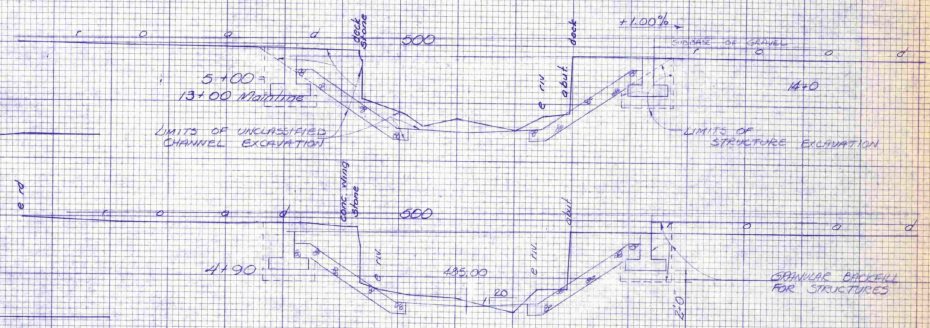
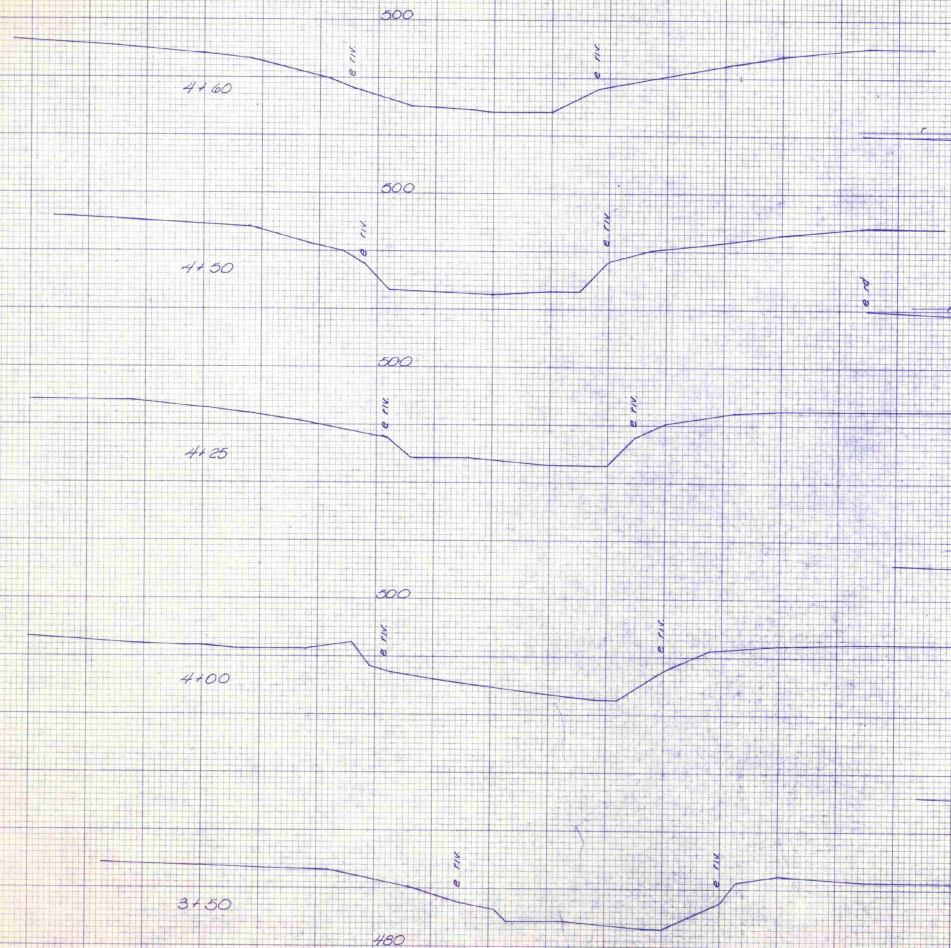
CONSTRUCT SATISFACTORY APPROACH
 END PROJECT
 15+39.0



BR#50 - TH#29

STA	14+50	18+00
TOWN	CHARLESTON	
PROJECT	T.V. 3004	
SCALE	1" = 10'	1" = 25'
SHEET	10	25
SURVEY	Fontana 7/73	

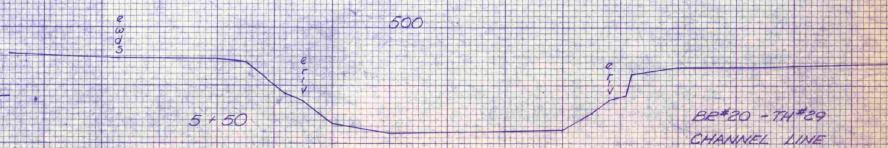
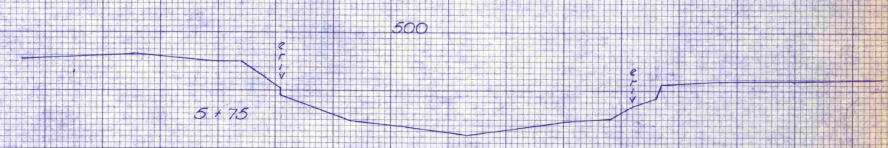
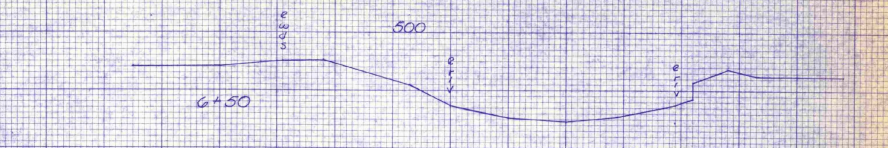
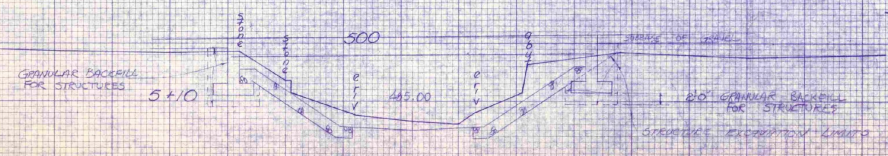
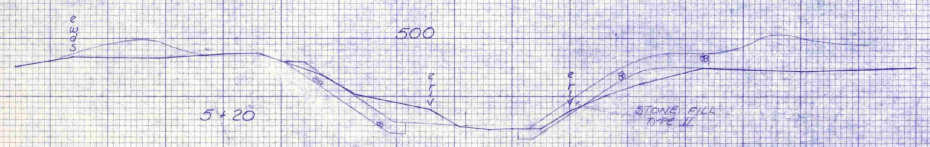
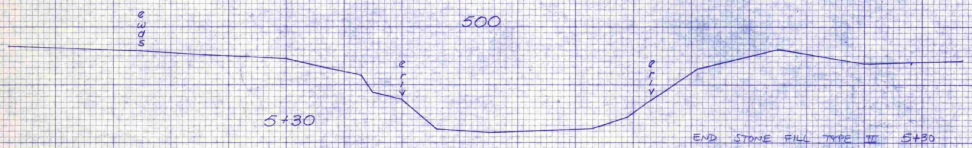
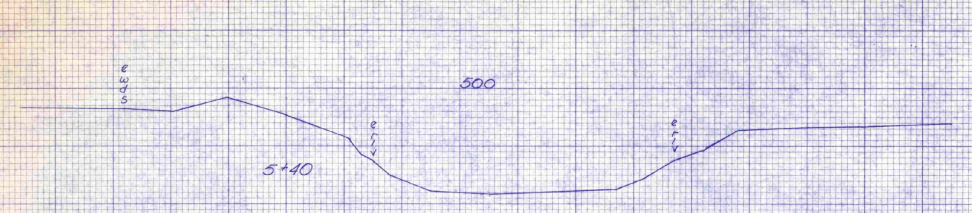




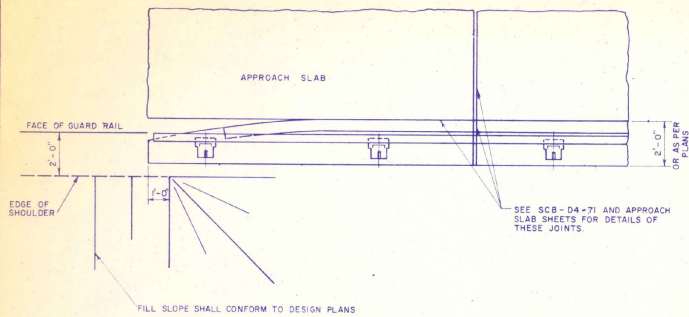
BR#20 - TH#29
 CHANNEL LINE

STA	3+50	STA	5+00
PROJECT	CHARLESTON		
PROJ	TH 3004		
SHEET	11		

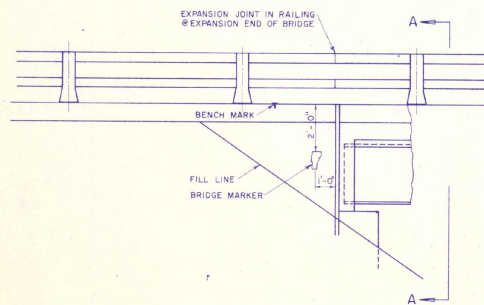
Fontana 7-75



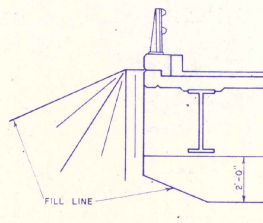
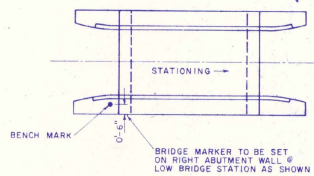
BE#20 - TH#29
 CHANNEL LINE
 STA. 5+10 STA. 6+50
 TOWN CHARLESTON
 PROJECT III 3601
 DATE 83
 DRAWN BY Fontana DATE 7-75



PLAN AT ABUTMENT



ELEVATION AT ABUTMENT



SECTION A-A

GENERAL NOTES

ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, DATED JANUARY 1975 AND ITS LATEST REVISIONS AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 1975 AND ITS LATEST REVISIONS, DESIGN IS FOR HS-20-44 LOADINGS MODIFIED FOR THE NATIONAL SYSTEM OF INTERSTATE HIGHWAYS, APPLIED IN ACCORDANCE WITH THE PROVISIONS OF AASHTO STANDARD SPECIFICATIONS.

THE FOLLOWING NOTES SHALL APPLY UNLESS OTHERWISE NOTED ON PROJECT PLANS.

- ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM DESIGNATION A-588 (UNPAINTED). ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/8" Ø ASTM A-325 TYPE II BOLTS IN 1/16" Ø HOLES, WHERE CONNECTIONS ARE NOT DETAILED ON THE PLANS THEY SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STATE FOR APPROVAL.
- WHEN NOT DETAILED ON THE PLANS, SIMPLE SPAN BEAMS SHALL BE CAMBERED FOR THE DEAD LOAD DEFLECTION, PLUS ONE EIGHTH (1/8) INCH FOR EACH TEN FEET OF SPAN OR FRACTION THEREOF. THE CAMBER SHALL APPROXIMATE A SIMPLE CIRCULAR CURVE FROM END TO END OF BEAM. TOLERANCES IN CAMBER SHALL BE AS INDICATED IN THE AISC HANDBOOK FOR ROLLED BEAMS AND AS INDICATED IN THE AWS SPECIFICATION FOR WELDED GIRDERS.
- ALL WELDING AND DIMENSIONAL TOLERANCES OF WELDED MEMBERS SHALL CONFORM TO AWS D1-1-72 "STRUCTURAL WELDING CODE" AND ITS LATEST REVISIONS EXCEPT AS MODIFIED BY THE AASHTO STANDARD SPECIFICATIONS FOR WELDING OF STRUCTURAL STEEL HIGHWAY BRIDGES, DATED 1974 AND ITS LATEST REVISIONS.
- ALLOWABLE DESIGN STRESSES: *
 CONCRETE: CLASS A f'c 3,500 psi fc 1400 psi
 CLASS B f'c 3,500 psi fc 1400 psi
 STRUCTURAL STEEL A-588 MAX. DESIGN STRESS 27,000 psi (or as per AASHTO Specs)
 REINFORCING STEEL GRADE 40 GRADE 60
 DESIGN STRESS (TENSION) 20,000 psi 24,000 psi
 DESIGN STRESS (COMPRESSION) 16,000 psi 20,000 psi
- AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF ERECTED BEAMS SHALL BE TAKEN UNDER THE DIRECTION OF THE ENGINEER FOR USE IN DETERMINING THE FINAL GRADE.
- MINIMUM COVER FOR REINFORCEMENT STEEL SHALL BE 2" MEASURED FROM THE CONCRETE SURFACE TO THE FACE OF THE REINFORCEMENT (3" IN ALL FOOTINGS).
- ALL EXPOSED EDGES OF CONCRETE IN THE SUBSTRUCTURE AND SUPERSTRUCTURE SHALL BE CHAMFERED 1" x 1".
- DECK CONCRETE SHALL BE CONCRETE CLASS A. ALL OTHER CONCRETE SHALL BE CONCRETE CLASS B.
- BRIDGE SEATS OF ALL PIERS AND ABUTMENTS SHALL BE SLOPED 1/2" PER FOOT EXCEPT UNDER BEARING PLATES WHERE THE SURFACES SHALL BE LEVEL. ABUTMENTS SHALL BE SLOPED FULL WIDTH. PIERS SHALL BE SLOPED EACH WAY FROM CENTER. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE SMOOTH STEEL TROWEL FINISHED.
- ABUTMENT CONCRETE ABOVE THE ADJACENT BRIDGE SEAT ELEVATIONS SHALL PREFERABLY NOT BE PLACED UNTIL FINAL FINISHED GRADE OF DECK IS ESTABLISHED BY THE ENGINEER.
- BRIDGE DECKS AND APPROACH SLABS CALLING FOR BITUMINOUS CONCRETE PAVEMENT SHALL BE PAVED WITH A TYPE III MIX APPLIED IN TWO COURSES.
- GRANULAR BORROW USED IN AREAS THROUGH WHICH PILES ARE TO BE DRIVEN SHALL HAVE A MAXIMUM STONE SIZE OF NINE INCHES.
- BORINGS INDICATED ON THE DRAWINGS HAVE BEEN MADE FOR DESIGN PURPOSES ONLY AND DO NOT WARRANT ACTUAL SUB-SURFACE CONDITIONS.
- ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL.

*NOTE: SPECIFICATIONS CALL FOR A CLASS A CONCRETE WHICH WILL PRODUCE 4000 PSI AT 28 DAYS. HOWEVER, SUPERSTRUCTURE CONCRETE IS DESIGNED ON THE BASIS OF f'c = 3500 THUS PROVIDING AN ADDITIONAL FACTOR OF SAFETY IN BRIDGE SLABS.

REVISIONS AND CORRECTIONS
 1- Added word seat in line 3 of Note #9 J. WOOD 4-23-75

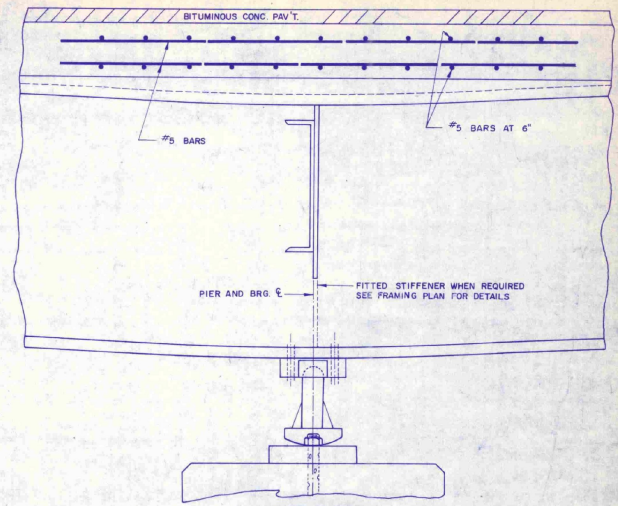
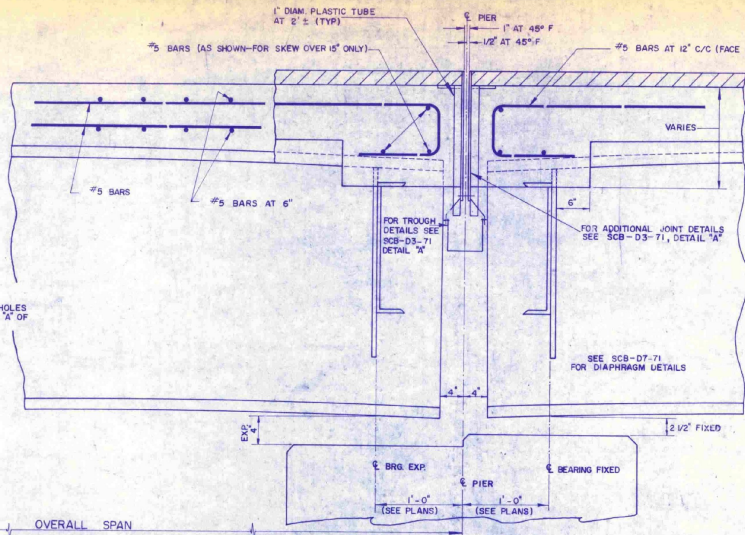
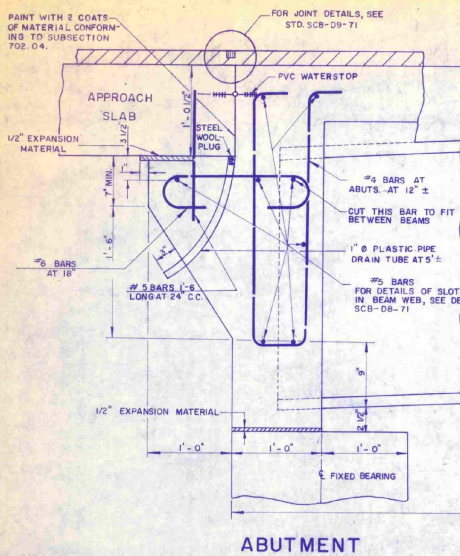
APPROVED

DATE July 31 1975
 CHIEF ENGINEER
 ASST. CHIEF ENGINEER
 BRIDGE ENGINEER

DETAILS OF W BEAM BRIDGES
 GENERAL INFORMATION
 AND
 GENERAL NOTES

VERMONT
 DEPARTMENT
 OF HIGHWAYS
 STANDARD

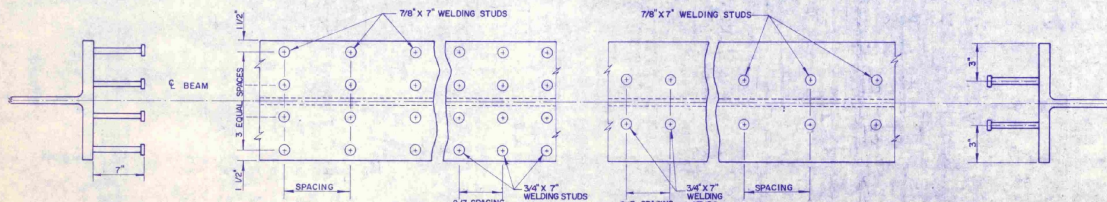
SCB-DI-75



ELEVATION VIEWS

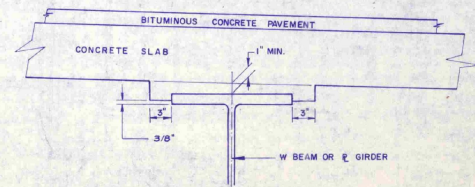
PIER-CONTINUOUS BEAM BRIDGE

(A)



SHEAR CONNECTOR DETAILS

(B)



BEAM HAUNCH

(C)

REVISIONS AND CORRECTIONS

1. REMOVED BAR MARK DESIGNATIONS AND BEAM SIZE REFERENCE. W. TRIPP 12-29-75

APPROVED: DATE: 12/14/72

R.H. C... ..
CHIEF ENGINEER

E.H.
ASST. CHIEF ENGINEER

P.M.
BRIDGE ENGINEER

DETAILS OF W BEAM BRIDGES

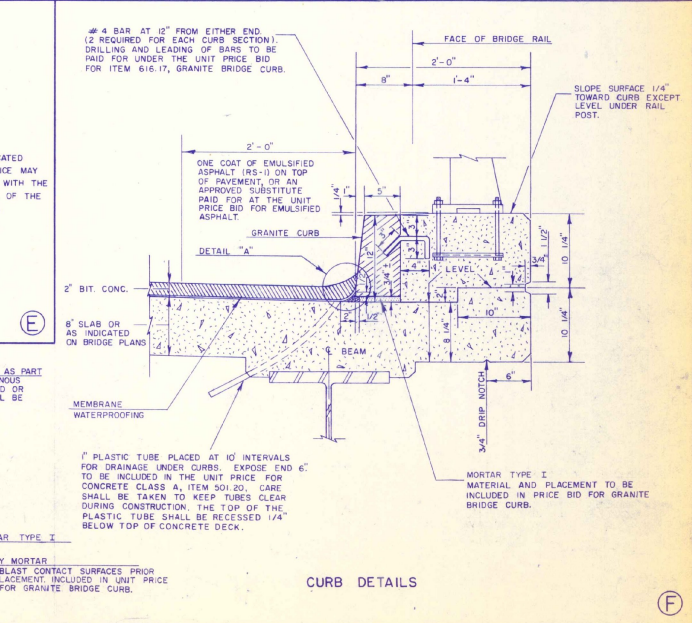
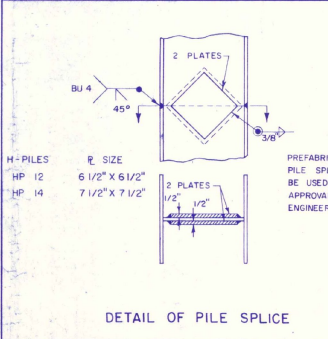
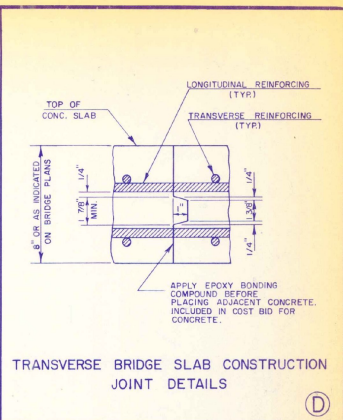
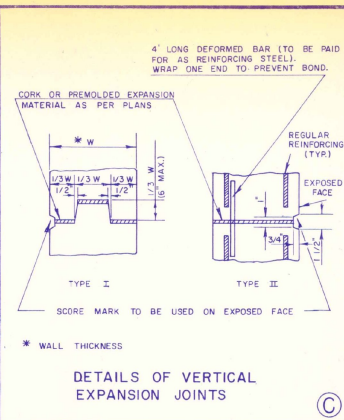
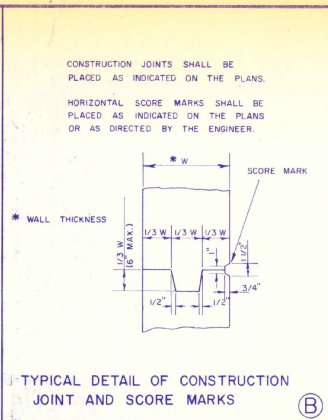
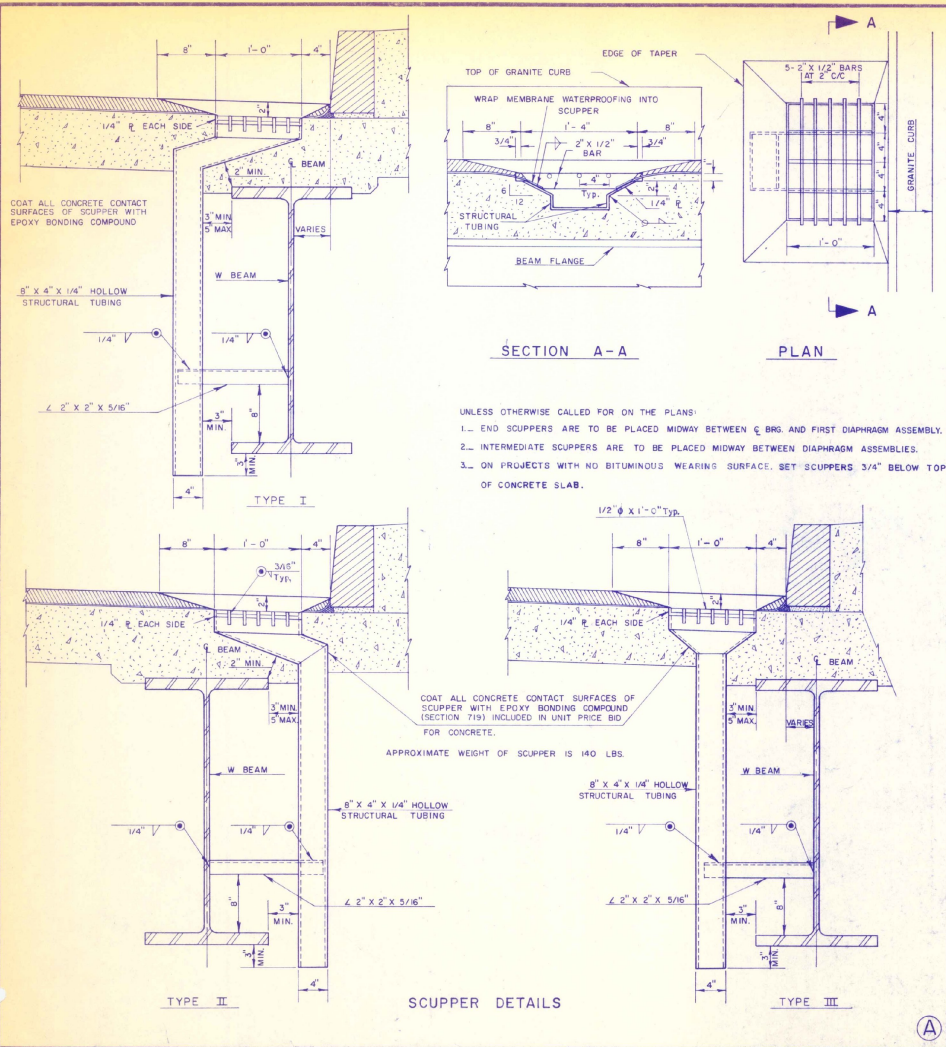
(A) ELEVATION VIEWS

(B) SHEAR CONNECTOR DETAILS

(C) BEAM HAUNCH DETAIL

VERMONT DEPARTMENT OF HIGHWAYS STRUCTURE STANDARDS

SCB-D2-71



REVISIONS AND CORRECTIONS

1. Added 1/2" bars to scupper details. J. WOOD 1-27-75

2. Added to note on 1" plastic tubes. J. WOOD 1-27-75

3. Revised pile splice weld. W. Tripp 12-29-75

APPROVED DATE: Nov 28 1973

E. H. Stibney
CHIEF ENGINEER

R. O. Mann
ASST. CHIEF ENGINEER

W. M. Smith
BRIDGE ENGINEER

DETAILS OF W BEAM BRIDGES

(A) SCUPPER DETAILS

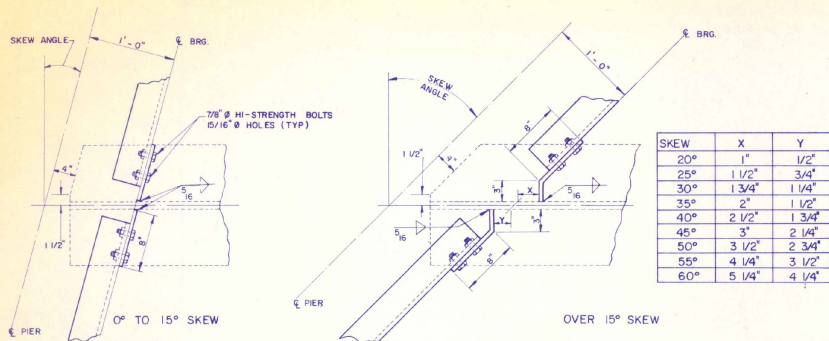
(B)(C)(D) CONSTRUCTION DETAILS

(E) PILE DETAILS

(F) CURB DETAILS

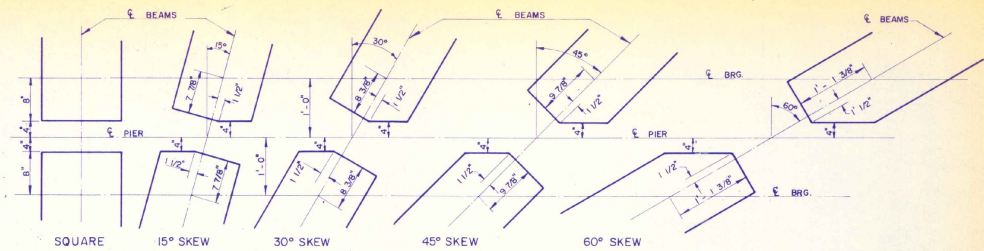
VERMONT
DEPARTMENT OF HIGHWAYS
STRUCTURE STANDARDS

SCB-D6-73



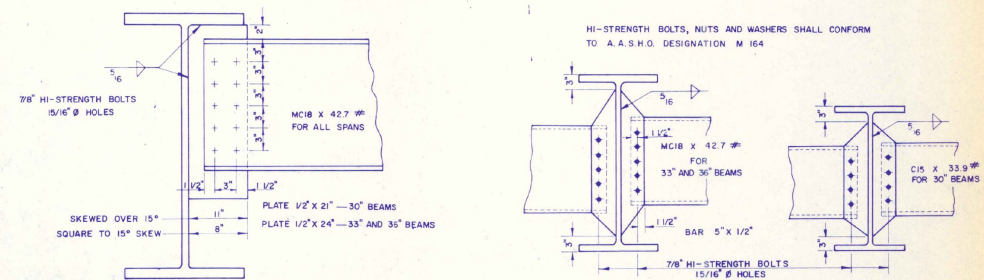
DETAILS OF PIER DIAPHRAGM CONNECTIONS

A



INTERIOR W BEAM CUT-OFFS AT PIER

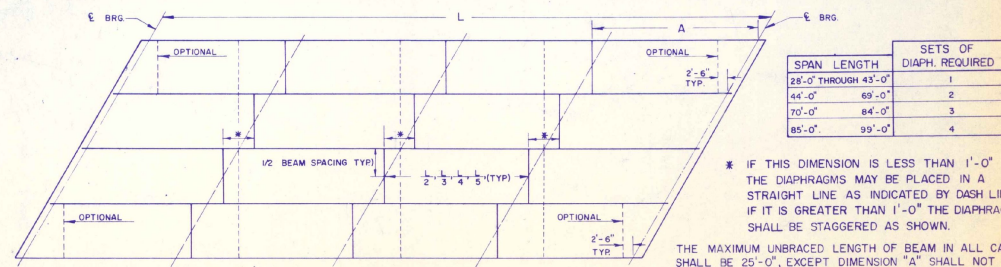
B



PIER DIAPHRAGMS

INTERMEDIATE DIAPHRAGMS

D



DIAPHRAGM LOCATION PLAN

* IF THIS DIMENSION IS LESS THAN 1'-0" THE DIAPHRAGMS MAY BE PLACED IN A STRAIGHT LINE AS INDICATED BY DASH LINE. IF IT IS GREATER THAN 1'-0" THE DIAPHRAGMS SHALL BE STAGGERED AS SHOWN.

THE MAXIMUM UNBRACED LENGTH OF BEAM IN ALL CASES SHALL BE 25'-0", EXCEPT DIMENSION "A" SHALL NOT EXCEED 15' ON FASCIA BEAMS UNLESS DIAPHRAGMS ARE USED AT C OF BEARINGS, OR UNLESS OPTIONAL DIAPHRAGMS ARE USED AS SHOWN.

C

E

REVISIONS AND CORRECTIONS

1. REMOVED DETAIL "C". J. WOOD 1-22-73
2. NOTE CONCERNING DIMENSION "A" ADDED TO DETAIL "E". J. WOOD 1-22-73

APPROVED: DATE: 2/14/71

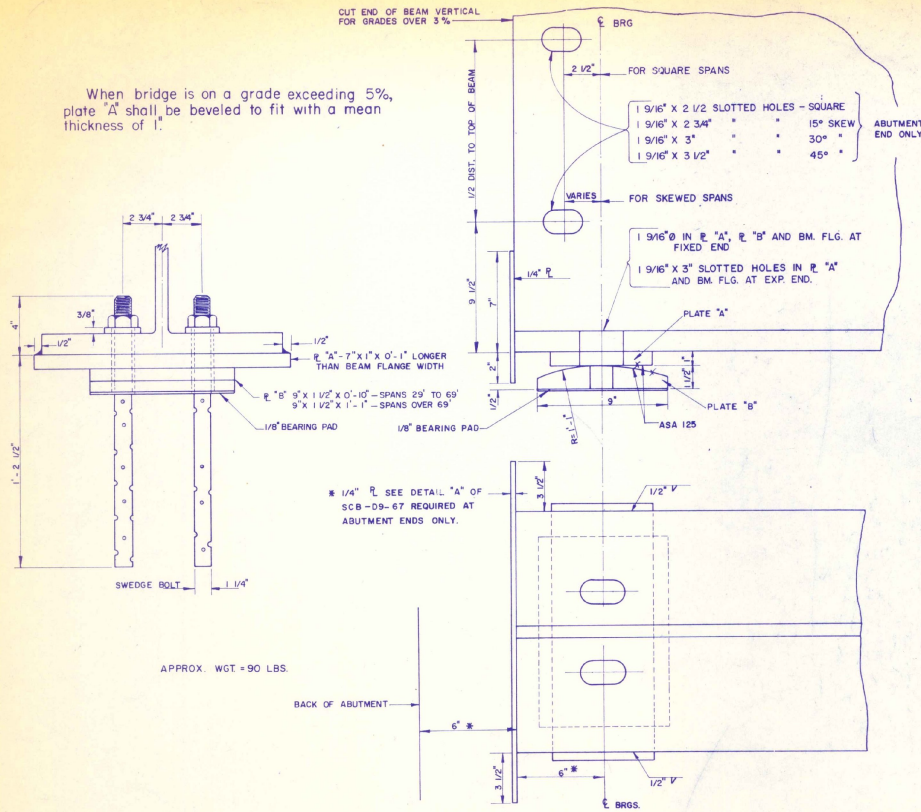
R.M. Conrad
 CHIEF ENGINEER
E.H. Stebbins
 ASST. CHIEF ENGINEER
Landman
 BRIDGE ENGINEER

DETAILS OF W BEAM BRIDGES
 STRUCTURAL STEEL DETAILS

- A D E DIAPHRAGM DETAILS
 B WF BEAM CUT-OFFS
 C

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 DEPARTMENT OF HIGHWAYS
 STRUCTURE STANDARDS
SCB-D7-71

When bridge is on a grade exceeding 5%, plate "A" shall be beveled to fit with a mean thickness of 1".

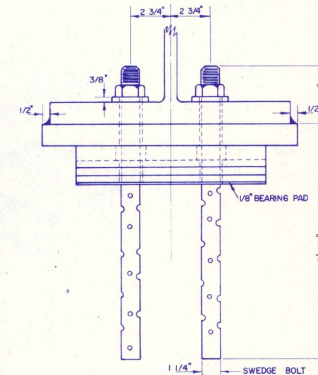


FIXED END BEARING DEVICE
USE FOR EXPANSION END ON SPANS UP TO AND INCLUDING 69'

Plate "C" - 9" x 1 1/2" x 1" longer than the beam flange width. When the bridge is on a grade exceeding 5%, plate "C" shall be beveled to fit the grade with a mean thickness of 1 1/2".

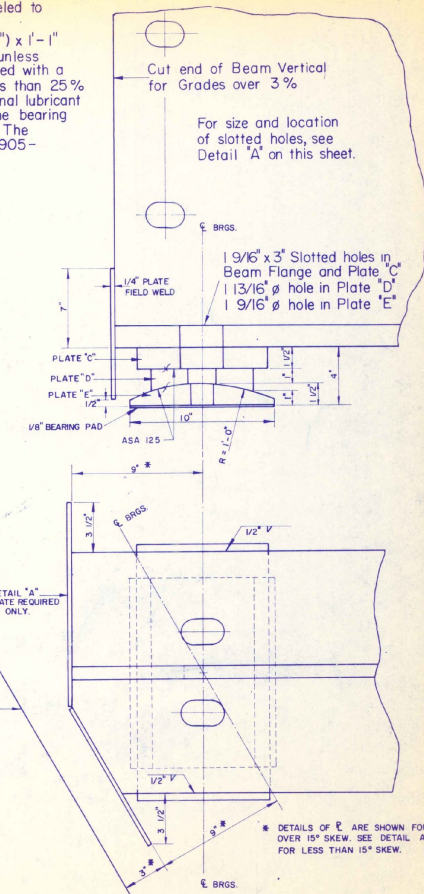
Plate "D" - 7" x (outer edge thickness 1 1/2", center thickness 1") x 1' - 1" To be Cast Bronze - A.S.T.M. - B 22, Copper Alloy 905* or 911 unless otherwise specified. This plate shall have trepanned recesses filled with a lubricating compound. The lubricating area shall comprise not less than 25% of the total bearing area. The manufacturer shall supply additional lubricant in liquid form with which the Contractor shall thoroughly coat the bearing surfaces that contact the lubricated portion of the bronze plate. The coefficient of friction shall not exceed 0.10. (*Copper Alloy 905 - maximum lead content allowed is 2.5%.)

Plate "E" - 10" x 1 1/2" x 1' - 1"



APPROX. WGT = 150 LBS.

EXPANSION END BEARING DEVICE
FOR SPANS OVER 69'



Attention is called to State of Vermont Department of Highways Standard Specifications for Highway and Bridge Construction, Section 731, Bearing Pads for Structures.

(A)

(B)

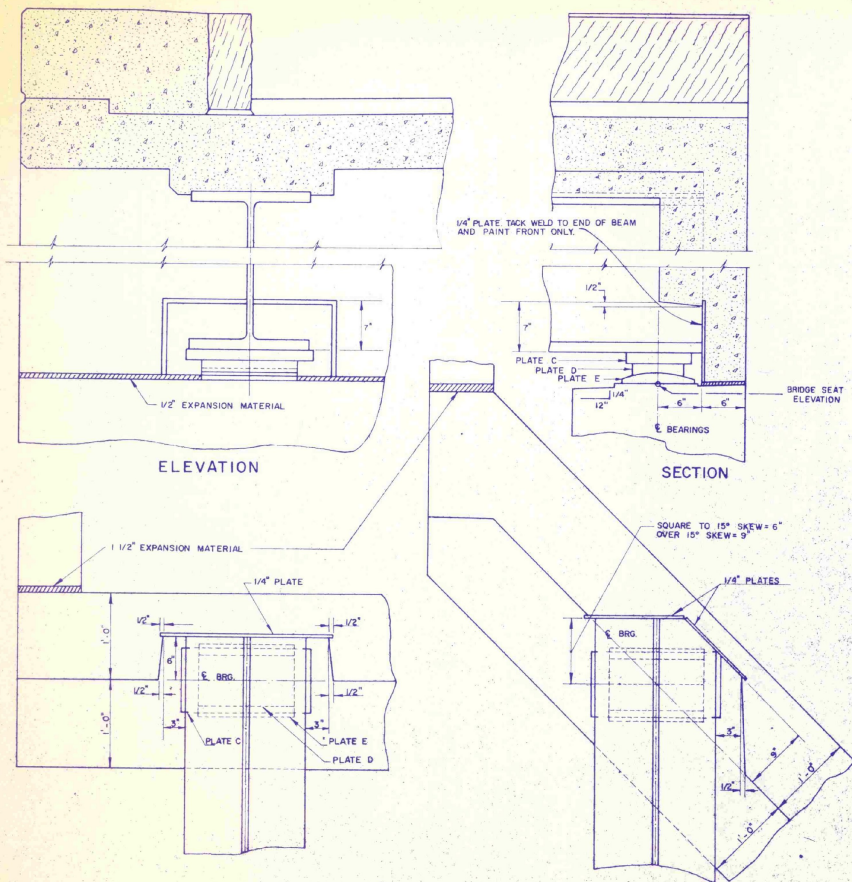
REVISIONS AND CORRECTIONS
L. CHANGE IN COPPER ALLOY FOR BRONZE CASTING. J. WOOD
9/27/72

APPROVED: DATE: 12/14/11
K.H. Arnold
CHIEF ENGINEER
E.H. Stebbins
ASST. CHIEF ENGINEER
Bridges
BRIDGE ENGINEER

DETAILS OF W BEAM BRIDGES

- (A) FIXED END BEARING DEVICE
- (B) EXPANSION END BEARING DEVICE

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SCB-D8-71



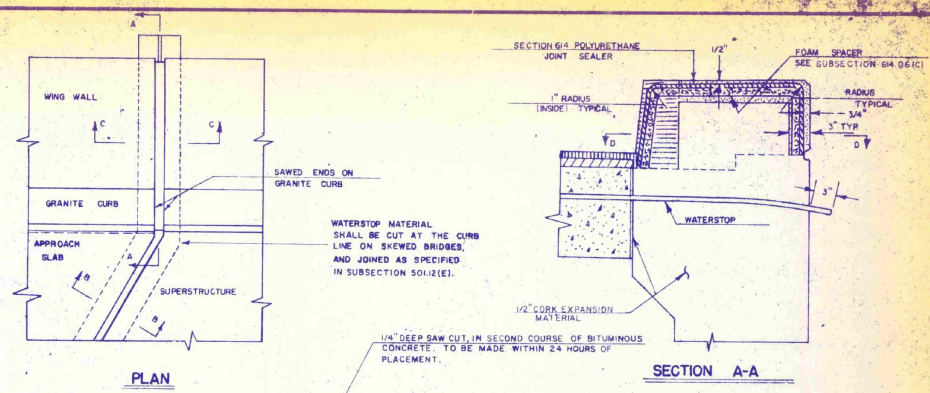
ELEVATION

SECTION

PLAN FOR SQUARE BRIDGES

PLAN FOR SKEWED BRIDGES

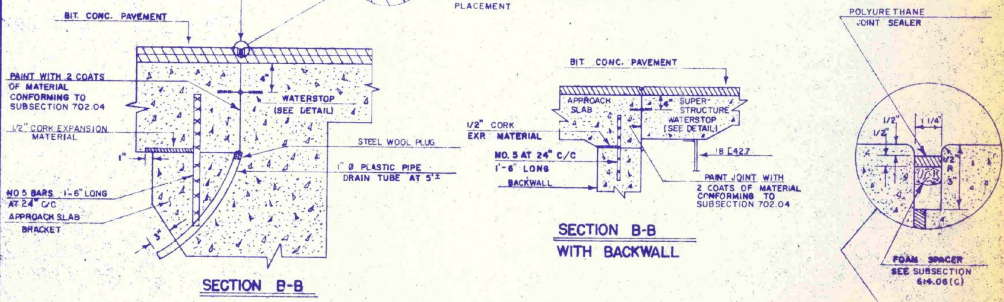
(DETAILS SHOWN FOR EXP. END; FIXED END SIMILAR EXCEPT P's A AND B IN LIEU OF P's C, D AND E; SEE SCB-D9-71)



PLAN

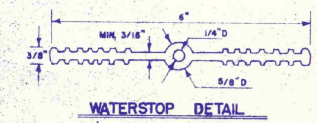
SECTION A-A

JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUT WILL BE MADE DIRECTLY OVER THE JOINT.



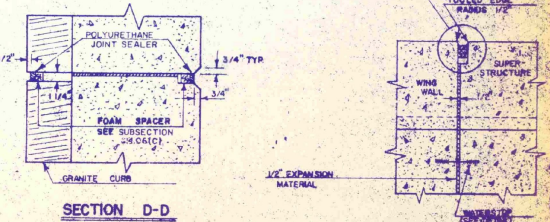
SECTION B-B

SECTION B-B WITH BACKWALL



WATERSTOP DETAIL

MATERIAL TO BE POLYVINYLCHLORIDE, AS SPECIFIED IN SUBSECTION 707.30. OTHER CONFIGURATIONS, WITH MINOR DIMENSION VARIATIONS, MAY BE USED WITH THE APPROVAL OF THE BRIDGE ENGINEER.
 COST OF THE WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 502.20 CONCRETE.
 THE CONTRACTOR SHALL PROVIDE ADEQUATE SUPPORT TO MAINTAIN PROPER ALIGNMENT OF WATERSTOP DURING CONSTRUCTION.



SECTION D-D

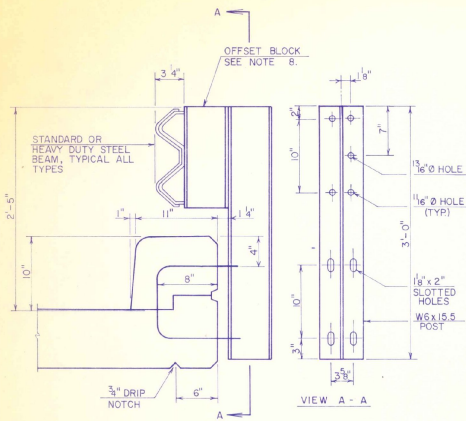
SECTION C-C

REVISIONS AND CORRECTIONS
 Added notes to estv cut let. @ 2nd. course of Bit. Conc. - J.WOOD
 1-27-75

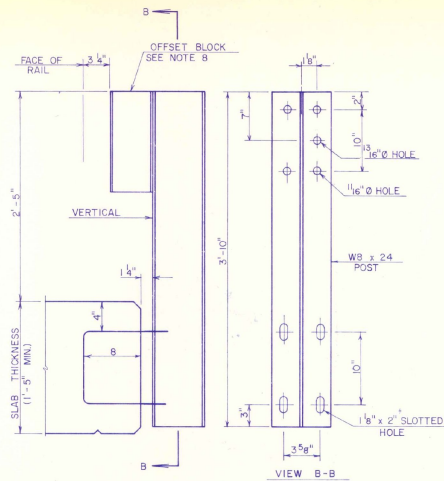
APPROVED: DATE: 10/11/71
 R.H. Crandall
 CHIEF ENGINEER
 E.H. Stebbins
 ASST. CHIEF ENGINEER
 Fred Burns
 BRIDGE ENGINEER

DETAILS OF W BEAM BRIDGES
 A CURTAIN WALL AT BEARING DEVICES
 B FIXED END JOINT DETAILS

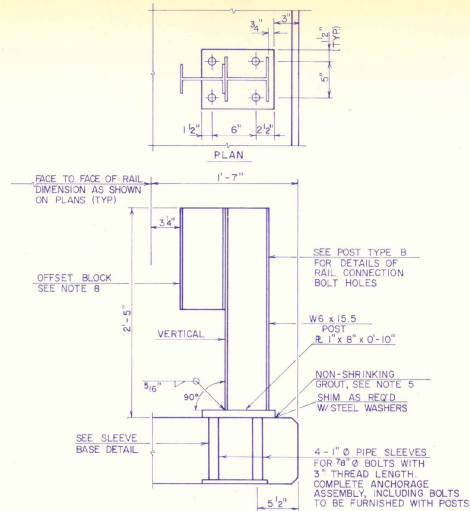
VERMONT
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 SCB-D9-71



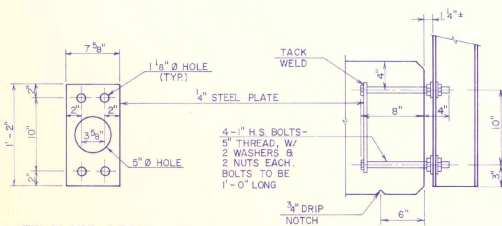
FASCIA MOUNTED STEEL POST TYPE A



FASCIA MOUNTED STEEL POST TYPE B

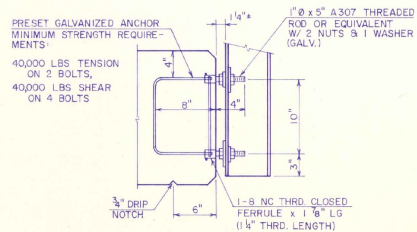


PEDESTAL MOUNTED STEEL POST TYPE C

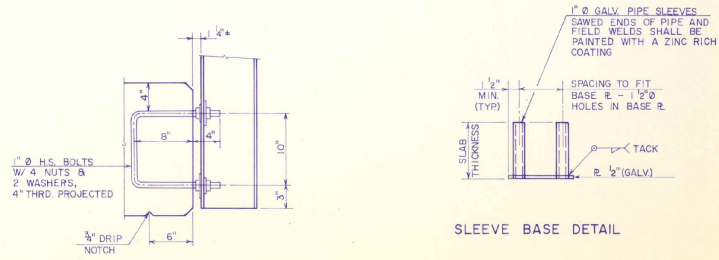


TEMPLATE DETAIL

ANCHORAGE TYPE 1



ANCHORAGE TYPE 2



ANCHORAGE TYPE 3

SLEEVE BASE DETAIL

- NOTES -

1. SEE STANDARD DRAWINGS G-1 AND G-1a FOR ADDITIONAL DETAILS.
2. FASCIA MOUNTED POSTS (TYPE A & B) MAY BE USED WITH EITHER ANCHORAGE TYPE 1, 2 OR 3 UNLESS OTHERWISE SPECIFIED ON PROJECT PLANS.
3. ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF STD. SPEC. SUBSECTION 714.16, "ANCHOR BOLTS".
4. DESIGN STRESSES:
ULTIMATE STRENGTH DESIGN USED IN SELECTION OF POSTS
 $f_t = 29,000$ PSI STEEL POSTS
5. NON-SHRINKING GROUT SHALL CONFORM WITH SUBSECTION 707.04, MORTAR TYPE IV. PACK UNDER BASE PLATE.
6. ALL STEEL POSTS AND FIXTURES SHALL BE ASTM A-36 EXCEPT AS OTHERWISE NOTED, AND SHALL BE GALVANIZED AFTER FABRICATION TO CONFORM WITH ASTM A-123.
7. ALL RAIL POSTS SHALL BE SET NORMAL TO GRADE UNLESS OTHERWISE NOTED.
8. OFFSET BLOCKS ARE TO BE USED UNLESS OTHERWISE DESIGNATED ON PROJECT PLANS. SEE STANDARD DRAWING G-1 FOR OFFSET BLOCK DETAIL.

REVISIONS AND CORRECTIONS

APPROVED: Jan. 8 1976
DATE
E.H. Steckney
CHIEF ENGINEER
R.O. Munn
ASST. CHIEF ENGINEER
W.M. Smith
BRIDGE ENGINEER

STANDARD STEEL
BRIDGE RAILING MOUNTINGS

VERMONT
DEPARTMENT
OF HIGHWAYS
STANDARD

SB-R6-76