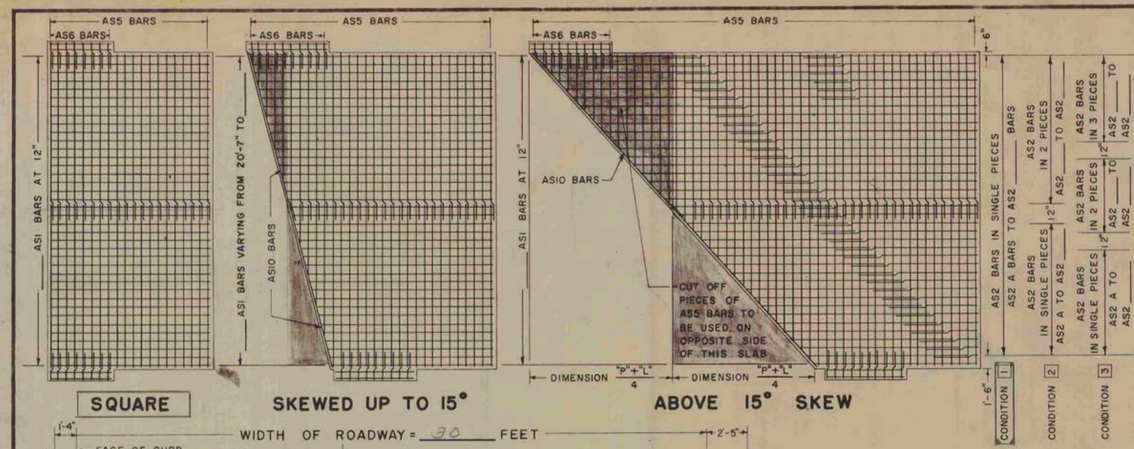
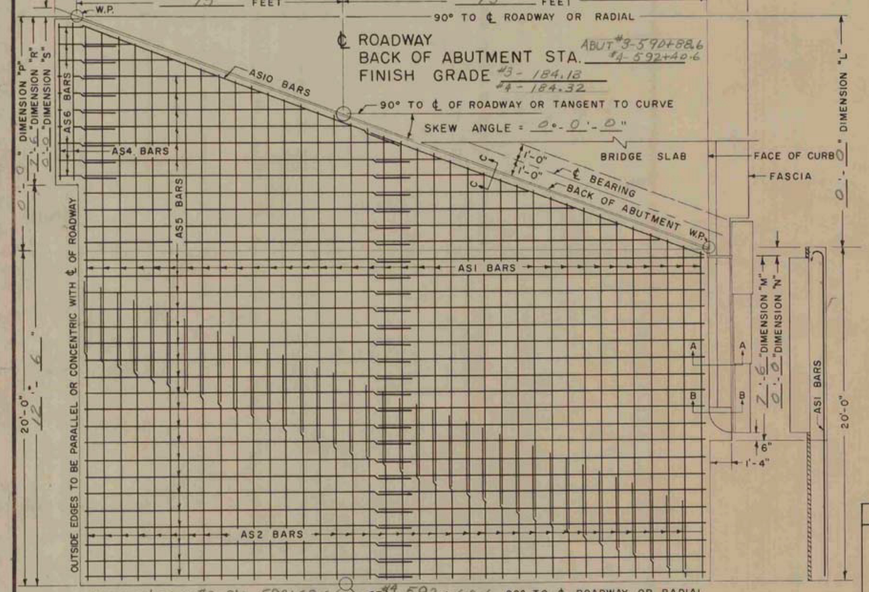
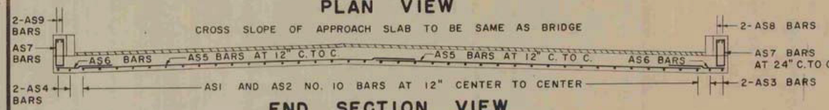


SQUARE — SKEWED UP TO 15° — ABOVE 15° SKEW



PLAN VIEW



END SECTION VIEW

30' ROADWAY

NO. PIECES	SIZE	LENGTH	MARK	TYPE	REMARKS
SQUARE OR SKEWED					
2	10	7-0	AS3	STR.	
2	10	7-0	AS4	STR.	
16	5	3'-6"	AS6	STR.	
8	5	5'-0"	AS7	S6	
2	5	5-4	AS8	STR.	
2	5	5-4	AS9	STR.	
SQUARE					
30	10	20'-7"	ASI	1	
20	5	29'-6"	AS5	STR.	
SKEWED UP TO 15°					
30	10	AVE.	ASI	1	1.
	5	29'-6"	AS5	STR.	2.
ALL SKEWED SPANS					
2	5		ASIO	STR.	
ABOVE 15° SKEW					
30	10	20'-7"	ASI	1	
29	10	AVE.	AS2	STR.	4.
	5	29'-6"	AS5	STR.	2.

38' ROADWAY

NO. PIECES	SIZE	LENGTH	MARK	TYPE	REMARKS
SQUARE OR SKEWED					
2	10		AS3	STR.	
2	10		AS4	STR.	
	5	3'-6"	AS6	STR.	
	5	5'-0"	AS7	S6	
2	5		AS8	STR.	
2	5		AS9	STR.	
SQUARE					
38	10	20'-7"	ASI	1	
40	5	19'-9"	AS5	STR.	
SKEWED UP TO 15°					
38	10	AVE.	ASI	1	1.
	5	19'-9"	AS5	STR.	3.
ALL SKEWED SPANS					
	5		ASIO	STR.	
ABOVE 15° SKEW					
38	10	20'-7"	ASI	1	
37	10	AVE.	AS2	STR.	4.
	5	19'-9"	AS5	STR.	3.

42' ROADWAY

NO. PIECES	SIZE	LENGTH	MARK	TYPE	REMARKS
SQUARE OR SKEWED					
2	10		AS3	STR.	
2	10		AS4	STR.	
	5	3'-6"	AS6	STR.	
	5	5'-0"	AS7	S6	
2	5		AS8	STR.	
2	5		AS9	STR.	
SQUARE					
42	10	20'-7"	ASI	1	
40	5	21'-9"	AS5	STR.	
SKEWED UP TO 15°					
42	10	AVE.	ASI	1	1.
	5	21'-9"	AS5	STR.	3.
ALL SKEWED SPANS					
	5		ASIO	STR.	
ABOVE 15° SKEW					
42	10	20'-7"	ASI	1	
41	10	AVE.	AS2	STR.	4.
	5	21'-9"	AS5	STR.	3.

44' ROADWAY

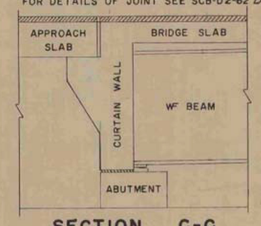
NO. PIECES	SIZE	LENGTH	MARK	TYPE	REMARKS
SQUARE OR SKEWED					
2	10		AS3	STR.	
2	10		AS4	STR.	
	5	3'-6"	AS6	STR.	
	5	5'-0"	AS7	S6	
2	5		AS8	STR.	
2	5		AS9	STR.	
SQUARE					
44	10	20'-7"	ASI	1	
40	5	22'-9"	AS5	STR.	
SKEWED UP TO 15°					
44	10	AVE.	ASI	1	1.
	5	22'-9"	AS5	STR.	3.
ALL SKEWED SPANS					
	5		ASIO	STR.	
ABOVE 15° SKEW					
44	10	20'-7"	ASI	1	
43	10	AVE.	AS2	STR.	4.
	5	22'-9"	AS5	STR.	3.

___ ROADWAY

NO. PIECES	SIZE	LENGTH	MARK	TYPE	REMARKS
SQUARE OR SKEWED					
2	10		AS3	STR.	
2	10		AS4	STR.	
	5	3'-6"	AS6	STR.	
	5	5'-0"	AS7	S6	
2	5		AS8	STR.	
2	5		AS9	STR.	
SQUARE					
	10	20'-7"	ASI	1	
	5		AS5	STR.	
SKEWED UP TO 15°					
	10	AVE.	ASI	1	1.
	5		AS5	STR.	2.-3.
ALL SKEWED SPANS					
	5		ASIO	STR.	
ABOVE 15° SKEW					
	10	20'-7"	ASI	1	
	10	AVE.	AS2	STR.	4.
	5		AS5	STR.	2.-3.

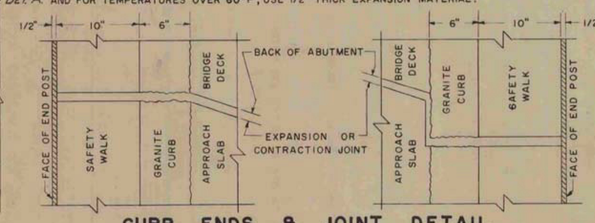
REMARKS: (1) ASI BAR "B" DIMENSION VARIES FROM 19'-6" TO _____ (2) 20 + DIMENSION ("P"+"L") ÷ 4 (IN FEET) = NUMBER OF PIECES. CUT BARS IN THE FIELD USING CUT OFF PIECES ON OPPOSITE HALF OF SLAB. (3) 40 + DIMENSION ("P"+"L") ÷ 2 (IN FEET) = NUMBER OF PIECES. CUT BARS IN THE FIELD USING CUT OFF PIECES ON OPPOSITE HALF OF SLAB. (4) THE LENGTH OF AS2 BARS VARIES FROM _____ TO _____. THE AS2 BARS MAY BE DIVIDED INTO TWO OR MORE PIECES, AS MAY BE NECESSARY, TO LIMIT THE MAXIMUM BAR LENGTH TO 30 FEET. THE LOCATION OF SPLICES IS LEFT TO THE OPTION OF THE DESIGNER. THE NO. PIECES SHOWN ARE FOR CONDITION 1. (FOR CONDITION 2. & 3. SEE REINF. SCHEDULE.)

GENERAL NOTES: ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. WHEN A BAR LENGTH VARIES IN INCREMENTS EACH BAR MUST BE DETAILED. SPLICES SHALL BE 2'-1" FOR NUMBER 5 BARS, AND 4'-3" FOR NUMBER 10 BARS. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED JANUARY 1956, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR H20-S16-44.

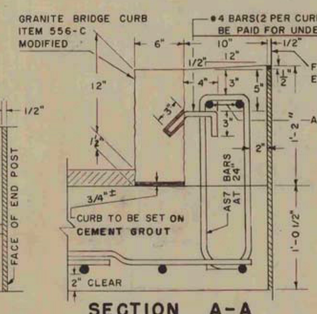


SECTION C-C
SCALE 1/2" = 1'-0"

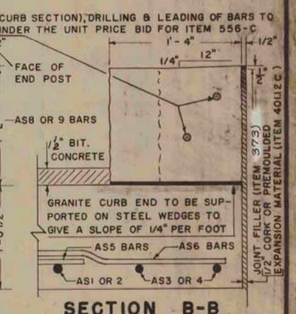
ABUTMENTS (FIXED END) USE 1/2" EXPANSION MATERIAL. ABUTMENTS (EXPANSION END) AND PIERS: FOR TEMPERATURES LESS THAN 60°F, USE 1" THICK EXPANSION MATERIAL; AND FOR TEMPERATURES OVER 60°F, USE 1/2" THICK EXPANSION MATERIAL.



CURB ENDS & JOINT DETAIL
SCALE 1 1/2" = 1'-0"



SECTION A-A
SCALE 1 1/2" = 1'-0"



SECTION B-B
SCALE 1 1/2" = 1'-0"

DETAILS OF REINFORCING BARS

TYPE I: A = 1'-1" J = 0'-9"; B = 19'-6" OR VARIES

TYPE S6: A = 0'-6"; B = 1'-9"; C = 0'-6"; D = 1'-9"; G = 0'-6"

ITEM NO.	ITEM	UNIT	APP. SLAB #3 TOTAL	APP. SLAB #3 FINAL	APP. SLAB #4 TOTAL	APP. SLAB #4 FINAL
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	27		27	
361-B	BITUMINOUS CONCRETE PAVEMENT (MOD.)	TONS	5.5		5.5	
401-B	CONCRETE CLASS B (MOD.)	CY.	~~24~~	24.5	~~24~~	24.5
402	REINFORCING STEEL	LB.	~~3515~~	3532	~~3515~~	3532
556-C	GRANITE BRIDGE CURB (MOD.)	L.F.	16 ✓	16	16 ✓	16

REINFORCING STEEL

BAR NO.	A NO. PIECES	B LENGTH	C WEIGHT PER FT.	A x B x C WEIGHT IN LBS.
ASI	30	20'-7"	4.303	2656.67
AS2	—	—	4.303	—
AS3	2	7-0	4.303	60.24
AS4	2	7-0	4.303	60.24
AS5	20	29-6	1.043	615.37
AS6	16	3'-6"	1.043	58.80
AS7	8	5'-0"	1.043	41.72
AS8	2	5-9	1.043	11.13
AS9	2	5-4	1.043	11.13
ASIO	—	—	1.043	—
TOTAL WEIGHT =				3514.90

QUANTITY COMPUTATION

W = WIDTH OF ROADWAY; Z = 20 + DIMENSION ("P"+"L")/4; T = DIMENSION ("M"+"R")/2

W = 30; Z = 20; T = 7'-6"

BITUMINOUS CONCRETE = W x Z x 0.0092 = TONS: 30 x 20 x 0.0092 = 5.52 TONS

TAR EMULSION = W x Z x 0.0444 = GALLONS: 30 x 20 x 0.0444 = 26.64 GALLONS

CONCRETE CLASS B = W x Z x 0.0386 + T x 0.1029 + (T − 1.8333) x 0.0733 = CUBIC YARDS

[30 x 20 x 0.0386] + [7.5 x 0.1029] + [(7.5 − 1.8333) x 0.0733] = 24.35 CUBIC YARDS

GRANITE BRIDGE CURB = 2(T + 0'-3") = LINEAR FEET; 2(7.5 + 0.25) = 15.5 LINEAR FEET

BAR LENGTHS: AS3 BARS = DIMENSION "M" − 0'-6"
AS4 BARS = DIMENSION "R" − 0'-6"
AS6 BARS = 3'-6"
AS7 BARS = 5'-0"
AS8 BARS = DIMENSION "M" − 2'-2"
AS9 BARS = DIMENSION "R" − 2'-2"

REVISIONS AND CORRECTIONS

SWANTON
IM 089-3(70)
SHEET 20 OF 31
FOR REFERENCE ONLY

APPROVED

DRAWN BY: R.S. HAUPT NOV. 1960
TRACED BY: R.S. HAUPT NOV. 1960
CHECKED BY: A.H. SMALLEY NOV. 1960

Recommended For Approval — Bridge Engineer — Date 12/7/62
Recommended For Approval — Asst. Chief Engineer — Date 1/4/63
Approved By — Chief Engineer — Date 1/4/63

DETAILS OF APPROACH SLAB FOR 30 FOOT BRIDGE
(WIDTH)

TO BE USED FOR BRIDGE AT STATION 591+64.6

LOCATION SWANTON

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE

SB-AS-62

TOWN OF SWANTON-HIGHGATE
ROUTE NO. I-89
NBI I-89 over St. J. & L.C. Railroad
SCALE AS NOTED
DESIGNED BY W CHECKED BY ELO
PROJECT NO. I-89-3 (38)
BR. 305 OF 308 SHEET 133 OF 240