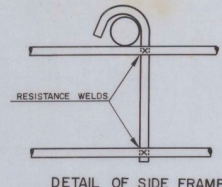


PLAN OF DOWEL UNIT

DOWELS TO BE OF INTERMEDIATE GRADE STEEL
ONE (1) INCH IN DIAMETER AND EIGHTEEN (18) INCHES LONG



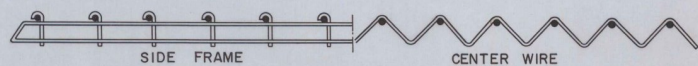
DETAIL OF SIDE FRAME

DETAILS OF CONTRACTION UNIT

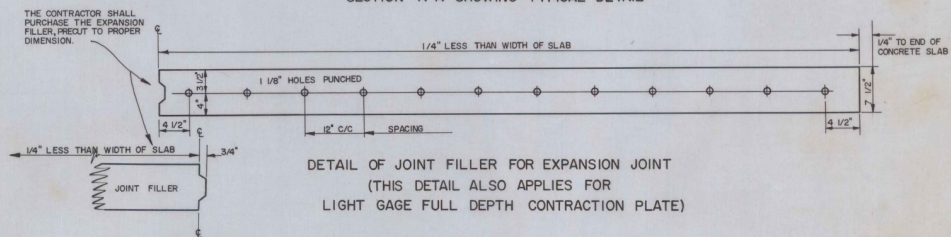


SECTION A-A SHOWING TYPICAL DETAIL

DETAIL OF EXPANSION UNIT

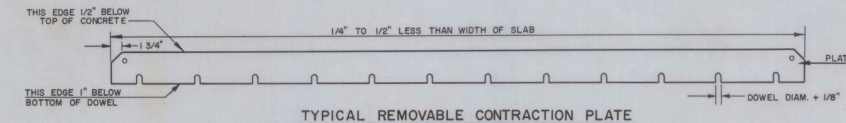


SECTION A-A SHOWING TYPICAL DETAIL

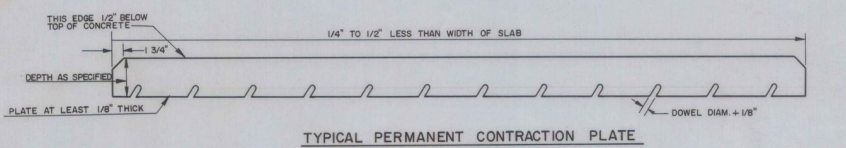


DETAIL OF JOINT FILLER FOR EXPANSION JOINT
(THIS DETAIL ALSO APPLIES FOR
LIGHT GAGE FULL DEPTH CONTRACTION PLATE)

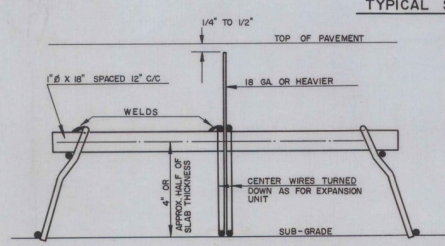
TYPICAL SECTIONS



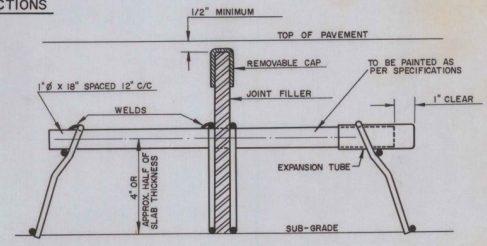
TYPICAL REMOVABLE CONTRACTION PLATE



TYPICAL PERMANENT CONTRACTION PLATE



SECTION AT CONTRACTION JOINT USING LIGHT GAGE
FULL DEPTH PERMANENT PLATE



SECTION AT EXPANSION JOINT

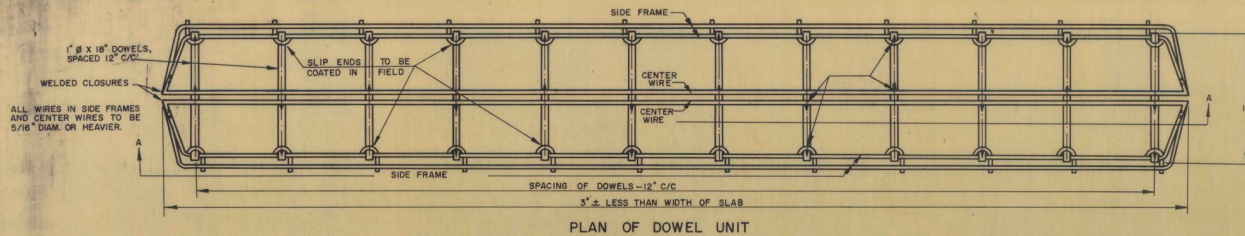
REVISIONS AND CORRECTIONS

APPROVED: DATE MARCH 10, 1965
A. S. Bishop
 CHIEF ENGINEER
E. M. Lane
 HIGHWAY ENGINEER
E. W. Dickson
 CONSTRUCTION ENGINEER
 DRAWN AJA
 TRACED AJA

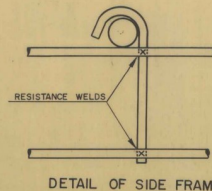
STANDARD DETAILS AND ASSEMBLY PLANS FOR
 TRANSVERSE JOINT DOWEL UNIT FOR
 ONE COURSE CEMENT CONCRETE PAVEMENT, ITEM 371

VERMONT
 DEPARTMENT
 OF HIGHWAYS
 STANDARD

K-1



PLAN OF DOWEL UNIT



DETAIL OF SIDE FRAME

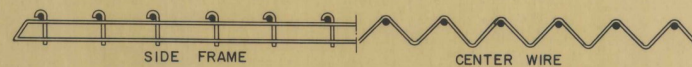
DOWELS TO BE OF INTERMEDIATE GRADE STEEL
ONE (1) INCH IN DIAMETER AND EIGHTEEN (18) INCHES LONG

DETAILS OF CONTRACTION UNIT

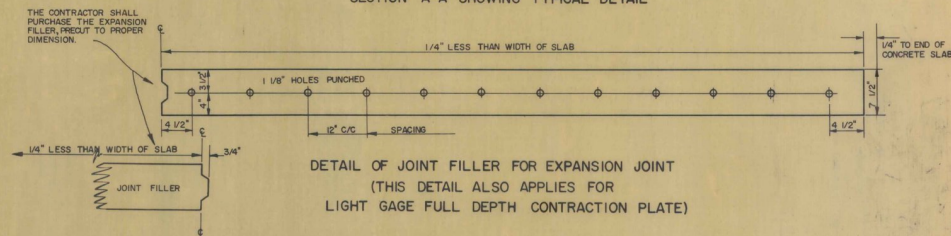


SECTION A-A SHOWING TYPICAL DETAIL

DETAIL OF EXPANSION UNIT

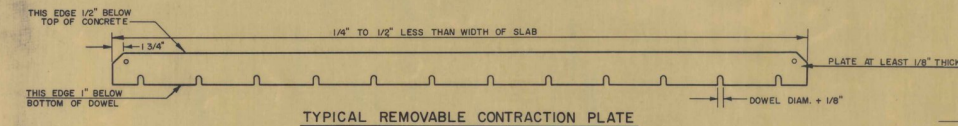


SECTION A-A SHOWING TYPICAL DETAIL

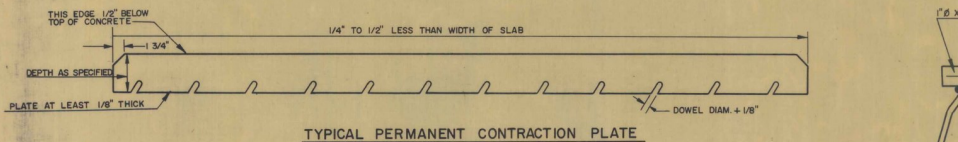


DETAIL OF JOINT FILLER FOR EXPANSION JOINT
(THIS DETAIL ALSO APPLIES FOR LIGHT GAGE FULL DEPTH CONTRACTION PLATE)

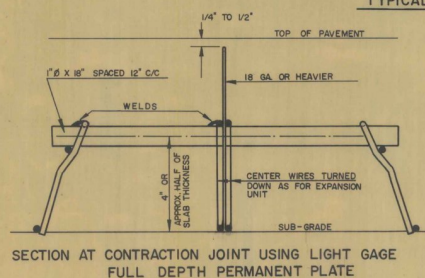
TYPICAL SECTIONS



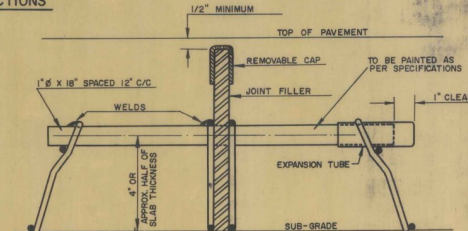
TYPICAL REMOVABLE CONTRACTION PLATE



TYPICAL PERMANENT CONTRACTION PLATE



SECTION AT CONTRACTION JOINT USING LIGHT GAGE FULL DEPTH PERMANENT PLATE



SECTION AT EXPANSION JOINT

REVISIONS AND CORRECTIONS

APPROVED: DATE NOV. 4, 1958

H.E. Sargent
CHIEF ENGINEER
D.M. Lane
HIGHWAY ENGINEER
T. Coates
CONSTRUCTION ENGINEER

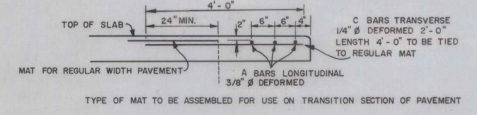
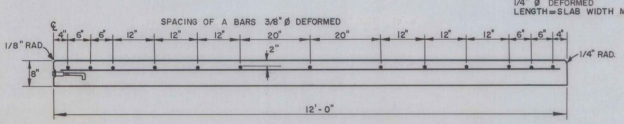
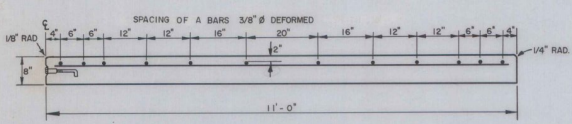
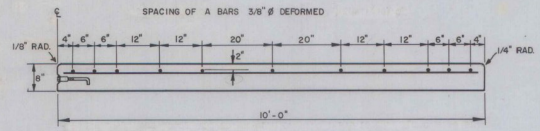
DRAWN AJA
TRACED AJA

STANDARD DETAILS AND ASSEMBLY PLANS FOR
TRANSVERSE JOINT DOWEL UNIT FOR
ONE COURSE CEMENT CONCRETE PAVEMENT, ITEM 371



DEPARTMENT
OF HIGHWAYS
STANDARD

K-1



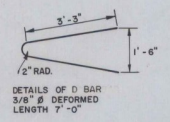
PAVEMENT SECTIONS SHOWING REINFORCING STEEL

WHEN SLABS ARE TO BE WIDENED AN ADDITIONAL TWO FEET FOR CURVES, TWO ADDITIONAL "A" BARS SPACED 12 INCHES C/C ARE TO BE PLACED BEFORE THE EDGE BARS.

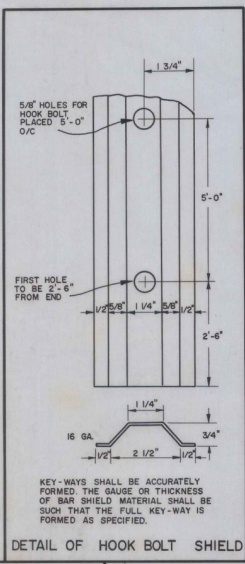
TRANSVERSE EXPANSION JOINTS SHALL BE MADE DIRECTLY OVER ALL CULVERTS AS ORDERED BY THE ENGINEER. TRANSVERSE EXPANSION JOINTS SHALL BE SPACED FOR ONE MAT SLABS THROUGH LEDGE CUT AS ORDERED BY THE ENGINEER, ALL OTHER SLABS UNLESS ORDERED OTHERWISE BY THE ENGINEER, SHALL BE BUILT 60'-0" LONG AS FOUR MAT SLABS. CONTRACTION JOINTS SHALL NOT BE USED UNLESS CALLED FOR ON THE PLANS OR ORDERED BY THE ENGINEER.

C TRANSVERSE BARS 1/4" Ø DEFORMED LENGTH=SLAB WIDTH MINUS 4"

BAR MATS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT SPECIFICATIONS FOR STEEL BAR OR ROD MATS FOR CONCRETE. BAR REINFORCEMENT A.A.S.H.O. DESIGNATION M 54-37, MESH REINFORCEMENT SHALL BE A.A.S.H.O. DESIGNATION M 55-50. BAR MATS OR WIRE FABRIC TO BE PLACED IN PAVEMENT 2" BELOW FINISHED SURFACE. THE CONCRETE SHALL BE PLACED IN TWO OPERATIONS, THE INITIAL LAYER SHALL BE STRUCK OFF 2" BELOW FINISHED SURFACE AND THE REINFORCEMENT PLACED THEREON

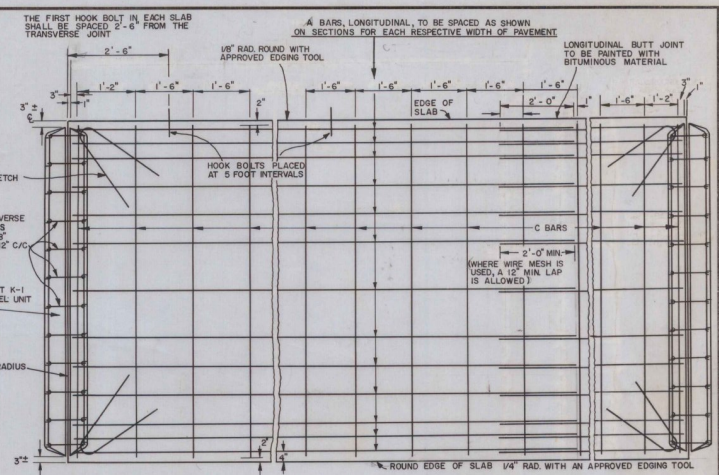


DETAILS OF D BAR 3/8" Ø DEFORMED LENGTH 7'-0"



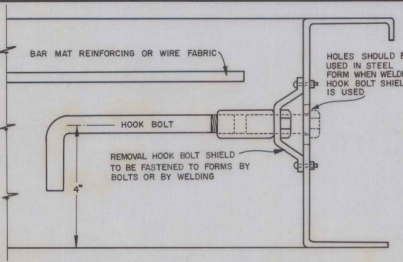
DETAIL OF HOOK BOLT SHIELD

KEY-WAYS SHALL BE ACCURATELY FORMED THE GAUGE OR THICKNESS OF BAR SHIELD MATERIAL SHALL BE SUCH THAT THE FULL KEY-WAY IS FORMED AS SPECIFIED.

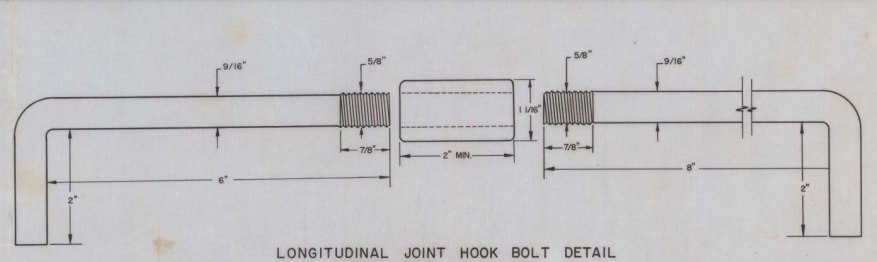
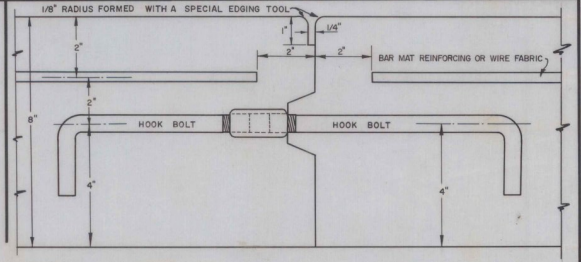


STEEL LAYOUT SLAB

BAR SPECIFICATIONS		NUMBER OF BARS REQUIRED PER SLAB									
		SLAB WIDTH 10'		SLAB WIDTH 11'		SLAB WIDTH 12'		SLAB WIDTH 13'			
BAR	SIZE	LENGTH	1 MAT 15'-0"	3 MAT 45'-0"	4 MAT 60'-0"	1 MAT 15'-0"	3 MAT 45'-0"	4 MAT 60'-0"	1 MAT 15'-0"	3 MAT 45'-0"	4 MAT 60'-0"
A	3/8" Ø DEFORMED	14'-10"	11	11	11	12	12	12	13	13	13
B	3/8" Ø DEFORMED	17'-0"	0	22	33	0	24	36	0	25	39
C	1/4" Ø DEFORMED	W-4	11	31	41	11	31	41	11	31	41
D	3/8" Ø DEFORMED	7'-0"	4	4	4	4	4	4	4	4	4
LBS PER 100 SQ. FT. OF PAVEMENT EXCLUDING D BARS			52.73	56.00	56.14	52.43	55.67	56.18	52.18	55.34	55.79
WIRE FABRIC-STYLE 6"X12"		2/8 60									
COVER		LONG	TRANS		OF MAT		WT. PER 100 SQ. FT.				
BAR MAT		1.320"	0.450"	0.517							
WIRE FABRIC		1.308"	0.463"	0.515							



CONSTRUCTION DETAIL USING HOOK BOLT

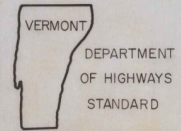


LONGITUDINAL JOINT HOOK BOLT DETAIL (INTERMEDIATE GRADE STEEL)

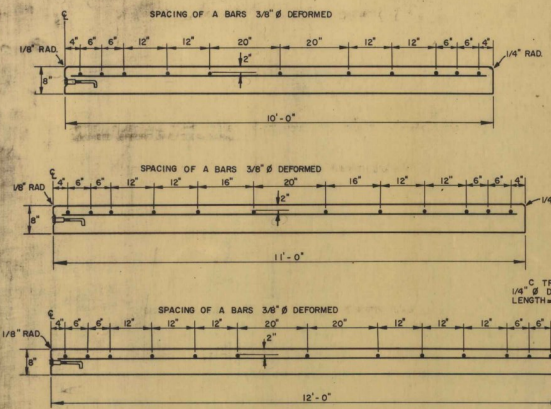
REVISIONS AND CORRECTIONS

APPROVED: DATE MARCH 10, 1965
A. D. Bishop
 CHIEF ENGINEER
G. M. Lane
 HIGHWAY ENGINEER
E. H. Stuebing
 CONSTRUCTION ENGINEER

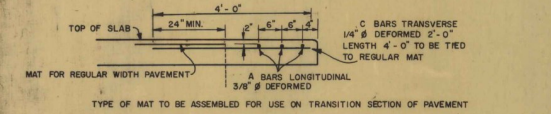
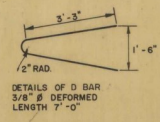
ONE COURSE CEMENT CONCRETE PAVEMENT, ITEM 371
 (CONSTRUCTION DETAILS)



K-2



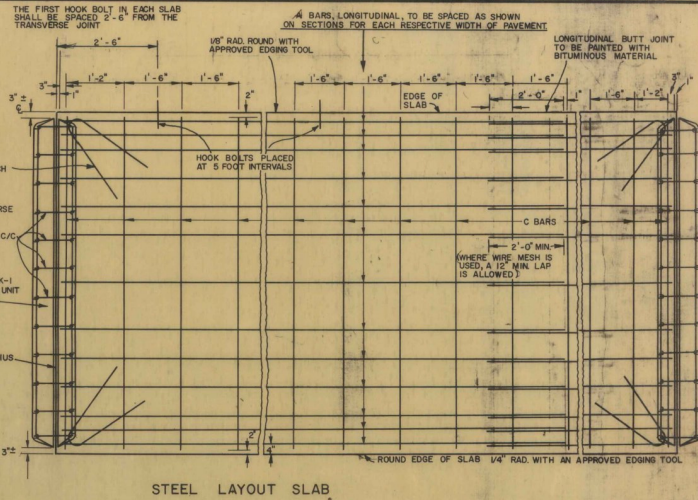
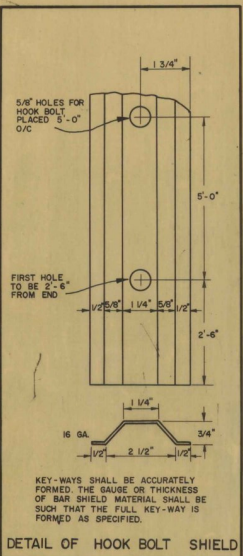
TRANSVERSE EXPANSION JOINTS SHALL BE MADE DIRECTLY OVER ALL CULVERTS AS ORDERED BY THE ENGINEER.
 TRANSVERSE EXPANSION JOINTS SHALL BE SPACED FOR ONE MAT SLABS THROUGH LEDGE CUT AS ORDERED BY THE ENGINEER; ALL OTHER SLABS UNLESS OTHERWISE ORDERED BY THE ENGINEER, SHALL BE BUILT 60'-0" LONG AS FOUR MAT SLABS.
 CONTRACTION JOINTS SHALL NOT BE USED UNLESS CALLED FOR ON THE PLANS OR ORDERED BY THE ENGINEER.



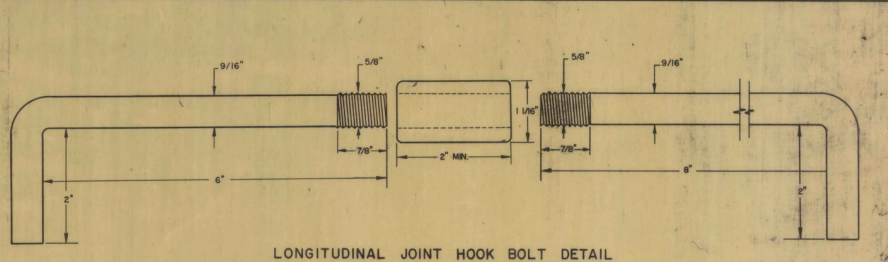
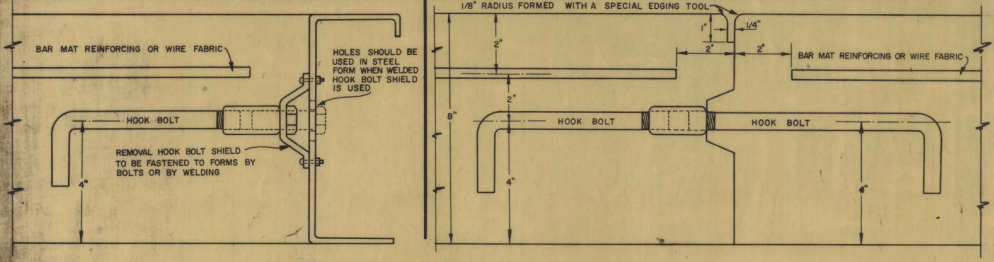
PAVEMENT SECTIONS SHOWING REINFORCING STEEL

WHEN SLABS ARE TO BE WIDENED AN ADDITIONAL TWO FEET FOR CURVES, TWO ADDITIONAL "A" BARS SPACED 12 INCHES C/C ARE TO BE PLACED BEFORE THE EDGE BARS.

BAR MATS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT SPECIFICATIONS FOR STEEL BAR OR ROD MATS FOR CONCRETE.
 BAR REINFORCEMENT A.A.S.H.O. DESIGNATION M 54-37, MESH REINFORCEMENT SHALL BE A.A.S.H.O. DESIGNATION M 55-37.
 BAR MATS OR WIRE FABRIC TO BE PLACED IN PAVEMENT 2" BELOW FINISHED SURFACE.
 THE CONCRETE SHALL BE PLACED IN TWO OPERATIONS, THE INITIAL LAYER SHALL BE STRUCK OFF 2" BELOW FINISHED SURFACE AND THE REINFORCEMENT PLACED THEREON.



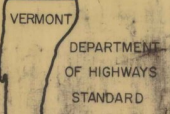
BAR SPECIFICATIONS		NUMBER OF BARS REQUIRED PER SLAB												
BAR	SIZE	LENGTH	SLAB WIDTH 10'			SLAB WIDTH 11'			SLAB WIDTH 12'					
			1 MAT 15'-0"	3 MAT 45'-0"	4 MAT 60'-0"	1 MAT 15'-0"	3 MAT 45'-0"	4 MAT 60'-0"	1 MAT 15'-0"	3 MAT 45'-0"	4 MAT 60'-0"			
A	3/8" Ø DEFORMED	14'-10"	11	11	11	12	12	12	13	13	13			
B	3/8" Ø DEFORMED	17'-0"	0	22	33	0	24	36	0	26	39			
C	1/4" Ø DEFORMED	W-4	11	31	41	11	31	41	11	31	41			
D	3/8" Ø DEFORMED	7'-0"	4	4	4	4	4	4	4	4	4			
LBS PER 100 SQ. FT. OF PAVEMENT EXCLUDING D BARS			52.73	56.00	56.14	52.43	55.67	56.18	52.18	55.34	55.79			
WIRE FABRIC - STYLE 6" X 12"			2/6		60									
COVER			LONG TRANS OF MAT		WT PER SQ YD									
BAR MAT			1 3/2"		0.465"		517							
WIRE FABRIC			1 3/8"		0.463"		51.5							



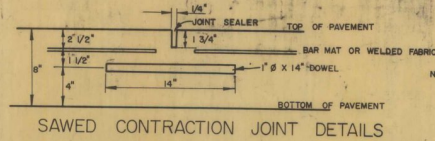
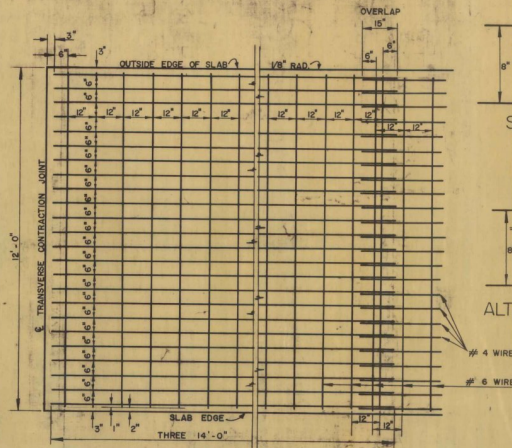
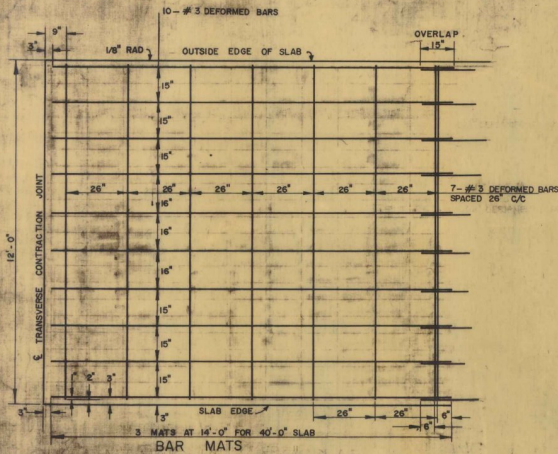
REVISIONS AND CORRECTIONS

APPROVED: DATE NOV. 4, 1958
 H.E. Sargent
 CHIEF ENGINEER
 G.M. Lane
 HIGHWAY ENGINEER
 W. White
 CONSTRUCTION ENGINEER

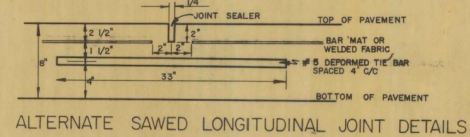
ONE COURSE CEMENT CONCRETE PAVEMENT, ITEM 371
 (CONSTRUCTION DETAILS)



K-2



NOTE: ONE HALF OF DOWEL IS TO BE RENDERED BONDLESS WITH GRAPHITE LUBRICANT THE OTHER HALF RIGIDLY ENCASED IN PAVEMENT



LOAD TRANSFER UNIT NOTES FOR TRANSVERSE EXPANSION AND TRANSVERSE CONTRACTION JOINTS. SLIP-DOWEL BARS OF THE SIZE, SPACING AND POSITION SHOWN IN THIS DRAWING SHALL BE USED AS LOAD TRANSFER UNITS IN ALL TRANSVERSE EXPANSION AND CONTRACTION JOINTS. THE CENTER OF BARS SHALL BE LOCATED VERTICALLY AT THE CENTER OF THE PAVEMENT THICKNESS.

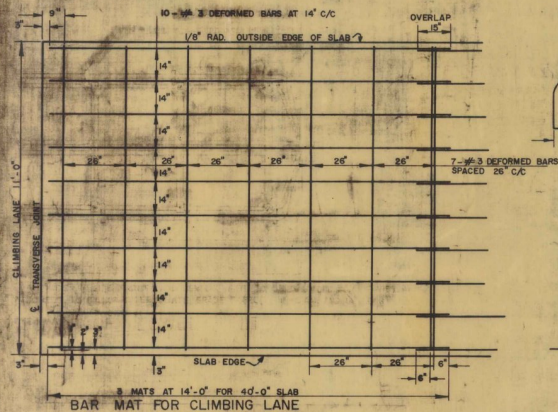
THE PERIMETER OF THE FREE END OF ALL SLIP-DOWEL BARS IN EXPANSION AND CONTRACTION JOINTS SHALL BE A TRUE CIRCLE AND FREE FROM BURRS.

THIS SHEET DOES NOT INDICATE DETAILS FOR THE METHOD OF SUPPORTING THE SLIP-DOWEL BARS REQUIRED AS LOAD TRANSFER UNITS IN ALL TRANSVERSE EXPANSION AND TRANSVERSE CONTRACTION JOINTS. A DRAWING SHOWING NECESSARY ASSEMBLY DETAILS FOR SUPPORTING THE BARS IN CORRECT VERTICAL AND HORIZONTAL POSITION FOR EXPANSION AND FOR CONTRACTION JOINT ASSEMBLIES SHALL BE PREPARED BY THE MANUFACTURER OR HIS REPRESENTATIVE, AND IT SHALL BE SUBMITTED TO AND BE APPROVED BY THE CHIEF ENGINEER PRIOR TO FURNISHING ASSEMBLIES ON ANY PURCHASE ORDER OR FOR USE ON ANY CONTRACT. THE DRAWING SHALL BE IN INK ON TRADING CLOTH.

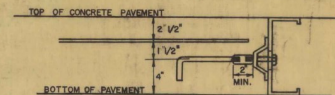
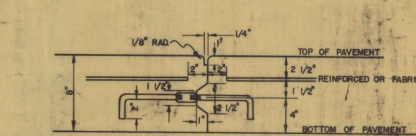
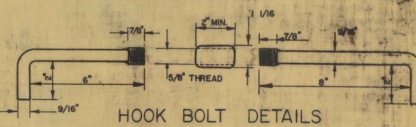
STEEL AND JOINTS IN TAPERS. THE BAR MATS OR WIRE FABRIC REINFORCING STEEL THAT IS USED IN THE TAPER OF CEMENT CONCRETE PAVEMENTS BETWEEN STATION 65+80 AND 65+80 ALSO ON THE RIGHT BETWEEN STATION 90+00 AND STATION 92+00 IS TO BE ARRANGED WITH THE SAME SPACING AND IS TO BE OF THE SAME SIZE AS THAT IN THE FULL WIDTH LANES. THIS STEEL IS TO BE CUT SO THAT NO STEEL COMES WITHIN TWO (2) INCHES OF THE OUTER EDGES OF THE SLABS AND THREE (3) INCHES OF THE ENDS OF THE SLABS. ALL DOWELS IN THESE TAPERS ARE TO BE PLACED PARALLEL TO THE FULL-WIDTH LANES.

THE SPACING OF THE CONTRACTION AND/OR CONTRACTION JOINTS IS TO BE ARRANGED SO THAT THE TAPER LEFT OF STATION 83+80 TO STATION 85+80 WILL BE MADE IN FIVE (5) FORTY (40) FOOT SLABS AND THE TAPER RIGHT OF STATION 90+80 TO 92+00 WILL BE MADE IN THREE (3) FORTY (40) FOOT SLABS. THE TRANSVERSE JOINTS ON THE SLABS ARE TO BE IN LINE WITH THE MAIN LINE SLABS TRANSVERSE JOINTS.

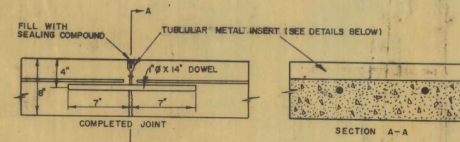
A SUBSTITUTE FOR THE TUBULAR METAL INSERT AS SHOWN MAY BE USED IF APPROVED BY THE ENGINEER.



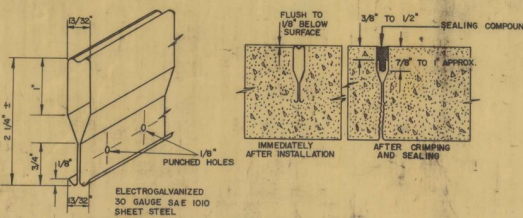
WELDED WIRE FABRIC FOR 40'-0" SLAB
NOTE: 6/12-4/6 WIRE MESH IS SHOWN ABOVE FOR A 12' WIDE SLAB. FOR 11' WIDE SLABS OBSERVE SAME CLEAR DIMENSIONS FROM SLAB ENDS AND EDGES AND USE SAME OVERLAP AS ABOVE.



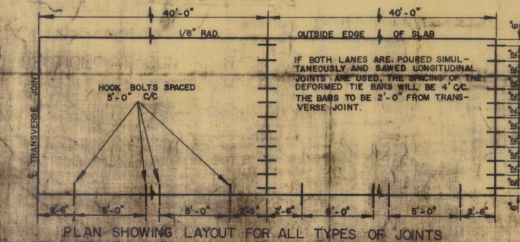
HOOK BOLT DETAILS ALONG LONGITUDINAL JOINT
REMOVAL HOOK BOLT SHIELD TO BE 3/4 IN. GAGE, OR WOOD STRIPS, SECURELY HELD IN PLACE.



CONTRACTION JOINT WITH TUBULAR METAL INSERT.



TUBULAR METAL INSERT



1" DOWELS 14" LONG 2" C/C IN CONTRACTION JOINTS

REVISIONS AND CORRECTIONS

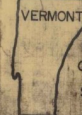
APPROVED

DATE SEPT 14, 1962

A. S. Pinkley
CHIEF ENGINEER
G. W. L. Lane
HIGHWAY ENGINEER
C. W. St. John
CONSTRUCTION ENGINEER

ONE COURSE CEMENT
CONCRETE PAVEMENT
ITEM 371

(CONSTRUCTION DETAILS)



DEPARTMENT
OF HIGHWAYS
STANDARD

K-3