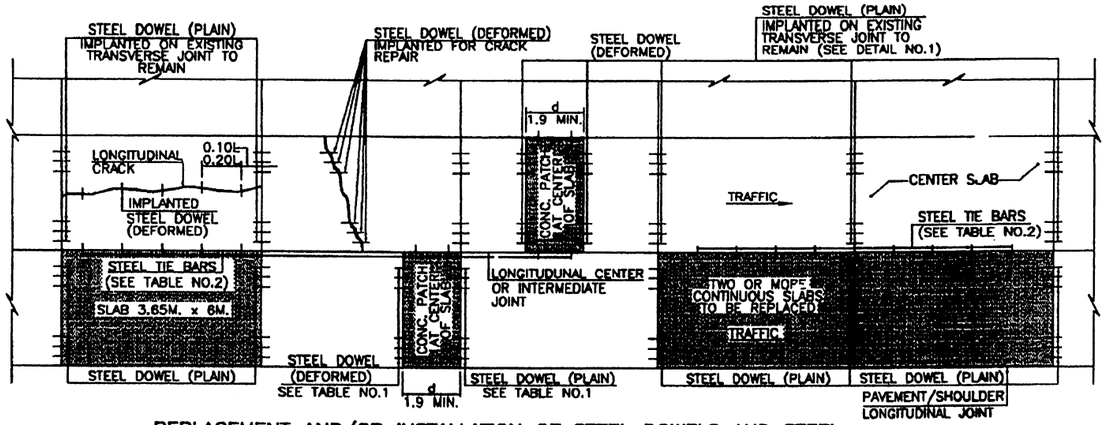
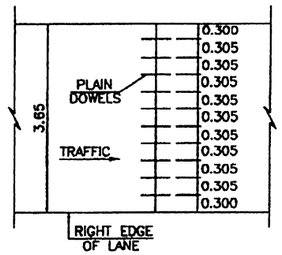


REPLACEMENT AND/OR INSTALLATION OF STEEL DOWELS AND STEEL TIE BARS ON TRANSVERSE AND LONGITUDINAL JOINTS OR CRACKS



DETAIL NO. 1

DETAIL OF STEEL DOWEL SPACING AT TRANSVERSE CONTRACTION AND CONSTRUCTION JOINTS WHEN TWO OR MORE CONTINOUS SLABS ARE REPLACED.

TABLE NO. 1

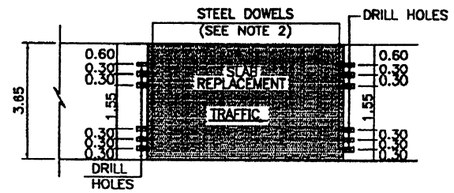
STEEL DOWEL (EPOXY COATED, PLAIN OR DEFORMED) AND DEPTH OF JOINTS SAW				
PAVEMENT THICKNESS METERS*	DOWEL BAR DIAMETER INCHES	DOWEL LENGTH METERS	DOWEL SPACING METERS	DEPTH OF JOINT SAW CUT METERS (MIN.)
0.200	1-3/8"	0.45	0.305	0.07
0.250	1-1/2"	0.45	0.305	0.08
0.350	1-5/8"	0.45	0.305	0.10

* – PAVEMENT THICKNESS EQUAL OR LESS THAN TABULATED VALUE.

TABLE NO. 2

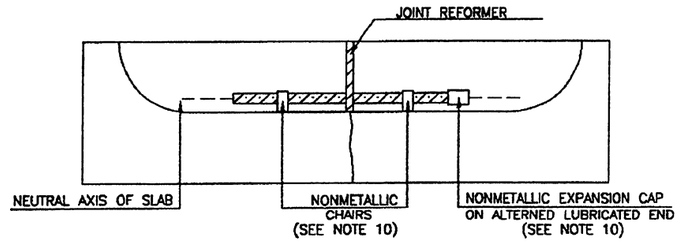
TIE BARS (EPOXY COATED, DEFORMED)						
			NO. 5 BARS			
TYPE AND GRADE OF STEEL	WORKING STRESS PSI	EXISTING PAVEMENT THICKNESS METERS*	MINIMUM OVERALL LENGTH INCHES	LANE WIDTH METERS		
				3.05	3.35	3.65
				MAXIMUM SPACING INCHES		
GRADE 60 BILLET STEEL	30,000	0.20	30	48	48	48
	30,000	0.25	30	48	48	48
	30,000	0.35	30	48	48	48

* – PAVEMENT THICKNESS EQUAL OR LESS THAN TABULATED VALUE.



PLAN

STEEL DOWEL ON PCC SLAB REPLACEMENT OR FULL DEPTH PATCH



DOWEL INSTALLATION DETAIL

NOTES:

1 – STEEL TIE BARS AT LONGITUDINAL JOINTS SHALL BE REINSTALLED WHEN CUT BY THE REMOVAL OF SLAB OR PARTIAL SECTION OF SLAB. FOR THE REINSTALLATION OF THESE BARS, USE THE CONSTRUCTION METHOD USED FOR THE INSTALLATION OF STEEL DOWEL ON PCC SLAB REPLACEMENT.

2 – STEEL DOWELS AND STEEL TIE BARS SHALL BE EPOXY COATED ACCORDING TO AASHTO SPEC. M–284.

3 – FOR DIMENSION AND SPACING OF STEEL DOWEL SEE TABLE NO.1.

4 – TRANSVERSE JOINTS MAY BE NORMAL OR SKEW WITH RESPECT TO THE ℄ AND OF EQUAL OR RANDOM SPACING. EXISTING TRANSVERSE JOINT PATTERN WILL BE USED ON REHABILITATION. DOWELS SHALL BE PARALLEL TO CENTER LINE.

5 – ALL DIMENSIONS IN METERS EXCEPT OTHERWISE INDICATED.

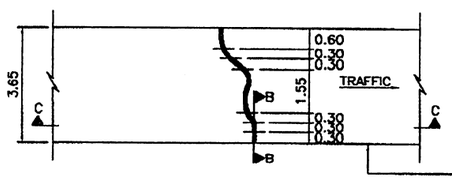
6 – THE CONTRACTOR SHALL USE DEFORMED DOWELS FOR CRACK REPAIRS AND COLD JOINTS; AND SHALL USE PLAIN DOWELS FOR TRANSVERSE JOINTS.

7 – THE CONTRACTOR SHALL LUBRICATE OF THE PLAIN DOWELS WITH OIL. GREASE WILL NOT BE ALLOWED.

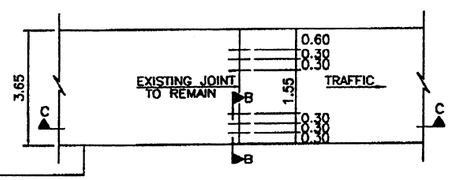
8 – CHAIRS, JOINT REFORMER BOARDS AND EXPANSION CAPS ARE A SUBSIDIARY OBLIGATION.

9 – THE CHAIRS WILL FIT TIGHTLY IN THE KERF.

10 – THE CONTRACTOR SHALL SUBMIT SAMPLES OF NONMETALLIC CHAIRS AND NONMETALLIC EXPANSION CAPS FOR APPROVAL OF THE ENGINEER.

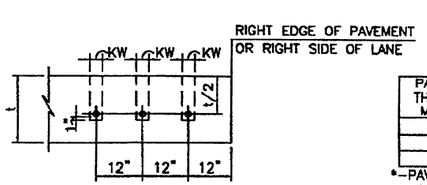


IMPLANTED STEEL DOWEL (DEFORMED) FOR CRACK REPAIR



RIGHT EDGE OF PAVEMENT OR RIGHT SIDE OF LANE

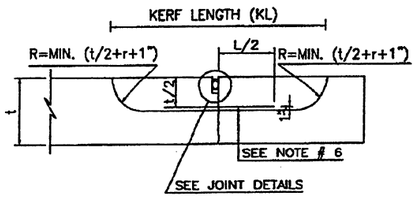
IMPLANTED STEEL DOWEL (PLAIN) ON EXISTING TRANVERSE JOINT TO REMAIN



PAVEMENT THICKNESS METERS*	KERF WIDTH (KW) METERS
0.200	0.055
0.250	0.060
0.350	0.065

*–PAVEMENT THICKNESS EQUAL OR LESS THAN TABULATED VALUE.

SECTION B–B



SECTION C–C

PAVEMENT THICKNESS METERS*	KERF LENGTH (KL) METERS	MINIMUM RADIUS (MR) METERS
0.200	0.750	0.150
0.250	0.800	0.170
0.350	0.900	0.230

* – PAVEMENT THICKNESS EQUAL OR LESS THAN TABULATED VALUE.

LEGEND:

r– RADIUS OF THE DOWEL
t– EXISTING PAVEMENT SLAB THICKNESS
L– LENGTH OF DOWEL, TIE BAR OR SLAB

EFFECTIVE DATE: MAY 1999

COMMONWEALTH OF PUERTO RICO
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
HIGHWAY AND TRANSPORTATION AUTHORITY

PCC PAVEMENT RESTORATION

INSTALLATION OF STEEL DOWEL AND TIE BARS

RECOMMENDED BY:
DESIGN AREA DIRECTOR
DATE : 11-15-95
APPROVED BY:
EXECUTIVE DIRECTOR
DATE : 12-10-95
APPROVED BY: Eddie Rivera
DIV. ADM. FHWA-PR DIVISION
DATE : 4-30-99

DATE	REVISION	BY
5-12-98	GENERAL REVISION	L.V.
4-14-99	ADD NOTE # 10	L.V.

STD. DWG. PCCPR 1 OF 4