LONG TERM PAVEMENT PERFORMANCE PROGRAM DIRECTIVE

For The Technical Direction Of The LTPP Program

Program Area: SPS

Directive Number: S-6

Date: February 1. 1994

Supersedes: Relative SHRP SPS-1 Documents

Subject: SPS-1 Construction Guidelines
SPS-1 Materials Sampling and Testing Requirements

Attached are the December 1993 and January 1994 revisions to the subject SPS-1 documents. These documents were prepared and revised in accordance with comments received for the LTPP Regional Offices and others involved with the program. They contain clarification and expansion of the original documents but do not change the scope and concept of the original experiment.

Approved: Paul Teng

Date: 2/01/94

NOTICE OF CHANGE(S) TO SHRP SPS REPORT		
Report Title: **Report Date:** **SHRP Operational Memo No.:**	Data Collection Guidelines for SPS-6 May 1991 SHRP-LTPP-OM-023	
Change Number: **Change Date:**	1 October 30, 1992	Page 1 of 1

The following change should be incorporated in the document:

Construction Data Sheets (All Sheets)

The title and the numbering of the data sheets were revised to conform to the scheme used for the development of Construction Data Sheets for SPS-l and SPS-2 experiments. The revised sheets 1 to 27 are attached.

Changes in the IMS will be implemented to incorporate the revisions.

SPS-6 CONSTRUCTION DATA SHEET 1 REFERENCE PROJECT STATION TABLE	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO. [0 0]

ORDER	TEST SECTION ID NO (1)	REFERENCE PROJECT STATION NUMBER		(4) CUT-FILL[1]	
		(2) START	(3) END	TYPE	STATION
1	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
2	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
3	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
4	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
5	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
6	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
7	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
8	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
9	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
10	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
11	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
12	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
13	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
14	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
15	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
16	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
17	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
18	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
19	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __
20	__ __ __ __ __ __	__ __ __ __ + __ __	__ __ __ __ + __ __	___	__ + __ __

5 SPS - GPS TEST SECTION EQUALITIES

GPS section __ __ __ __ __ __ is the same as SPS section __ __ __ __ __ __

GPS section __ __ __ __ __ __ is the same as SPS section __ __ __ __ __ __

6. INTERSECTIONS BETWEEN TEST SECTION ON THE PROJECT

ROUTE	PROJECT STATION NO.	RAMPS EXIT	RAMPS ENT	I --- INTERSECTION --- I STOP	SIGNAL	UNSIG
_____	__ __ __ __ + __ __	____	____	_____	_____	_____
_____	__ __ __ __ + __ __	____	____	_____	_____	_____
_____	__ __ __ __ + __ __	____	____	_____	_____	_____

Note 1. Indicate the type of subgrade section the test section is located on:

Cut ..... 1 Fill ..... 2 At-Grade ..... 3 Cut and Fill 4

If cut-fill transition is located in a test section, enter test section station of the cut-fill transition location.

PREPARER _____ EMPLOYER _____ DATE _____

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 2 REVISED LAYER DESCRIPTIONS	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO. [__ __]

1. LAYER NUMBER	2. LAYER DESCRIPTION	3. MATERIAL TYPE CLASS	4. LAYER THICKNESSES (Inches)			
			AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
1	SUBGRADE (7)	[___ ___]	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$$
2	[___ ___]	[___ ___]	[_ _ _ . _]	$$	$$	$$
3	[___ ___]	[___ ___]	[_ _ _ . _]	__ __ __ . __	__ __ __ . __	__ __ __ . __
4	[___ ___]	[___ ___]	[_ _ _ . _]	__ __ __ . __	__ __ __ . __	__ __ __ . __
5	[___ ___]	[___ ___]	[_ _ _ . _]	__ __ __ . __	__ __ __ . __	__ __ __ . __
6	[___ ___]	[___ ___]	[_ _ _ . _]	__ __ __ . __	__ __ __ . __	__ __ __ . __
7	[___ ___]	[___ ___]	[_ _ _ . _]	__ __ __ . __	__ __ __ . __	__ __ __ . __
8	[___ ___]	[___ ___]	[_ _ _ . _]	__ __ __ . __	__ __ __ . __	__ __ __ . __
9	[___ ___]	[___ ___]	[_ _ _ . _]	__ __ __ . __	__ __ __ . __	__ __ __ . __
10	[___ ___]	[___ ___]	[_ _ _ . _]	__ __ __ . __	__ __ __ . __	__ __ __ . __
11	[___ ___]	[___ ___]	[_ _ _ . _]	__ __ __ . __	__ __ __ . __	__ __ __ . __
12	[___ ___]	[___ ___]	[_ _ _ . _]	__ __ __ . __	__ __ __ . __	__ __ __ . __
13	[___ ___]	[___ ___]	[_ _ _ . _]	__ __ __ . __	__ __ __ . __	__ __ __ . __
14	[___ ___]	[___ ___]	[_ _ _ . _]	__ __ __ . __	__ __ __ . __	__ __ __ . __
15	[___ ___]	[___ ___]	[_ _ _ . _]	__ __ __ . __	__ __ __ . __	__ __ __ . __
				__ __ __ . __	__ __ __ . __	__ __ __ . __

NOTES:

1. Layer 1 is subgrade soil, the highest numbered layer is the pavement surface.
2. Layer description codes:

Overlay 01	Base Layer 05	Porous Friction Course 09
Seal/Tack Coat w/overlay . . 02	Subbase Layer 06	Surface Treatment 10
Original Surface 03	Subgrade 07	Embankment (Fill) 11
HMAC Layer (Subsurface) . 04	Interlayer 08	

   If milling was performed, the layers which were milled shall be assigned their previous layer number and material type. If the layer was completely removed by milling, it shall still be shown as a layer with a zero thickness.
3. Enter the material type classification codes from Tables A.5, A.6, A.7 and A.8 which best describes the material in each layer. If the layer was milled, enter the material classification code corresponding to the type material which was removed.
4. Enter the average thickness of each layer and the maximum, minimum, and standard deviation of the thickness measurements, if known. If a layer was partially milled, the remaining thickness of the layer shall be indicated.

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October 1990 (Heading revised October 1992)

PREPARER _____ EMPLOYER _____ DATE _____

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 3 PRE-OVERLAY SURFACE PREPARATION SKETCH	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO. [__ __]

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 4 OVERLAY PLACEMENT OPERATIONS	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO. [__ __]

1. DATE SURFACE PREPARATION BEGAN (Month-Day-Year) [__ __ - __ __ - __ __]
2. DATE SURFACE PREPARATION COMPLETED [__ __ - __ __ - __ __]

3. SURFACE PREPARATION PRIOR TO PLACEMENT OF OVERLAY [__]
   None ..... 1 Broomed ..... 2 Broomed + Asphaltic Tack Coat 3
   Asphaltic Tack Coat (only) 4

4. TACK COAT
   Layer Numbers [__ __] [__ __]
   Material Type None ..... 1 SS-1 ..... 2 SS-1H ..... 3 CRS-1 ..... 4 [__ __]
   CRS-2 ..... 5 CMS-2 ..... 6 CMS-2H .. 7 CSS-1 ..... 8 CSS-1H 9
   Other ..... 10 (Specify) _____
5. TACK COAT DILUTION
   (Percent) [__ __]
   Mixing Rate Parts Diluent _____ TO Parts Asphalt _____
6. TACK COAT APPLICATION RATE (Gal/Sq. Yd.) [__ . __ __]

7. ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers
Plant 1	[___]	_____	[___ ___ ___]	[___ ___]	[__] [__] [__]
Plant 2	[___]	_____	[___ ___ ___]	[___ ___]	[__] [__] [__]
Plant 3	[___]	_____	[___ ___ ___]	[___ ___]	[__] [__] [__]

   Plant Type: Batch ..... 1 Drum Mix ..... 2 Other ..... 3 Specify _____

8. MANUFACTURER OF ASPHALT CONCRETE PAVER _____
9. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER _____
10. SINGLE PASS LAYDOWN WIDTH (Feet) [__ __ . __]

11. AC BINDER COURSE
    Layer Number [__ __]
    Nominal First Lift Placement Thickness - Uncompacted (Inches) [__ . __]
    Nominal Second Lift Placement Thickness - Uncompacted (Inches) [__ . __]
12. AC SURFACE COURSE
    Layer Number [__ __]
    Nominal First Lift Placement Thickness - Uncompacted (Inches) [__ . __]
    Nominal Second Lift Placement Thickness - Uncompacted (Inches) [__ . __]
13. SURFACE FRICTION COURSE
    Layer Number [__ __]
    Nominal Placement Thickness - Uncompacted (Inches) [__ . __]
14. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
    Binder Course [__ + __ __]
    Surface Course [__ + __ __]
    Surface Friction Course [__ + __ __]
15. LOCATION OF LONGITUDINAL SURFACE JOINT [__]
    Between lanes ..... 1 Within lane ..... 2 [__ __ . __]
    (specify offset from outside edge of lane, in feet)
16. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.)

_____

_____

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 5 OVERLAY COMPACTION DATA	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO. [__ __]

1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [__ __ - __ __ - __ __]
2. DATE PAVING OPERATIONS COMPLETED [__ __ - __ __ - __ __]

3. LAYER NUMBER [__ __]

4. MIXING TEMPERATURE (°F) [__ __ __ .]
5. LAYDOWN TEMPERATURES (°F)
   Mean . . . . __ __ __ .   Number of Tests . . . . __ __ .
   Minimum . . . . __ __ __ .   Maximum . . . . __ __ __ .
   Standard Deviation . . . . __ __ . __

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	__ __ . __	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$
7	B	Steel-Whl Tandem	__ __ . __	$$$	$$$$	$$$	$$
8	C	Steel-Whl Tandem	__ __ . __	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$
9	D	Steel-Whl Tandem	__ __ . __	$$$	$$$$	$$$	$$
10	E	Pneumatic-Tired	__ __ . __	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$
11	F	Pneumatic-Tired	__ __ . __	$$$	$$$$	$$$	$$
12	G	Pneumatic-Tired	__ __ . __	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$
13	H	Pneumatic-Tired	__ __ . __	$$$	$$$$	$$$	$$
14	I	Single-Drum Vibr.	__ __ . __	__ __ __ __ __ .	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$
15	J	Single-Drum Vibr.	__ __ . __	__ __ __ __ __ .	$$$$	$$$	$$
16	K	Single-Drum Vibr.	__ __ . __	__ __ __ __ __ .	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$
17	L	Single-Drum Vibr.	__ __ . __	__ __ __ __ __ .	$$$$	$$$	$$
18	M	Double-Drum Vibr.	__ __ . __	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$
19	N	Double-Drum Vibr.	__ __ . __	$$$	$$$$	$$$	$$
20	O	Double-Drum Vibr.	__ __ . __	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$$$	$$$$$$$$
21	P	Double-Drum Vibr.	__ __ . __	$$$	$$$$	$$$	$$
				$$$$$$$$$$	__ __ __ __ .	. __ __ __ __	__ __ . __
				$$$	__ __ __ __ .	. __ __ __ __	__ __ . __
				$$$$$$$$$$	__ __ __ __ .	. __ __ __ __	__ __ . __
				$$$	__ __ __ __ .	. __ __ __ __	__ __ . __
				$$$$$$$$$$	__ __ __ __ .	. __ __ __ __	__ __ . __
				$$$	__ __ __ __ .	. __ __ __ __	__ __ . __
				$$$$$$$$$$	__ __ __ __ .	. __ __ __ __	__ __ . __
				$$$	__ __ __ __ .	. __ __ __ __	__ __ . __
				$$$$$$$$$$			
				$$$			
				$$$$$$$$$$			
				$$$			
22	Q	Other	____________________				

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	__	__	__	__
24	Coverages	__ __ .	__ __ .	__ __ .	__ __ .
	INTERMEDIATE				
25	Roller Code (A-Q)	__	__	__	__
26	Coverages	__ __ .	__ __ .	__ __ .	__ __ .

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
27 28	FINAL Roller Code (A-Q) Coverages	__ __ __ .	__ __ __ .	__ __ __ .	__ __ __ .
29 30 31	Air Temperature (°F) Compacted Thickness (In) Curing Period (Days)	__ __ __ . __ . __ __ __ . __	__ __ __ . __ . __ __ __ . __	__ __ __ . __ . __ __ __ . __	__ __ __ . __ . __ __ __ . __

PREPARER_____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 6 CONSTRUCTION QUALITY CONTROL MEASUREMENTS	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. DATE MEASUREMENTS BEGAN (Month-Day-Year) [__ __ - __ __ - __ __]
2. DATE MEASUREMENTS COMPLETED [__ __ - __ __ - __ __]

3. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	Rut Level-Up	Mill Replacement	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C) [1]	___	___	___	___	___
Rod Depth (Inches)	___ ___	___ ___	___ ___	___ ___	___ ___
Number of Measurements	___ ___	___ ___	___ ___	___ ___	___ ___
Average (pcf)	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ __ . __
Maximum (pcf)	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ __ . __
Minimum (pcf)	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ __ . __
Standard Deviation (pcf)	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ __ . __
Layer Number	___ ___	___ ___	___ ___	___ ___	___ ___

[1] Measurement Method Backscatter ..... A Direct Transmission ..... B Air Gap C

4. MANUFACURER OF NUCLEAR DENSITY GAUGE _____

5. NUCLEAR DENS ITY GAUGE MODEL NUMBER _____

6. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER _____

7. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION __ __ __ __ __

8. PROFILOGRAPH MEASUREMENTS
   Profilograph Type California ..... 1 Rainhart ..... 2 ___
   Profile Index (Inches/Mile) ___ ___

Interpretation Method Manual ..... 1 Mechanical ..... 2 Computer ..... 3 ___
Height of Blanking Band (Inches) ___ . ___ ___
Cutoff Height (Inches) ___ . ___ ___

9. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) ___

PREPARER_____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 7 LAYER THICKNESS MEASUREMENTS	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. DATE MEASUREMENTS BEGAN (Month-Day-Year) [__ __ - __ __ - __ __]
2. DATE MEASUREMENTS COMPLETED [__ __ - __ __ - __ __]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET ___ OF ___

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP	MILL REPLACEMENT	BINDER COURSE	SURFACE COURSE	SURFACE FRICTION
__ + __ __	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
__ + __ __	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
__ + __ __	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
__ + __ __	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
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__ + __ __	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
	__ __ __	__ __ . __	__ __ . __	__ __ . __	__ __ . __	__ __ . __
LAYER NUMBER		__ __	__ __	__ __	__ __	__ __

PREPARER_______________________ EMPLOYER ____________________ DATE _______________

SPS-6 CONSTRUCTION DATA SHEET 8 MISCELLANEOUS CONSTRUCTION NOTES AND COMMENTS	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

Provide any miscellaneous comments and notes concerning construction operations which may have an influence on the ultimate performance of the test sections or which may cause undesired performance differences to occur between test sections. Also include any quality control measurements or data for which space is not provided on other forms. Provide an indication of the basis for such measurements, such as an ASTM, AASHTO, or Agency standard test designation.

PREPARER_____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 9 PARTIAL DEPTH PATCHING FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. DATE PATCHING OPERATIONS BEGAN (Month-Day-Year) [__ __ - __ __ - __ __]

2. DATE PATCHING OPERATIONS COMPLETED [__ __ - __ __ - __ __]

3. PRIMARY DISTRESS OCCURRENCE PATCHED (code from Table A.22) [__ __]
   Other (Specify) _____
   _____

4. SECONDARY DISTRESS OCCURRENCE PATCHED (code from Table A.22) [__ __]
   Other (Specify) _____
   _____

5. PATCHES
   Total Square Feet [__ __ __ __ .]
   Number [__ __ .]
   Average Depth, Inches [__ __ . __]

6. METHOD USED FOR PATCH BOUNDARY DETERMINATION ___
   Visual ..... 1 Ball Peen Hammer, Steel Rod, Chain or Equivalent 2
   Delam-Tech ..... 3 Other (Specify) ..... 4 _____

7. METHOD USED TO CUT BOUNDARIES ___
   Diamond Blade Saw ..... 1 Carbide Blade Saw ..... 2 None ..... 3 Air Hammer 4
   Cold Milling ..... 5 Other (Specify) ..... 6 _____

8. METHOD USED TO BREAK UP AND/OR REMOVE DETERIORATED CONCRETE
   Jackhammer ..... 1 Cold Milling. ..2
   Other (Specify) ..... 3 _____

9. METHOD FOR FINAL CLEANING OF PATCH AREA
   None ..... 1 Sandblasting ..... 2 Waterblasting 3
   Other (Specify) ..... 4 _____

.

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 10 PARTIAL DEPTH PATCHING FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. PATCH MATERIAL USED [___]
   Portland Cement Concrete ..... 1 Polymer Concrete ..... 2 Epoxy Mortar 3
   Other (Specify) ..... 5 _____

2. BONDING AGENT [___]
   None ..... 1 Cement Grout ..... 2 Epoxy Resin 3
   Other (Specify) ..... 5 _____

3. MIXTURE DESIGN FOR PATCH MATERIAL, LB./CUBIC YARD
   Coarse Aggregate [__ __ __ __ .]
   Fine Aggregate [__ __ __ __ .]
   Cement [__ __ __ __ .]
   Water (Gallons/Cubic yd.) [__ __ __ __ .]

4. MAXIMUM SIZE OF COARSE AGGREGATE, INCHES __ . __

5. CEMENT TYPE USED [__ __]
   (See Cement Type Codes, Tables A.11)

6. AIR CONTENT, PERCENT BY VOLUME
   Mean [__ . __ . __]
   Range Min [__ . __ . __]
   Max [__ . __ . __]

7. ADMIXTURES [__ __]
   (See Cement Additive Codes, Table A.12) [__ __]

8. SLUMP, INCHES
   Mean [__ . __ .]
   Range Min [__ . __ .]
   Max [__ . __ .]

9. COMPRESSIVE STRENGTH OF PATCH MATERIAL, PSI [__ __ __ __ .]
   Curing Time, Days [__ __]
   If Unavailable, and Other Strength Test Conducted,
   Alternate Test [_____]
   Type of Loading [_____]
   Age, Days [__ __]; Strength, PSI [__ __ __ __ .]

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 11 PARTIAL DEPTH PATCHING FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. CURING METHOD — METHOD 1 [__ __] / METHOD 2 [__ __]

   None ..... 1 Membrane Curing Compound ..... 2 Burlap Curing Blankets 3
   Waterproof Paper Blankets ..... 4 White Polyethylene Sheeting 5
   Burlap-Polyethylene Blankets ..... 6 Insulating Layers 7
   Cotton Mat Curing ..... 8 Hay 9
   Other (Specify) ..... 10 _____

2. APPROXIMATE TIME BETWEEN PATCHING AND OPENING TO TRAFFIC. HOURS [__ __]

3. AMBIENT CONDITIONS AT TIME OF PATCHING — LOW [__ __ __ .] / HIGH [__ __ __ .]
   Air Temperature °F
   Surface Moisture - Dry = 1, Wet = 2 [__]

4. METHOD OF CONSOLIDATING MATERIALS ___
   Vibrators ..... 1 Vibrating Screeds ..... 2 Troweling 3
   Rodding/Tamping ..... 4 Rolling 5
   Other (Specify) ..... 6 _____

5. FINISHING METHOD ___
   Screeding .....1 Hand-Troweling ..... 2 Machine-Troweling 3
   Other (Specify) ..... 4 _____

6. JOINT FORMING METHOD
   Shoulder ___
   Transverse ___
   Longitudinal ___

   None .....1 Polyethylene Strip Insert ..... 2 Styrofoam Insert 3
   Fiberboard Insert ..... 4 Sawing ..... 5 Forms 6
   Other (Specify) ..... 7 _____

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 12 JOINT RESEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. DATE JOINT SEALANT OPERATIONS BEGAN (Month-Day-Year) [__ __ - __ __ - __ __]

2. DATE JOINT SEALANT OPERATIONS COMPLETED [__ __ - __ __ - __ __]

3. METHOD OF REMOVING OLD SEALANT [___]
   Not Removed ..... 1 Joint Plow - V-Shaped ..... 2 Joint Plow - Rectangular 3
   High Pressure Water Blasting ..... 4 Diamond Blade Saw 5
   Carbide Blade Saw ..... 6 Pull-Out of Old Compression Sealant 7
   Not Previously Sealed 8
   Other (Specify) ..... 9 _____

4. NEW SEALANT RESERVOIR DIMENSIONS, INCHES
   Width [__ . __]
   Depth (From Top of Slab to Top of Backer Rod or Tape) [__ __ . __]

5. BOND BREAKER UNDER SEALANT [___]
   None ..... 1 Nonreactive Adhesive Backed Tape ..... 2 Backer Rod 3
   Other (Specify) ..... 4 _____

6. WERE JOINT SIDEWALLS REFACED? ___
   No ..... 1 Yes -One-Blade ..... 2 Yes -Two-Blade 3
   Other (Specify) ..... 4 _____

7. CLEANING OF SIDEWALLS [___]
   None ..... 1 Air Blast ..... 2 Sand Blast ..... 3 Water Blast 4
   Other (Specify) ..... 4 _____

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 13 JOINT RESEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. TYPE OF CONTRACTION JOINT SEALANT [___]
(AASHTO OR ASTM SPECIFICATIONS)

D1850 (ASTM) Concrete Joint Sealer. Cold-Application Type 1
Dl190 (ASTM) -M173 (AASHTO) Concrete Joint Sealer. Hot-Poured Elastic Type 2
D3406 (ASTM) -M282 (AASHTO) Joint Sealants. Hot-Poured. Elastomeric-Type for PCC Pavements 3
D3405 (ASTM) -M301 (AASHTO) Joint Sealants. Hot-Poured for Concrete and Asphalt Pavements 4
D3542 (ASTM) Preformed Polychloroprene Elastomeric Joint Seals for Bridges 5
D2628 (ASTM) Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements 6
Other (Describe -if Silicone Material is Used Federal Spec. TT-S-001543A,
Georgia D.O.T. Spec 833.06, or Equal Applies 7

_____

_____

Manufacturer Information on Type of Pressure Relief Joint Sealant
Manufacturer Name [_____]
Manufacturer Sealant Name [_____]

2. AVERAGE DEPTH OF TOP OF SEALANT PLACEMENT
BELOW PAVEMENT SURFACE. INCHES [__ . __]

3. ARE EXPANSION JOINTS SEALED DIFFERENTLY THAN CONTRACTION JOINTS? [___]
Yes ..... 1 No 2
If Yes. Enter the code from Item 1, or describe below [___]
Other [_____

_____]

4. TOTAL LINEAR FEET OF JOINTS SEALED
Transverse Joints [__ __ __ __ . __]
Longitudinal Joints [__ __ __ __ . __]
NOTE: IF DIFFERENT MATERIALS OR METHODS ARE USED REPEAT SHEETS 15 AND 16 FOR EACH RECORDING THEIR LENGTHS IN ITEM NO.4.

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 14 CRACK SEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. DATE CRACK SEALING OPERATIONS BEGAN (Month-Day- Year) [__ __ - __ __ - __ __]

2. DATE CRACK SEALING OPERATIONS COMPLETED [__ __ - __ __ - __ __]

3. NEW SEALANT RESERVOIR DIMENSIONS, INCHES, If Used
   Width
   Depth (From Top of Slab to Top of Backer Rod or Tape) [__ __ . __]

4. BOND BREAKER UNDER SEALANT, If Used [__]
   None ..... 1 Nonreactive Adhesive Backed Tape ..... 2 Backer Rod 3
   Other (Specify) ..... 4 _____

5. CLEANING OF CRACKS ___
   None ..... 1 Routing ..... 2 Air Blast ..... 3 Steel Wire Brush 4
   Brooming ..... 5 Other (Specify) ..... 4 _____

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 15 CRACK SEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. TYPE OF SEALANT [___]
   (AASHTO OR ASTM SPECIFICATIONS)
   D1850 (ASTM) Concrete Joint Sealer, Cold-Application Type 1
   Dl190 (ASTM) -M173 (AASHTO) Concrete Joint Sealer, Hot-Poured Elastic Type 2
   D3406 (ASTM) -M282 (AASHTO) Joint Sealants, Hot-Poured, Elastomeric-Type, for PCC Pavements 3
   D3405 (ASTM) -M30l (AASHTO) Joint Sealants, Hot-Poured for Concrete and Asphalt Pavements 4
   D3542 (ASTM) Preformed Polychloroprene Elastomeric Joint Seals for Bridges 5
   D2628 (ASTM) Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements 6
   Other (Describe -if Silicone Material is Used Federal Spec. TT-S-001543A,
   Georgia D.O.T. Spec 833.06, or Equal Applies 7
   _____
   _____

   Manufacturer Information on Type of Pressure Relief Crack Sealant
   Manufacturer Name [_____]
   Manufacturer Sealant Name [_____]

2. AVERAGE DEPTH OF TOP OF SEALANT PLACEMENT
   Below Pavement Surface, Inches [__ . __]

3. TOTAL LINEAR FEET OF CRACKS SEALED [__ __ __ __ . __]

   NOTE: IF DIFFERENT MATERIALS OR METHODS ARE USED REPEAT SHEETS 17 AND 18 FOR EACH RECORDING THEIR LENGTHS IN ITEM NO.3.

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 16 DIAMOND GRINDING FOR PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. DATE DIAMOND GRINDING OPERATIONS BEGAN (Month-Day-Year) [__ __ - __ __ - __ __]

2. DATE DIAMOND GRINDING OPERATIONS COMPLETED [__ __ - __ __ - __ __]

3. REASON FOR GRINDING [___]
   Elimination of Faulting ..... 1 Elimination of Slab Warping 2
   Improve Skid Resistance 3
   Restoration of Transverse Drainage Slope 4
   Other (Specify) ..... 5 _____

4. AVERAGE DEPTH OF CUT, INCHES [__ . __ __]

5. CUTTING HEAD WIDTH, INCHES __ __ __ . __ __

6. AVERAGE GROOVE WIDTH, INCHES __ . __

7. AVERAGE SPACING BETWEEN BLADES, INCHES . __

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 17 FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. DATE PATCHING OPERATIONS BEGAN (Month-Day-Year) [__ __ - __ __ - __ __]

2. DATE PATCHING OPERATIONS COMPLETED [__ __ - __ __ - __ __]

3. PRIMARY DISTRESS OCCURRENCE PATCHED OR REPLACED WITH NEW SLAB [__ __]
   (See Table A.22 for Type Codes)
   Other (Specify) _____

4. SECONDARY DISTRESS OCCURRENCE PATCHED OR REPLACED WITH NEW SLAB __ __
   (See Table A.22 for Type Codes)
   Other (Specify) _____

5. PATCHES

	NUMBER	SQ. FEET
SLAB ONLY	[__ __]	[__ __ __ __]
SLAB AND BASE	[__ __]	[__ __ __ __]

6. PATCH MATERIAL USED [___]
   Portland Cement Concrete ..... 1 Polymer Concrete ..... 2 Epoxy Mortar 4
   Other (Specify) ..... 5 _____

7. SLABS REPLACED

	NUMBER	SQ. FEET
SLAB ONLY	[__ __]	[__ __ __ __]
SLAB AND BASE	[__ __]	[__ __ __ __]

8. METHOD FOR PATCH BOUNDARY DETERMINATION ___
   Visual ..... 1 Coring ..... 2 Deflection 3
   State Standard or Specification 4
   Other (Specify) ..... 5 _____

9. CUTTING INSTRUMENT ___
   Diamond Blade Saw ..... 1 Carbide Blade Saw ..... 2 Wheel Saw 3
   Air Hammer 4
   Other (Specify) ..... 5 _____

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 18 FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. SECURING LOAD TRANSFER DEVICES [___]
   None ..... 1 Grout Filler ..... 2 Epoxy filler 3
   Other ..... 4 _____

2. REINFORCING STEEL PLACED IN PATCH [___]
   No ..... 1 Yes 2

	TEMPERATURE STEEL Transverse	 Longitudinal
3. REBAR NUMBER	[__ __]	[__ __]
4. BAR LENGTHS, INCHES	[__ __ . __]	[__ __ . __]
5. BAR SPACING, INCHES	[__ __ . __]	[__ __ . __]

	Dowel Bars	Tie Bars
6. REBAR NUMBER	[__ __]	[__ __]
7. BAR LENGTHS, INCHES	[__ __ . __]	[__ __ . __]
8. BAR SPACING, INCHES	[__ __ . __]	[__ __ . __]

9. DOWEL COATINGS [___]
   None ..... 1 Paint and/or Grease ..... 2 Plastic 3
   Monel ..... 4 Stainless Steel ..... 5 Epoxy 6
   Other (Specify) ..... 7 _____

10. NUMBER OF SAW CUTS PER PATCH (If Sawed) __ __

11. DEPTH OF TYPICAL BOUNDARY SAW CUT, INCHES __ __ . __

12. CONCRETE BREAKUP ___
    None ..... 1 Pneumatic Air Hammer ..... 2 Gravity Drop Hammer 3
    Sawing 4
    Other (Specify) ..... 5 _____

13. REMOVAL OF CONCRETE ___
    Concrete Breakup and C1eanout ..... 1 Lift Out Intact Slab Section 2
    Other (Specify) ..... 3 _____

.

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 19 FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. METHOD OF REINFORCING STEEL PLACEMENT [___]
   Chairs ..... 1 Between Layers of Concrete 2

2. MIXTURE DESIGN FOR PATCH MATERIAL, LB./CUBIC YARD
   Coarse Aggregate [__ __ __ __ .]
   Fine Aggregate [__ __ __ __ .]
   Cement [__ __ __ __ .]
   Water (Gallons/Cubic Yard) [__ __ __ __ .]

3. CEMENT TYPE USED [__ __]
   (See Type Codes, Tables A.11)

4. AIR CONTENT, PERCENT BY VOLUME
   Mean [__ __ . __]
   Range [__ __ . __] to [__ __ . __]

5. ADMIXTURES [__ __]
   (See Cement Additive Codes, Table A.12) [__ __]

6. SLUMP, INCHES
   Mean [__ __ .]
   Range [__ __ .] to [__ __ .]

7. FLEXURAL STRENGTH (MODULUS OF RUPTURE), PSI [__ __ __ __ .]
   (Based on 3rd Point Loading) Curing Time, Days [__ __]
   If Unavailable, and Other Strength Test Conducted,
   Enter Alternate Test [_____]
   Type of Loading [_____]
   Age, Days [__ __]; Strength, PSI [__ __ __ __ .]

8. AMBIENT CONDITIONS AT TIME OF PATCHING LOW [__ __ __ .]
   Air Temperature °F HIGH [__ __ __ .]
   Surface Moisture - Dry = 1, Wet = 2 [__]

9. MAXIMUM SIZE OF COARSE AGGREGATE, INCHES __ . __

10. CONSOLIDATION OF MATERIALS ___
    Internal Vibrators ..... 1 Vibrating Screeds ..... 2 Troweling 3
    Rolling ..... 4 Tamping 5
    Other (Specify) ..... 6 _____

12. FINISHING ___
    Screeding ..... 1 Hand-Troweling ..... 2 Machine-Troweling 3
    Other (Specify) ..... 4 _____

.

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 20 FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. JOINT FORMING METHOD SHOULDER [___] TRANSVERSE [___] LONGITUDINAL [___]
   None ..... 1 Polyethylene Strip Insert ..... 2 Styrofoam Insert. ..3
   Fiberboard Insert ..... 4 Sawing ..... 5 Forms 6
   Other (Specify) ..... 7 _____

2. WAS BOND BREAKER USED BETWEEN ADJACENT LANES? [___]
   Yes ..... 1 No 2

3. CURING METHOD METHOD 1 [__ __]
   METHOD 2 [__ __]
   None ..... 1 Membrane Curing Compound ..... 2 Burlap Curing Blankets 3
   Waterproof Paper Blankets ..... 4 White Polyethylene Sheeting 6
   Burlap-Polyethylene Blankets ..... 6 Insulating Layers 7
   Cotton Mat Curing ..... 8 Hay 9
   Other (Specify) ..... 10 _____

4. APPROXIMATE TYPICAL TIME BETWEEN PATCHING AND OPENING TO TRAFFIC, HOURS [__ __ .]

5. TYPE OF TRANSVERSE JOINTS IN PATCHES ____ OR SLABS ____
   None ..... 1 All Expansion Joints ..... 2 All Contraction Joints 3
   Mixture of Expansion and Contraction Joints 4

6. WERE OLD JOINTS MATCHED? ____
   Yes ..... 1 No 2

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 21 LOAD TRANSFER RESTORATION DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. DATE LOAD TRANSFER RESTORATION BEGAN (Month-Day-Year) [__ __ - __ __ - __ __]

2. DATE LOAD TRANSFER RESTORATION COMPLETED [__ __ - __ __ - __ __]

3. NUMBER OF JOINTS IN TEST SECTION [__ __ __]

4. NUMBER OF JOINT LOAD TRANSFER RESTORATION LOCATIONS [__ __ __]

5. NUMBER OF DEVICES PER JOINT [__ __ __]

6. LOCATION OF DOWELS OR SHEAR DEVICES (INCHES)

(DISTANCE FROM THE OUTER LANE EDGE TO THE CENTER OF EACH DEVICE)

1st [__ __ __ .]
2nd [__ __ __ .]
3rd [__ __ __ .]
4th [__ __ __ .]
5th [__ __ __ .]
6th [__ __ __ .]
7th [__ __ __ .]
8th [__ __ __ .]
9th [__ __ __ .]
10th [__ __ __ .]
11th [__ __ __ .]
12th [__ __ __ .]
13th [__ __ __ .]
14th [__ __ __ .]

7. DIAMETER OF RETROFIT DOWEL BARS, INCHES [__ . __ __]

8. MATERIAL USED TO BACKFILL SLOT/CORE HOLE [___]
   Cement Based Grout ..... 1 Polymer Concrete 2
   Epoxy Resin Grout 3
   Other (Specify) ..... 4 _____

9. BONDING AGENT USED BETWEEN EXISTING PCC AND BACKFILL MATERIAL [___]
   None ..... 1 Epoxy ..... 2 Cement/Water 3
   Other (Specify) ..... 4 _____

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 22 LOAD TRANSFER RESTORATION DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. LOAD TRANSFER EFFICIENCY BEFORE AND AFTER RESTORATION

POINT DISTANCE (FEET)	LOAD TRANSFER EFFICIENCY (%) BEFORE RESTORATION APPROACH	LEAVE	AFTER RESTORATION APPROACH	LEAVE
[__ __ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]
[__ __ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]
[__ __ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]
[__ __ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]
[__ __ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]
[__ __ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]
[__ __ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]
[__ __ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]
[__ __ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]
[__ __ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]	[__ __ __ .]

2. DATE OF LOAD TRANSFER EFFICIENCY TESTS

BEFORE RESTORATION (Month-Day-Year) [__ __ - __ __ - __ __]

AFTER RESTORATION [__ __ - __ __ - __ __]

PREPARER ________________________ EMPLOYER ________________________ DATE ______________

SPS-6 CONSTRUCTION DATA SHEET 23 UNDERSEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. DATE UNDERSEALING BEGAN (Month-Day-Year) [__ __ - __ __ - __ __]

2. DATE UNDERSEALING COMPLETED [__ __ - __ __ - __ __]

3. TYPE OF MIXTURE USED IN SUBSEALING [___]
   Cement-Loam Top Soil Slurry ..... 1 Cement-Limestone Dust Slurry 2
   Cement-Pozzolan Slurry ..... 3 Cement-Fine Sand Slurry 4
   Other (Specify) ..... 6 _____

   MIX DESIGN OF PORTLAND CEMENT GROUT (Items 4. to 8.)

4. CEMENT TYPE (SEE CEMENT TYPE CODES, TABLE A.11) [__ __]
5. CEMENT TO SAND RATIO (BY WEIGHT) [__ . __]
6. WATER/CEMENT RATIO (BY WEIGHT) [__ . __ __]
7. ADDITIVE TYPE (SEE TABLE A.12) [__ __]
8. AMOUNT OF ADDITIVE (BY PERCENT OF CEMENT WEIGHT) [__ __ __ .]

9. FLUIDITY OF PORTLAND CEMENT GROUT [__ __ . __]
   (Flow Cone Method ASTM C939) (SEC)

10. CUBE COMPRESSIVE STRENGTH OF PORTLAND CEMENT GROUT, psi __ __ __ .

11. CURING PERIOD FOR PORTLAND CEMENT GROUT (DAYS) __ __

12. DETERMINATION OF AREA TO BE UNDERSEALED [___]
    Blanket Coverage ..... 1 Deflection Data 2
    Visual Signs of Pumping 3
    Other (Specify) ..... 4 _____

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 24 UNDERSEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. DEPTH OF UNDERSEALING HOLE FROM TOP OF SLAB (INCHES) [__ __ . __]

2. MAXIMUM ALLOWABLE PUMPING PRESSURE [__ __ __ .]
(Gauge at Plant) (PSI)

3. MAXIMUM SURGE PRESSURE (PSI) [__ __ __ .]

4. SLABS IN TEST SECTION (JOINTED CONCRETE PAVEMENTS ONLY)
Total Number [__ __ __ .] Number Undersealed [__ __ __ .]

5. AVERAGE NUMBER OF HOLES PER SLAB UNDERSEALED [__ __ .]
(JCP Only)

6. TYPICAL NUMBER OF UNDERSEALING HOLES NEAR JOINT OR CRACK [__ __ .]
(JCP Only)

7. AVERAGE VOLUME OF MATERIAL PUMPED PER HOLE [__ __ . __]
(Cubic Feet)

8. MONITORING OF LIFT [___]
Deflection Device (e.g., Benkelman Beam) ..... 1 Maximum Pumping Time 2
Appearance of Material in Adjacent Joints or Cracks 3
Other (Specify) ..... 4 _____

9. TYPICAL TIME BETWEEN UNDERSEALING AND REOPENING TO TRAFFIC (HOURS) [__ __ .]

11. WERE DEFLECTION MEASUREMENTS TAKEN BEFORE AND AFTER UNDERSEALING?
Yes ..... 1 No ..... 2 BEFORE UNDERSEALING [___]
AFTER UNDERSEALING [___]

12. TIME OF DAY WHEN DEFLECTION MEASUREMENTS WERE CONDUCTED (HOURS)

	STARTING TIME	ENDING TIME
BEFORE UNDERSEALING	[__ __ __ __]	[__ __ __ __]
AFTER UNDERSEALING	[__ __ __ __]	[__ __ __ __]

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 25 SUBDRAINAGE RETROFIT FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. DATE SUBDRAINAGE PLACEMENT BEGAN (Month-Day-Year) [__ __ - __ __ - __ __]

2. DATE SUBDRAINAGE PLACEMENT COMPLETED [__ __ - __ __ - __ __]

3. TYPE OF DRAINAGE PIPE [___]
   Clay Tile ..... 1 Concrete Tile ..... 2 Vitrified Clay 3
   Perforated Plastic Bituminous Fiber ..... 4 Perforated Corrugated Metal 5
   Corrugated Plastic Tubing ..... 6 Drainage Mat 7
   Other (Specify) ..... 8 _____

4. DIAMETER OF PIPE (INCHES) [__ __ . __]

5. DEPTH OF PIPE BELOW TOP OF PAVEMENT SURFACE (INCHES) [__ __ . __]

6. HORIZONTAL PLACEMENT OF PIPE FROM OUTER EDGE OF PAVEMENT (INCHES) [__ __ . __]

7. TYPE OF PRIMARY FILTER USED [___]
   Graded Aggregate ..... 1 Uniformly Graded Aggregate (One Size) 2
   Woven Fabric ..... 3 Non-Woven Fabric ..... 4 Porous PCC 5
   Porous Bituminous Concrete 6
   Other (Specify) ..... 7 _____

8. MAXIMUM PARTICLE SIZE OF PRIMARY FILTER MATERIAL (INCHES) [__ . __]

9. GRADATION OF PRIMARY FILTER MATERIAL
   % Passing #4 Sieve [__ __ . __] % Passing #40 Sieve [__ __ . __]
   % Passing #10 Sieve [__ __ . __] % Passing #100 Sieve [__ __ . __]

10. PERMEABILITY OF PRIMARY FILTER MATERIAL (FT/DAY) __ __ . __ __

11. TYPE AND LOCATION OF SECONDARY FILTER MATERIAL [___]
    Fabric Encapsulating the Primary Filter Material 1
    Fabric Encapsulating the Drainage Pipe 2
    Other (Specify) ..... 3 _____

12. AVERAGE OUTLET INTERVAL (FEET) [__ __ . __]

13. PRIMARY PURPOSE OF SUBDRAINAGE INSTALLATION [___]
    Remove Free Water From Pavement Layers 1
    Cut Off Side-Hill/Through Hill Seepage 2
    Lower Water Table 3
    Other (Specify) ..... 4 _____

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 26 CRACK/BREAK AND SEAT DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. DATE CRACK/BREAK AND SEAT OPERATION BEGAN (Month-Day-Year) [__ __ - __ __ - __ __]

2. DATE CRACK/BREAK AND SEAT OPERATION COMPLETED [__ __ - __ __ - __ __]

3. AVERAGE PCC BREAKAGE SIZE (INCHES)
   Width [__ __ .]
   Length [__ __ .]

4. PAVEMENT BREAKER PASSES/LANE [__ .]

5. PAVEMENT BREAKER TYPE [__]
   Pile Driver Hammer ..... 2 Guillotine Drop Hammer 4
   Other (Specify) ..... 7 _____

6. SEATING ROLLER WEIGHT (TONS) [__ __ .]

7. NUMBER OF SEATING ROLLER PASSES/LANE [__ .]

8. DEFLECTION MEASUREMENTS TAKEN
   Yes ..... 1 No 2
   Before Breaking [__]
   After Breaking (Prior to Seating) [__]
   After Seating (Prior to Overlay) [__]
   After Overlay [__]

9. BROKEN PAVEMENT SURFACE PREPARATION [__]
   None ..... 1 Sweeping ..... 2 Tack Coat ..... 3 Leveling Course 4
   Full Depth Repair of Failed Areas 5
   Other (Specify) ..... 6 _____

PREPARER _____ EMPLOYER _____ DATE _____

SPS-6 CONSTRUCTION DATA SHEET 27 SAW AND SEAL DATA FOR PORTLAND CEMENT CONCRETE SURFACES WITH ASPHALT CONCRETE OVERLAYS	* STATE CODE [__ __] * SPS PROJECT CODE [__ __] * TEST SECTION NO [__ __]

1. DATE SAW AND SEAL OPERATION BEGAN (Month-Day- Year) [__ __ - __ __ - __ __]

2. DATE SAW AND SEAL OPERATION COMPLETED [__ __ - __ __ - __ __]

3. NUMBER OF JOINTS SAWED [__ __ __ .]

4. NUMBER OF DAYS AFTER PLACEMENT OF OVERLAY BEFORE SAWING AND SEALING OPERATION BEGAN [__ __ .]

5. AVERAGE EXTENT OF SAW CUT INTO SHOULDER, INCHES [__ __ . __]

6. AVERAGE DEPTH OF SAW CUT, INCHES [__ . __ __]

7. AVERAGE WIDTH OF SAW CUT, INCHES [__ . __ __]

8. AVERAGE SHAPE FACTOR OF JOINT [__ . __ __]

PREPARER _____ EMPLOYER _____ DATE _____