Technical Report Documentation Page

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15. Supplementary Notes

Study conducted in cooperation with the U.S. Department of Transportation, Federal Highway Administration. Research study title: "Continued Monitoring of Pavement Test Sections"

16. Abstract

Project 187.9 involved the continued monitoring of pavement test sections. The objective of this project has been to monitor seal coat test sections which were set up in Project 1222. Monitoring of each site included a visual survey, photographic records, texture readings, frictional, readings, and maintenance of the data base. The texture values and frictional values are included in this report. The visual survey and photographic records of each site are in a separate report. This data update is the last deliverable for this project. Any sections which are still open will continue to be monitored as a part of TxDOT's in-house project 7-3994.

17. Key Words	18. Distribution Statement
Seal coats, texture values, frictional values	No restrictions. This document is available to the public through the National Technical Information Service, Springfield, Virginia 22161.

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1997 Final Status Report of Project 187.9

Continued Monitoring of Pavement Test Sections

Introduction

Project 187.9 is the Continued Monitoring of Pavement Test Sections. The objective of this project has been to monitor seal coat test sections which were set-up in Project 1222. Monitoring of each site included a visual survey, photographic records, texture readings, frictional readings and maintenance of the data base. The texture values and frictional values are included in this report and the data base is on the attached disk . The visual survey and photographic records of each site are in a separate binder. This data update is the last deliverable for this expiring project. Any sections which are still open will continue to be monitored as a part of Texas Department of Transportation Materials and Tests Division's in-house research, Project 7-3994.

Status Report of Project 187.9 as of October 1997

Test Sections

Total number of test sections = 39

Number of remaining test sections = 13

Number of closed test sections = 26

Table 2: Status of Test Sections (187.9): HMAC, Seal Coat, and Micro Surfaces

Surface	HMAC	Seal Coat	Micro	Total
Number of Open Sections	9	4	0	13
Number of Closed Sections	12	9	5	26

All test sections are closed in Abilene

Table 3: Remaining Test Sections (187.9)

District	Test Section	Last Skid Number Testing	Last Visual Condition Survey
Austin (14)	AUS-2	June 12, 1997	July 17, 1997
Corpus Christi (16)	C-3	October 1, 1997	July 15, 1997
Lubbock (5)	L-5	October 17, 1996	October 17, 1996
	L-6	October 16, 1996	October 16, 1996
Odessa (6)	OD-1	September 9, 1997	May 21, 1997
San Angelo (7)	SA-1	September 9, 1997	May 19, 1997
	SA-16	September 9, 1997	May 19, 1997
	SA-30	January 29, 1997	May 19, 1997
Waco (9)	W-1	October 4, 1997	June 24, 1997
	W-2	October 4, 1997	June 24, 1997
	W-3	October 4, 1997	June 24, 1997
	W-4	October 4, 1997	June 24, 1997
	W-6	October 4, 1997	June 24, 1997

Key to Test Abbreviations

AGTY..... Aggregate Type

SPGR..... Specific Gravity

ABSP..... Absorption

DCL..... Decantation Test Loss

PV..... Accelerated Polish Value Test

INRD..... Insoluble Residue Test (Carbonate Aggregates)

MSS..... Magnesium Sulfate Soundness Test

FRTH..... Coarse Aggregate Freeze-Thaw Test

LA..... Los Angeles Abrasion Test Loss

ADI..... Aggregate Durability Test Index

TDT..... Texas Degradation Test

187.9
(old 1222)

Producer: Prace Construction **SECTION STATUS:** CLOSED

Pit: Clements

SECTION: A1

DISTRICT: Abilene

AGTY: LS

SPGR:

ABSP:

DCL:

PV: 39.0

INRD:

MSS: 16.3

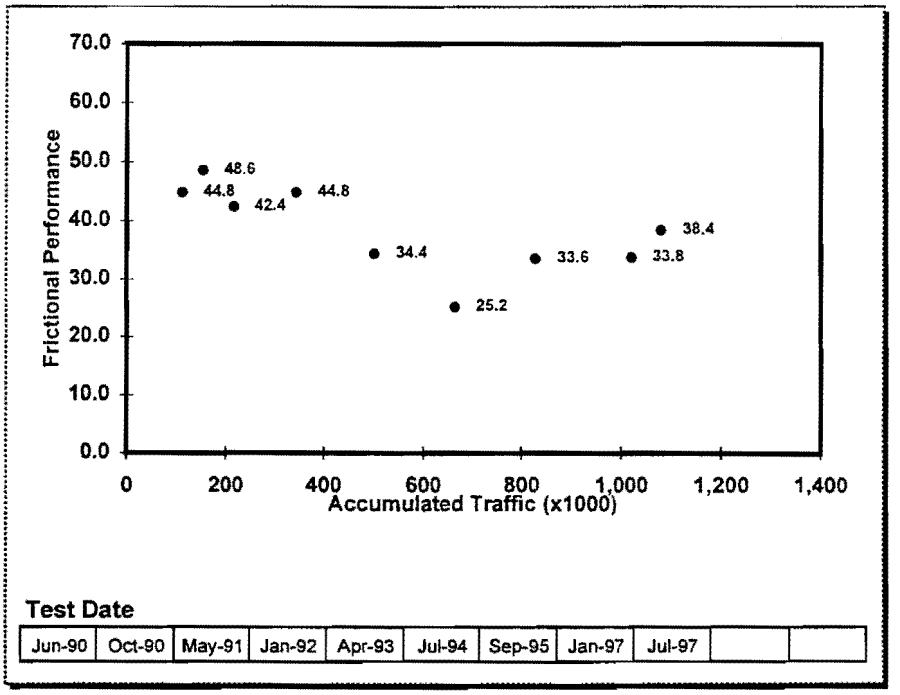
FRTH:

LA: 27.0

ADI:

TDT: 7.6

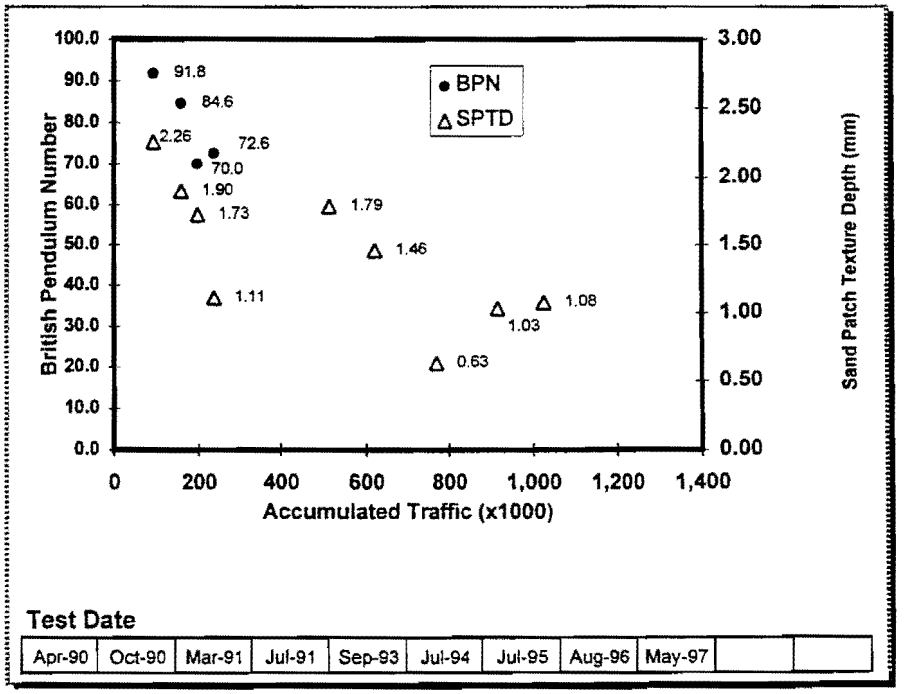
FN:



Test Date

Jun-90	Oct-90	May-91	Jan-92	Apr-93	Jul-94	Sep-95	Jan-97	Jul-97		

BP and SPTD:



Test Date

Apr-90	Oct-90	Mar-91	Jul-91	Sep-93	Jul-94	Jul-95	Aug-96	May-97		

Date of Const: 6/14/89

Date Covered:

Reason Covered: District has not yet returned survey.

Producer: Prace Construction **SECTION STATUS:** CLOSED

Pit: Tubb

SECTION: A2

DISTRICT: Abilene

AGTY: LS

SPGR: 2.5

ABSP: 5.5

DCL:

PV: 42.0

INRD:

MSS: 30.8

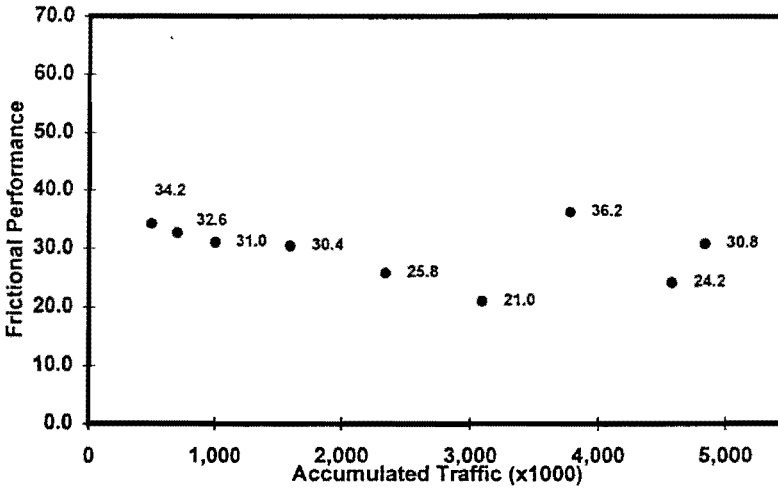
FRTH:

LA: 39.0

ADI:

TDT: 11.9

FN:



Test Date

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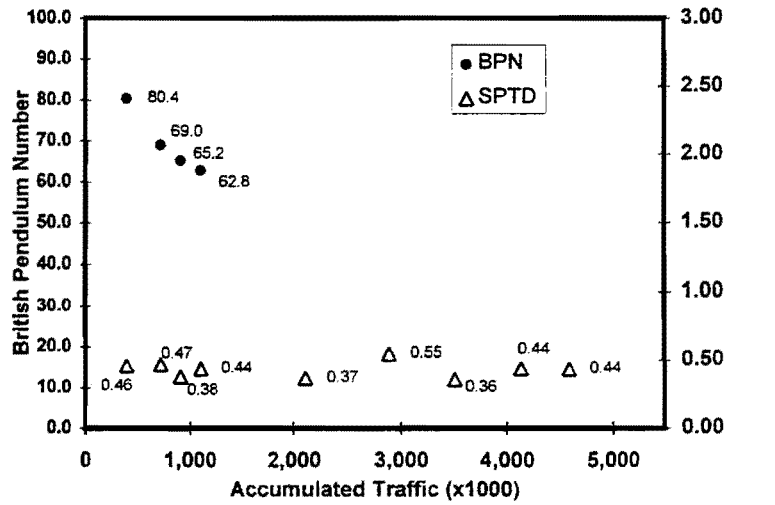


Test Date

Apr-90	Oct-90	Mar-91	Jul-91	Mar-93	Jul-94	Jul-95	Aug-96	May-97		

Date of Const: 7/5/89

Date Covered:

Reason Covered: District has not yet returned survey.

Producer: Strain & Sons **SECTION STATUS:** CLOSED

Pit: Hutcheson

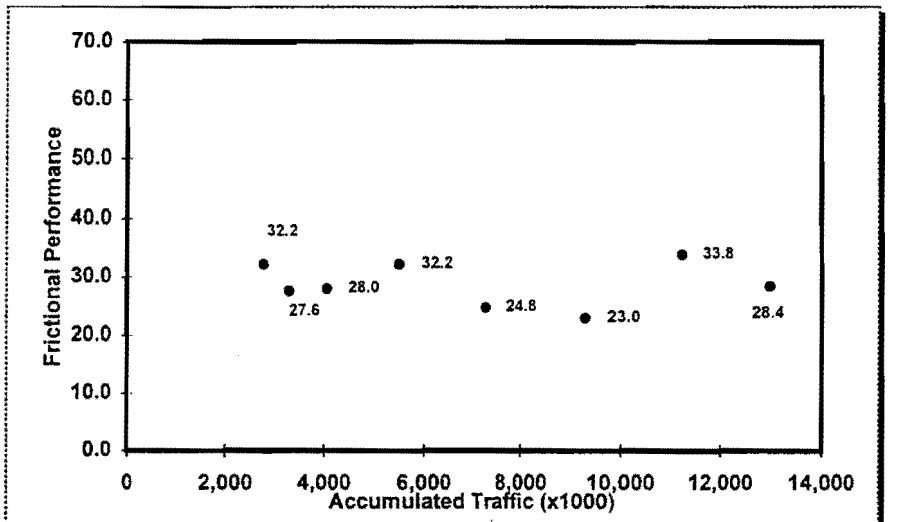
SECTION: A4

DISTRICT: Abilene

AGTY: LS

SPGR:	2.4
ABSP:	1.8
DCL:	
PV:	33.0
INRD:	
MSS:	18.1
FRTH:	
LA:	29.0
ADI:	
TDT:	8.1

FN:



Test Date

Jun-90	Oct-90	Apr-91	Jan-92	Apr-93	Jul-94	Sep-95	Oct-96			

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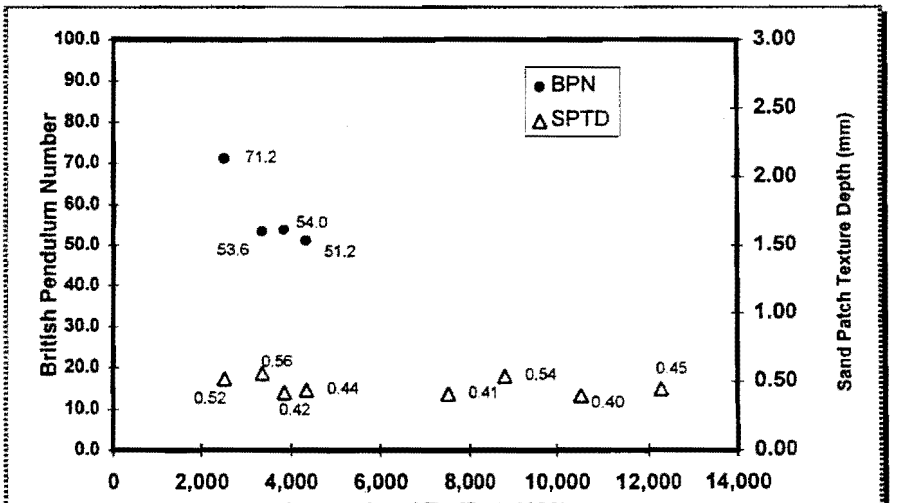


Test Date

Apr-90	Oct-90	Mar-91	Jul-91	Sep-93	Jul-94	Jul-95	Jul-95	Aug-96		

Date of Const: 6/10/88

Date Covered:

Reason Covered: District has not yet returned survey.

Producer: Strain & Sons **SECTION STATUS:** CLOSED

Pit: Hutcheson

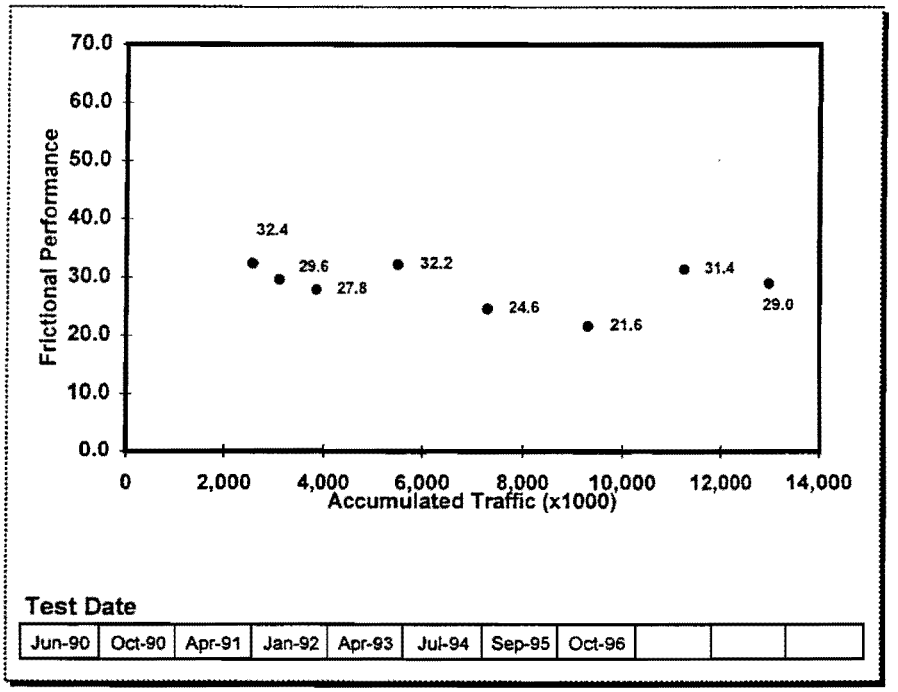
SECTION: A5

DISTRICT: Abilene

AGTY: LS

SPGR:	2.4
ABSP:	1.8
DCL:	
PV:	33.0
INRD:	
MSS:	18.1
FRTH:	
LA:	29.0
ADI:	
TDT:	8.1

FN:



Test Date

Jun-90	Oct-90	Apr-91	Jan-92	Apr-93	Jul-94	Sep-95	Oct-96			

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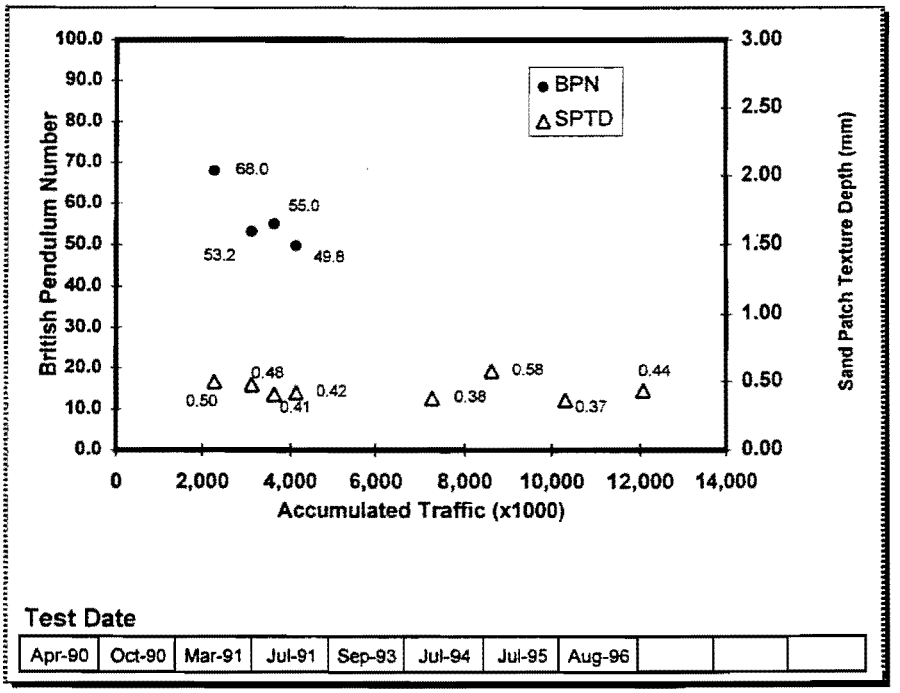


Test Date

Apr-90	Oct-90	Mar-91	Jul-91	Sep-93	Jul-94	Jul-95	Aug-96			

Date of Const: 8/9/88

Date Covered:

Reason Covered: District has not yet returned survey.

Producer: Delta Capital Aggregate **SECTION STATUS:** CLOSED

Pit: Wood

SECTION: AUS1

DISTRICT: Austin

AGTY: LS

SPGR:

ABSP:

DCL:

PV: 29.0

INRD:

MSS: 2.9

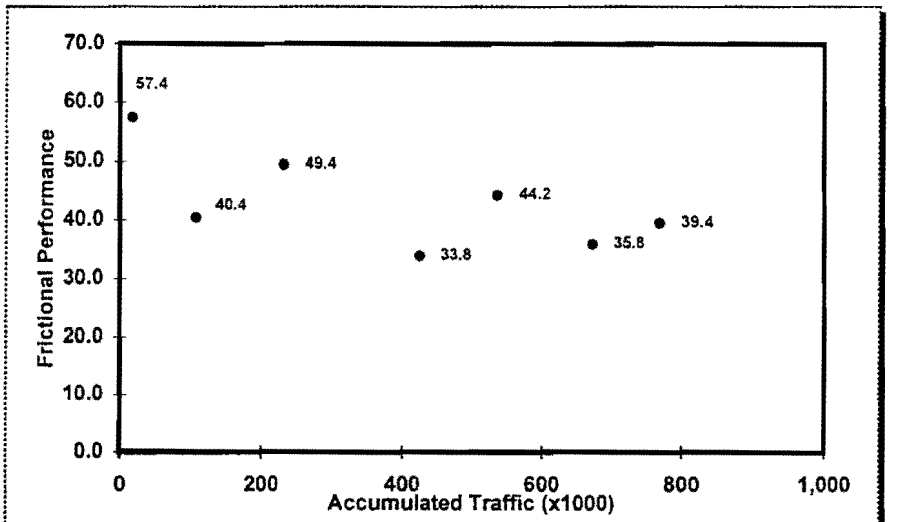
FRTH:

LA: 25.0

ADI:

TDT: 4.7

FN:



Test Date

Sep-90	Jul-91	Feb-92	Sep-93	Aug-94	Oct-95	Jul-96				

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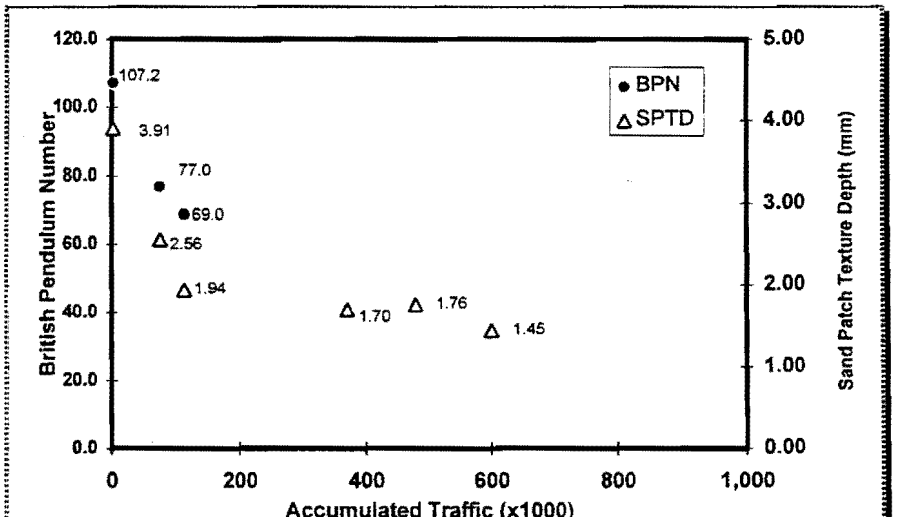


Test Date

Aug-90	Mar-91	Jul-91	Aug-93	Jul-94	Jul-95					

Date of Const: 8/1/90

Date Covered: Sep-96

Reason Covered: Maintenance Contract

Producer: Texas Crushed Stone **SECTION STATUS:** OPEN

Pit: Georgetown

SECTION: AUS2

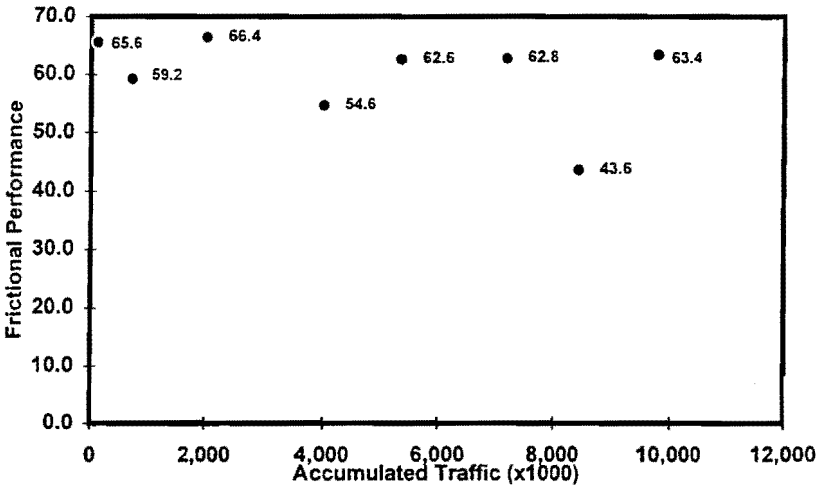
DISTRICT: Austin

AGTY: LS

SPGR:	2.4
ABSP:	4.3
DCL:	
PV:	34.0
INRD:	
MSS:	2.3
FRTH:	
LA:	31.0
ADI:	
TDT:	5.7

Date of Const: 7/30/90

FN:



Test Date

Sep-90	Jul-91	Mar-92	Sep-93	Aug-94	Oct-95	Jul-96	May-97			

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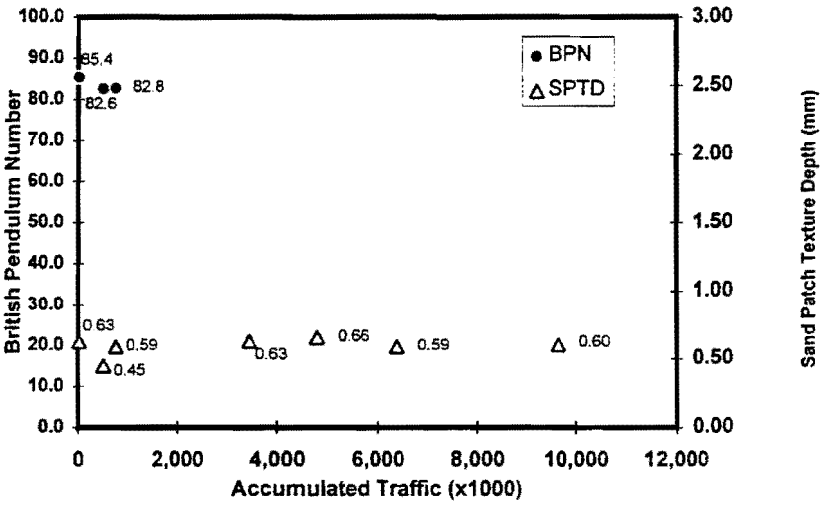


Test Date

Aug-90	Mar-91	Jul-91	Aug-93	Jul-94	Jul-95		Jul-97			

Producer: Colorado Materials **SECTION STATUS:** CLOSED

Pit: Hunter

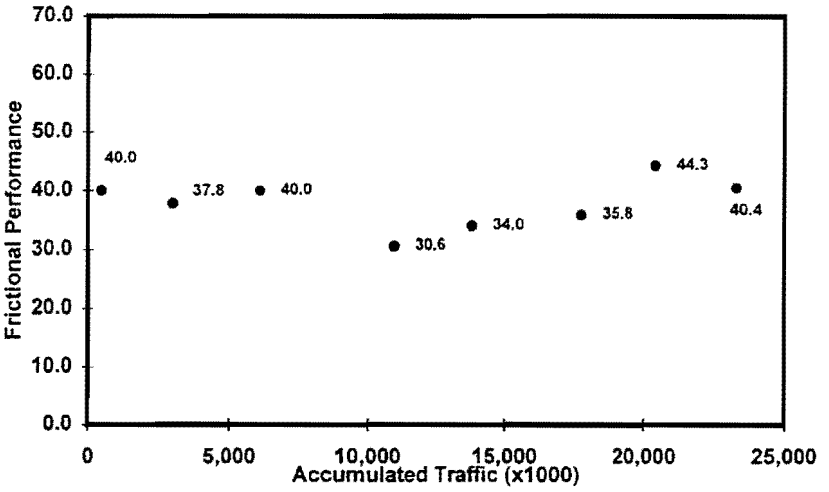
SECTION: AUS3

DISTRICT: Austin

AGTY: LS

SPGR:	2.6
ABSP:	1.2
DCL:	
PV:	30.0
INRD:	
MSS:	5.4
FRTH:	
LA:	27.0
ADI:	
TDT:	6.0

FN:



Test Date

Sep-90	Jul-91	Feb-92	Sep-93	Aug-94	Oct-95	Jul-96	May-97			

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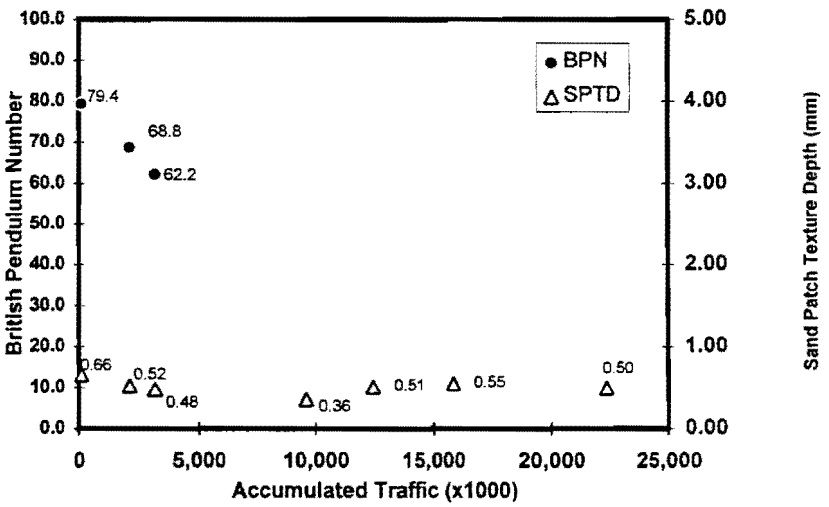


Test Date

Aug-90	Mar-91	Jul-91	Aug-93	Jul-94	Jul-95		May-97			

Date of Const: 7/26/90

Date Covered: Jul/Aug 97

Reason Covered: Test section and surrounding areas cracked.

Producer: Delta Capitol Aggregate

SECTION STATUS: CLOSED

Pit: Brownlee

SECTION: AUS4

DISTRICT: Austin

AGTY: SS

SPGR: 2.6

ABSP: 2.7

DCL:

PV: 43.0

INRD:

MSS: 18.7

FRTH:

LA: 21.0

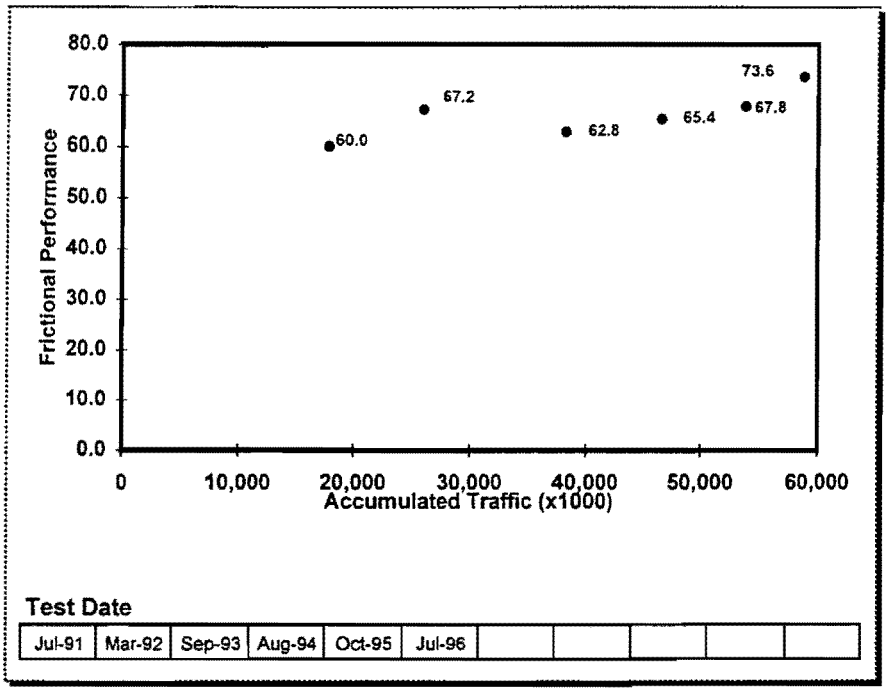
ADI:

TDT: 22.6

Date of Const: 6/1/89

Date Covered: Aug/Sep 96

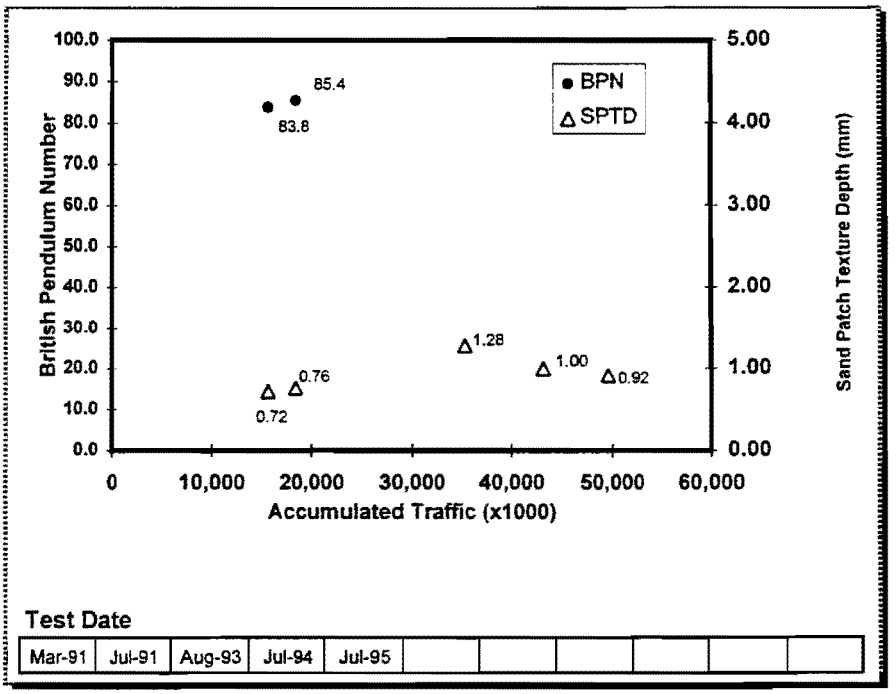
FN:



Test Date

Jul-91	Mar-92	Sep-93	Aug-94	Oct-95	Jul-96					

BP and SPTD:



Test Date

Mar-91	Jul-91	Aug-93	Jul-94	Jul-95						

Reason Covered: Test section and surrounding areas cracked.

Producer: South Texas Construction **SECTION STATUS:** CLOSED

Pit: Rabe

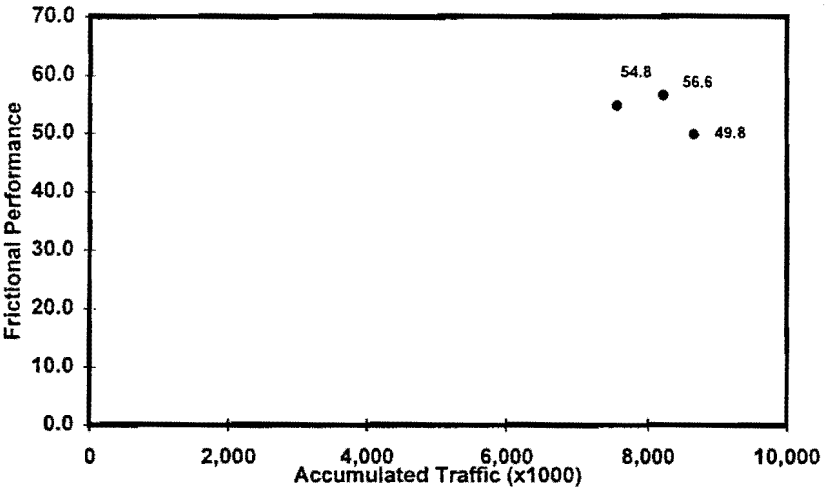
SECTION: C1

DISTRICT: Corpus Christi

AGTY: SS

SPGR:	2.4
ABSP:	4.0
DCL:	
PV:	32.0
INRD:	
MSS:	22.7
FRTH:	
LA:	29.0
ADI:	
TDT:	

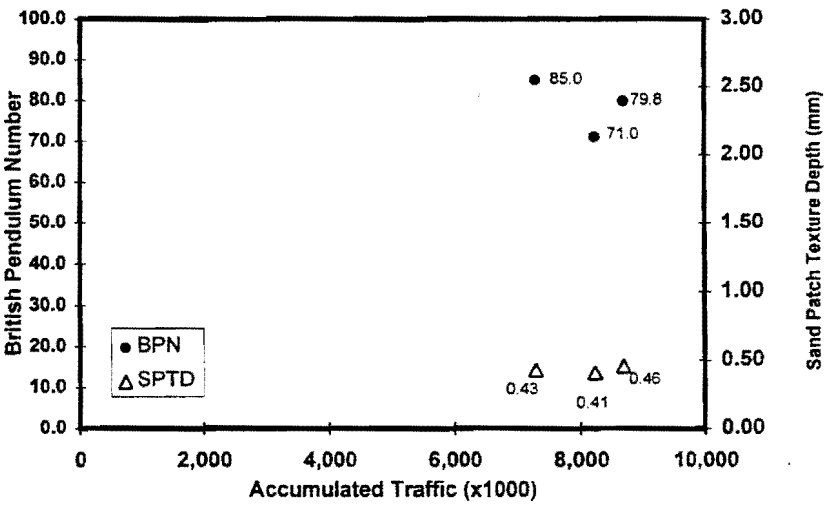
FN:



Test Date

May-90	Nov-90	Mar-91								

BP and SPTD:



Test Date

Mar-90	Nov-90	Mar-91								

Date of Const: 3/1/84

Date Covered: 7/7/91

Reason Covered: District seal coat program. Need to bring skid numbers up to acceptable levels.

Producer: Bay Incorporated **SECTION STATUS:** CLOSED

Pit: Lindholm

SECTION: C2

DISTRICT: Corpus Christi

AGTY: SS

SPGR:

ABSP:

DCL:

PV: 42.0

INRD:

MSS: 27.0

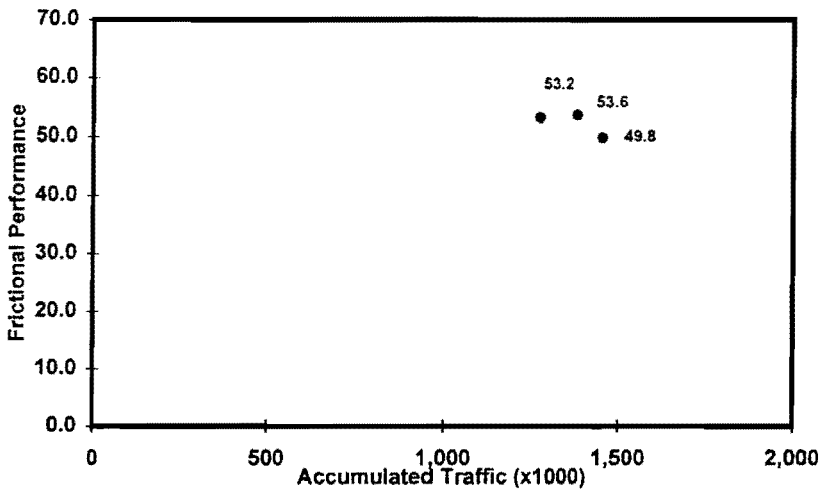
FRTH:

LA: 25.0

ADI:

TDT: 9.2

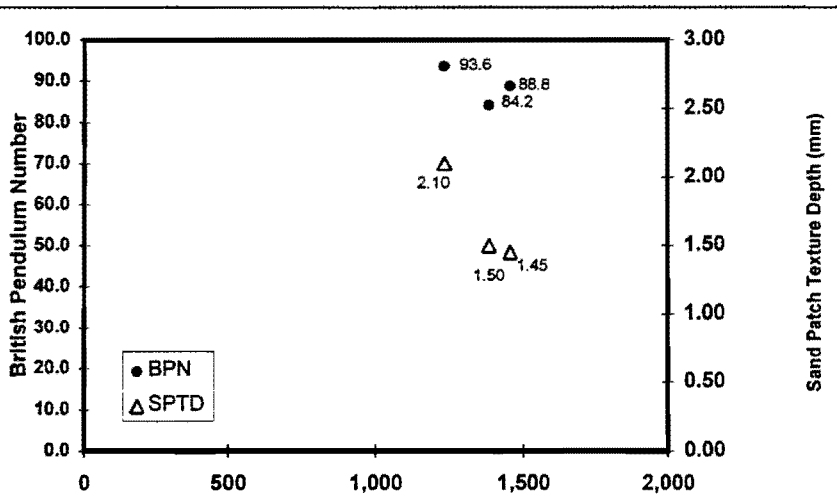
FN:



Test Date

May-90	Nov-90	Mar-91								

BP and SPTD:



Test Date

Mar-90	Nov-90	Mar-91								

Date of Const: 5/1/84

Date Covered: 8/31/97

Reason Covered: District seal coat program. Need to bring skid numbers up to acceptable levels.

Producer: Redland Worth Materials **SECTION STATUS:** OPEN

Pit: Beckman

SECTION: C3

DISTRICT: Corpus Christi

AGTY: LS

SPGR: 2.5

ABSP: 3.0

DCL:

PV: 32.0

INRD:

MSS: 5.5

FRTH:

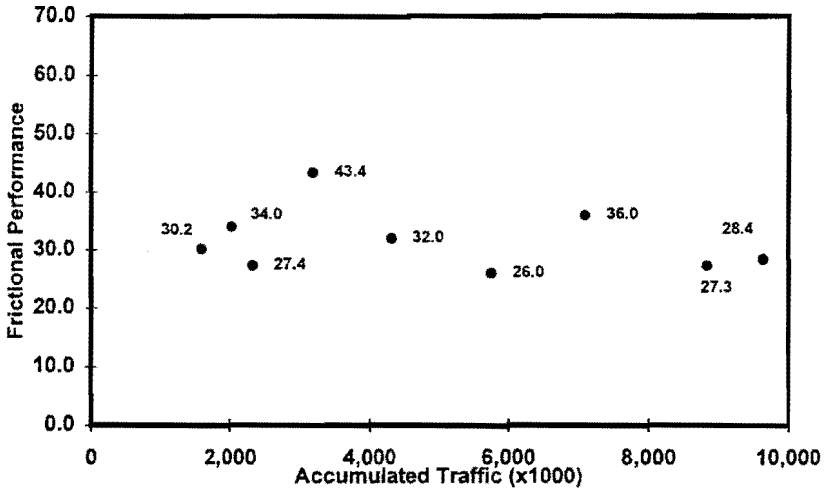
LA: 30.0

ADI:

TDT: 6.4

Date of Const: 11/1/88

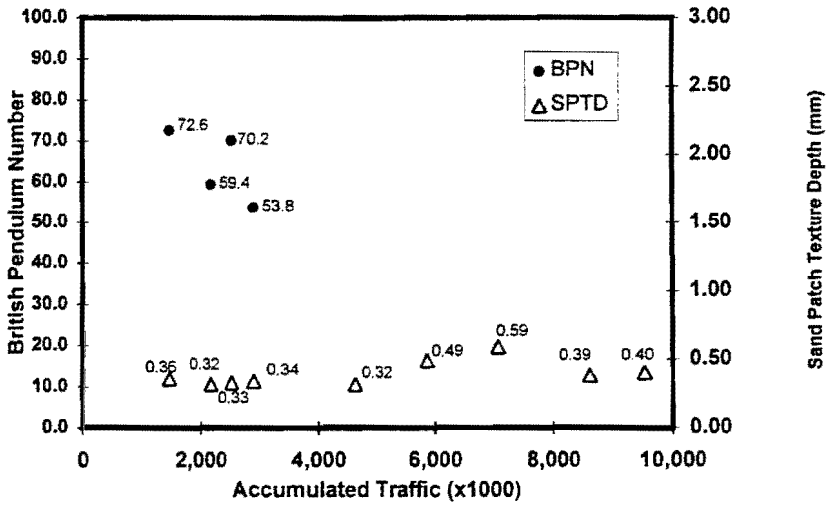
FN:



Test Date

May-90	Nov-90	Mar-91	Feb-92	Jun-93	Aug-94	Sep-95	Feb-97	Oct-97		

BP and SPTD:



Test Date

Mar-90	Nov-90	Mar-91	Jul-91	Jul-93	Jul-94	Jul-95	Oct-96	Jul-97		

Producer: Vulcan Materials **SECTION STATUS:** CLOSED

Pit: Uvalde

SECTION: C4

DISTRICT: Corpus Christi

AGTY: RY

SPGR:

ABSP:

DCL:

PV: 37.0

INRD:

MSS: 16.8

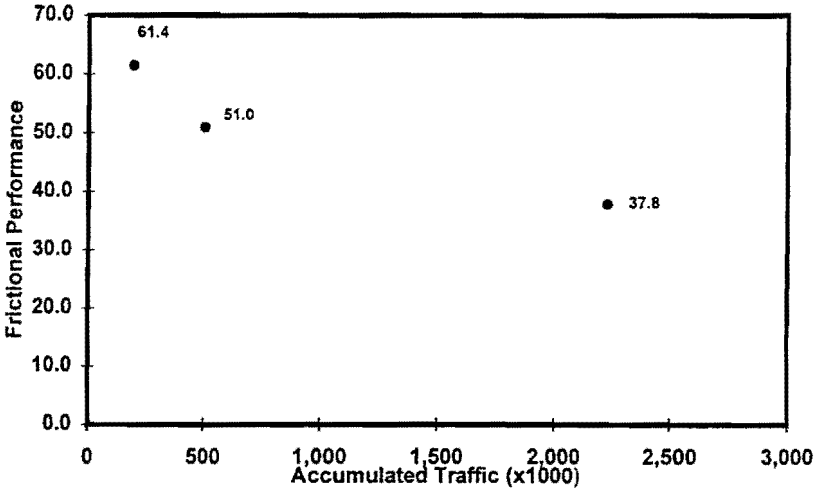
FRTH:

LA: 31.0

ADI:

TDT:

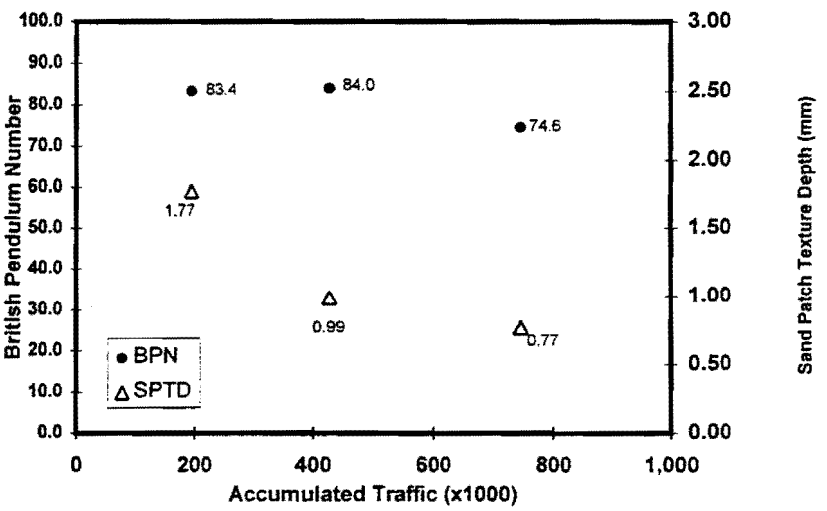
FN:



Test Date

Nov-90	Mar-91	Feb-92								

BP and SPTD:



Test Date

Nov-90	Mar-91	Jul-91								

Date of Const: 9/1/90

Date Covered: 11/19/92

Reason Covered: Needed to bring skid numbers up to acceptable levels. Done with micro-surfacing project.

Producer: Delta Capitol Aggregate **SECTION STATUS:** CLOSED

Pit: Brownlee

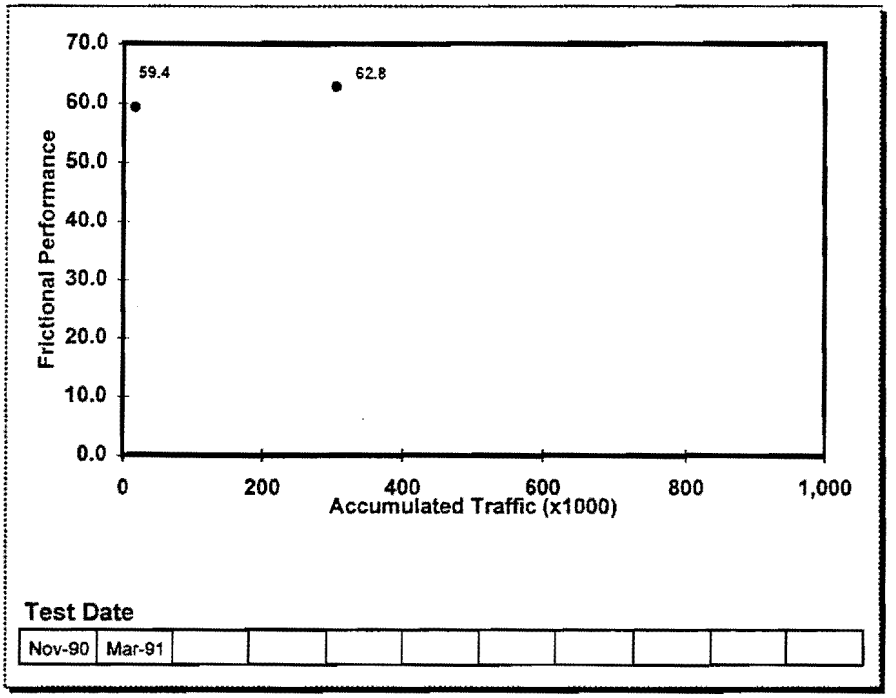
SECTION: C5

DISTRICT: Corpus Christi

AGTY: SS

SPGR:	2.5
ABSP:	4.9
DCL:	
PV:	41.0
INRD:	
MSS:	24.0
FRTH:	
LA:	21.0
ADI:	
TDT:	23.7

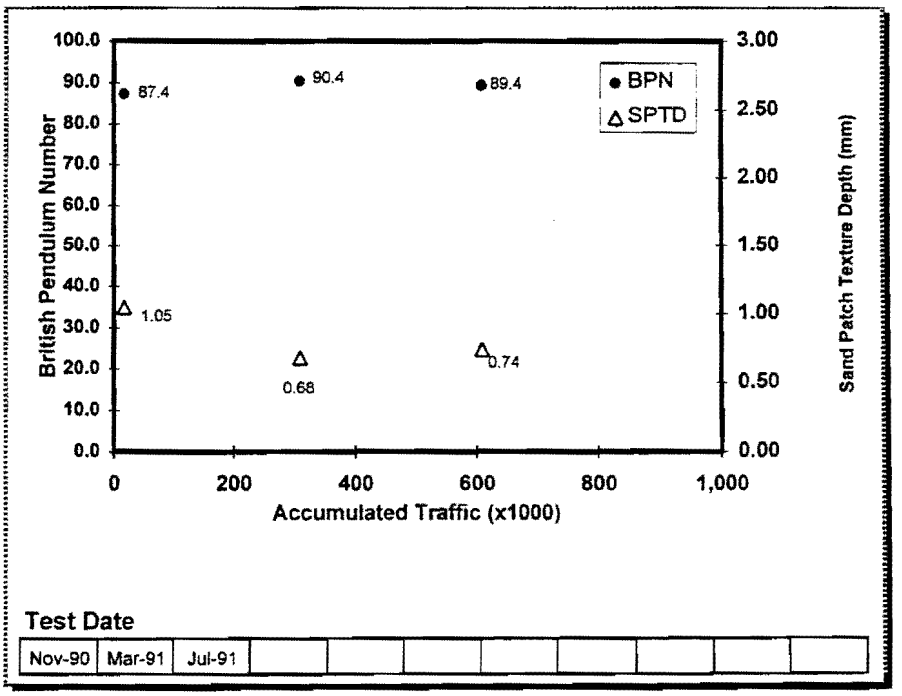
FN:



Test Date

Nov-90	Mar-91									

BP and SPTD:



Test Date

Nov-90	Mar-91	Jul-91								

Date of Const: 11/8/90

Date Covered: 3/8/94

Reason Covered: Scheduled major construction project to add capacity and improve safety.

Producer: Janes Gravel

Pit: Wood

SECTION STATUS: CLOSED

SECTION: L1

DISTRICT: Lubbock

AGTY: SG

SPGR:

ABSP:

DCL:

PV: 30.0

INRD:

MSS: 19.0

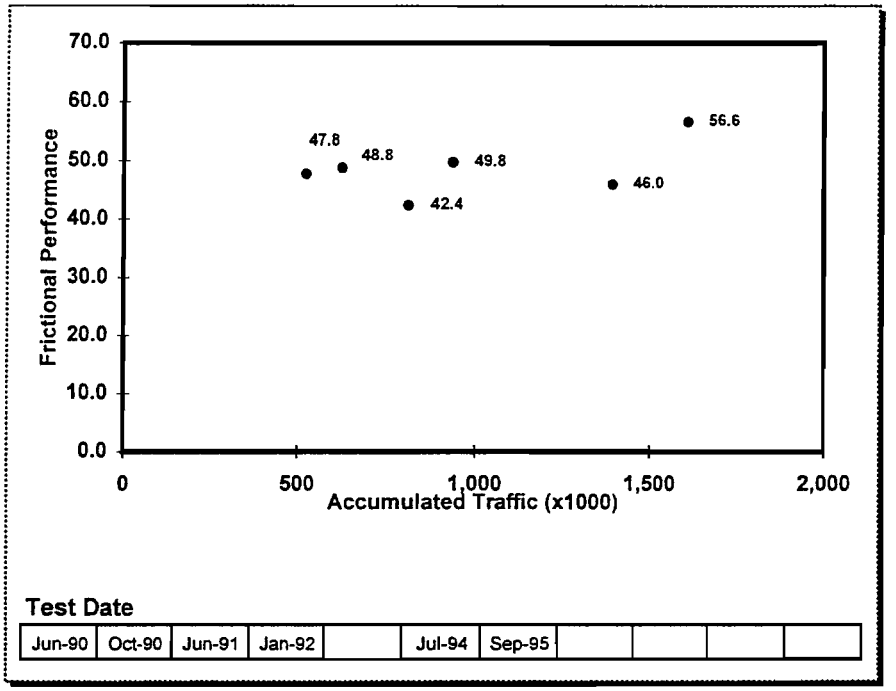
FRTH:

LA: 22.0

ADI:

TDT: 7.6

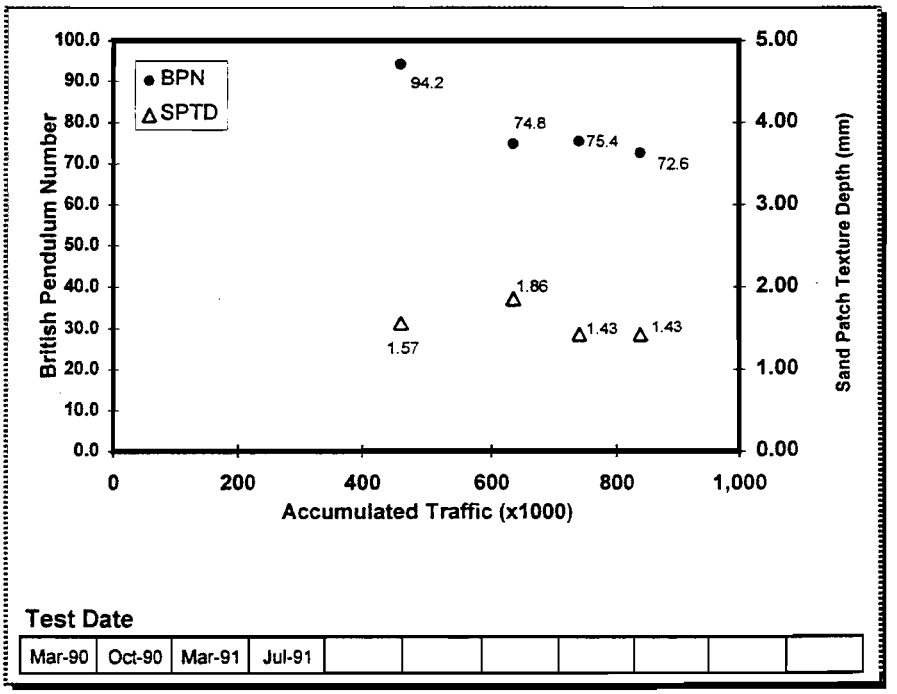
FN:



Test Date

Jun-90	Oct-90	Jun-91	Jan-92		Jul-94	Sep-95				

BP and SPTD:



Test Date

Mar-90	Oct-90	Mar-91	Jul-91							

Date of Const: 7/1/88

Date Covered: Aug-93

Reason Covered: Routine maintenance for purpose of sealing pavement surface.

Producer: El Paso Sand Product **SECTION STATUS:** CLOSED

Pit: Turner

SECTION: L2

DISTRICT: Lubbock

AGTY: SG

SPGR: 2.4

ABSP: 2.5

DCL:

PV: 42.0

INRD:

MSS: 28.6

FRTH:

LA: 23.0

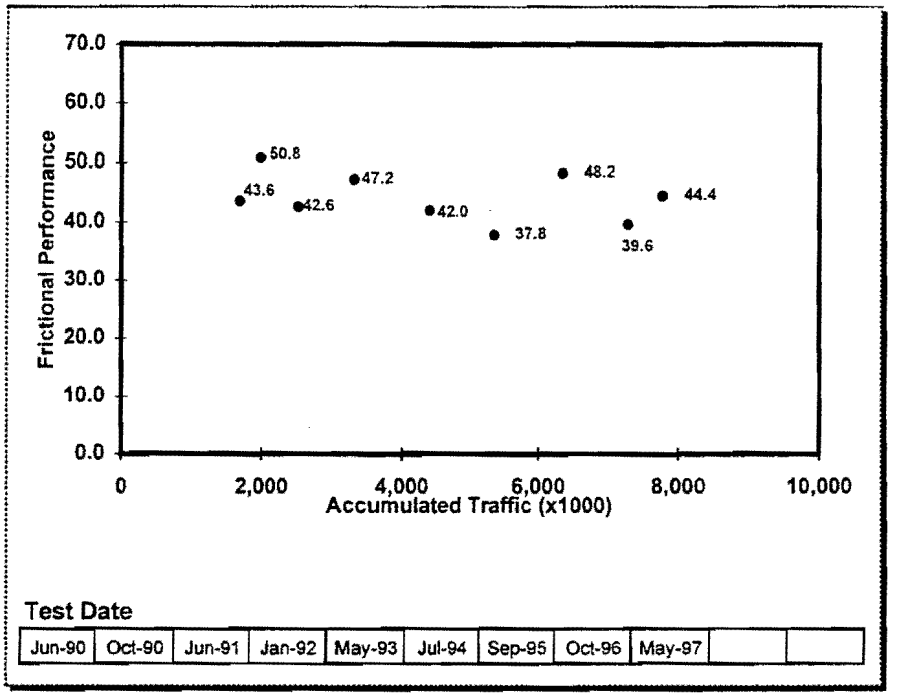
ADI:

TDT: 9.5

Date of Const: 4/1/88

Date Covered: Aug-97

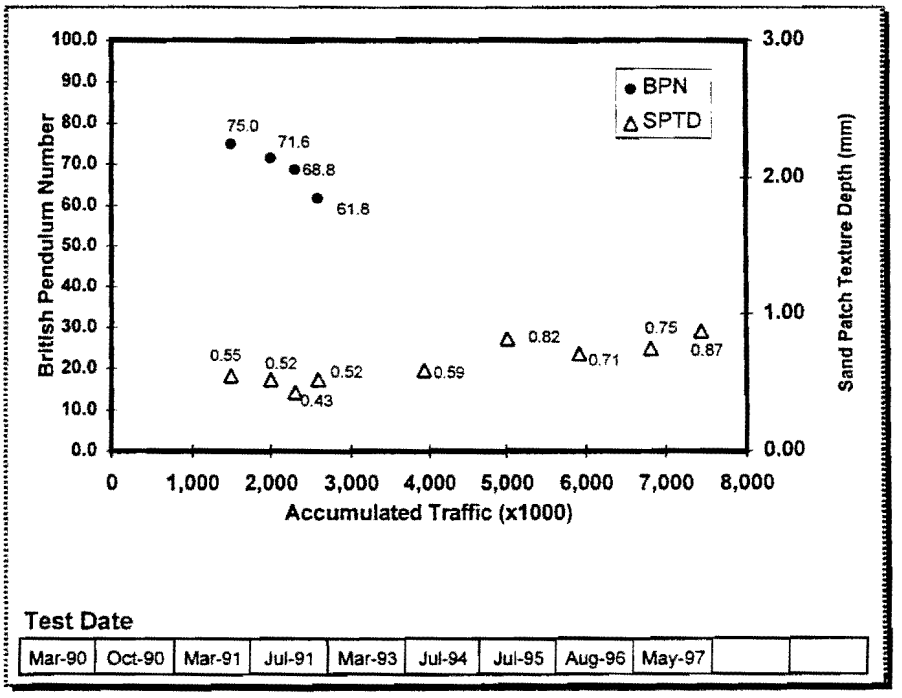
FN:



Test Date

Jun-90	Oct-90	Jun-91	Jan-92	May-93	Jul-94	Sep-95	Oct-96	May-97		

BP and SPTD:



Test Date

Mar-90	Oct-90	Mar-91	Jul-91	Mar-93	Jul-94	Jul-95	Aug-96	May-97		

Reason Covered: Routine maintenance/ seal coat.

Producer: Appian Corp. **SECTION STATUS:** CLOSED

Pit: Thrasher

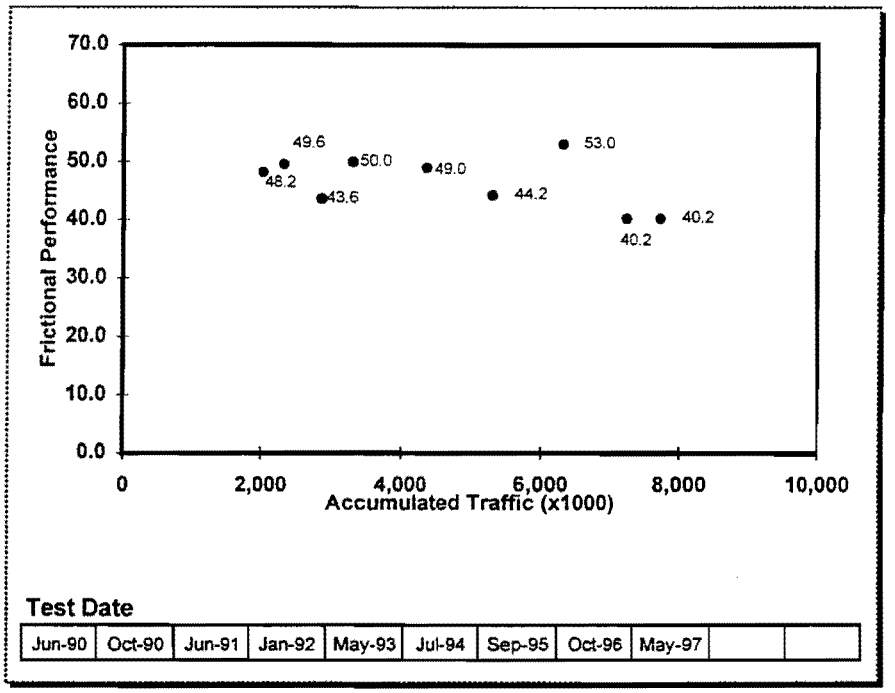
SECTION: L3

DISTRICT: Lubbock

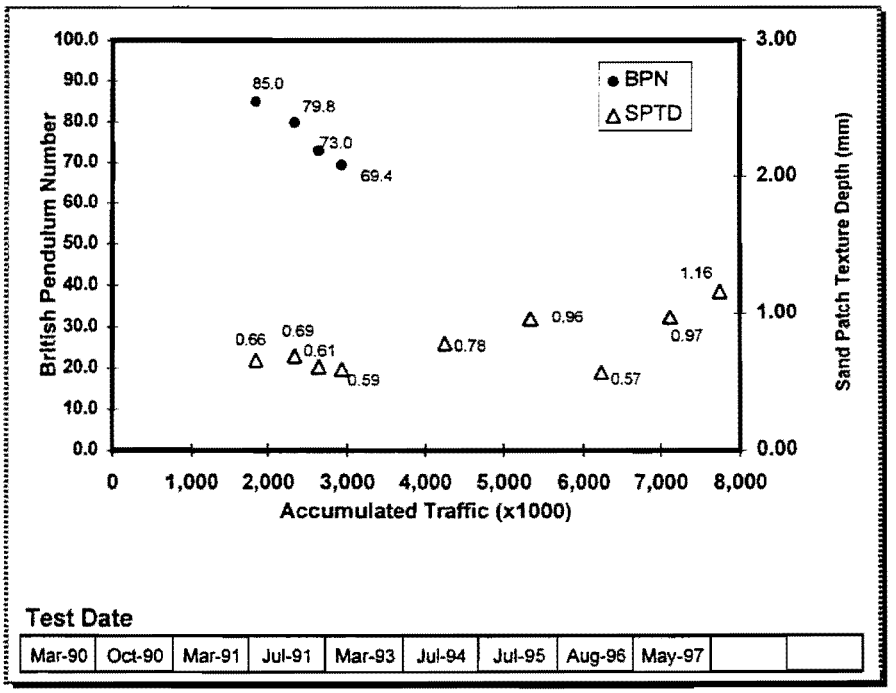
AGTY: SG

SPGR:	2.6
ABSP:	1.3
DCL:	
PV:	22.0
INRD:	
MSS:	5.4
FRTH:	
LA:	20.0
ADI:	
TDT:	1.6

FN:



BP and SPTD:



Date of Const: 10/1/87

Date Covered: Aug-97

Reason Covered: Routine maintenance/ seal coat.

Producer: Janes Gravel **SECTION STATUS:** CLOSED

Pit: Wood

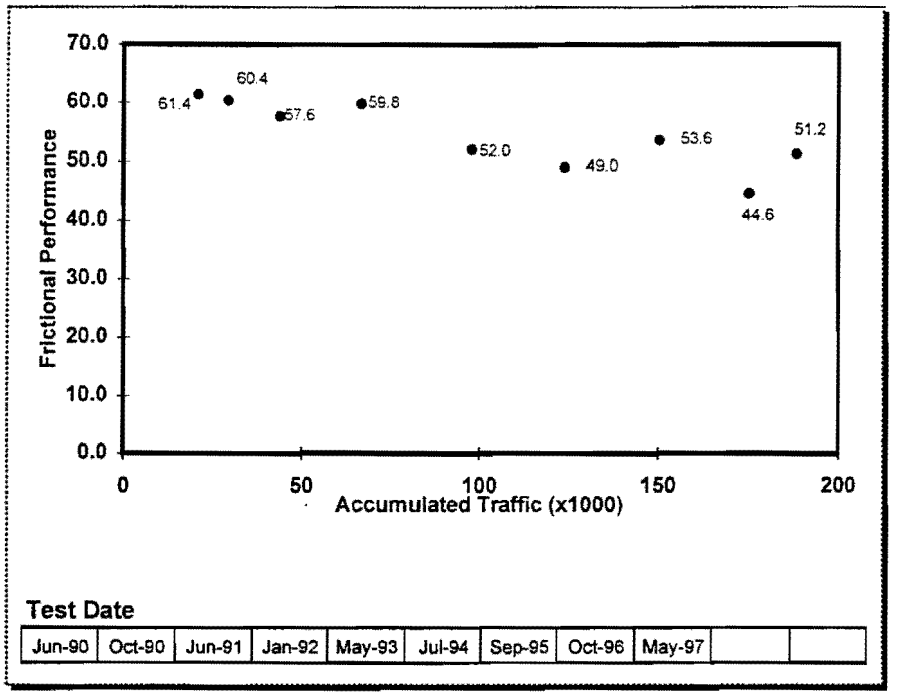
SECTION: L4

DISTRICT: Lubbock

AGTY: SG

SPGR:	2.5
ABSP:	2.9
DCL:	
PV:	25.0
INRD:	
MSS:	10.5
FRTH:	
LA:	20.0
ADI:	
TDT:	5.9

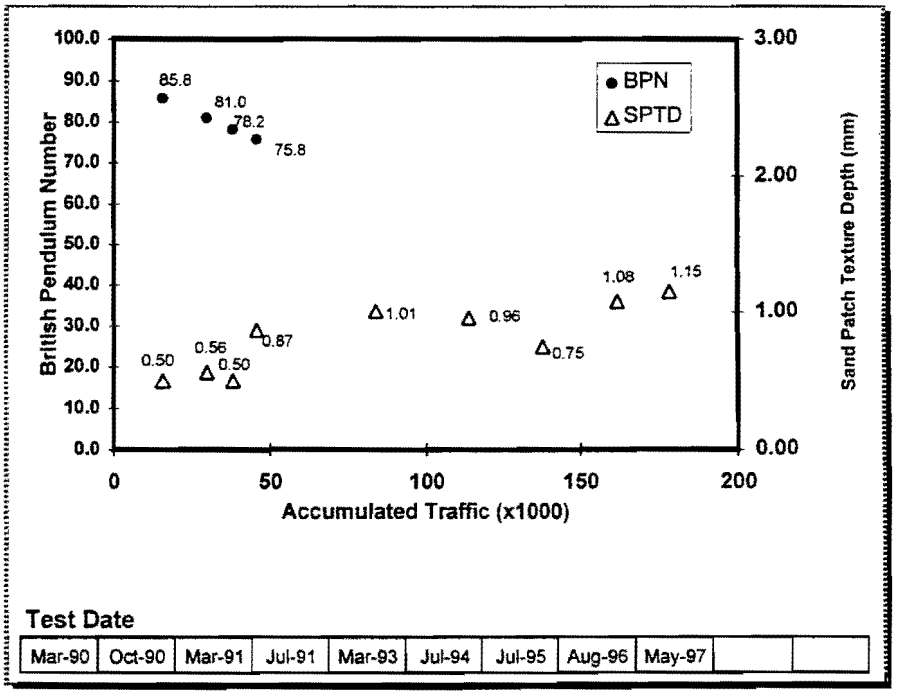
FN:



Test Date

Jun-90	Oct-90	Jun-91	Jan-92	May-93	Jul-94	Sep-95	Oct-96	May-97		

BP and SPTD:



Test Date

Mar-90	Oct-90	Mar-91	Jul-91	Mar-93	Jul-94	Jul-95	Aug-96	May-97		

Date of Const: 7/1/89

Date Covered: Aug-97

Reason Covered: Routine maintenance/ seal coat.

Producer: CSA Materials

SECTION STATUS: OPEN

Pit: Gordon-Cox

SECTION: L5

DISTRICT: Lubbock

AGTY: LS

SPGR:

ABSP:

DCL:

PV: 41.0

INRD:

MSS: 22.1

FRTH:

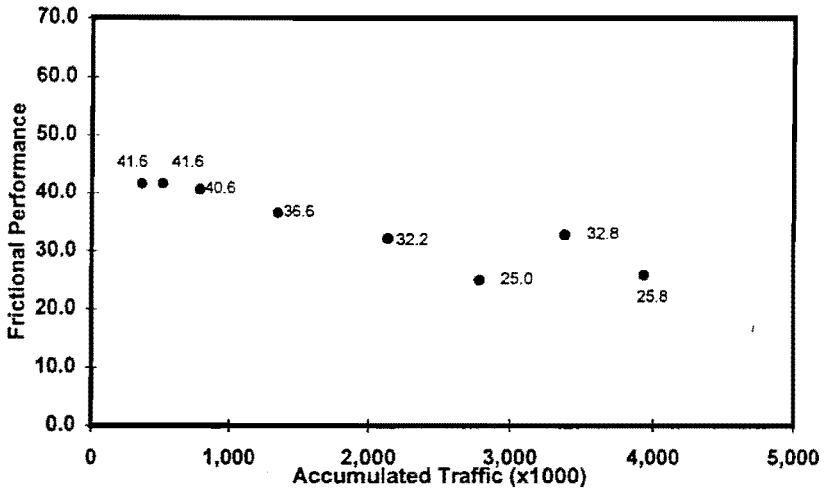
LA: 26.0

ADI:

TDT: 9.5

Date of Const: 6/1/89

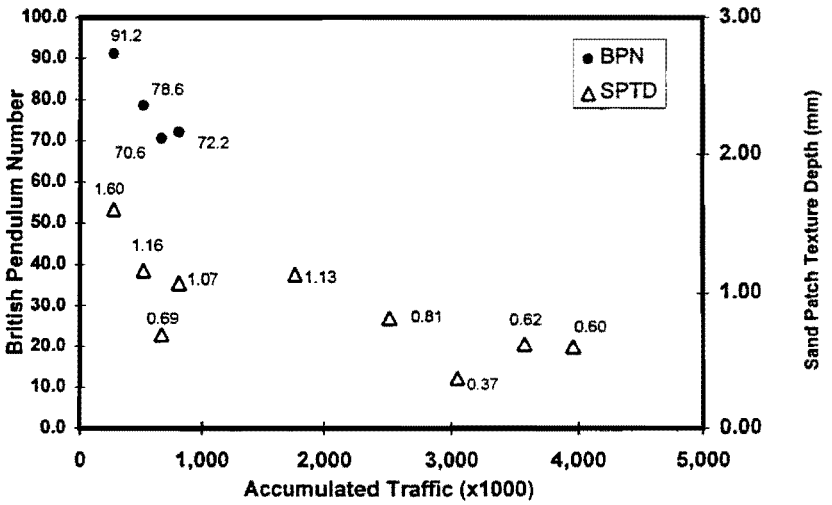
FN:



Test Date

Jun-90	Oct-90	Jun-91	Jan-92	May-93	Jul-94	Sep-95	Oct-96			

BP and SPTD:



Test Date

Mar-90	Oct-90	Mar-91	Jul-91	Mar-93	Jul-94	Jul-95	Aug-96	May-97		

Producer: Appian Corp. **SECTION STATUS:** OPEN

Pit: Campbell

SECTION: L6

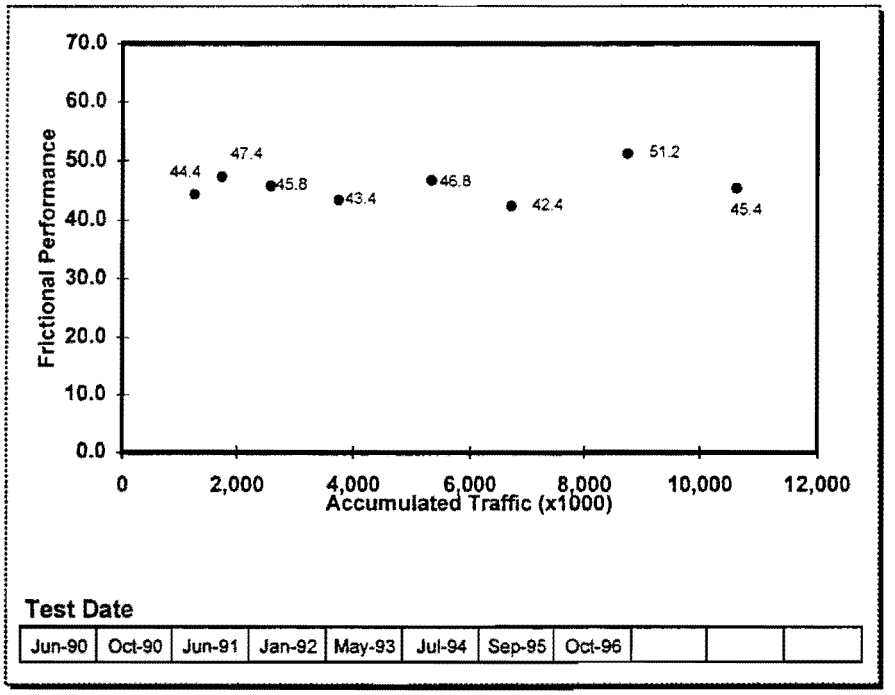
DISTRICT: Lubbock

AGTY: SG

SPGR:	2.6
ABSP:	1.5
DCL:	
PV:	36.0
INRD:	
MSS:	5.5
FRTH:	
LA:	19.0
ADI:	
TDT:	6.7

Date of Const: 6/1/89

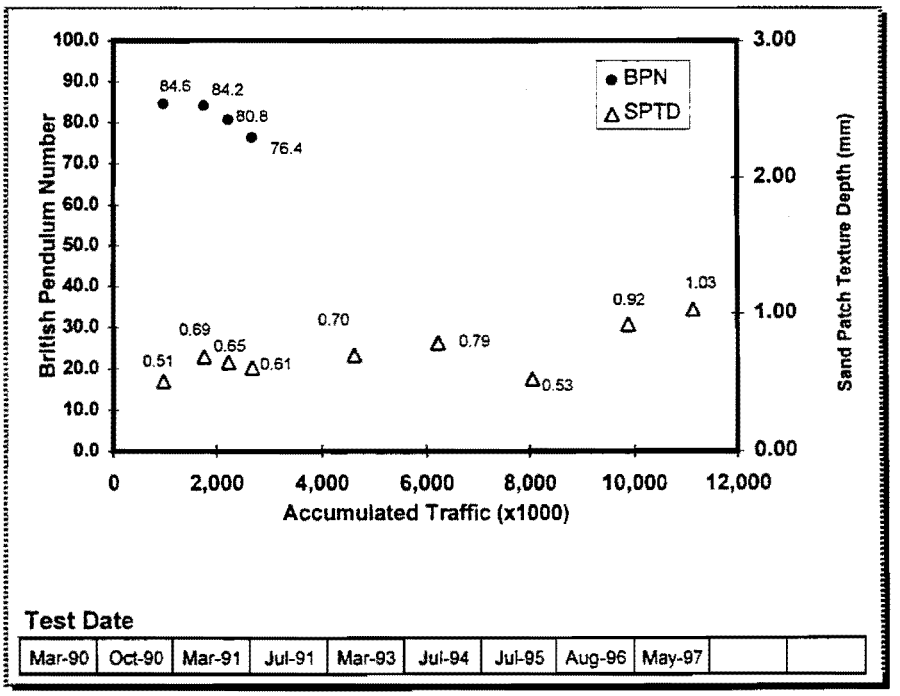
FN:



Test Date

Jun-90	Oct-90	Jun-91	Jan-92	May-93	Jul-94	Sep-95	Oct-96			

BP and SPTD:



Test Date

Mar-90	Oct-90	Mar-91	Jul-91	Mar-93	Jul-94	Jul-95	Aug-96	May-97		

Producer: Trans Pecos Materials

SECTION STATUS: CLOSED

Pit: Hoban

SECTION: L7

DISTRICT: Lubbock

AGTY: RY

SPGR: 2.5

ABSP: 4.4

DCL:

PV: 37.0

INRD:

MSS: 6.9

FRTH:

LA: 17.0

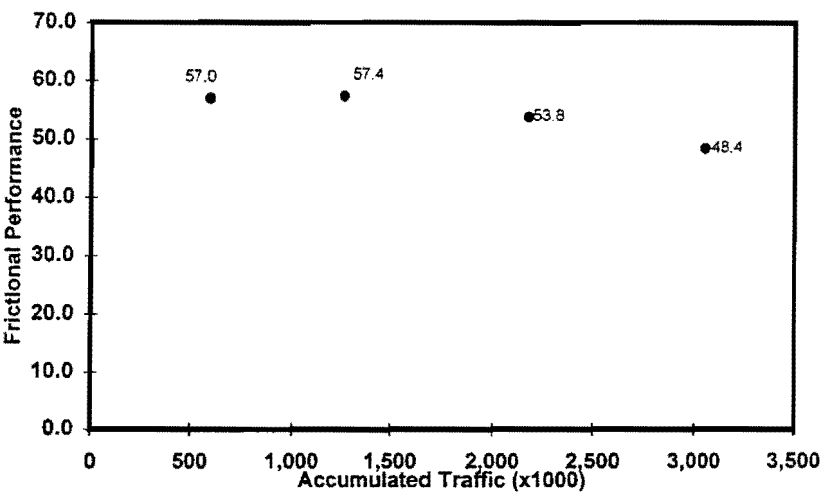
ADI:

TDT: 4.8

Date of Const: 9/1/90

Date Covered:

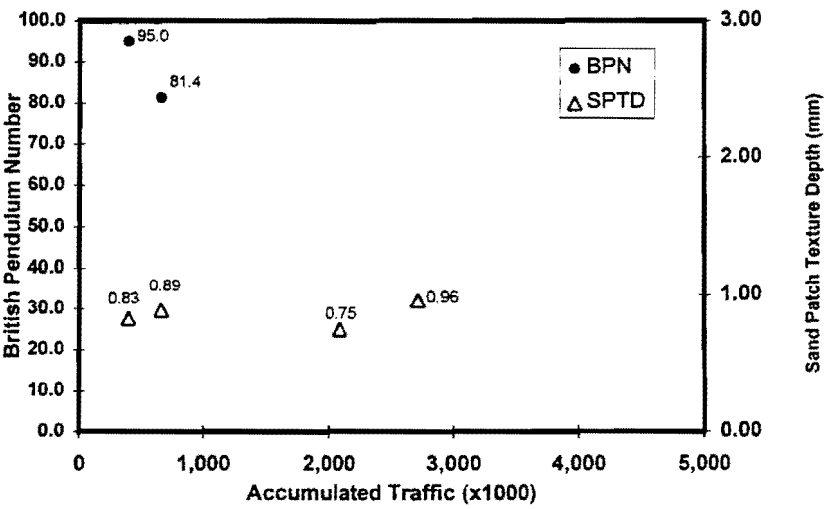
FN:



Test Date

Jun-91	Jan-92	May-93	Jul-94							

BP and SPTD:



Test Date

Mar-91	Jul-91	Sep-93	Jul-94							

Reason Covered:

Producer: Trans Pecos Materials **SECTION STATUS:** CLOSED

Pit: Hoban

SECTION: L8

DISTRICT: Lubbock

AGTY: RY

SPGR: 2.5

ABSP: 4.4

DCL:

PV: 37.0

INRD:

MSS: 6.9

FRTH:

LA: 17.0

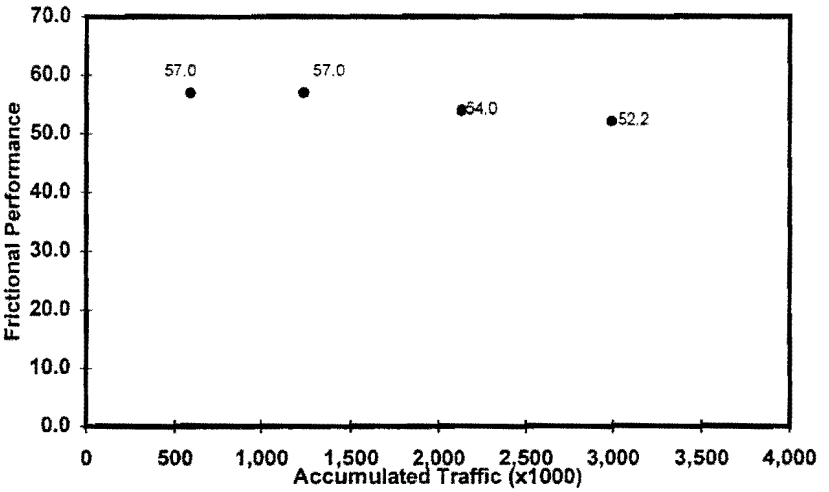
ADI:

TDT: 4.8

Date of Const: 9/1/90

Date Covered:

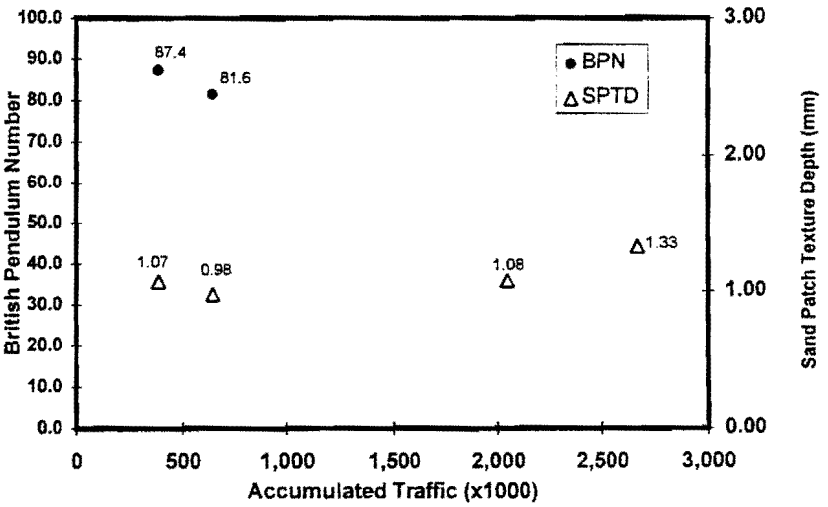
FN:



Test Date

Jun-91	Jan-92	May-93	Jul-94							

BP and SPTD:



Test Date

Mar-91	Jul-91	Sep-93	Jul-94							

Reason Covered:

Producer: South Texas Lime Stone

Pit: Counts

SECTION STATUS: OPEN

SECTION: OD1

DISTRICT: Odessa

AGTY: LS

SPGR:

ABSP:

DCL:

PV: 43.0

INRD:

MSS: 28.8

FRTH:

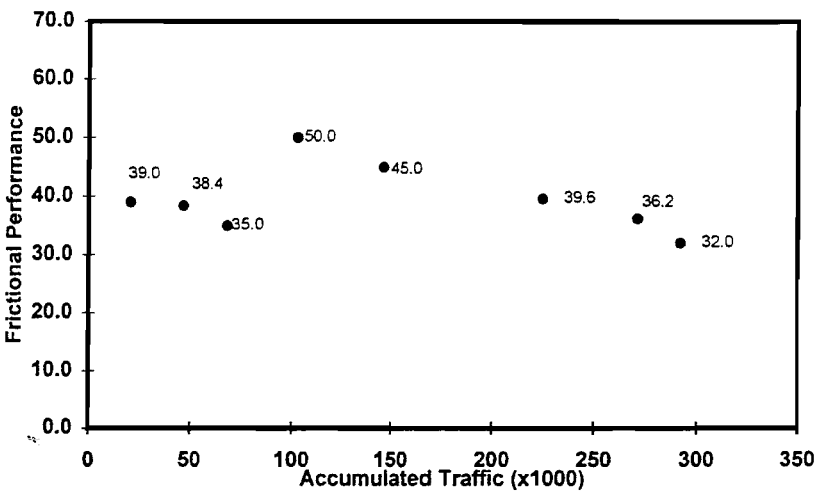
LA: 30.0

ADI:

TDT: 10.0

Date of Const: 5/22/89

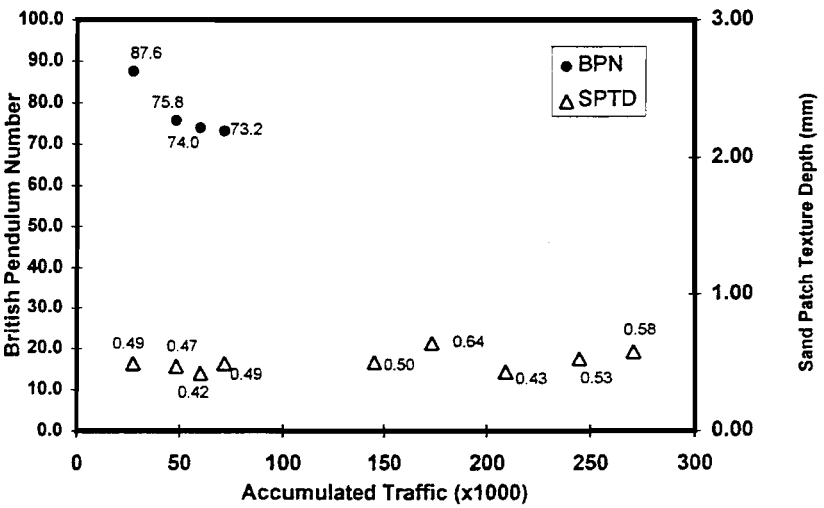
FN:



Test Date

Jun-90	Oct-90	Jun-91	Feb-92	May-93	Jul-94	Sep-95	Jan-97	Sep-97		

BP and SPTD:



Test Date

Mar-90	Oct-90	Mar-91	Jul-91	Sep-93	Jul-94	Jul-95	Aug-96	May-97		

Producer: Trans Pecos Materials **SECTION STATUS:** CLOSED

Pit: Hoban

SECTION: OD2

DISTRICT: Odessa

AGTY: RY

SPGR: 2.5

ABSP: 2.3

DCL:

PV: 38.0

INRD:

MSS: 4.1

FRTH:

LA: 13.0

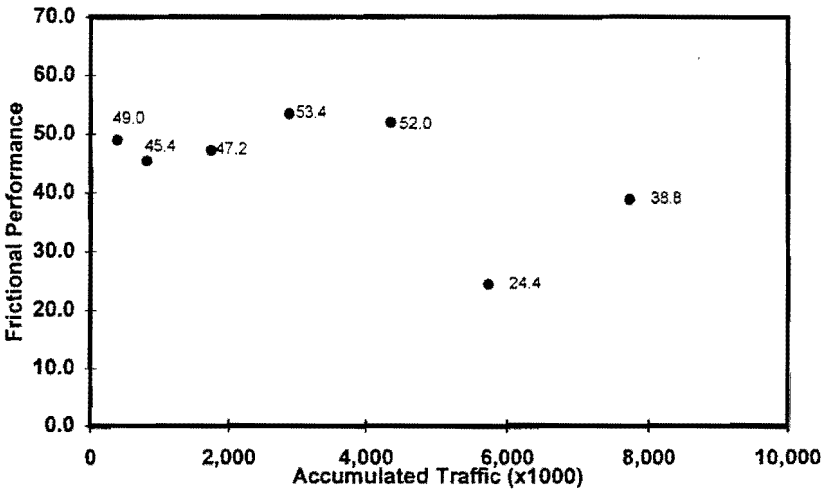
ADI:

TDT: 3.5

Date of Const: 2/9/90

Date Covered:

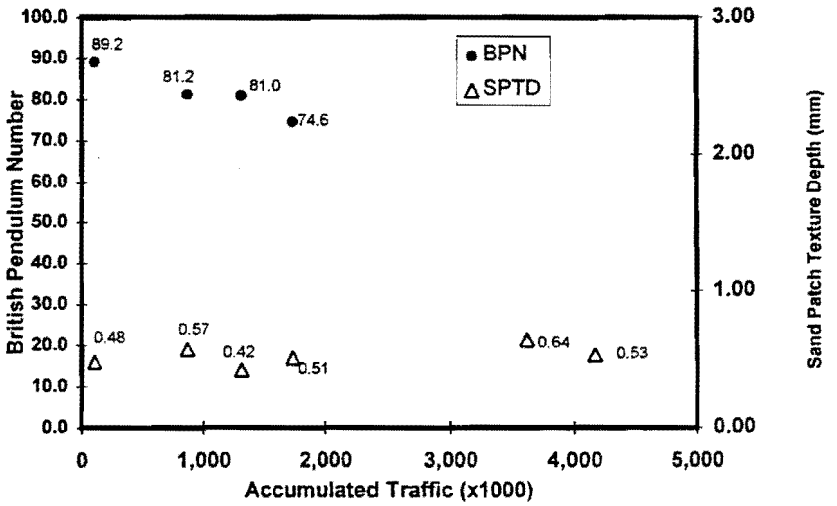
FN:



Test Date

Jun-90	Oct-90	Jun-91	Feb-92	May-93	Jul-94	Sep-95				

BP and SPTD:



Test Date

Mar-90	Oct-90	Mar-91	Jul-91	Mar-93	Sep-93					

Reason Covered: District has not yet returned survey.

Producer: Grimmett Brothers

SECTION STATUS: CLOSED

Pit: Gordon-Cox

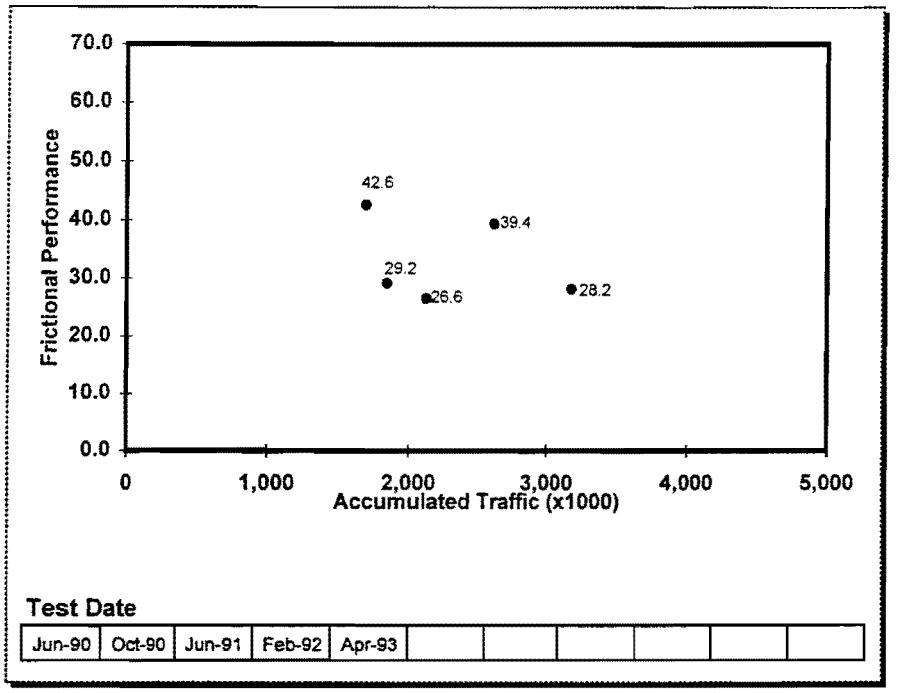
SECTION: OD3

DISTRICT: Odessa

AGTY: LS

SPGR:	2.6
ABSP:	2.8
DCL:	
PV:	36.0
INRD:	
MSS:	28.3
FRTH:	
LA:	28.0
ADI:	
TDT:	10.6

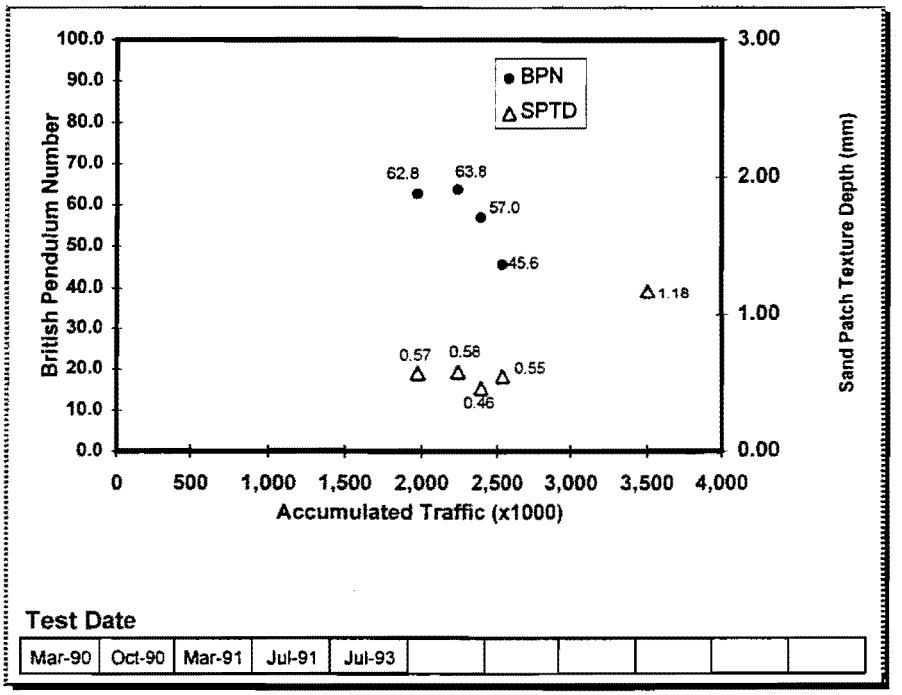
FN:



Test Date

Jun-90	Oct-90	Jun-91	Feb-92	Apr-93						

BP and SPTD:



Test Date

Mar-90	Oct-90	Mar-91	Jul-91	Jul-93						

Date of Const: 1/10/86

Date Covered:

Reason Covered: District has not yet returned survey.

Producer: CSA Materials **SECTION STATUS:** OPEN

Pit: Willeke

SECTION: SA1

DISTRICT: San Angelo

AGTY: LS

SPGR:

ABSP:

DCL:

PV: 37.0

INRD:

MSS: 16.9

FRTH:

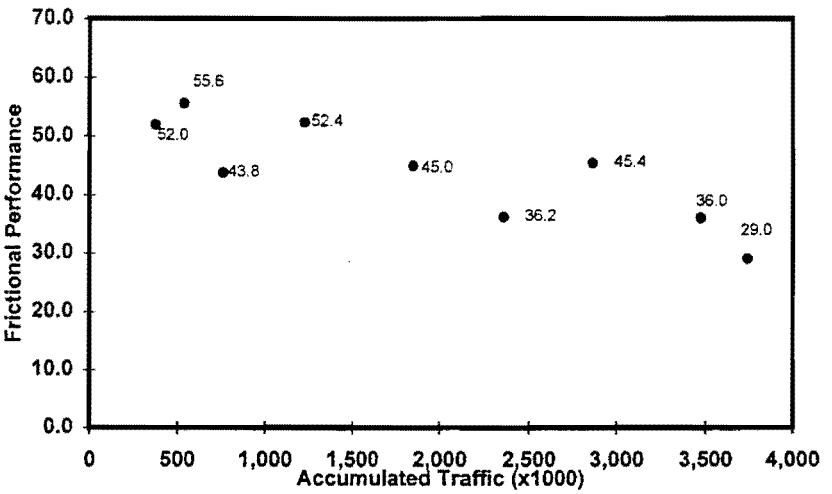
LA: 27.0

ADI:

TDT: 10.2

Date of Const: 6/29/89

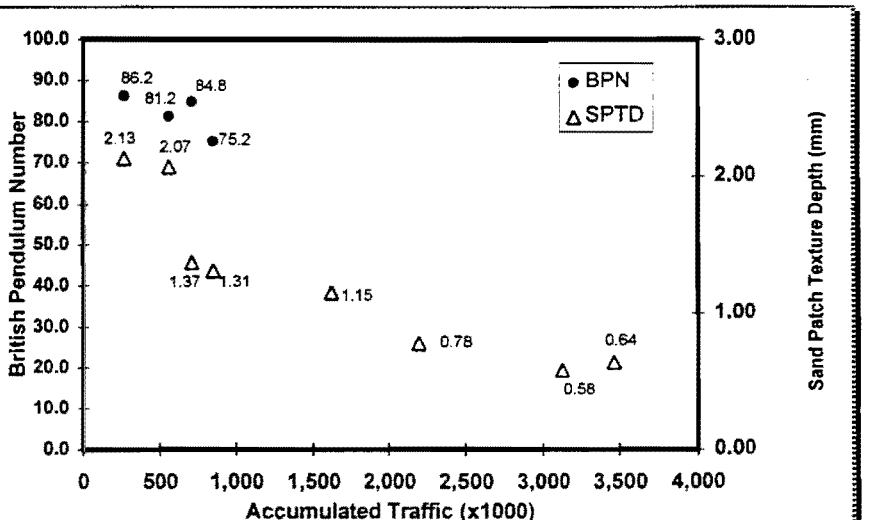
FN:



Test Date

May-90	Oct-90	May-91	Jan-92	May-93	Jul-94	Sep-95	Jan-97	Sep-97		

BP and SPTD:



Test Date

Feb-90	Nov-90	Mar-91	Jul-91	Mar-93	Jul-94		Aug-96	May-97		

Producer: CSA Materials **SECTION STATUS:** CLOSED

Pit: Willeke

SECTION: SA4

DISTRICT: San Angelo

AGTY: LS

SPGR:

ABSP:

DCL:

PV: 37.0

INRD:

MSS: 20.6

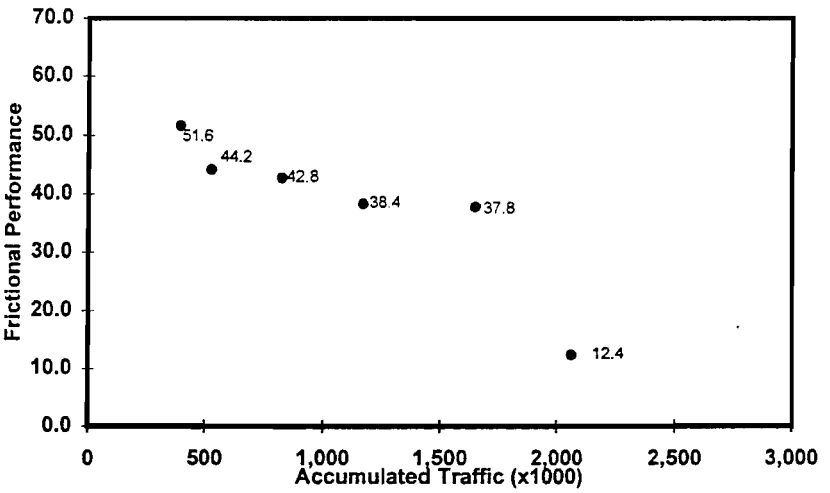
FRTH:

LA: 27.0

ADI:

TDT: 10.6

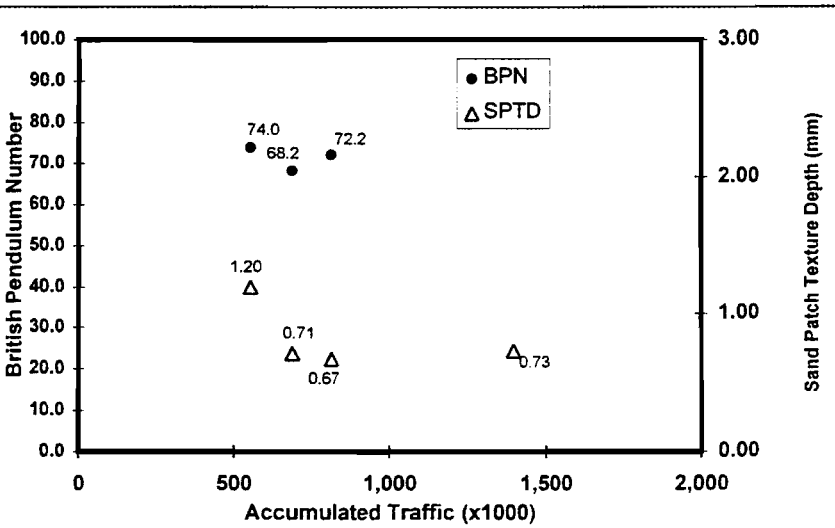
FN:



Test Date

May-90	Oct-90	Jun-91	Jan-92	May-93	Jul-94					

BP and SPTD:



Test Date

Nov-90	Mar-91	Jul-91	Mar-93							

Date of Const: 5/4/89

Date Covered: Jun-97

Reason Covered: Test section bad, surfaces around test section bad.

Producer: CSA Materials **SECTION STATUS:** CLOSED

Pit: Willeke

SECTION: SA6

DISTRICT: San Angelo

AGTY: LS

SPGR:

ABSP:

DCL:

PV: 35.0

INRD:

MSS: 18.4

FRTH:

LA: 21.0

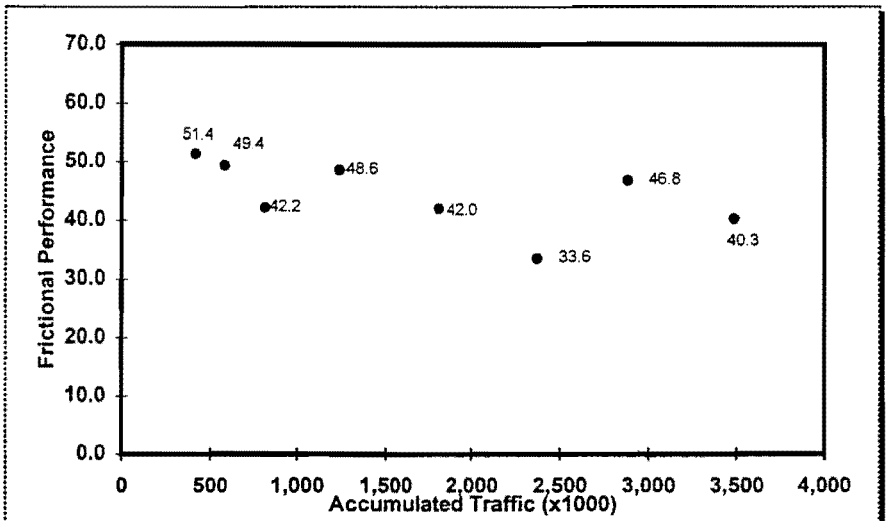
ADI:

TDT: 7.9

Date of Const: 6/19/89

Date Covered: Sep-97

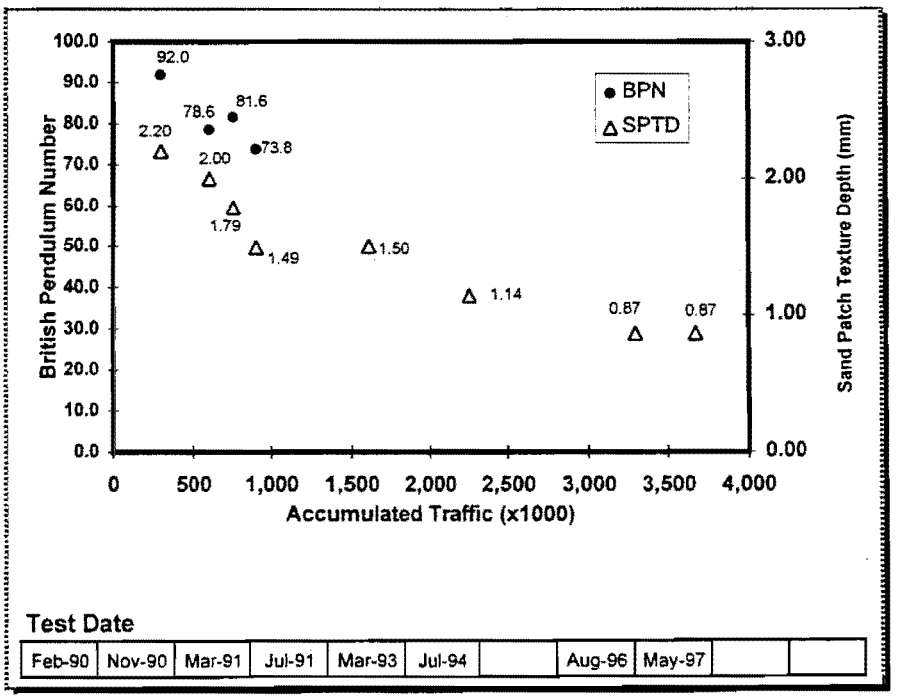
FN:



Test Date

May-90	Oct-90	May-91	Jan-92	May-93	Jul-94	Sep-95	Jan-97			

BP and SPTD:



Test Date

Feb-90	Nov-90	Mar-91	Jul-91	Mar-93	Jul-94		Aug-96	May-97		

Reason Covered: Test section bad, surfaces around test section bad.

Producer: CSA Materials

Pit: Willeke

SECTION STATUS: OPEN

SECTION: SA16

DISTRICT: San Angelo

AGTY: LS

SPGR:

ABSP:

DCL:

PV: 35.0

INRD:

MSS: 23.6

FRTH:

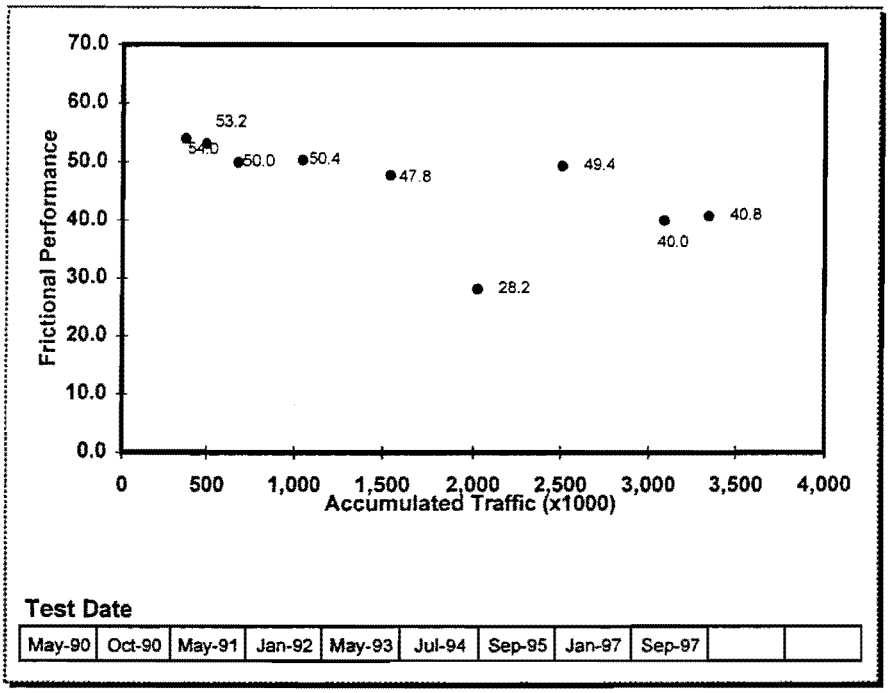
LA: 29.0

ADI:

TDT: 8.5

Date of Const: 4/7/89

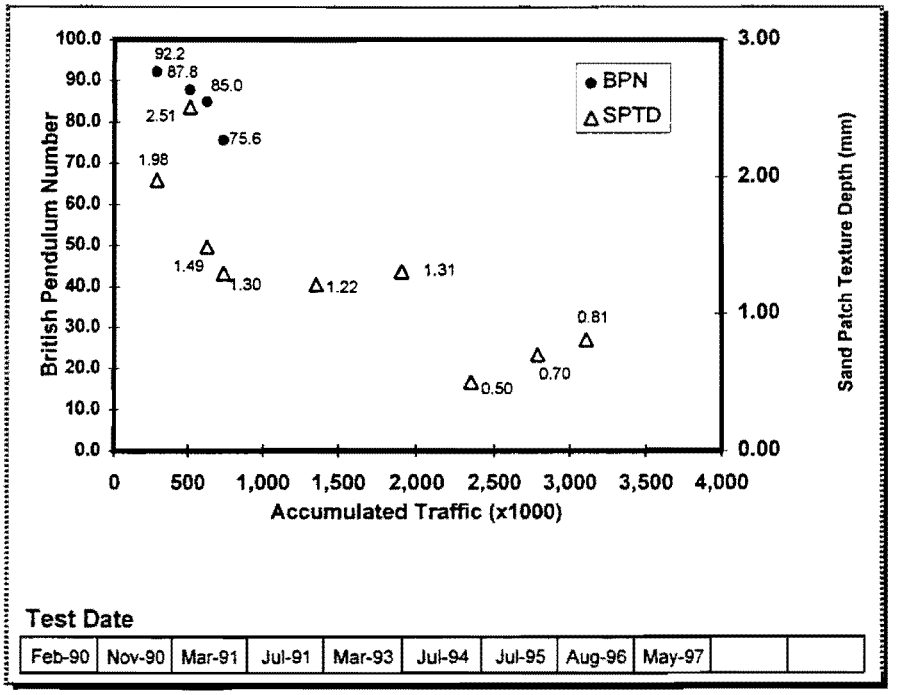
FN:



Test Date

May-90	Oct-90	May-91	Jan-92	May-93	Jul-94	Sep-95	Jan-97	Sep-97		

BP and SPTD:



Test Date

Feb-90	Nov-90	Mar-91	Jul-91	Mar-93	Jul-94	Jul-95	Aug-96	May-97		

Producer: CSA Materials **SECTION STATUS:** CLOSED

Pit: Willeke

SECTION: SA17

DISTRICT: San Angelo

AGTY: LS

SPGR:

ABSP:

DCL:

PV: 37.0

INRD:

MSS: 18.4

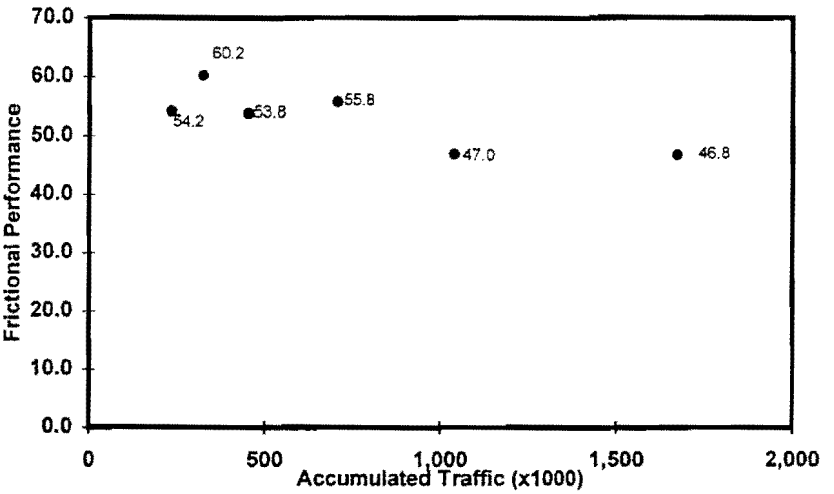
FRTH:

LA: 21.0

ADI:

TDT: 7.9

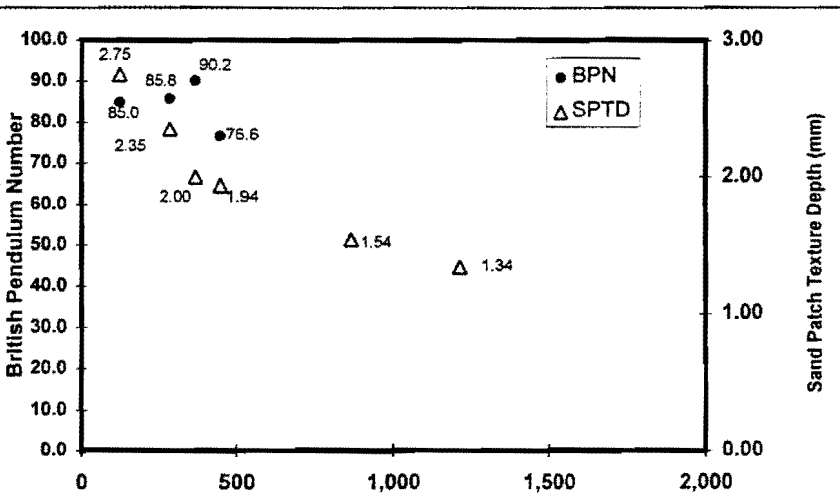
FN:



Test Date

May-90	Oct-90	May-91	Jan-92	May-93		Sep-95				

BP and SPTD:



Test Date

Feb-90	Nov-90	Mar-91	Jul-91	Mar-93	Jul-94					

Date of Const: 8/18/89

Date Covered: Sep-94

Reason Covered: Test section bad, surfaces around test section bad.

Producer: CSA Materials **SECTION STATUS:** CLOSED

Pit: Willeke

SECTION: SA19

DISTRICT: San Angelo

AGTY: LS

SPGR:

ABSP:

DCL:

PV: 37.0

INRD:

MSS: 18.9

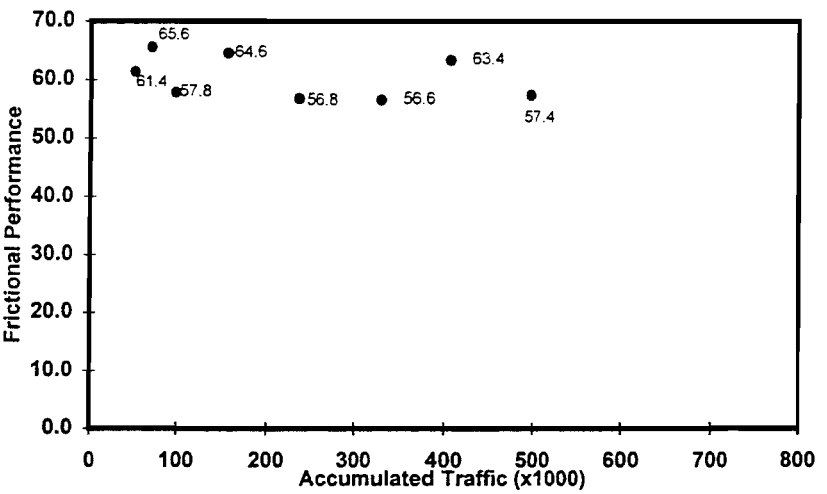
FRTH:

LA: 38.0

ADI:

TDT: 9.3

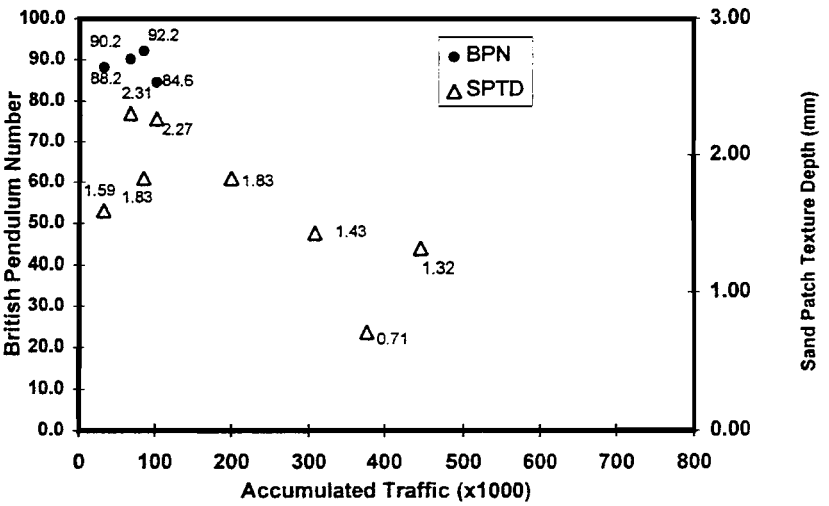
FN:



Test Date

May-90	Oct-90	May-91	Jan-92	May-93	Jul-94	Sep-95	Jan-97			

BP and SPTD:



Test Date

Feb-90	Nov-90	Mar-91	Jul-91	Mar-93	Jul-94	Jul-95	Aug-96			

Date of Const: 7/12/89

Date Covered:

Reason Covered: Since a coating was applied to this surface, it was deemed by the researchers to no

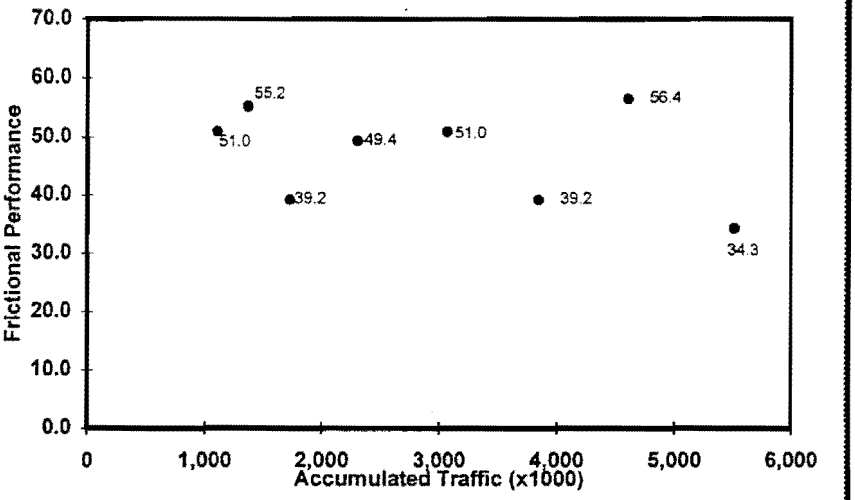
Producer: CSA Materials
Pit: Willeke

SECTION STATUS: CLOSED

SECTION: SA27
DISTRICT: San Angelo
AGTY: LS

SPGR:	2.6
ABSP:	1.7
DCL:	
PV:	37.0
INRD:	
MSS:	21.2
FRTH:	
LA:	31.0
ADI:	
TDT:	8.0

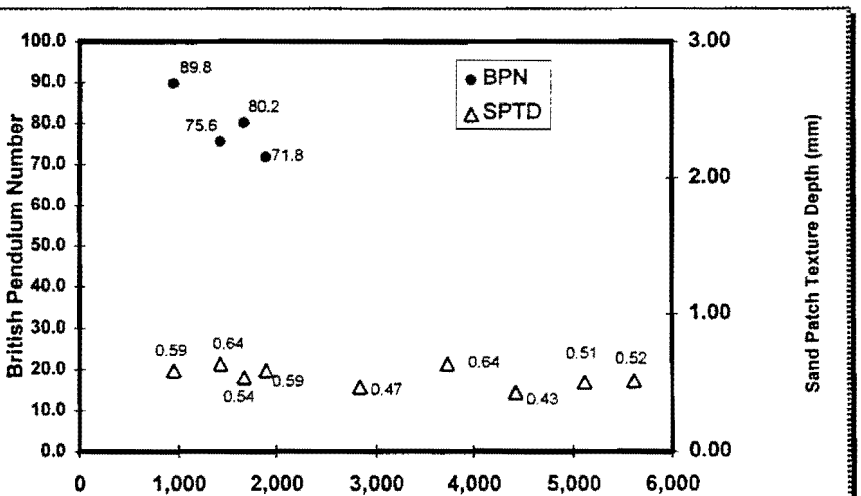
FN:



Test Date

May-90	Oct-90	May-91	Jan-92	May-93	Jul-94	Sep-95	Jan-97			

BP and SPTD:



Test Date

Feb-90	Nov-90	Mar-91	Jul-91	Mar-93	Jul-94	Jul-95	Aug-96	May-97		

Date of Const: 9/16/88

Date Covered: Sep-97

Reason Covered: Test section bad, surfaces around test section bad.

Producer: CSA Materials **SECTION STATUS:** OPEN

Pit: Willeke

SECTION: SA30

DISTRICT: San Angelo

AGTY: LS

SPGR:

ABSP:

DCL:

PV: 37.0

INRD:

MSS: 20.6

FRTH:

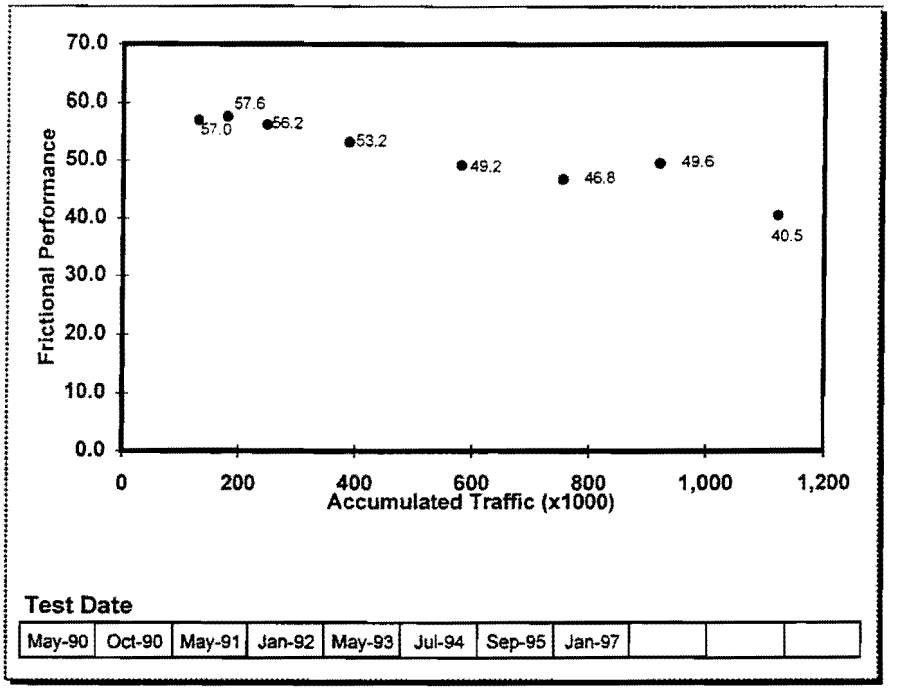
LA: 27.0

ADI:

TDT: 8.9

Date of Const: 7/13/89

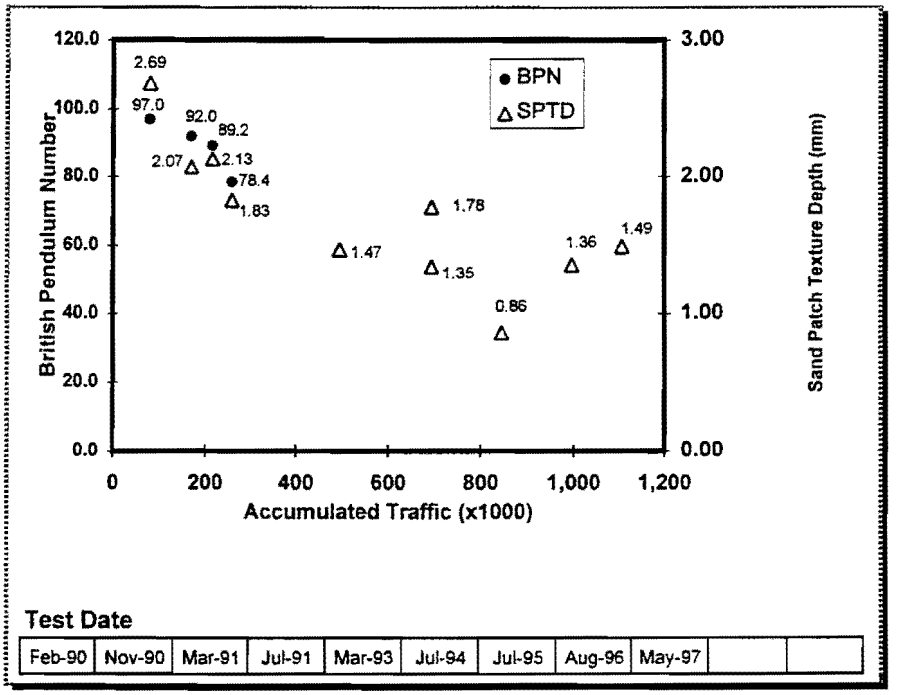
FN:



Test Date

May-90	Oct-90	May-91	Jan-92	May-93	Jul-94	Sep-95	Jan-97			

BP and SPTD:



Test Date

Feb-90	Nov-90	Mar-91	Jul-91	Mar-93	Jul-94	Jul-95	Aug-96	May-97		

Producer: Bandas Industries **SECTION STATUS:** OPEN

Pit: Nolanville

SECTION: W1

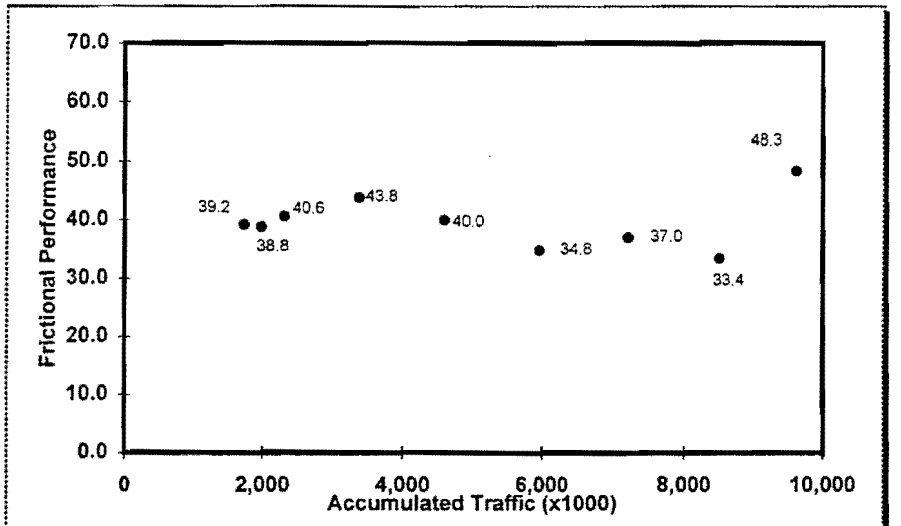
DISTRICT: Waco

AGTY: LS

SPGR:	2.4
ABSP:	4.1
DCL:	
PV:	34.0
INRD:	
MSS:	26.0
FRTH:	
LA:	39.0
ADI:	
TDT:	10.1

Date of Const: 5/13/88

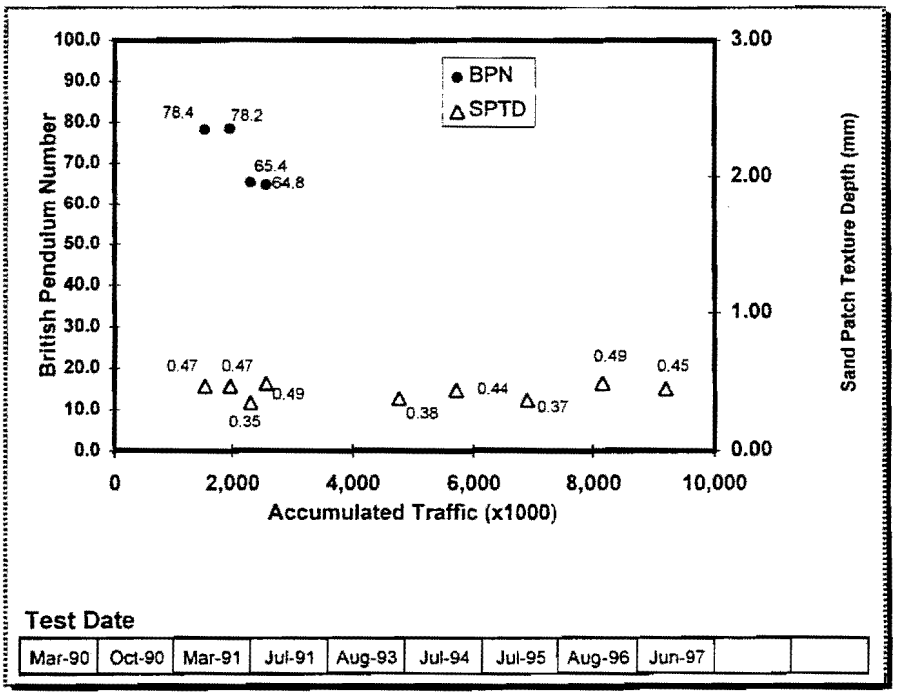
FN:



Test Date

Jun-90	Sep-90	Mar-91	Mar-92	Apr-93	Aug-94	Sep-95	Oct-96	Oct-97		

BP and SPTD:



Test Date

Mar-90	Oct-90	Mar-91	Jul-91	Aug-93	Jul-94	Jul-95	Aug-96	Jun-97		

Producer: Redland Worth Materials **SECTION STATUS:** OPEN

Pit: Ainsworth

SECTION: W2

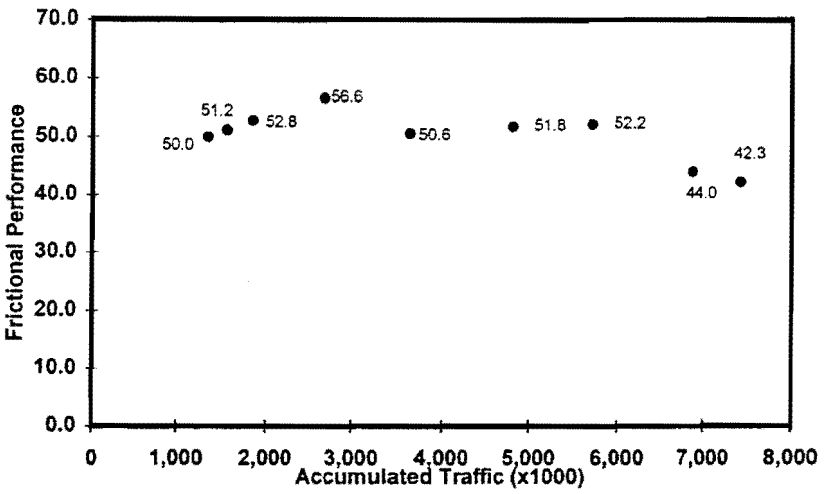
DISTRICT: Waco

AGTY: LS

SPGR:	2.4
ABSP:	3.6
DCL:	
PV:	40.0
INRD:	
MSS:	11.2
FRTH:	
LA:	30.0
ADI:	
TDT:	6.1

Date of Const: 6/20/88

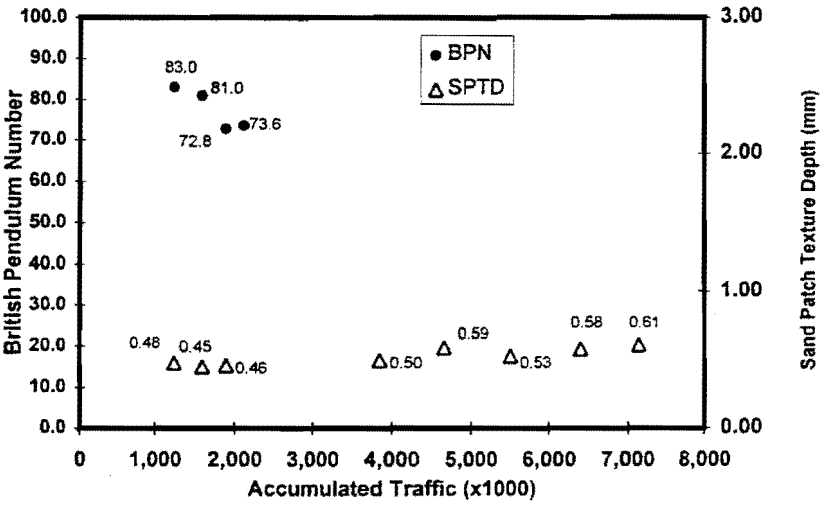
FN:



Test Date

Jun-90	Sep-90	Mar-91	Mar-92	Apr-93	Aug-94	Sep-95	Feb-97	Oct-97		

BP and SPTD:



Test Date

Apr-90	Oct-90	Mar-91	Jul-91	Aug-93	Jul-94	Jul-95	Aug-96	Jun-97		

Producer: Redland Worth Materials **SECTION STATUS:** OPEN

Pit: Ainsworth

SECTION: W3

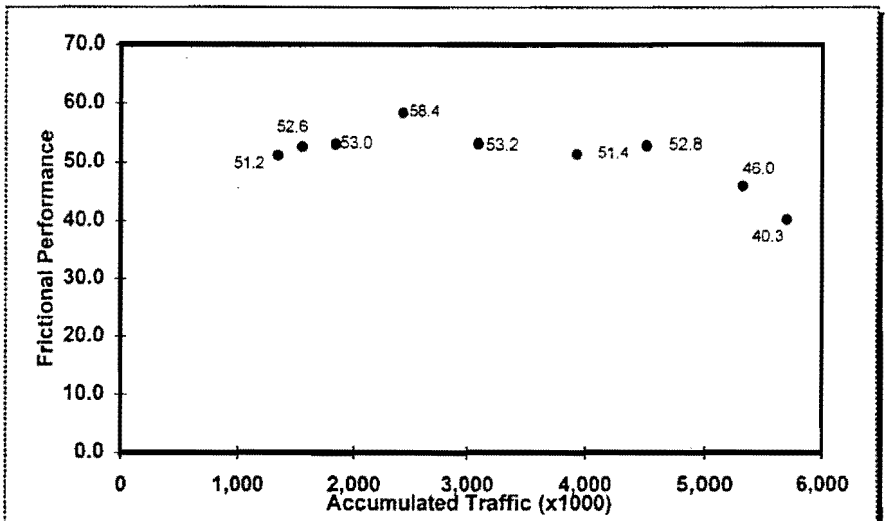
DISTRICT: Waco

AGTY: LS

SPGR:	2.4
ABSP:	3.6
DCL:	
PV:	40.0
INRD:	
MSS:	11.2
FRTH:	
LA:	30.0
ADI:	
TDT:	6.1

Date of Const: 6/20/88

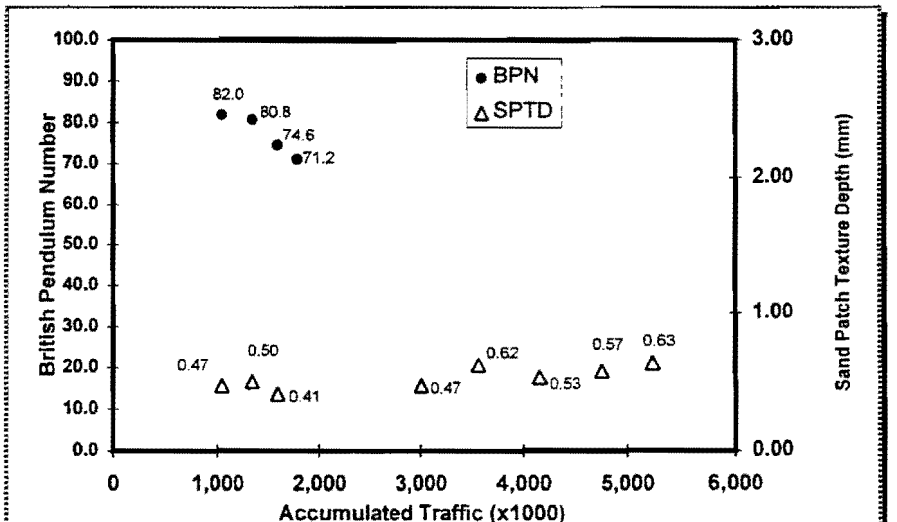
FN:



Test Date

Jun-90	Sep-90	Mar-91	Mar-92	Apr-93	Aug-94	Sep-95	Feb-97	Oct-97		

BP and SPTD:



Test Date

Apr-90	Oct-90	Mar-91	Jul-91	Aug-93	Jul-94	Jul-95	Aug-96	Jun-97		

Producer: Young Brothers **SECTION STATUS:** OPEN

Pit: Atkins

SECTION: W4

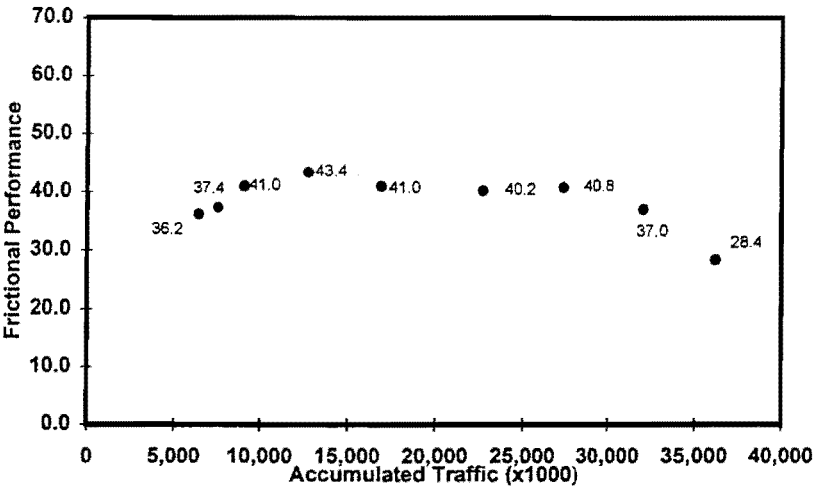
DISTRICT: Waco

AGTY: LS

SPGR:	2.5
ABSP:	3.3
DCL:	
PV:	46.0
INRD:	
MSS:	23.6
FRTH:	
LA:	34.0
ADI:	
TDT:	6.0

Date of Const: 7/26/88

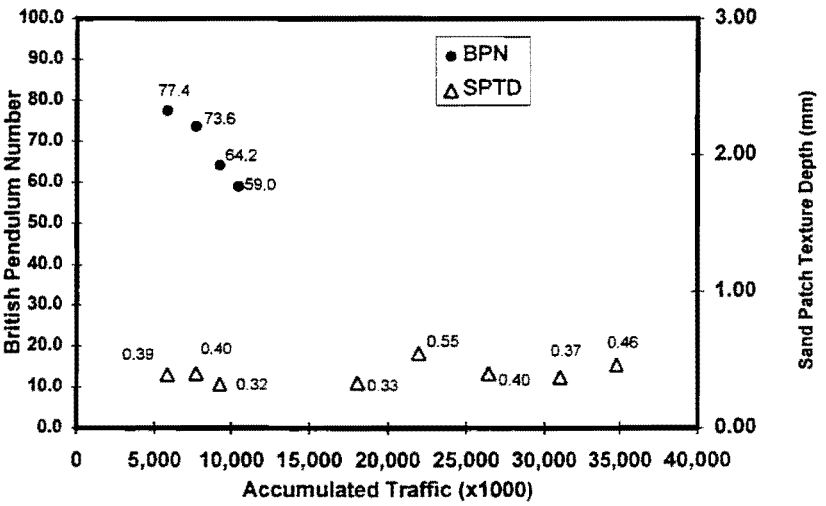
FN:



Test Date

Jun-90	Sep-90	Mar-91	Mar-92	Apr-93	Aug-94	Sep-95	Oct-96	Oct-97		

BP and SPTD:



Test Date

Apr-90	Oct-90	Mar-91	Jul-91	Aug-93	Jul-94	Jul-95	Aug-96	Jun-97		

Producer: Odell Geer **SECTION STATUS:** CLOSED

Pit: Prairie Dell

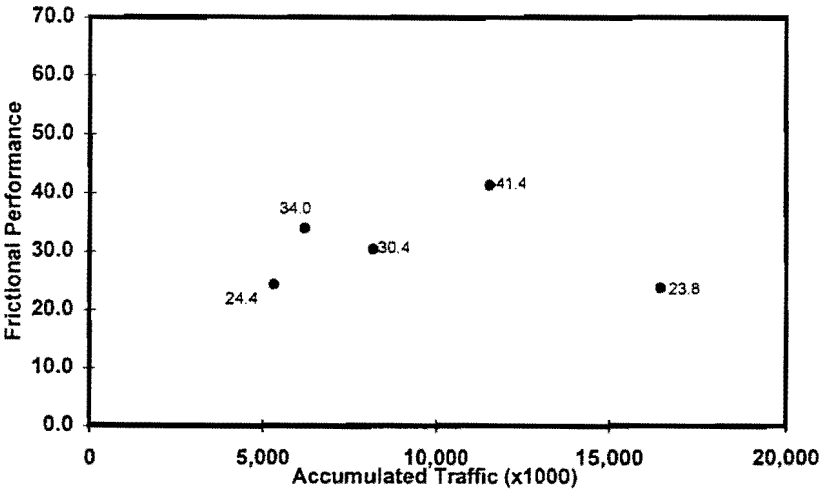
SECTION: W5

DISTRICT: Waco

AGTY: LS

SPGR:	2.5
ABSP:	2.9
DCL:	
PV:	30.0
INRD:	
MSS:	11.0
FRTH:	
LA:	27.0
ADI:	
TDT:	6.4

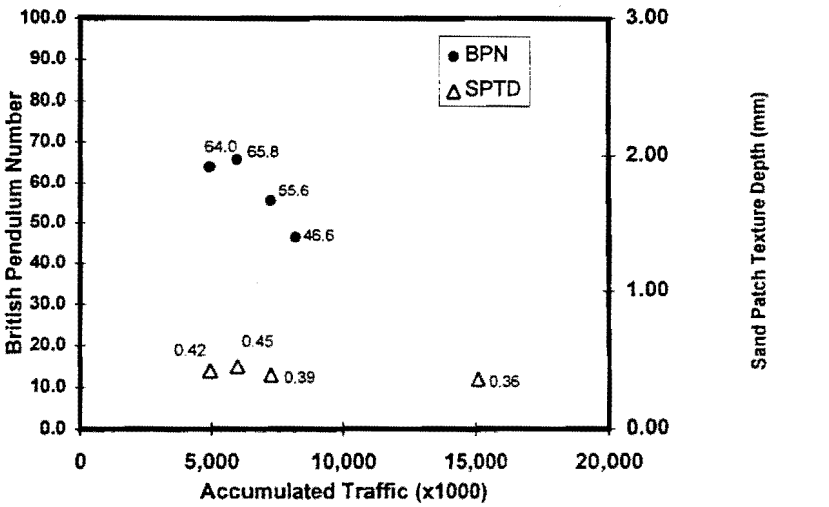
FN:



Test Date

Jun-90	Sep-90	Jul-91	Mar-92	Aug-93						

BP and SPTD:



Test Date

Apr-90	Oct-90	Mar-91	Jul-91	Aug-93						

Date of Const: 8/9/88

Date Covered: 95-Slurry Seal

Reason Covered: Upheaval of roadway or bulging section due to small fault line in area. Surface cracks

Producer: Bandas Industries **SECTION STATUS:** OPEN

Pit: Nolanville

SECTION: W6

DISTRICT: Waco

AGTY: LS

SPGR: 2.4

ABSP: 4.1

DCL:

PV: 34.0

INRD:

MSS: 26.0

FRTH:

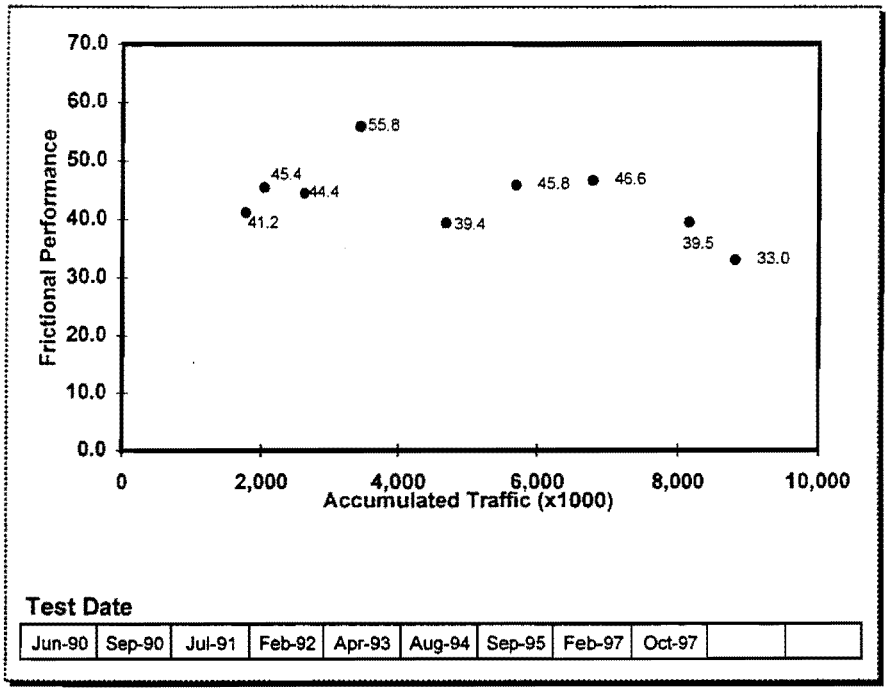
LA: 39.0

ADI:

TDT: 10.1

Date of Const: 5/13/88

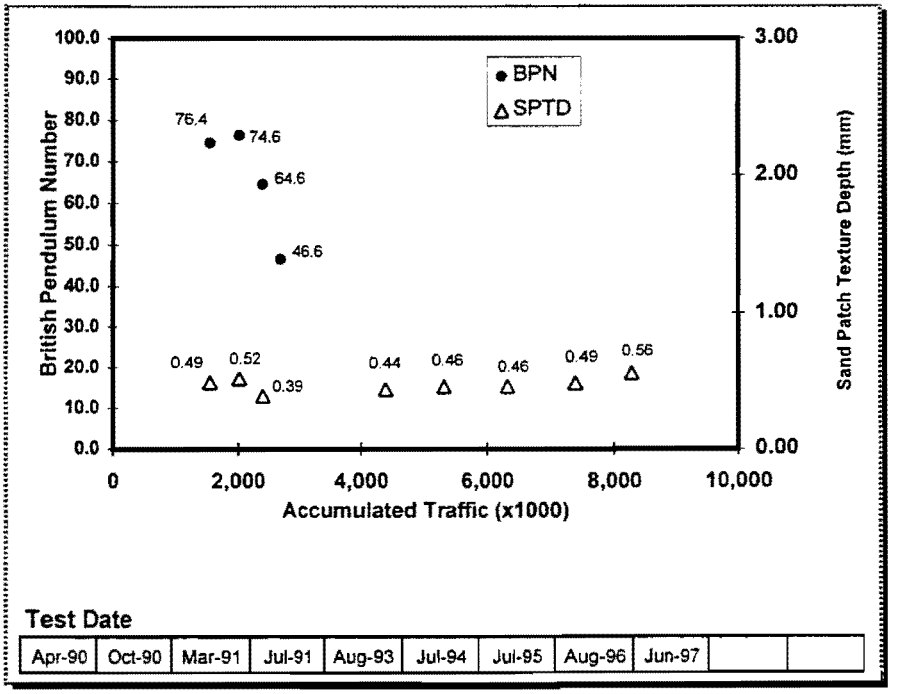
FN:



Test Date

Jun-90	Sep-90	Jul-91	Feb-92	Apr-93	Aug-94	Sep-95	Feb-97	Oct-97		

BP and SPTD:



Test Date

Apr-90	Oct-90	Mar-91	Jul-91	Aug-93	Jul-94	Jul-95	Aug-96	Jun-97		

Producer: Delta Capitol Aggregate **SECTION STATUS:** CLOSED

Pit: Brownlee

SECTION: W7

DISTRICT: Waco

AGTY: SS

SPGR: 2.6

ABSP: 2.7

DCL:

PV: 43.0

INRD:

MSS: 18.7

FRTH:

LA: 21.0

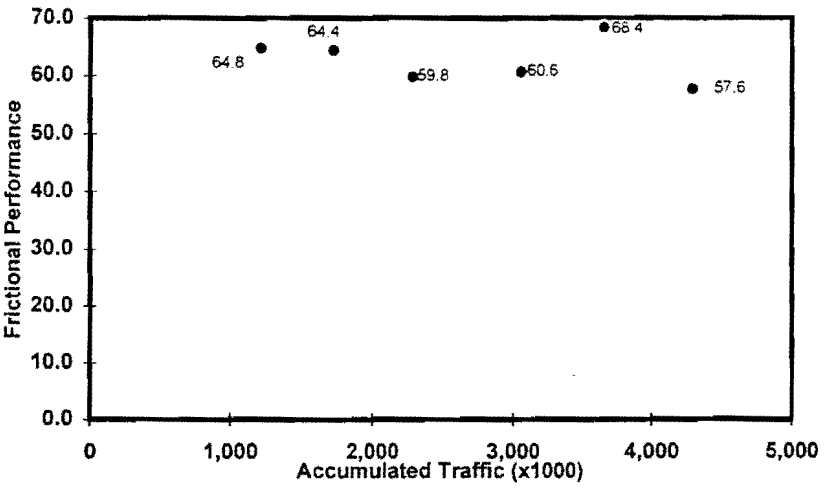
ADI:

TDT: 22.9

Date of Const: 11/3/88

Date Covered: 5/11/97

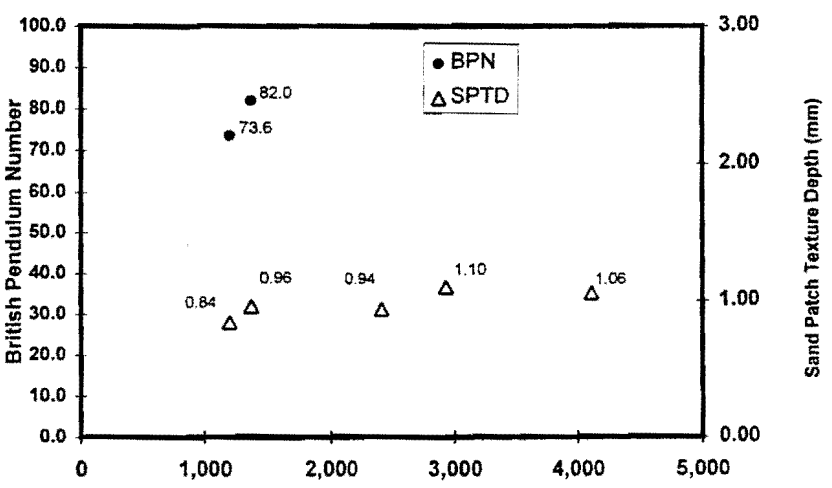
FN:



Test Date

Mar-91	Mar-92	Apr-93	Aug-94	Sep-95	Oct-96					

BP and SPTD:



Test Date

Mar-91	Jul-91	Aug-93	Jul-94	Aug-96						

Reason Covered: Surface had excessive cracking w/some stripping noticed between base and surface

APPENDIX

Sec.	Set #	D-M-Yr	Friction Value						Cum Day	Traffic /day	Cumulative Traffic	FT	CUFT	PP	CUPP	Distribution Factor	CUTR*DF /1,000
			1	2	3	4	5	Avg									
A1	1	6/4/90	46	44	46	44	44	44.8			319,500		54		16.71	0.35	112
A1	2	10/17/90	48	50	50	47	48	48.6	135		441,000		54		29.81	0.35	154
A1	3	5/3/91	43	39	40	45	45	42.4	198		619,200		96		34.66	0.35	217
A1	4	1/15/92	45	44	45	46	44	44.8	257		985,200		133		69.50	0.35	345
A1	5	4/6/93	34	35	34	35	34	34.4	447	1,000	1,432,200		188		97.53	0.35	501
A1	6	7/18/94	25	24	27	26	24	25.2	468	1,000	1,900,200	66	254	31.9	129.43	0.35	665
A1	7	9/13/95	38	32	34	34	30	33.6	422	1,100	2,364,400	42	296	18.6	148.03	0.35	828
A1	8	1/28/97	34	35	33	33		33.8	503	1,100	2,917,700	47	343	22.6	170.63	0.35	1,021
A1	9	7/3/97	40	38	37	38	39	38.4	156	1,100	3,089,300					0.35	1,081
A2	1	6/4/90	36	37	35	31	32	34.2			1,649,700		54		12.70	0.299	493
A2	2	10/17/90	33	31	31	36	32	32.6	135		2,338,200		54		25.80	0.299	699
A2	3	5/3/91	32	28	30	34	31	31.0	198		3,348,000		96		30.65	0.299	1,001
A2	4	1/15/92	31	29	28	33	31	30.4	257		5,361,000		133		65.99	0.299	1,603
A2	5	4/6/93	24	27	26	26	26	25.8	447	5,500	7,819,500		188		94.02	0.299	2,338
A2	6	7/18/94	20	20	20	23	22	21.0	468	5,400	10,346,700	66	254	31.9	125.92	0.299	3,094
A2	7	9/13/95	33	35	38	33	42	36.2	422	5,400	12,625,500	42	296	18.6	144.52	0.299	3,775
A2	8	1/28/97	28	24	23	23	23	24.2	503	5,400	15,341,700	47	343	22.6	167.12	0.299	4,587
A2	9	7/3/97	28	31	32	33	30	30.8	156	5,400	16,184,100					0.299	4,839
A3	6	7/18/94	23	24	27	23	26	24.6								0.299	0
A3	7	9/13/95	33	28	30	32	33	31.2	422			73	73			0.299	0
A4	1	6/8/90	33	34	33	31	30	32.2			9,267,350		43		28.84	0.299	2,771
A4	2	10/18/90	28	32	25	22	31	27.6	132		11,029,550		43		44.32	0.299	3,298
A4	3	4/29/91	30	28	26	28	28	28.0	193		13,606,100		75		54.28	0.299	4,068
A4	4	1/20/92	33	32	31	34	31	32.2	266		18,473,900		101		89.80	0.299	5,524
A4	5	4/5/93	24	25	25	25	25	24.8	441	13,300	24,339,200		139		122.71	0.299	7,277
A4	6	7/18/94	24	22	23	23	23	23.0	469	14,600	31,186,600	48	187	33.8	156.48	0.299	9,325
A4	7	9/13/95	34	32	34	37	32	33.8	422	15,000	37,516,600	37	224	34.1	190.58	0.299	11,217
A4	8	10/14/96	29	28	27	29	29	28.4	397	15,000	43,471,600	34	258	28.0	218.58	0.299	12,998
A5	1	6/8/90	31	33	34	33	31	32.4			8,529,350		43		20.09	0.299	2,550
A5	2	10/18/90	30	30	29	30	29	29.6	132		10,291,550		43		35.57	0.299	3,077
A5	3	4/29/91	27	27	28	28	29	27.8	193		12,868,100		75		45.53	0.299	3,848
A5	4	1/20/92	32	33	32	32	32	32.2	266		18,473,900		101		81.05	0.299	5,524
A5	5	4/5/93	24	25	25	25	24	24.6	441	13,300	24,339,200		139		113.96	0.299	7,277
A5	6	7/18/94	23	22	20	22	21	21.6	469	14,600	31,186,600	48	187	33.8	147.73	0.299	9,325
A5	7	9/13/95	32	28	30	34	33	31.4	422	15,000	37,516,600	37	224	34.1	181.83	0.299	11,217
A5	8	10/14/96	28	27	29	31	30	29.0	397	15,000	43,471,600	34	258	28.0	209.83	0.299	12,998
AUS1	2	9/25/90	55	58	58	56	60	57.4			34,650				4.11	0.5	17
AUS1	3	7/3/91	39	43	42	38	40	40.4	281		212,310		25		36.22	0.5	106
AUS1	4	2/19/92	48	50	49	50	50	49.4	231		464,850		38		68.18	0.5	232
AUS1	5	9/1/93	34	34	35	33	33	33.8	560	690	851,250		58		110.43	0.5	426
AUS1	6	8/23/94	42	45	47	44	43	44.2	356	630	1,075,530	38	96	26.3	136.73	0.5	538
AUS1	7	10/2/95	37	33	36	34	39	35.8	405	670	1,346,880	21	117	54.5	191.23	0.5	673
AUS1	8	7/15/96	36	39	42	40	40	39.4	287	670	1,539,170	8	125	14.3	205.53	0.5	770
AUS2	2	9/25/90	67	64	66	67	64	65.6			723,900				2.09	0.165	119
AUS2	3	7/3/91	58	60	59	60	59	59.2	281		4,305,300		11		31.14	0.165	710
AUS2	4	3/5/92	65	67	65	66	69	66.4	246		12,357,300		15		62.51	0.165	2,039
AUS2	5	9/1/93	54	56	52	56	55	54.6	545	22,000	24,347,300		21		106.62	0.165	4,017
AUS2	6	8/23/94	61	62	63	63	64	62.6	356	23,000	32,535,300	14	35	24.5	131.16	0.165	5,368
AUS2	7	10/5/95	60	62	63	64	65	62.8	408	27,000	43,551,300	4	39	54.5	185.66	0.165	7,186
AUS2	8	7/15/96	44	41	49	41	43	43.6	284	27,000	51,219,300	8	47	14.3	199.96	0.165	8,451
AUS2	9	5/12/97	62	63	64	64	64	63.4	301	27,000	59,346,300					0.165	9,792
AUS3	2	9/25/90	43	39	37	39	42	40.0			3,103,000				2.09	0.165	512
AUS3	3	7/3/91	37	38	38	37	39	37.8	281		18,190,000		11		31.14	0.165	3,001
AUS3	4	2/19/92	39	38	42	41	40	40.0	231		37,222,000		15		62.51	0.165	6,142
AUS3	5	9/1/93	30	28	31	30	34	30.6	560	52,000	66,342,000		27		109.08	0.165	10,946
AUS3	6	8/23/94	34	31	35	35	35	34.0	356	49,000	83,786,000	24	51	28.6	137.64	0.165	13,825
AUS3	7	10/5/95	35	34	35	40	35	35.8	408	58,000	107,450,000	6	57	54.5	192.14	0.165	17,729
AUS3	8	7/15/96	44	45	45	43		44.3	284	58,000	123,922,000	8	65	14.3	206.44	0.165	20,447
AUS3	9	5/12/97	38	41	39	41	43	40.4	301	58,000	141,380,000					0.165	23,328
AUS4	3	7/3/91	60	60	61	59	60	60.0			35,861,000		11		49.51	0.5	17,931
AUS4	4	3/5/92	66	66	69	67	68	67.2	246		51,965,000		15		80.88	0.5	25,983
AUS4	5	9/16/93	63	63	60	64	64	62.8	560	44,000	76,605,000		21		126.93	0.5	38,303
AUS4	6	8/23/94	67	65	64	67	64	65.4	341	49,000	93,314,000	14	35	24.3	151.20	0.5	46,657
AUS4	7	10/5/95	68	66	72	66	67	67.8	408	35,000	107,594,000	4	39	54.5	205.70	0.5	53,797
AUS4	8	7/15/96	76	78	75	70	69	73.6	284	35,000	117,534,000	8	47	14.3	220.00	0.5	58,767
C1	1	5/24/90	53	53	53	56	59	54.8			25,355,800		32		179.46	0.298	7,556
C1	2	11/15/90	57	59	59	53	55	56.6	175		27,595,800		32		192.44	0.298	8,224

Sec.	Set #	D-M-Yr	Friction Value						Cum Day	Traffic /day	Cumulative Traffic	FT	CUFT	PP	CUPP	Distribution Factor	CUTR*DF /1,000
			1	2	3	4	5	Avg.									
C1	3	3/13/91	49	47	53	51	49	49.8	118		29,106,200		37		198.86	0.298	8,674
C2	1	5/24/90	50	54	51	52	59	53.2			2,548,010		32		173.96	0.5	1,274
C2	2	11/15/90	45	56	62	58	47	53.6	175		2,765,010		32		186.94	0.5	1,383
C2	3	3/13/91	48	50	48	54	49	49.8	118		2,911,330		37		193.36	0.5	1,456
C3	1	5/24/90	29	27	32	31	32	30.2			5,264,640		15		42.85	0.3	1,579
C3	2	11/15/90	34	30	33	32	41	34.0	175		6,762,640		15		50.18	0.3	2,029
C3	3	3/13/91	28	26	29	26	28	27.4	118		7,772,720		20		56.13	0.3	2,332
C3	4	2/4/92	42	43	44	46	42	43.4	328		10,627,520		21		105.75	0.3	3,188
C3	5	6/1/93	30	32	33	33	32	32.0	483	7,800	14,394,920		21		147.17	0.3	4,318
C3	6	8/15/94	24	26	28	25	27	26.0	440	10,900	19,190,920	6	27	37.3	184.43	0.3	5,757
C3	7	9/17/95	37	36	37	36	34	36.0	398	11,300	23,688,320	0	27	44.6	229.03	0.3	7,106
C3	8	2/5/97	28	26	27	28		27.3	507	11,300	29,417,420	3	30	35.2	264.23	0.3	8,825
C3	9	10/1/97	26	27	29	30	30	28.4	238	11,300	32,106,820					0.3	9,632
C4	2	11/15/90	62	60	60	63	62	61.4			650,560				4.15	0.304	198
C4	3	3/13/91	52	50	48	53	52	51.0	118		1,660,640		9		14.58	0.304	505
C4	4	2/3/92	35	36	40	32	46	37.8	327		7,350,400		12		54.62	0.304	2,235
C4	5	6/1/93							484							0.304	0
C4	6	8/15/94	60	60	60	63	62	61.0	440							0.304	0
C5	2	11/15/90	59	58	59	61	60	59.4			34,020					0.503	17
C5	3	3/13/91	65	62	62	62	63	62.8	118		604,500		5		6.42	0.503	304
L1	1	6/5/90	48	48	48	47	48	47.8			1,050,170		146		27.89	0.5	525
L1	2	10/17/90	48	48	48	50	50	48.8	134		1,260,550		146		36.04	0.5	630
L1	3	6/11/91	43	43	44	39	43	42.4	237		1,632,640		217		42.18	0.5	816
L1	4	1/8/92	48	50	50	50	51	49.8	211		1,875,350		251		63.49	0.5	938
L1	5	5/20/93							498	930	2,338,490		327		85.88	0.5	1,169
L1	6	7/18/94	46	48	47	43	46	46.0	424	1,050	2,783,690	95	422	14.9	100.77	0.5	1,392
L1	7	9/12/95	55	57	54	58	59	56.6	421	1,050	3,225,740	67	489			0.5	1,613
L2	1	6/5/90	44	42	45	43	44	43.6			5,599,540		147		32.64	0.301	1,685
L2	2	10/17/90	51	49	50	49	55	50.8	134		6,616,600		147		40.79	0.301	1,992
L2	3	6/11/91	41	40	42	46	44	42.6	237		8,415,430		218		46.93	0.301	2,533
L2	4	1/8/92	43	49	50	47	47	47.2	211		11,050,630		252		68.24	0.301	3,326
L2	5	5/20/93	42	42	40	45	41	42.0	498	7,200	14,636,230		327		90.63	0.301	4,406
L2	6	7/18/94	37	38	39	37	38	37.8	424	7,500	17,816,230	95	422	14.9	105.52	0.301	5,363
L2	7	9/12/95	46	48	49	49	49	48.2	421	7,800	21,100,030	67	489	17.5	123.02	0.301	6,351
L2	8	10/17/96	39	43	36	40	40	39.6	401	7,800	24,227,830	55	544	18.6	141.62	0.301	7,293
L2	9	5/13/97	45	46	43	46	42	44.4	208	7,800	25,850,230					0.301	7,781
L3	1	6/5/90	47	49	49	48	48	48.2			6,782,540		228		35.30	0.299	2,028
L3	2	10/17/90	49	50	51	48	50	49.6	134		7,799,600		228		43.45	0.299	2,332
L3	3	6/11/91	39	45	45	45	44	43.6	237		9,598,430		299		50.36	0.299	2,870
L3	4	1/8/92	51	47	49	52	51	50.0	211		11,050,630		333		70.90	0.299	3,304
L3	5	5/20/93	48	49	50	48	50	49.0	498	7,200	14,636,230		408		93.29	0.299	4,376
L3	6	7/18/94	45	46	42	44	44	44.2	424	7,500	17,816,230	95	503	14.9	108.18	0.299	5,327
L3	7	9/12/95	53	56	47	54	55	53.0	421	7,800	21,100,030	67	570	17.5	125.68	0.299	6,309
L3	8	10/17/96	37	42	41	37	44	40.2	401	7,800	24,227,830	55	625	18.6	144.28	0.299	7,244
L3	9	5/13/97	40	40	41	39	41	40.2	208	7,800	25,850,230					0.299	7,729
L4	1	6/5/90	61	59	61	64	62	61.4			41,580		89		13.33	0.499	21
L4	2	10/17/90	61	64	56	61	60	60.4	134		58,330		89		21.48	0.499	29
L4	3	6/11/91	58	57	57	59	57	57.6	237		87,955		160		27.62	0.499	44
L4	4	1/8/92	60	60	60	59	60	59.8	211		133,705		194		49.93	0.499	67
L4	5	5/20/93	51	50	54	53	52	52.0	498	125	195,955		269		72.32	0.499	98
L4	6	7/18/94	49	48	50	49	49	49.0	424	125	248,955	95	364	14.9	87.21	0.499	124
L4	7	9/12/95	53	57	51	52	55	53.6	421	125	301,580	67	431	17.5	104.71	0.499	150
L4	8	10/17/96	41	42	48	48	44	44.6	401	125	351,705	55	486	18.6	123.31	0.499	176
L4	9	5/13/97	50	51	51	53	51	51.2	208	125	377,705					0.499	188
L5	1	6/5/90	41	41	42	42	42	41.6			751,360		82		18.66	0.5	376
L5	2	10/17/90	43	40	40	43	42	41.6	134		1,047,500		84		25.76	0.5	524
L5	3	6/12/91	42	37	42	38	44	40.6	238		1,573,480		167		31.59	0.5	787
L5	4	1/8/92	43	33	37	38	32	36.6	210		2,708,080		200		56.30	0.5	1,354
L5	5	5/24/93	32	30	33	32	34	32.2	502	3,100	4,264,280		277		77.03	0.5	2,132
L5	6	7/18/94	25	24	26	25	25	25.0	420	3,100	5,566,280	108	385	18.8	95.84	0.5	2,783
L5	7	9/12/95	35	29	35	34	31	32.8	421	2,800	6,745,080	73	458	23.3	119.14	0.5	3,373
L5	8	10/17/96	22	24	25	31	27	25.8	401	2,800	7,867,880	57	515	26.8	145.94	0.5	3,934
L6	1	6/5/90	45	48	47	43	39	44.4			4,201,720		89		18.31	0.303	1,273
L6	2	10/17/90	48	48	46	47	48	47.4	134		5,752,100		89		26.46	0.303	1,743
L6	3	6/12/91	47	45	44	47	46	45.8	238		8,505,760		160		32.60	0.303	2,577
L6	4	1/8/92	44	43	43	43	44	43.4	210		12,348,760		194		53.91	0.303	3,742

Sec.	Set #	D-M-Yr	Friction Value 1	2	3	4	5	Avg.	Cum Day	Traffic /day	Cumulative Traffic	FT	CUFT	PP	CUPP	Distribution Factor	CUTR*DF /1,000
L6	5	5/24/93	48	46	45	47	48	46.8	502	10,500	17,619,760		269		76.30	0.303	5,339
L6	6	7/18/94	42	43	42	43	42	42.4	420	11,000	22,239,760	95	364	14.9	91.17	0.303	6,739
L6	7	9/12/95	50	49	52	55	50	51.2	421	15,700	28,849,460	67	431	17.5	108.67	0.303	8,741
L6	8	10/16/96	44	48	44	47	44	45.4	400	15,700	35,129,460	55	486	18.6	127.27	0.303	10,644
L7	3	6/12/91	58	60	56	57	54	57.0			1,975,050		71		9.29	0.303	598
L7	4	1/8/92	60	53	56	58	60	57.4	210		4,171,050		96		27.14	0.303	1,264
L7	5	5/25/93	55	57	53	54	50	53.8	503	6,000	7,189,050		171		53.52	0.303	2,178
L7	6	7/18/94	50	40	50	51	51	48.4	419	6,900	10,080,150	95	266	14.9	68.39	0.303	3,054
L8	3	6/12/91	58	55	56	57	59	57.0			1,975,050		71		9.29	0.297	587
L8	4	1/8/92	57	59	56	56	57	57.0	210		4,171,050		96		27.14	0.297	1,239
L8	5	5/25/93	56	52	56	52	54	54.0	503	6,000	7,189,050		171		53.52	0.297	2,135
L8	6	7/18/94	54	49	53	51	54	52.2	419	6,900	10,080,150	95	266	14.9	68.39	0.297	2,994
OD1	1	6/7/90	35	35	37	45	43	39.0			69,130		66		10.81	0.299	21
OD1	2	10/12/90	37	38	36	41	40	38.4	127		157,480		66		20.04	0.299	47
OD1	3	6/4/91	36	31	35	35	38	35.0	235		230,330		112		27.29	0.299	69
OD1	4	2/5/92	53	46	49	51	51	50.0	246		343,790		166		59.49	0.299	103
OD1	5	5/20/93	38	48	47	39	53	45.0	470	310	489,490		224		80.87	0.299	146
OD1	6	7/18/94							424	310	620,930	75	299	19.0	99.88	0.299	186
OD1	7	9/14/95	33	41	38	40	46	39.6	423	310	752,060	45	344	18.6	118.48	0.299	225
OD1	8	1/28/97	44	35	35	33	34	36.2	502	310	907,680	47	67	22.6	26.95	0.299	271
OD1	9	9/9/97	27	28	29	43	33	32.0	224	310	977,120					0.299	292
OD2	1	6/7/90	47	49	51	53	45	49.0			1,321,600		20		4.35	0.3	396
OD2	2	10/12/90	44	46	42	45	50	45.4	127		2,744,000		20		11.05	0.3	823
OD2	3	6/4/91	45	46	48	50	47	47.2	235		5,824,000		75		18.06	0.3	1,747
OD2	4	2/5/92	52	51	54	57	53	53.4	246		9,593,800		129		50.26	0.3	2,878
OD2	5	5/25/93	47	54	50	56	53	52.0	475	10,300	14,486,300		187		68.61	0.3	4,346
OD2	6	7/18/94	22	25	26	25	24	24.4	419	11,000	19,095,300	75	262	17.9	86.48	0.3	5,729
OD2	7	9/14/95	38	37	41	41	37	38.8	423	15,700	25,736,400	45	307			0.3	7,721
OD3	1	6/7/90	44	44	44	40	41	42.6			11,507,300		258		69.99	0.148	1,703
OD3	2	10/12/90	24	28	34	26	34	29.2	127		12,510,600		258		76.15	0.148	1,852
OD3	3	6/4/91	20	26	26	33	28	26.6	235		14,367,100		309		82.88	0.148	2,126
OD3	4	2/5/92	39	39	40	39	40	39.4	246		17,661,100		343		106.59	0.148	2,614
OD3	5	4/6/93	30	27	22	31	31	28.2	426	9,000	21,495,100		392		124.46	0.148	3,181
SA1	1	5/29/90	50	50	52	53	55	52.0			749,700		57		20.16	0.503	377
SA1	2	10/18/90	56	56	56	54	56	55.6	142		1,076,300		57		33.69	0.503	541
SA1	3	5/1/91	42	43	45	43	46	43.8	195		1,524,800		91		38.04	0.503	767
SA1	4	1/14/92	53	55	45	55	54	52.4	258		2,439,800		114		78.40	0.503	1,227
SA1	5	5/26/93	46	44	45	48	42	45.0	498	2,500	3,684,800		153		111.24	0.503	1,853
SA1	6	7/18/94	39	32	36	35	39	36.2	418	2,400	4,688,000	68	221	22.6	133.82	0.503	2,358
SA1	7	9/14/95	45	46	47	42	47	45.4	423	2,400	5,703,200	35	256	29.5	163.32	0.503	2,869
SA1	8	1/29/97	37	31	41	35		36.0	503	2,400	6,910,400	47	303	25.7	189.02	0.503	3,476
SA1	9	9/9/97	27	28	33	28		29.0	223	2,400	7,445,600					0.503	3,745
SA4	1	5/30/90	53	53	51	52	49	51.6			789,500		52		26.66	0.5	395
SA4	2	10/8/90	48	42	40	49	42	44.2	131		1,058,050		52		43.26	0.5	529
SA4	3	6/6/91	45	40	48	49	32	42.8	241		1,656,650		107		56.61	0.5	828
SA4	4	1/16/92	50	45	25	44	28	38.4	596		2,352,050		143		84.62	0.5	1,176
SA4	5	5/26/93	40	27	40	42	40	37.8	496	1,900	3,294,450		197		110.27	0.5	1,647
SA4	6	7/18/94	14	11	14	12	11	12.4	418	2,000	4,130,450	68	265	22.7	132.99	0.5	2,065
SA6	1	5/31/90	52	51	51	52	51	51.4			830,400		49		19.33	0.5	415
SA6	2	10/18/90	47	51	50	47	52	49.4	140		1,166,400		49		33.15	0.5	583
SA6	3	5/2/91	39	44	42	43	43	42.2	196		1,636,800		92		39.30	0.5	818
SA6	4	1/15/92	47	49	47	52	48	48.6	258		2,478,600		111		68.99	0.5	1,239
SA6	5	5/26/93	43	41	42	45	39	42.0	497	2,300	3,621,700		151		90.02	0.5	1,811
SA6	6	7/18/94	34	33	32	36	33	33.6	418	2,700	4,750,300	43	194	17.9	107.88	0.5	2,375
SA6	7	9/16/95	50	46	41	46	51	46.8	425	2,400	5,770,300	37	231	20.6	128.48	0.5	2,885
SA6	8	1/29/97	41	40	41	39		40.3	501	2,400	6,972,700	47	278	23.0	151.48	0.5	3,486
SA16	1	5/29/90	54	57	54	52	53	54.0			750,600		74		16.60	0.5	375
SA16	2	10/12/90	54	51	54	55	52	53.2	136		995,400		74		30.87	0.5	498
SA16	3	5/2/91	51	44	54	51	50	50.0	202		1,359,000		127		37.22	0.5	680
SA16	4	1/15/92	52	47	52	51	50	50.4	258		2,091,000		158		51.65	0.5	1,046
SA16	5	5/25/93	50	47	48	50	44	47.8	496	2,000	3,083,000		232		74.46	0.5	1,542
SA16	6	7/18/94	29	24	32	28	28	28.2	419	2,300	4,046,700	85	317	17.1	91.53	0.5	2,023
SA16	7	9/14/95	52	53	47	47	48	49.4	423	2,300	5,019,600	64	381	16.9	108.43	0.5	2,510
SA16	8	1/28/97	41	37	40	42		40.0	502	2,300	6,174,200	56	437	16.6	125.03	0.5	3,087
SA16	9	9/9/97	47	42	40	36	39	40.8	224	2,300	6,689,400					0.5	3,345

Sec.	Set #	D-M-Yr	Friction Value						Cum Day	Traffic /day	Cumulative Traffic	FT	CUFT	PP	CUPP	Distribution Factor	CUTR*DF /1,000
			1	2	3	4	5	Avg.									
SA17	1	5/29/90	54	50	55	57	55	54.2			474,500		62		16.10	0.5	237
SA17	2	10/18/90	60	61	61	59	60	60.2	142		659,100		64		31.65	0.5	330
SA17	3	5/1/91	51	57	53	52	56	53.8	195		912,600		118		37.42	0.5	456
SA17	4	1/14/92	55	56	56	55	57	55.8	258		1,406,700		143		71.32	0.5	703
SA17	5	5/26/93	48	47	46	46	48	47.0	498	1,350	2,079,000		182		99.40	0.5	1,040
SA17	6	7/18/94							418	1,450	2,685,100	70	252	21.4	120.79	0.5	1,343
SA17	7	9/14/95	46	49	45	43	51	46.8	423	1,550	3,340,750	53	305	28.4	149.19	0.5	1,670
SA19	1	5/30/90	62	59	59	64	63	61.4			102,200		43		20.30	0.5	51
SA19	2	10/19/90	64	64	67	65	68	65.6	142		141,960		44		16.10	0.5	71
SA19	3	5/2/91	55	56	59	62	57	57.8	195		196,560		86		46.56	0.5	98
SA19	4	1/14/92	61	69	66	63	64	64.6	257		313,680		89		79.94	0.5	157
SA19	5	5/26/93	56	56	56	57	59	56.8	498	320	473,040		129		100.97	0.5	237
SA19	6	7/18/94	56	56	55	57	59	56.6	418	450	661,140	61	190	28.5	129.51	0.5	331
SA19	7	9/14/95	64	63	64	65	61	63.4	423	360	813,420	37	227	33.9	163.41	0.5	407
SA19	8	1/29/97	56	58	59	56	58	57.4	503	360	994,500	53	280	29.2	192.61	0.5	497
SA27	1	5/31/90	50	50	48	50	57	51.0			2,217,050		98		33.89	0.5	1,109
SA27	2	10/19/90	57	56	52	51	60	55.2	141		2,745,800		98		47.71	0.5	1,373
SA27	3	5/1/91	36	41	38	44	37	39.2	194		3,473,300		141		53.86	0.5	1,737
SA27	4	1/16/92	47	48	50	50	52	49.4	260		4,607,900		123		64.94	0.5	2,304
SA27	5	5/26/93	53	53	50	49	50	51.0	496	3,100	6,145,500		163		85.97	0.5	3,073
SA27	6	7/18/94	36	43	37	40	40	39.2	418	3,700	7,692,100	43	206	17.9	103.83	0.5	3,846
SA27	7	9/16/95	54	57	58	56	57	56.4	425	3,600	9,222,100	37	243	28.3	132.13	0.5	4,611
SA27	8	1/29/97	36	38	30	33		34.3	501	3,600	11,025,700	48	291	27.8	159.93	0.5	5,513
SA30	1	5/30/90	58	53	58	59	57	57.0			258,440		49		19.33	0.5	129
SA30	2	10/19/90	59	55	59	58	57	57.6	142		359,260		49		33.15	0.5	180
SA30	3	5/1/91	56	55	58	56	56	56.2	194		497,000		92		39.30	0.5	249
SA30	4	1/14/92	54	53	52	54	53	53.2	258		778,820		111		68.99	0.5	389
SA30	5	5/27/93	50	52	46	50	48	49.2	499	770	1,163,050		151		90.02	0.5	582
SA30	6	7/18/94	44	42	46	49	53	46.8	417	830	1,509,160	43	194	17.9	107.88	0.5	755
SA30	7	9/16/95	52	51	51	43	51	49.6	425	790	1,844,910	37	231	20.6	128.48	0.5	922
SA30	8	1/29/97	40	38	43	41		40.5	501	790	2,240,700	48	279	23.0	151.48	0.5	1,120
W1	1	6/5/90	38	38	42	39	39	39.2			3,527,000		57		76.37	0.495	1,746
W1	2	9/27/90	34	40	37	35	48	38.8	114		4,017,200		57		86.31	0.495	1,989
W1	3	3/29/91	41	39	39	42	42	40.6	183		4,675,100		79		105.99	0.495	2,314
W1	4	3/4/92	44	43	45	43	44	43.8	341		6,834,500		99		161.56	0.495	3,383
W1	5	4/22/93	37	41	43	40	39	40.0	414	5,900	9,277,100		116		200.17	0.495	4,592
W1	6	8/23/94	33	36	35	35	35	34.8	488	5,700	12,058,700	41	157	39.2	239.39	0.495	5,969
W1	7	9/18/95	35	37	40	38	35	37.0	391	6,500	14,600,200	24	181	51.7	291.09	0.495	7,227
W1	8	10/24/96	35	34	26	37	35	33.4	402	6,500	17,213,200	18	199	18.4	309.49	0.495	8,521
W1	9	10/4/97	51	50	45	47		48.3	345	6,500	19,455,700					0.495	9,631
W2	1	6/5/90	50	49	52	50	49	50.0			2,711,100		56		71.70	0.5	1,356
W2	2	9/26/90	52	49	48	55	52	51.2	113		3,129,200		56		81.82	0.5	1,565
W2	3	3/29/91	54	54	52	50	54	52.8	184		3,699,000		79		102.51	0.5	1,850
W2	4	3/4/92	58	59	56	55	55	56.6	341		5,382,600		96		161.56	0.5	2,691
W2	5	4/22/93	52	51	49	51	50	50.6	414	4,600	7,287,000		120		201.71	0.5	3,644
W2	6	8/23/94	52	52	51	52	52	51.8	488	4,800	9,629,400	42	162	39.1	240.84	0.5	4,815
W2	7	9/18/95	53	51	51	54	52	52.2	391	4,600	11,428,000	24	186	51.7	292.54	0.5	5,714
W2	8	2/3/97	45	43	43	45		44.0	504	4,600	13,746,400	18	204	18.4	310.94	0.5	6,873
W2	9	10/4/97	43	41	42	43		42.3	243	4,600	14,864,200					0.5	7,432
W3	1	6/5/90	51	53	49	51	52	51.2			2,711,100		56		71.70	0.5	1,356
W3	2	9/26/90	53	53	52	54	51	52.6	113		3,129,200		56		81.82	0.5	1,565
W3	3	3/29/91	54	54	53	51	53	53.0	184		3,699,000		79		102.51	0.5	1,850
W3	4	3/4/92	60	58	58	58	58	58.4	341		4,870,200		96		154.65	0.5	2,435
W3	5	4/22/93	54	54	52	54	52	53.2	414	3,200	6,195,000		113		194.40	0.5	3,098
W3	6	8/23/94	52	51	52	51	51	51.4	488	3,400	7,854,200	39	152	44.8	239.15	0.5	3,927
W3	7	9/18/95	54	55	54	51	50	52.8	391	3,100	9,066,300	20	172	48.9	288.05	0.5	4,533
W3	8	2/3/97	46	47	46	45		46.0	504	3,100	10,628,700	18	190	41.9	329.95	0.5	5,314
W3	9	10/4/97	41	40	41	39		40.3	243	3,100	11,382,000					0.5	5,691
W4	1	6/5/90	36	36	36	37	36	36.2			21,188,600		47		55.08	0.304	6,441
W4	2	9/27/90	35	37	42	40	33	37.4	114		24,905,000		47		64.36	0.304	7,571
W4	3	3/29/91	41	40	39	41	44	41.0	183		29,892,800		69		78.43	0.304	9,087
W4	4	3/4/92	43	43	43	44	44	43.4	341		41,970,800		100		132.03	0.304	12,759
W4	5	4/22/93	39	42	42	41	41	41.0	414	33,000	55,632,800		124		172.18	0.304	16,912
W4	6	8/23/94	39	41	41	41	39	40.2	488	39,000	74,664,800	42	166	39.1	211.31	0.304	22,698
W4	7	9/18/95	42	45	38	40	39	40.8	391	39,000	89,913,800	24	190	51.7	263.01	0.304	27,334

Sec.	Set #	D-M-Yr	Friction Value						Cum Day	Traffic /day	Cumulative Traffic	FT	CUFT	PP	CUPP	Distribution Factor	CUTR*DF /1,000
			1	2	3	4	5	Avg.									
W4	8	10/24/96	38	39	39	34	35	37.0	402	39,000	105,591,800			18.4	281.41	0.304	32,100
W4	9	10/4/97	27	30	30	27	28	28.4	345	39,000	119,046,800					0.304	36,190
W5	1	6/5/90	24	22	23	26	27	24.4			32,098,000		47		55.08	0.166	5,328
W5	2	9/25/90	34	36	34	33	33	34.0	112		37,474,000		47		64.36	0.166	6,221
W5	3	7/3/91	29	31	30	32	30	30.4	281		49,522,000		69		87.99	0.166	8,221
W5	4	3/4/92	42	40	41	41	43	41.4	245		69,652,000		100		126.70	0.166	11,562
W5	5	8/19/93	24	18	25	26	26	23.8	533	55,000	98,967,000		128		174.04	0.166	16,429
W6	1	6/5/90	42	43	42	39	40	41.2			5,889,640		47		44.00	0.3	1,767
W6	2	9/25/90	41	46	44	45	51	45.4	112		6,784,520		47		53.28	0.3	2,035
W6	3	7/3/91	46	46	44	43	43	44.4	281		8,790,010		75		99.07	0.3	2,637
W6	4	2/27/92	60	56	52	57	54	55.8	239		11,535,010		100		115.62	0.3	3,461
W6	5	8/19/93	41	36	39	41	40	39.4	539	7,500	15,577,510		128		162.96	0.3	4,673
W6	6	8/23/94	51	44	45	46	43	45.8	369	9,200	18,972,310	33	161	27.8	190.72	0.3	5,692
W6	7	9/18/95	47	54	40	46	46	46.6	391	9,200	22,569,510	18	179	35.1	225.82	0.3	6,771
W6	8	2/3/97	41	37	41	39	40	39.5	504	9,200	27,206,310	18	197	47.4	273.22	0.3	8,162
W6	9	10/4/97	34	36	33	36	26	33.0	243	9,200	29,441,910					0.3	8,833
W7	3	3/29/91	63	63	65	66	67	64.8			3,509,800		79		91.03	0.346	1,214
W7	4	3/4/92	65	65	65	64	63	64.4	341		4,973,800		99		146.60	0.346	1,721
W7	5	4/22/93	60	62	60	57	60	59.8	414	4,000	6,629,800		116		185.21	0.346	2,294
W7	6	8/23/94	61	61	60	62	59	60.6	488	4,500	8,825,800	41	157	39.2	224.43	0.346	3,054
W7	7	9/18/95	70	69	68	68	67	68.4	391	4,500	10,585,300	24	181	51.7	276.13	0.346	3,663
W7	8	10/24/96	57	60	58	53	60	57.6	402	4,500	12,394,300			18.4	294.53	0.346	4,288

Sec.	Set #	D-M-Yr	BP1	BP2	BP3	BP4	BP5	Avg	SPTD	Traffic /day	Cumulative Traffic	Distribution Factor	CUTR*DF /1,000
A1	1	4/3/90	88	94	91	89	97	91.8	2.26		263,700	0.35	92
A1	2	10/30/90	84	84	80	85	90	84.6	1.90		452,700	0.35	158
A1	3	3/4/91	68	70	69	71	72	70.0	1.73		565,200	0.35	198
A1	4	7/8/91	70	74	74	73	72	72.6	1.11		678,600	0.35	238
A1	5	9/7/93							1.79	1,000	1,470,600	0.35	515
A1	6	7/7/94							1.46	1,000	1,773,600	0.35	621
A1	7	7/26/95							0.63	1,100	2,196,000	0.35	769
A1	8	8/14/96							1.03	1,100	2,619,500	0.35	917
A1	9	5/20/97							1.08	1,100	2,926,400	0.35	1,024
A2	1	4/3/90	78	80	79	84	81	80.4	0.46		1,333,500	0.299	399
A2	2	10/30/90	69	69	70	66	71	69.0	0.47		2,404,500	0.299	719
A2	3	3/4/91	61	69	68	68	60	65.2	0.38		3,042,000	0.299	910
A2	4	7/8/91	60	60	65	66	63	62.8	0.44		3,684,600	0.299	1,102
A2	5	3/14/93							0.37	5,500	7,067,100	0.299	2,113
A2	6	7/7/94							0.55	5,400	9,659,100	0.299	2,888
A2	7	7/26/95							0.36	5,400	11,732,700	0.299	3,508
A2	8	8/14/96							0.44	5,400	13,811,700	0.299	4,130
A2	9	5/20/97							0.44	5,400	15,318,300	0.299	4,580
A4	1	4/3/90	74	71	72	69	70	71.2	0.52		8,386,250	0.299	2,507
A4	2	10/30/90	49	52	57	54	56	53.6	0.56		11,189,750	0.299	3,346
A4	3	3/4/91	55	54	55	52	54	54.0	0.42		12,858,500	0.299	3,845
A4	4	7/8/91	54	51	51	50	50	51.2	0.44		14,540,600	0.299	4,348
A4	5	9/7/93							0.41	13,300	25,074,200	0.299	7,497
A4	6	7/7/94							0.54	14,600	29,498,000	0.299	8,820
A4	7	7/26/95							0.40	15,000	35,258,000	0.299	10,542
A4	8	8/15/96							0.45	15,000	41,048,000	0.299	12,273
A5	1	4/3/90	66	69	68	68	69	68.0	0.50		7,648,250	0.299	2,287
A5	2	10/30/90	55	53	50	53	55	53.2	0.48		10,451,750	0.299	3,125
A5	3	3/4/91	55	57	54	55	54	55.0	0.41		12,120,500	0.299	3,624
A5	4	7/8/91	50	50	50	50	49	49.8	0.42		13,802,600	0.299	4,127
A5	5	9/7/93							0.38	13,300	24,336,200	0.299	7,277
A5	6	7/7/94							0.58	14,600	28,760,000	0.299	8,599
A5	7	7/26/95							0.37	15,000	34,520,000	0.299	10,321
A5	8	8/15/96							0.44	15,000	40,310,000	0.299	12,053
AUS1	2	8/7/90	110	108	101	110	107	107.2	3.91		3,780	0.5	2
AUS1	3	3/26/91	81	75	76	74	79	77.0	2.56		149,310	0.5	75
AUS1	4	7/24/91	70	69	69	68	69	69.0	1.94		224,280	0.5	112
AUS1	5	8/9/93							1.70	690	739,710	0.5	370
AUS1	6	7/19/94							1.76	630	956,430	0.5	478
AUS1	7	7/17/95							1.45	670	1,199,640	0.5	600
AUS2	2	8/7/90	80	87	86	88	86	85.4	0.63		101,600	0.165	17
AUS2	3	3/26/91	82	83	84	82	82	82.6	0.45		3,035,300	0.165	501
AUS2	4	7/24/91	80	84	83	86	81	82.8	0.59		4,546,600	0.165	750
AUS2	5	8/9/93							0.63	22,000	20,980,600	0.165	3,462
AUS2	6	7/19/94							0.66	23,000	28,892,600	0.165	4,767
AUS2	7	7/17/95							0.59	27,000	38,693,600	0.165	6,384
AUS2	9	7/17/97							0.60	27,000	58,430,600	0.165	9,641
AUS3	2	8/8/90	77	84	79	84	73	79.4	0.66		642,000	0.165	106
AUS3	3	3/26/91	68	72	70	65	69	68.8	0.52		13,000,500	0.165	2,145
AUS3	4	7/24/91	62	65	60	64	60	62.2	0.48		19,367,000	0.165	3,196
AUS3	5	8/9/93							0.36	52,000	58,211,000	0.165	9,605
AUS3	6	7/19/94							0.51	49,000	75,067,000	0.165	12,386

Sec.	Set #	D-M-Yr	BP1	BP2	BP3	BP4	BP5	Avg.	SPTD	Traffic /day	Cumulative Traffic	Distribution Factor	CUTR*DF /1,000
AUS3	7	7/17/95							0.55	58,000	96,121,000	0.165	15,860
AUS3	9	5/23/97							0.50	58,000	135,329,000	0.165	22,329
AUS4	3	3/26/91	83	81	85	85	85	83.8	0.72		31,208,000	0.5	15,604
AUS4	4	7/24/91	80	84	87	85	91	85.4	0.76		36,801,000	0.5	18,401
AUS4	5	8/30/93							1.28	44,000	70,593,000	0.5	35,297
AUS4	6	7/19/94							1.00	49,000	86,420,000	0.5	43,210
AUS4	7	7/17/95							0.92	35,000	99,125,000	0.5	49,563
C1	1	3/20/90	90	85	83	82	85	85.0	0.43		24,513,200	0.298	7,305
C1	2	11/15/90	76	68	71	70	70	71.0	0.41		27,585,200	0.298	8,220
C1	3	3/14/91	84	82	82	74	77	79.8	0.46		29,108,400	0.298	8,674
C2	1	3/20/90	95	97	94	91	91	93.6	2.10		2,466,310	0.5	1,233
C2	2	11/15/90	82	90	81	83	85	84.2	1.50		2,763,910	0.5	1,382
C2	3	3/14/91	90	87	89	85	93	88.8	1.45		2,911,470	0.5	1,456
C3	1	3/20/90	71	72	73	75	72	72.6	0.36		4,833,850	0.3	1,450
C3	2	11/16/90	60	59	59	59	60	59.4	0.32		7,280,000	0.3	2,184
C3	3	3/14/91	71	75	69	70	66	70.2	0.33		8,477,700	0.3	2,543
C3	4	7/15/91	52	55	55	53	54	53.8	0.34		9,726,150	0.3	2,918
C3	5	7/12/93							0.32	7,800	15,404,550	0.3	4,621
C3	6	7/28/94							0.49	10,900	19,557,450	0.3	5,867
C3	7	7/17/95							0.59	11,300	23,557,650	0.3	7,067
C3	8	10/19/96							0.39	11,300	28,755,650	0.3	8,627
C3	9	7/15/97							0.40	11,300	31,795,350	0.3	9,539
C4	2	11/15/90	93	80	81	80	83	83.4	1.77		642,000	0.304	195
C4	3	3/14/91	85	86	90	75	84	84.0	0.99		1,403,840	0.304	427
C4	4	7/15/91	73	78	75	73	74	74.6	0.77		2,456,720	0.304	747
C4	5							0.0				0.304	0
C5	2	11/15/90	90	87	85	90	85	87.4	1.05		34,020	0.503	17
C5	3	3/14/91	87	86	93	93	93	90.4	0.68		612,360	0.503	308
C5	4	7/15/91	91	91	88	87	90	89.4	0.74		1,210,140	0.503	609
C5	5											0.503	0
L1	1	3/14/90	93	96	95	94	93	94.2	1.57		919,860	0.5	460
L1	2	10/24/90	75	72	80	75	72	74.8	1.86		1,271,540	0.5	636
L1	3	3/6/91	74	78	75	73	77	75.4	1.43		1,480,350	0.5	740
L1	4	7/10/91	74	73	77	70	69	72.6	1.43		1,678,170	0.5	839
L1	5											0.5	0
L2	1	3/14/90	75	75	76	76	73	75.0	0.55		4,969,570	0.301	1,496
L2	2	10/24/90	75	71	67	76	69	71.6	0.52		6,669,730	0.301	2,008
L2	3	3/6/91	68	70	70	67	69	68.8	0.43		7,679,200	0.301	2,311
L2	4	7/9/91	65	60	65	60	59	61.8	0.52		8,635,540	0.301	2,599
L2	5	3/14/93							0.59	7,200	13,056,340	0.301	3,930
L2	6	7/6/94							0.82	7,500	16,648,840	0.301	5,011
L2	7	7/26/95							0.71	7,800	19,651,840	0.301	5,915
L2	8	8/13/96							0.75	7,800	22,647,040	0.301	6,817
L2	9	5/5/97							0.87	7,800	24,714,040	0.301	7,439
L3	1	3/15/90	87	85	85	86	82	85.0	0.66		6,160,160	0.299	1,842
L3	2	10/24/90	80	78	78	80	83	79.8	0.69		7,852,730	0.299	2,348
L3	3	3/6/91	70	71	72	79	73	73.0	0.61		8,862,200	0.299	2,650
L3	4	7/9/91	66	69	70	70	72	69.4	0.59		9,818,540	0.299	2,936
L3	5	3/14/93							0.78	7,200	14,239,340	0.299	4,258
L3	6	7/6/94							0.96	7,500	17,831,840	0.299	5,332
L3	7	7/26/95							0.57	7,800	20,834,840	0.299	6,230
L3	8	8/13/96							0.97	7,800	23,830,040	0.299	7,125

Sec.	Set #	D-M-Yr	BP1	BP2	BP3	BP4	BP5	Avg.	SPTD	Traffic /day	Cumulative Traffic	Distribution Factor	CUTR*DF /1,000
L3	9	5/5/97							1.16	7,800	25,897,040	0.299	7,743
L4	1	3/15/90	83	87	88	85	86	85.8	0.50		31,330	0.499	16
L4	2	10/24/90	81	81	81	85	77	81.0	0.56		59,210	0.499	30
L4	3	3/6/91	75	81	80	76	79	78.2	0.50		75,830	0.499	38
L4	4	7/9/91	72	75	76	80	76	75.8	0.87		91,580	0.499	46
L4	5	3/13/93							1.01	125	168,205	0.499	84
L4	6	7/6/94							0.96	125	228,205	0.499	114
L4	7	7/28/95							0.75	125	276,330	0.499	138
L4	8	8/13/96							1.08	125	324,080	0.499	162
L4	9	5/5/97							1.15	125	357,205	0.499	178
L5	1	3/15/90	90	89	93	94	90	91.2	1.60		570,140	0.5	285
L5	2	10/25/90	80	80	75	78	80	78.6	1.16		1,065,180	0.5	533
L5	3	3/6/91	71	71	73	65	73	70.6	0.69		1,356,900	0.5	678
L5	4	7/10/91	70	71	75	71	74	72.2	1.07		1,635,360	0.5	818
L5	5	3/14/93							1.13	3,100	3,535,660	0.5	1,768
L5	6	7/5/94							0.81	3,100	5,017,460	0.5	2,509
L5	7	7/26/95							0.37	2,800	6,098,260	0.5	3,049
L5	8	8/13/96							0.62	2,800	7,173,460	0.5	3,587
L5	9	5/5/97							0.60	2,800	7,915,460	0.5	3,958
L6	1	3/15/90	86	85	83	85	84	84.6	0.51		3,252,980	0.303	986
L6	2	10/25/90	84	86	85	80	86	84.2	0.69		5,844,660	0.303	1,771
L6	3	3/6/91	81	80	80	82	81	80.8	0.65		7,371,900	0.303	2,234
L6	4	7/10/91	75	78	75	79	75	76.4	0.61		8,829,720	0.303	2,675
L6	5	3/14/93							0.70	10,500	15,266,220	0.303	4,626
L6	6	7/5/94							0.79	11,000	20,524,220	0.303	6,219
L6	7	7/26/95							0.53	15,700	26,584,420	0.303	8,055
L6	8	8/13/96							0.92	15,700	32,613,220	0.303	9,882
L6	9	5/5/97							1.03	15,700	36,773,720	0.303	11,142
L7	3	3/7/91	97	95	95	94	94	95.0	0.83		1,302,840	0.303	395
L7	4	7/10/91	81	80	80	81	85	81.4	0.89		2,176,020	0.303	659
L7	5	9/3/93							0.75	6,000	6,892,020	0.303	2,088
L7	6	7/5/94							0.96	6,900	8,996,520	0.303	2,726
L7	7											0.303	0
L8	3	3/7/91	87	92	82	89	87	87.4	1.07		1,302,840	0.297	387
L8	4	7/10/91	82	79	80	85	82	81.6	0.98		2,176,020	0.297	646
L8	5	9/3/93							1.08	6,000	6,892,020	0.297	2,047
L8	6	7/5/94							1.33	6,900	8,996,520	0.297	2,672
L8	7											0.297	0
OD1	1	3/13/90	85	88	87	89	89	87.6	0.49		91,450	0.299	27
OD1	2	10/26/90	75	75	76	77	76	75.8	0.47		161,820	0.299	48
OD1	3	3/5/91	75	75	75	75	70	74.0	0.42		202,120	0.299	60
OD1	4	7/9/91	74	73	75	70	74	73.2	0.49		241,180	0.299	72
OD1	5	9/3/93							0.50	310	485,150	0.299	145
OD1	6	7/6/94							0.64	310	580,010	0.299	173
OD1	7	7/26/95							0.43	310	699,360	0.299	209
OD1	8	8/14/96							0.53	310	818,710	0.299	245
OD1	9	5/21/97							0.58	310	905,510	0.299	271
OD2	1	3/13/90	86	90	91	89	90	89.2	0.48		358,400	0.3	108
OD2	2	10/26/90	80	84	83	82	77	81.2	0.57		2,900,800	0.3	870
OD2	3	3/5/91	80	79	83	83	80	81.0	0.42		4,356,800	0.3	1,307
OD2	4	7/9/91	72	77	77	75	72	74.6	0.51		5,768,000	0.3	1,730
OD2	5	3/14/93							0.64	10,300	12,092,200	0.3	3,628
OD2	5	9/3/93							0.53	10,300	13,874,100	0.3	4,162
OD2	6											0.3	0

Sec.	Set #	D-M-Yr	BP1	BP2	BP3	BP4	BP5	Avg	SPTD	Traffic /day	Cumulative Traffic	Distribution Factor	CUTR*DF /1,000
OD2	7											0.3	0
OD3	1	3/13/90	63	63	62	64	62	62.8	0.57		13,339,550	0.148	1,974
OD3	2	10/26/90	70	60	65	64	60	63.8	0.58		15,132,850	0.148	2,240
OD3	3	3/5/91	59	55	54	57	60	57.0	0.46		16,159,850	0.148	2,392
OD3	4	7/9/91	49	46	45	44	44	45.6	0.55		17,155,250	0.148	2,539
OD3	5	7/3/93							1.18	9,000	23,680,250	0.148	3,505
OD3	6											0.148	0
OD3	7											0.148	0
SA1	1	2/21/90	86	86	84	92	83	86.2	2.13		528,800	0.503	266
SA1	2	11/2/90	84	80	83	75	84	81.2	2.07		1,113,000	0.503	560
SA1	3	3/12/91	87	81	84	85	87	84.8	1.37		1,412,000	0.503	710
SA1	4	7/11/91	75	75	78	76	72	75.2	1.31		1,690,300	0.503	850
SA1	5	3/13/93							1.15	2,500	3,217,800	0.503	1,619
SA1	6	7/8/94							0.78	2,400	4,374,600	0.503	2,200
SA1	7											0.503	0
SA1	8	8/12/96							0.58	2,400	6,213,000	0.503	3,125
SA1	9	5/19/97							0.64	2,400	6,885,000	0.503	3,463
SA4	2	11/2/90	71	74	76	74	75	74.0	1.20		1,107,300	0.5	554
SA4	3	3/12/91	65	64	76	68	68	68.2	0.71		1,373,800	0.5	687
SA4	4	7/12/91	75	69	76	72	69	72.2	0.67		1,621,580	0.5	811
SA4	5	3/17/93							0.73	1,900	2,788,180	0.5	1,394
SA4	6											0.5	0
SA4	7											0.5	0
SA6	1	2/21/90	90	93	91	94	92	92.0	2.20		595,200	0.5	298
SA6	2	11/1/90	79	77	79	79	79	78.6	2.00		1,202,400	0.5	601
SA6	3	3/11/91	80	85	79	79	85	81.6	1.79		1,514,400	0.5	757
SA6	4	7/11/91	75	74	74	75	71	73.8	1.49		1,807,200	0.5	904
SA6	5	3/13/93							1.50	2,300	3,212,500	0.5	1,606
SA6	6	7/8/94							1.14	2,700	4,513,900	0.5	2,257
SA6	7											0.5	0
SA6	8	8/12/96							0.87	2,700	6,582,100	0.5	3,291
SA6	9	5/19/97							0.87	2,700	7,338,100	0.5	3,669
SA16	1	2/22/90	98	97	86	92	88	92.2	1.98		579,600	0.5	290
SA16	2	11/1/90	90	87	88	85	89	87.8	2.51		1,033,200	0.5	517
SA16	3	3/11/91	87	87	81	81	89	85.0	1.49		1,267,200	0.5	634
SA16	4	7/11/91	76	78	75	78	71	75.6	1.30		1,486,800	0.5	743
SA16	5	3/14/93							1.22	2,000	2,710,800	0.5	1,355
SA16	6	7/7/94							1.31	2,300	3,814,800	0.5	1,907
SA16	7	7/26/95							0.50	2,300	4,698,000	0.5	2,349
SA16	8	8/12/96							0.70	2,300	5,578,900	0.5	2,789
SA16	9	5/19/97							0.81	2,300	6,222,900	0.5	3,111
SA17	1	2/22/90	85	80	82	88	90	85.0	2.75		245,700	0.5	123
SA17	2	11/2/90	84	84	89	86	86	85.8	2.35		574,600	0.5	287
SA17	3	3/11/91	90	90	92	90	89	90.2	2.00		742,300	0.5	371
SA17	4	7/11/91	75	74	80	80	74	76.6	1.94		900,900	0.5	450
SA17	5	3/13/93							1.54	1,350	1,725,750	0.5	863
SA17	6	7/8/94							1.34	1,450	2,424,650	0.5	1,212
SA17	7											0.5	0
SA19	1	2/21/90	88	90	89	86	88	88.2	1.59		63,000	0.5	32
SA19	2	11/2/90	94	86	90	90	91	90.2	2.31		134,120	0.5	67
SA19	3	3/12/91	86	90	96	96	93	92.2	1.83		170,520	0.5	85
SA19	4	7/11/91	88	85	88	81	81	84.6	2.27		204,400	0.5	102
SA19	5	3/13/93							1.83	320	399,920	0.5	200
SA19	6	7/8/94							1.43	450	616,820	0.5	308

Sec.	Set #	D-M-Yr	BP1	BP2	BP3	BP4	BP5	Avg	SPTD	Traffic /day	Cumulative Traffic	Distribution Factor	CUTR*DF /1,000
SA19	7	7/26/95							0.71	360	754,700	0.5	377
SA19	8	8/12/96							1.32	360	892,580	0.5	446
SA27	1	2/22/90	91	85	93	90	90	89.8	0.59		1,899,050	0.5	950
SA27	2	11/1/90	80	76	75	72	75	75.6	0.64		2,844,050	0.5	1,422
SA27	3	3/11/91	80	82	79	78	82	80.2	0.54		3,331,550	0.5	1,666
SA27	4	7/12/91	71	71	72	74	71	71.8	0.59		3,789,050	0.5	1,895
SA27	5	3/12/93							0.47	3,100	5,676,950	0.5	2,838
SA27	6	7/8/94							0.64	3,700	7,464,050	0.5	3,732
SA27	7	7/26/95							0.43	3,600	8,842,850	0.5	4,421
SA27	8	8/12/96							0.51	3,600	10,221,650	0.5	5,111
SA27	9	5/19/97							0.52	3,600	11,229,650	0.5	5,615
SA30	1	2/21/90	100	96	94	97	98	97.0	2.69		159,040	0.5	80
SA30	2	11/1/90	92	92	93	89	94	92.0	2.07		338,670	0.5	169
SA30	3	3/11/91	90	85	92	90	89	89.2	2.13		430,970	0.5	215
SA30	4	7/11/91	81	78	80	75	78	78.4	1.83		517,590	0.5	259
SA30	5	3/13/93							1.47	770	988,060	0.5	494
SA30	6	7/8/94							1.78	830	1,388,120	0.5	694
SA30	6	7/8/94							1.35	830	1,388,120	0.5	694
SA30	7	7/26/95							0.86	790	1,690,690	0.5	845
SA30	8	8/12/96							1.36	790	1,993,260	0.5	997
SA30	9	5/19/97							1.49	790	2,214,460	0.5	1,107
W1	1	3/29/90	74	80	81	78	78	78.2	0.47		3,131,100	0.495	1,550
W1	2	10/11/90	82	76	78	81	75	78.4	0.47		3,973,900	0.495	1,967
W1	3	3/18/91	65	65	66	64	67	65.4	0.35		4,653,300	0.495	2,303
W1	4	7/17/91	62	67	64	66	65	64.8	0.49		5,173,600	0.495	2,561
W1	5	8/12/93							0.38	5,900	9,639,900	0.495	4,772
W1	6	7/11/94							0.44	5,700	11,538,000	0.495	5,711
W1	7	7/18/95							0.37	6,500	13,956,000	0.495	6,908
W1	8	8/9/96							0.49	6,500	16,478,000	0.495	8,157
W1	9	6/24/97							0.45	6,500	18,551,500	0.495	9,183
W2	1	4/5/90	82	82	85	81	85	83.0	0.48		2,497,400	0.5	1,249
W2	2	10/11/90	80	83	81	82	79	81.0	0.45		3,196,700	0.5	1,598
W2	3	3/18/91	71	72	73	75	73	72.8	0.46		3,781,300	0.5	1,891
W2	4	7/17/91	71	75	73	74	75	73.6			4,229,000	0.5	2,115
W2	5	8/12/93							0.50	4,600	7,711,200	0.5	3,856
W2	6	7/11/94							0.59	4,800	9,309,600	0.5	4,655
W2	7	7/18/95							0.53	4,600	11,020,800	0.5	5,510
W2	8	8/9/96							0.58	4,600	12,805,600	0.5	6,403
W2	9	6/24/97							0.61	4,600	14,273,000	0.5	7,137
W3	1	4/5/90	84	83	82	81	80	82.0	0.47		2,092,800	0.5	1,046
W3	2	10/11/90	85	78	82	80	79	80.8	0.50		2,697,600	0.5	1,349
W3	3	3/18/91	77	76	72	73	75	74.6	0.41		3,203,200	0.5	1,602
W3	4	7/17/91	73	70	69	69	75	71.2			3,590,400	0.5	1,795
W3	5	8/12/93							0.47	3,200	6,012,800	0.5	3,006
W3	6	7/11/94							0.62	3,400	7,145,000	0.5	3,573
W3	7	7/18/95							0.53	3,100	8,298,200	0.5	4,149
W3	8	8/9/96							0.57	3,100	9,501,000	0.5	4,751
W3	9	6/24/97							0.63	3,100	10,489,900	0.5	5,245
W4	1	4/5/90	78	77	77	76	79	77.4	0.39		19,152,000	0.304	5,822
W4	2	10/11/90	74	78	71	71	74	73.6	0.40		25,313,400	0.304	7,695
W4	3	3/18/91	65	65	60	66	65	64.2	0.32		30,464,200	0.304	9,261
W4	4	7/17/91	60	59	58	60	58	59.0			34,408,800	0.304	10,460
W4	5	8/12/93							0.33	33,000	59,389,800	0.304	18,054
W4	6	7/11/94							0.55	39,000	72,376,800	0.304	22,003

Sec.	Set #	D-M-Yr	BP1	BP2	BP3	BP4	BP5	Avg.	SPTD	Traffic /day	Cumulative Traffic	Distribution Factor	CUTR*DF /1,000
W4	7	7/18/95							0.40	39,000	86,884,800	0.304	26,413
W4	8	8/9/96							0.37	39,000	102,016,800	0.304	31,013
W4	9	6/24/97							0.46	39,000	114,457,800	0.304	34,795
W5	1	4/5/90	63	61	65	66	65	64.0	0.42		29,830,000	0.166	4,952
W5	2	10/11/90	71	65	65	63	65	65.8	0.45		35,902,000	0.166	5,960
W5	3	3/18/91	55	58	55	56	54	55.6	0.39		43,486,000	0.166	7,219
W5	4	7/17/91	48	48	46	45	46	46.6			49,294,000	0.166	8,183
W5	5	8/12/93							0.36	55,000	90,929,000	0.166	15,094
W5	6											0.166	0
W5	7											0.166	0
W6	1	4/5/90	75	75	74	74	75	74.6	0.49		5,200,050	0.3	1,560
W6	2	10/11/90	74	78	78	74	78	76.4	0.52		6,710,160	0.3	2,013
W6	3	3/18/91	65	66	65	63	64	64.6	0.39		7,972,580	0.3	2,392
W6	4	7/17/91	48	48	46	45	46	46.6			8,939,370	0.3	2,682
W6	5	8/12/93							0.44	7,500	14,616,870	0.3	4,385
W6	6	7/11/94							0.46	9,200	17,680,470	0.3	5,304
W6	7	7/18/95							0.46	9,200	21,102,870	0.3	6,331
W6	8	8/9/96							0.49	9,200	24,672,470	0.3	7,402
W6	9	6/24/97							0.56	9,200	27,607,270	0.3	8,282
W7	3	3/18/91	73	73	74	75	73	73.6	0.84		3,465,800	0.346	1,199
W7	4	7/17/91	82	84	80	84	80	82.0	0.96		3,949,800	0.346	1,367
W7	5	8/12/93							0.94	4,000	6,977,800	0.346	2,414
W7	6	7/11/94							1.10	4,500	8,476,300	0.346	2,933
W7	8	8/9/96							1.06	4,500	11,896,300	0.346	4,116