LANA STREET – MELODY DRIVE TO CRESTON ROAD

RECOMMENDATIONS

Pavement Maintenance Options (Short-Term)

These options are not available for this street because of structural deficiencies and/or pavement cracking condition.

Pavement Rehabilitation Options (Long-Term)

Overlay Options

For option 1, we recommend 4 inch digouts for base failures, placing a 1/2 inch HMA leveling course and a 1-3/4 inch RHMA overlay.

Estimated Cost: $241,000 Estimated Life Expectancy: 10-12 Years

An overlay using HMA is not recommended because the 3-3/4 inch structural requirement exceeds the 3-1/2 inch maximum overlay that is considered feasible to meet geometric constraints.

Recycle and Mill and Replace Options

These options are not available for this street because of the structural deficiencies and thin pavement layer.

Reconstruction Options

For option 1, we recommend removing the pavement to a depth of 10-1/2 inches and placing 10-1/2 inches of new HMA. The HMA should be placed in 4 lifts.

Estimated Cost: $631,000 Estimated Life Expectancy: 20 Years

For option 2, we recommend removing 4 inches of the existing structure, lime treating the native soil and aggregate base to a depth of 13 inches and placing 4 inches of new HMA in 2 lifts.

Estimated Cost: $292,000 Estimated Life Expectancy: 20 Years

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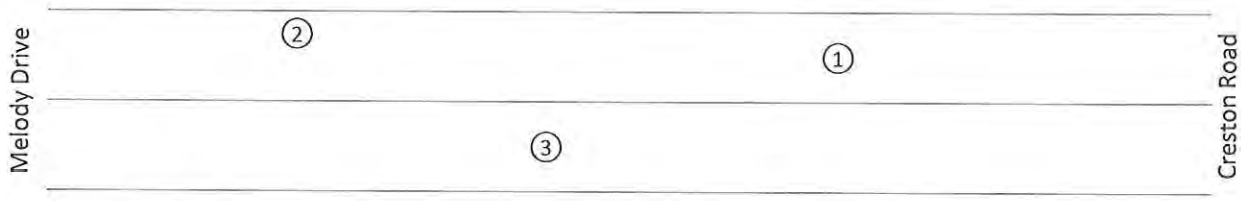

NOTES:
- NTS
- ACTUAL ROAD MAY NOT BE STRAIGHT
- NOT ALL ROADS CONNECTING TO THIS STREET ARE SHOWN
- WIDTH OF ROAD MAY VARY WITHIN THE BOUNDARY SECTION
- ALL LOCATIONS SHOWN ARE APPROXIMATED

Lana Street

[Section of Road ≈ 1400ft]

TRAFFIC LAYOUT:
- 2-WAY STREET
- 1 LANE EACH WAY

VISUAL DESCRIPTION FOR THIS SECTION OF ROAD

The pavement exhibits continuous severe alligator cracking. Previous maintance includes a slurry seal and patching with cold mix.

CORING LOG

Symbol	Location	Core Data		R-value
1	West of Creston Road 450ft	AC AB	4.25" 5.25"	9
2	West of Creston Road 1100ft	AC AB	3.00" 5.00"	22
3	West of Creston Road 800ft	AC AB	3.00" 6.75"	-

DEFLECTION ANALYSIS

Lane	Tolerable	TI	80th Percentile	Percent Reduction	HMA Overlay
West Bound	25	7.0	47.04	46.86	3.60 - inches
East Bound	25	7.0	44.84	44.25	3.24 - inches
				Overlay Required by Reflective Cracking	2.00 - inches

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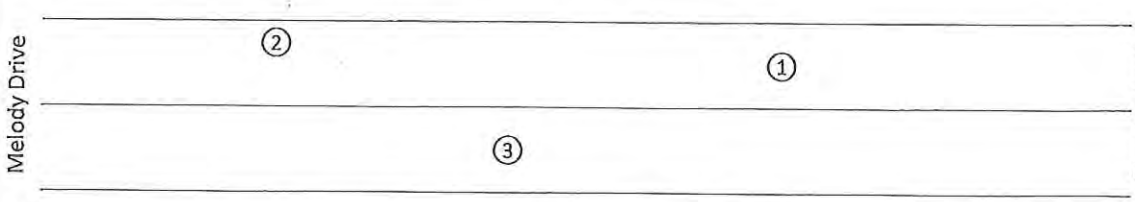

NOTES:
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- ACTUAL ROAD MAY NOT BE STRAIGHT
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Lana Street (N)

[Section of Road ≈ 1400ft]

TRAFFIC LAYOUT:
- 2-WAY STREET
- 1 LANE EACH WAY

VISUAL DESCRIPTION FOR THIS SECTION OF ROAD

CORING LOG

Symbol	Location	Core Data	R-value
1	West of Creston Road 450ft	AC 4.25" AB 5.25"	9
2	West of Creston Road 1100ft	AC 3.00" AB 5.00"	22
3	West of Creston Road 800ft	AC 3.00" AB 6.75"	-

PHOTO LOG

Symbol	Location	Comments
A	_____ of _____ _____ft	
B	_____ of _____ _____ft	
C	_____ of _____ _____ft	

DEFLECTION ANALYSIS

Lane	Tolerable	TI	80th Percentile	Percent Reduction	HMA Overlay
West Bound	25	7.0	47.04	46.86	3.60 - Inches
East Bound	25	7.0	44.84	44.25	3.24 - Inches
				Overlay Required by Reflective Cracking	2.00 - Inches

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03/27/13

City of Paso Robles

Road: Lana
From: Creston
To: Melody
Lane/Line: WB

Survey Date: 03/13/13
Thickness: 0.33
Traffic Index: 7.00
Project Number: 130065

Deflection Data Analysis

Deflection Readings (Equivalent Deflectometer Units)

No. of Tests	Low	Mean	High	Std. Dev.
14	22.19	39.20	54.40	9.33

Road Surface

Thickness	Traffic Index
0.33	7.00

Structural Design

Tolerable	80th Percentile	90th Percentile	% Reduction	GE Deficient
25.00	47.04	51.15	46.86	0.57

HMA Overlay
0.30

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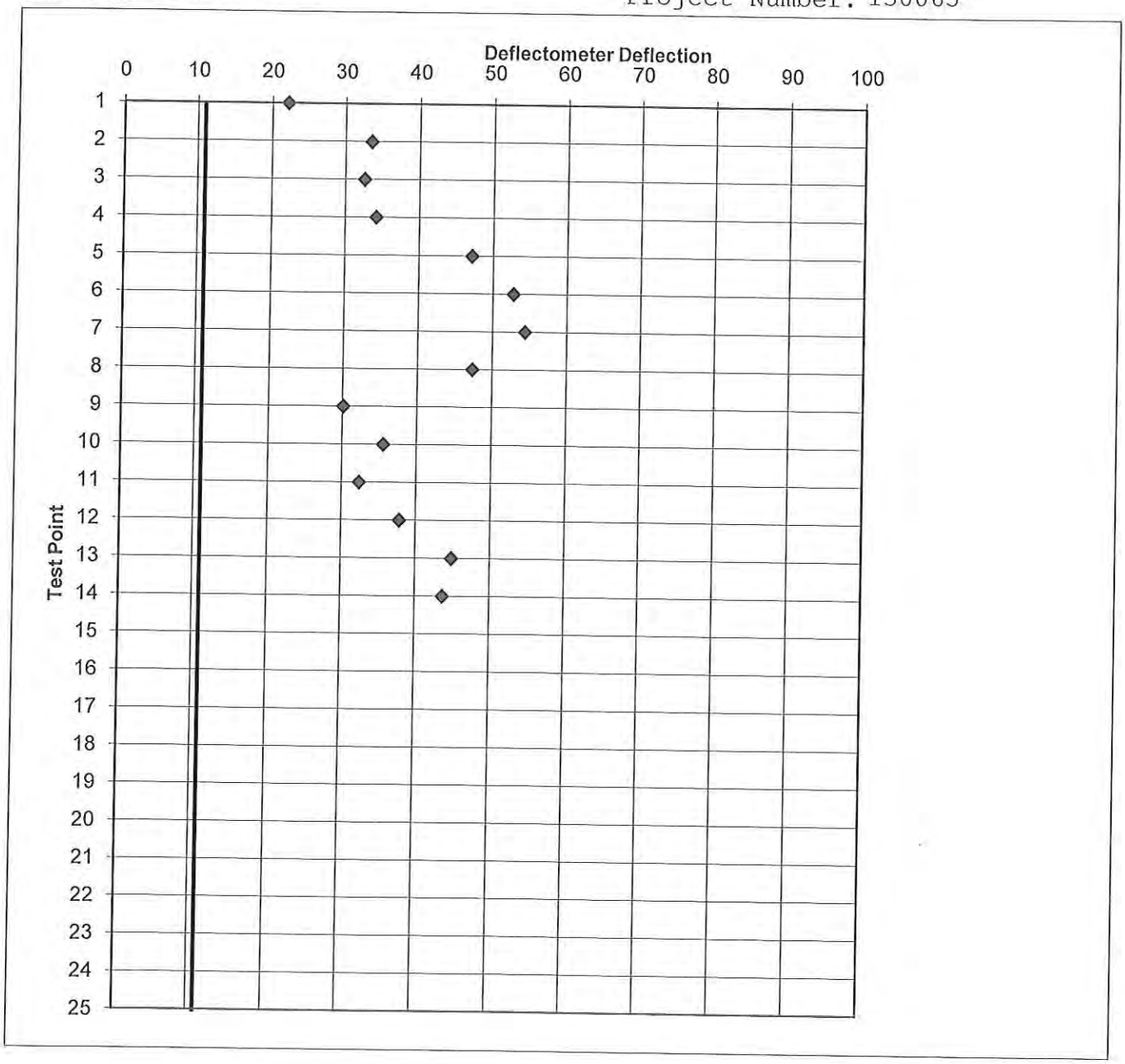
03/27/13

City of Paso Robles

Road: Lana
From: Creston
To: Melody
Lane/Line: WB

Survey Date: 03/13/13
Thickness: 0.33
Traffic Index: 7.00
Project Number: 130065



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Date: 3/27/2013

Client: City of Paso Robles
Road: Lana
From: Creston
To: Melody
Lane/Line: WB

Interval: 100
Survey Date: 3/13/13
Thickness: 0.33
Traffic Index: 7.00
Project Number: 130065

Test Points	Dynaflect	Conditions	Comments	Deflection	Exclude
1	1.00			22.187	
2	1.50		Dorothy	33.530	
3	1.46			32.622	
4	1.53			34.211	
5	2.10		Elaine	47.142	
6	2.35			52.814	
7	2.42		Frances	54.402	
8	2.11			47.369	
9	1.35			30.127	
10	1.59			35.572	
11	1.45			32.396	
12	1.69			37.840	
13	2.00			44.873	
14	1.95			43.739	

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03/27/13

City of Paso Robles

Road: Lana
From: Melody
To: Creston
Lane/Line: EB

Survey Date: 03/13/13
Thickness: 0.33
Traffic Index: 7.00
Project Number: 130065

Deflection Data Analysis

Deflection Readings (Equivalent Deflectometer Units)

No. of Tests	Low	Mean	High	Std. Dev.
14	26.72	38.10	53.27	8.02

Road Surface

Thickness	Traffic Index
0.33	7.00

Structural Design

Tolerable	80th Percentile	90th Percentile	% Reduction	GE Deficient
25.00	44.84	48.37	44.25	0.51

HMA Overlay
0.27

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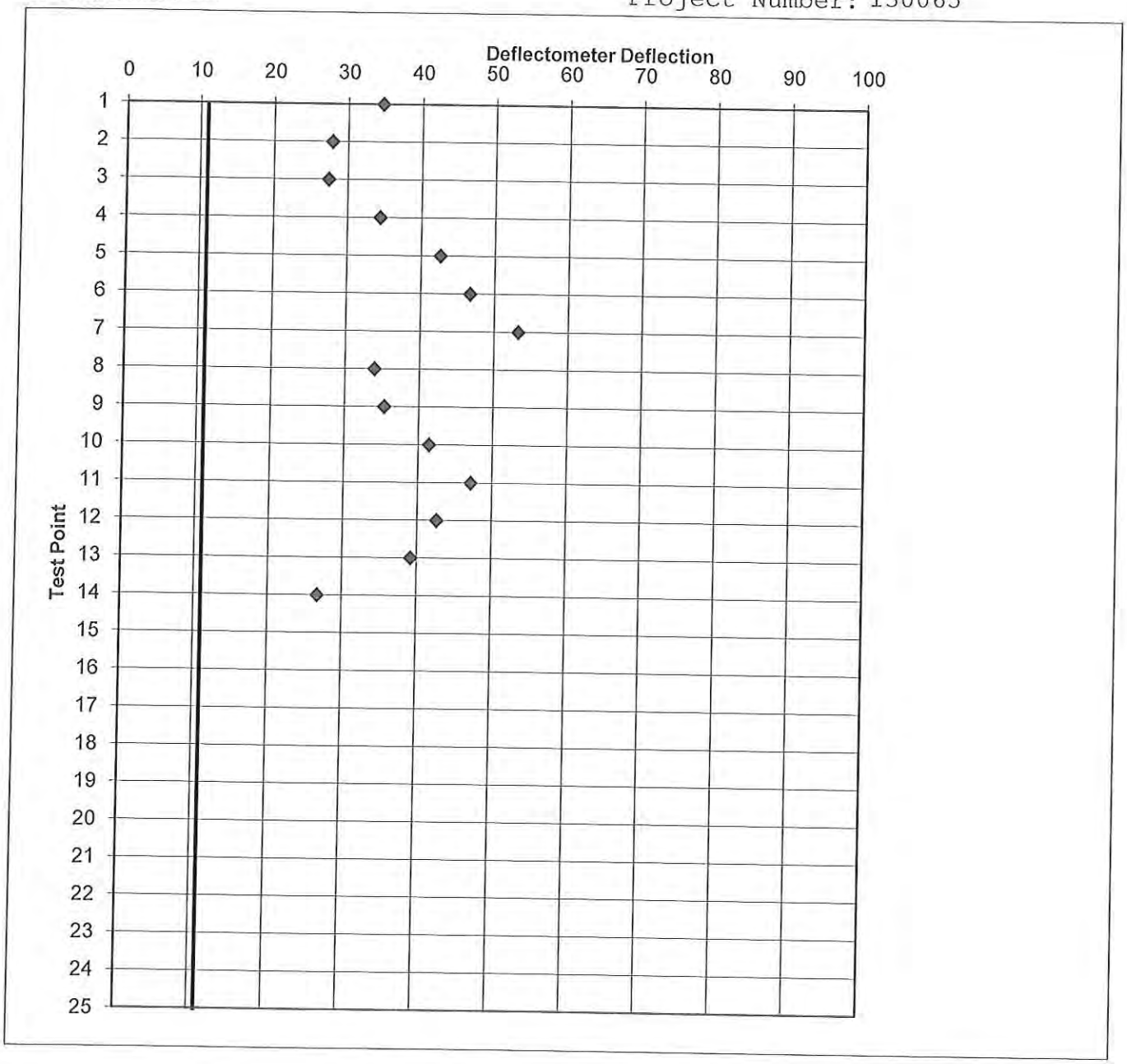
03/27/13

City of Paso Robles

Road: Lana
From: Melody
To: Creston
Lane/Line: EB

Survey Date: 03/13/13
Thickness: 0.33
Traffic Index: 7.00
Project Number: 130065



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Date: 3/27/2013

Client: City of Paso Robles
Road: Lana
From: Melody
To: Creston
Lane/Line: EB

Interval: 100
Survey Date: 3/13/13
Thickness: 0.33
Traffic Index: 7.00
Project Number: 130065

Test Points	Dynaflect	Conditions	Comments	Deflection	Exclude
1	1.55			34.664	
2	1.25			27.858	
3	1.23			27.405	
4	1.54			34.437	
5	1.90			42.605	
6	2.08		Frances	46.688	
7	2.37			53.267	
8	1.52			33.984	
9	1.58		Elaine	35.345	
10	1.85			41.470	
11	2.10			47.142	
12	1.90		Dorothy	42.605	
13	1.75			39.202	
14	1.20			26.724	

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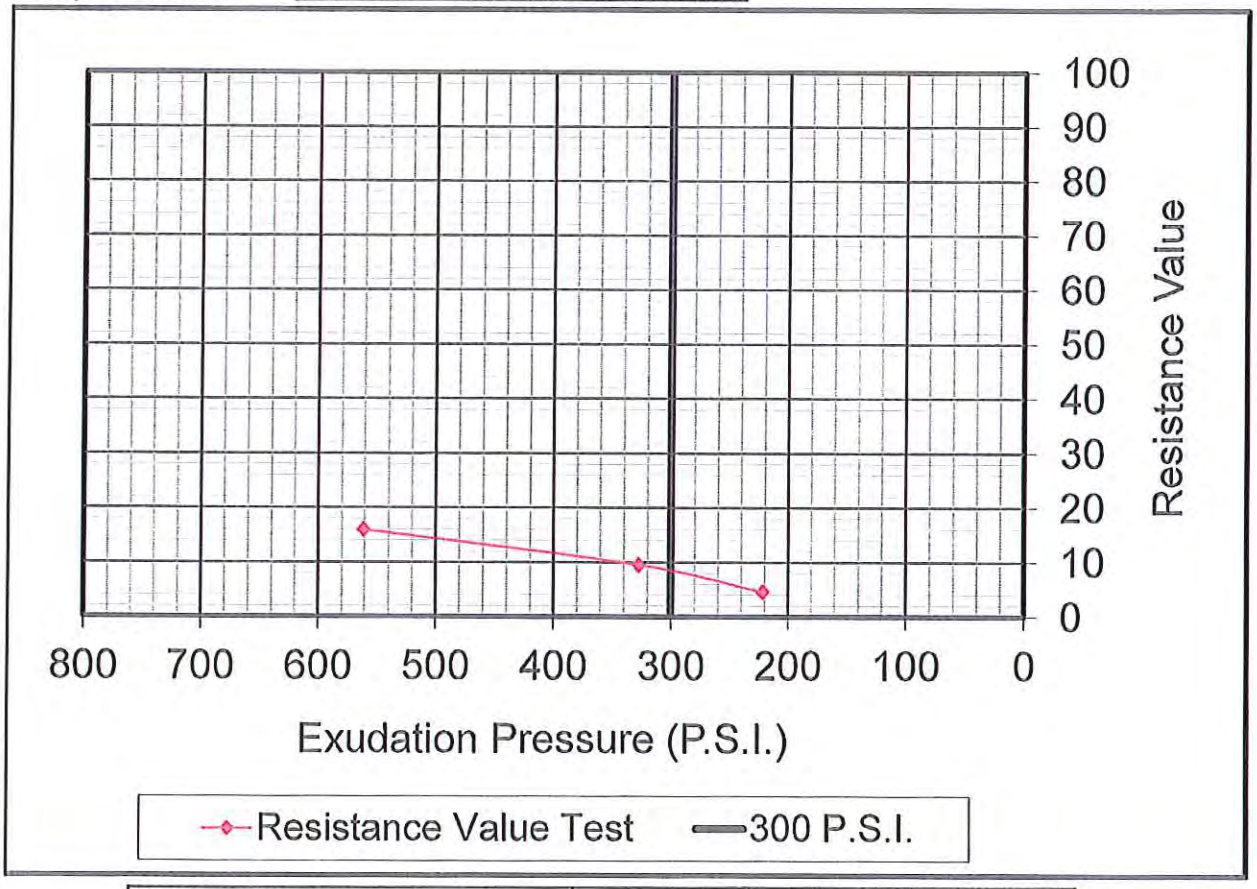
RESISTANCE (R) VALUE TEST

ASTM D 2844

Laboratory No.: L130083K
Project No.: 130065
Sample Date: March 14, 2013
Report Date: March 25, 2013
Client: City of Paso Robles
Project Name: City of Paso Robles 2013 Pavement Analysis
Sample Description: Brown Sandy Clay
Sample Location: Lana Street - 450' West of Creston Road



Specimen No.	1	2	3
Moisture Content (%)	15.4	16.9	14.5
Dry Density (PCF)	119.6	115.4	119.4
Resistance Value (R)	10	5	16
Exudation Pressure (PSI)	328	222	562
Expansion Pressure	9	0	69

RESISTANCE VALUE AT 300 P.S.I. 9

AASHTO R18

Reviewed By: Craig Long
Craig W. Long
Laboratory Operations Manager

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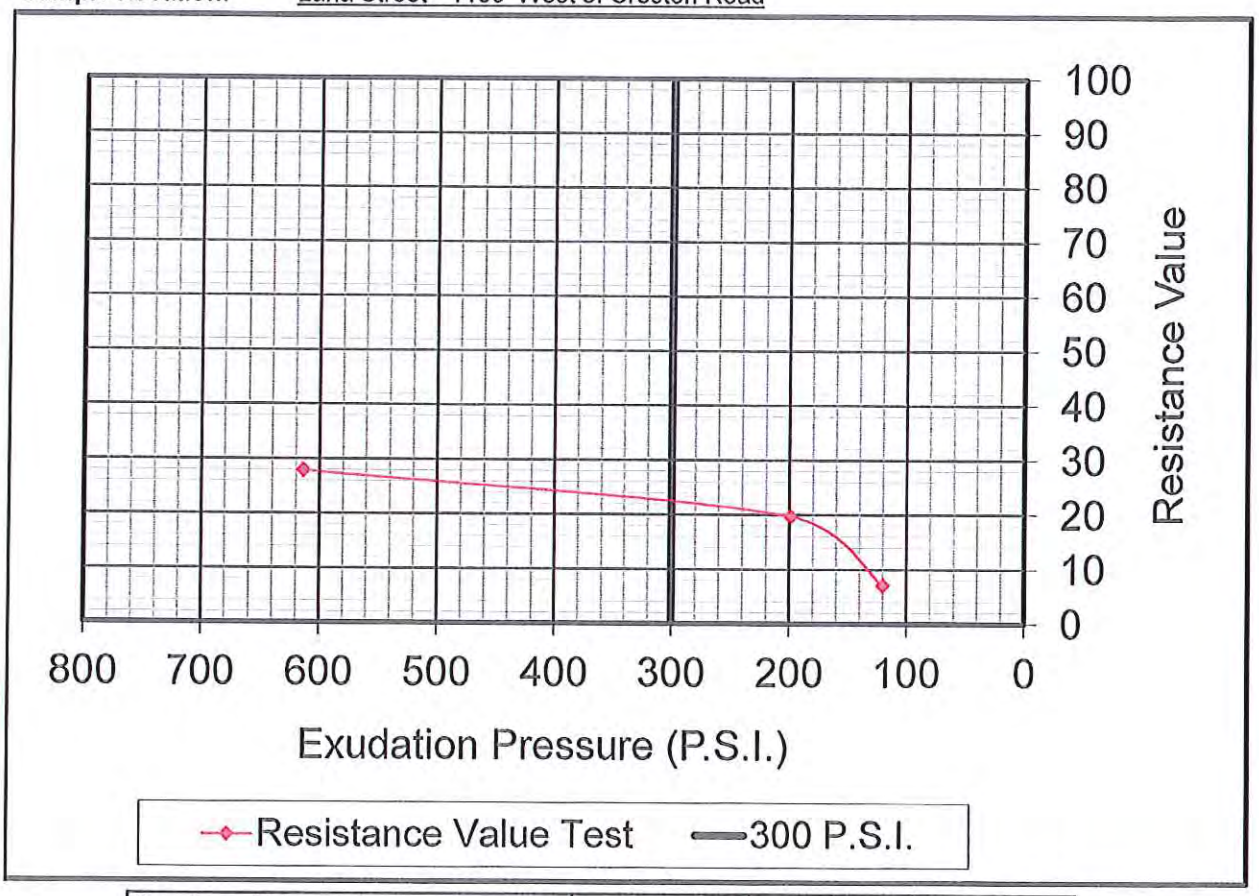
RESISTANCE (R) VALUE TEST

ASTM D 2844

Laboratory No.: L130083V
Project No.: 130065
Sample Date: March 12, 2013
Report Date: March 25, 2013
Client: City of Paso Robles
Project Name: City of Paso Robles 2013 Pavement Analysis
Sample Description: Brown Clayey Silt
Sample Location: Lana Street - 1100' West of Creston Road



Specimen No.	1	2	3
Moisture Content (%)	13.8	15.2	14.5
Dry Density (PCF)	119.2	115.7	117.8
Resistance Value (R)	28	7	20
Exudation Pressure (PSI)	614	121	199
Expansion Pressure	186	43	61

RESISTANCE VALUE AT 300 P.S.I. 22

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LANA STREET – MELODY DRIVE TO CRESTON ROAD
Creston Road looking Westbound

LANA STREET – MELODY DRIVE TO CRESTON ROAD
Frances Street looking Westbound

LANA STREET – MELODY DRIVE TO CRESTON ROAD
Melody Drive looking Eastbound