Technical Report Documentation Page

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3. RECIPIENT'S CATALOG No.

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Brighton Test Track

5. REPORT DATE

April 1943

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15. SUPPLEMENTARY NOTES

16. ABSTRACT

8 Test Sections, each 100' long and 71/2' wide. Profile shows a porous sand layer (for the purpose of flooding and draining below the subgrade, next 12" of subgrade of 3% Bearing Value when satured. Base courses vary in thickness from 3" at thin end to 18" at thick end. 2" of bituminous plant mix placed over all test sections.

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18. No. OF PAGES:

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40-02

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April 1942

BRIGHTON TEST TRACK

Synopsis

8 Test Sections, each 100' long and 7½' wide. Profile shows a porous sand layer (for the purpose of flooding and draining) below the subgrade, next 12" of subgrade of 3% Bearing Value when saturated. Base courses vary in thickness from 3" at thin end to 18" at thick end. 9" of bituminous plant mix placed over all test sections.

Base Materials Treated as follows:

Designation	Type of Mat'l.	Min. B.V.	Treatment
CR_{100}	Crusher Run Base	100	Untreated
S_{50}	Cemented Gravel	50	Untreated
C_{50}	" "	50	Stabilized with 6% Portland Cement
E_{50}	" "	50	" " 4.5% Asph. Emul.
S_{30}	Sand-Clay Mixture	30	Untreated
C_{30}	" " "	30	Stabilized with 6% Portland Cement
E_{30}	" " "	30	" " 5% Asph. Emul.
CB_{30}	" " "	30	" " 5% MC-2 Patbuck and 5% water

Sept. 4, 1940	Start of testing. Subgrade saturated, water level 10" below top of subgrade. Single tired truck loaded to 12,000 lbs. on rear axle. Rapid failure of untreated materials at thin ends. Major repair work after 130 trips.
Oct. 29, 1940	10,000 trips. Water level raised to 1" below bottom of base materials.
Nov. 7, 1940	15,000 trips. End of traffic for 1940 season.
Dec. 1940--April, 1941	Water level raised successively to 5" in base materials; at this level for 2 months.
April 28, 1941	Start of traffic. After 30 trips discontinued due to failures of curves.
May--June 10, '41	Reconstruction of curves.

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June 11, 1941	Traffic started. Truck loaded to 12,000 lbs. on rear axle, water level 1" below bottom of base materials (same as in November, 1940).
June 12, 1941	After 500 trips (total 13,500) 75% of 30% B.V. Untreated Soil failed.
June 13, 1941	16,000 trips. Entire section of 30% B.V. Untreated soil failed. Repaired from 12" total thickness to end by excavating sufficient material to place 6" of new bituminous surface.
June 20, 1941	17,000 trips. 100% Crusher Run shows 1/2" depression in wheel tracks to end. Wheel tracks of reconstructed 30% B.V. Section levelled up with new mix.
June 24, 1941	18,000 trips. Truck load increased to 18,000 lbs. on rear axle. (Legal Limit)
June 27, 1941	19,000 trips. 50% B. V. Untreated Soil shows 1/2" depression in wheel tracks to end.
June 30, 1941	20,000 trips. 30% B. V. Cutback shows 1/2" depression in wheel tracks to end.
July 7, 1941	21,000 trips. 50% B. V. Untreated Soil considered failed to end due to cracking.
July 9, 1941	23,000 trips. 100% B. V. Crusher Run considered failed to end due to cracking.
July 17, 1941	25,000 trips. 30% B. V. Cutback considered failed to end due to excessive depression in wheel tracks.
	Wheel tracks of 30% B. V. Cutback, 50% B. V. Untreated Soil & 100% Crusher Run leveled up with new mix.
Aug. 8, 1941	36,000 trips. Conclusion of regular tests with 18,000 lbs. load. Load increased to 22,000 lbs. on rear axle.
Aug. 18, 1941	38,000 trips. End of 22,000 lbs. traffic.
Sept. 18, 1941	39,000 trips. 1000 trips with 5 axle dual tired semi-trailer truck, gross load 70,000 lbs. Load per tire on trailer section 4,000 lbs. No noticeable change in sections since 38,000 trips.

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BRIGHTON TEST TRACK

April 24, 1962

Type of Base Materials	Total Thickness of Base and Surface								Re-paired to: (3)	Remarks
	12,000 lbs. Load				18000 lbs. Load		Variable Load			
	After 15000 Trips		After 18000 Trips		After 36000 Trips		After 39000 Trips			
	1/2" Dep. (1)	Fail. (2)	1/2" Dep.	Fail.	1/2" Dep.	Fail.	1/2" Dep.	Fail.		
Natv. Soil	14-3/8	15		20		20		20	20"	6" new bituminous from 14" to 20". Wheel track filled in.
Setback	10-1/4	12	18-1/2	12-1/2		20		20	18"	
Lime-Soil	12-3/8	13-1/2	18-1/2	14	15-3/4	17	16	17	14-1/2"	
Cement	9	10	9	10	10-1/2	11-3/4	10-3/4	11-3/4	10"	
Bituminous Gravel	14-3/8	14-1/2	15-1/2	15-1/2		20		20	13"	Wheel track filled in.
Emulsion	12	12-1/2	13	13	16-1/2	16-1/2	16-3/4	16-3/4	15"	
Cement	7-5/8	9	8-1/2	9	9-1/2	9-1/2	9-3/4	10	9"	
Bituminous Crusher Run	16-3/4	15-1/2	20	16-3/4		20		20	11"	Wheel track filled in.

(1) 1/2" Depression in wheel tracks.

(2) Pavement considered failed.

(3) Base and Subgrade Material removed to sand layer and replaced with approved mix.

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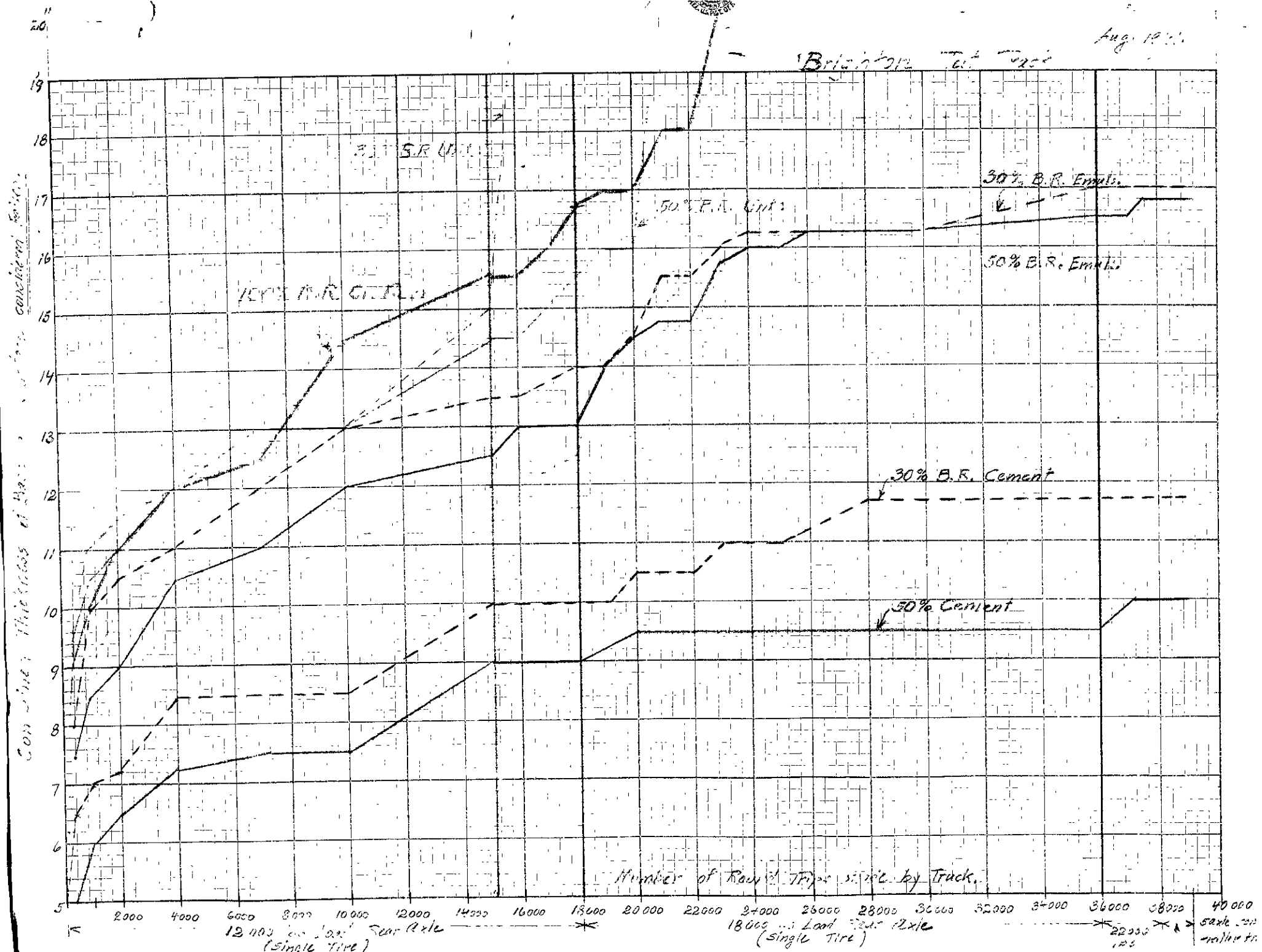

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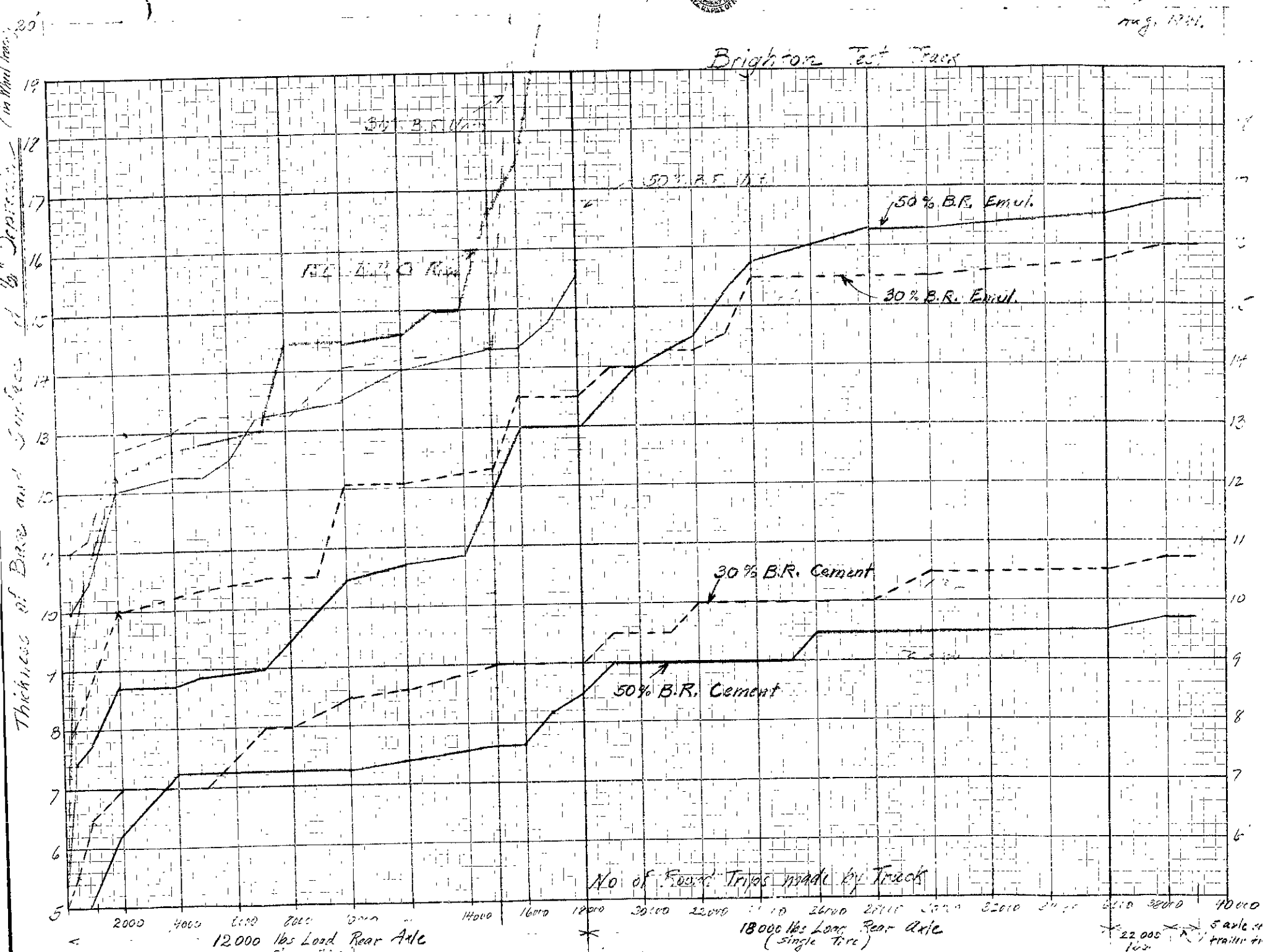

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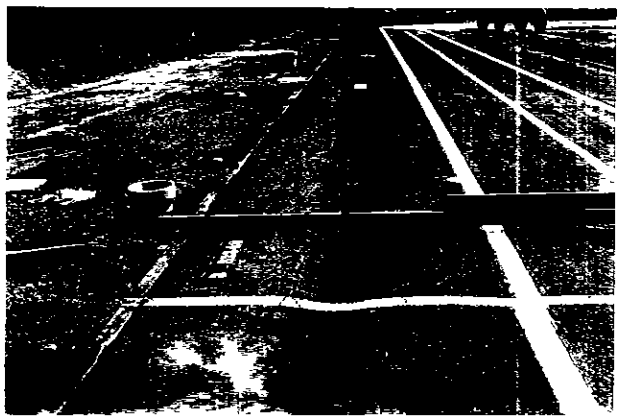
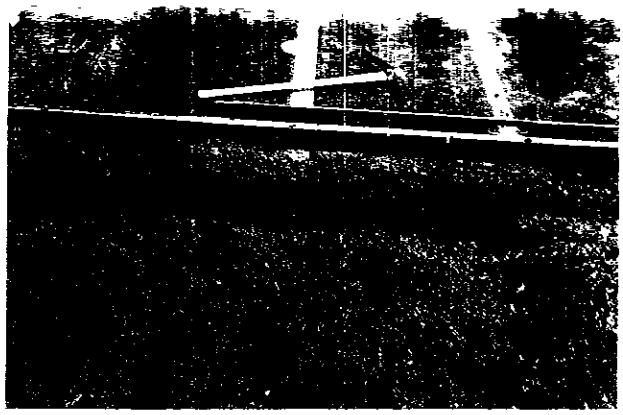


I-12

30% B.V. Untreated Soil After 26 Trips

I-11

100% B.V. Crusher Run Base After 26 Trips



II-4

Displacement of Subgrade in above sections.

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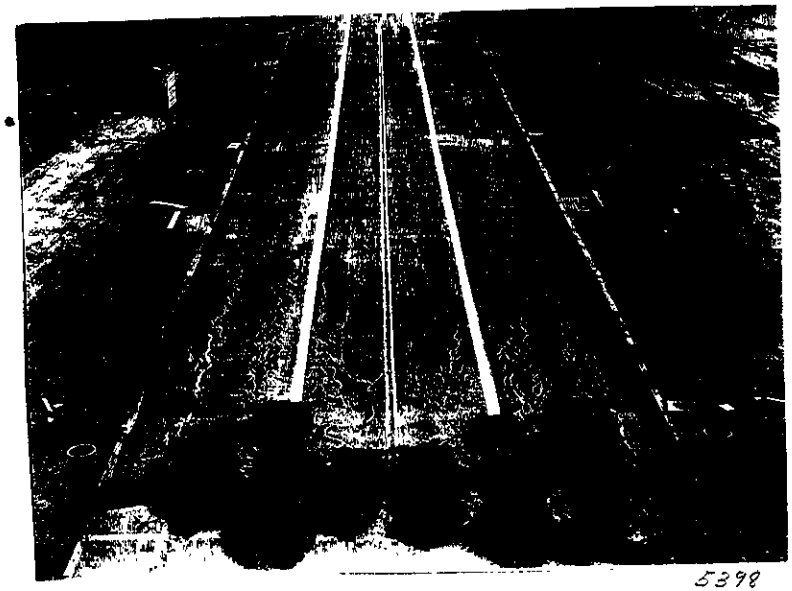
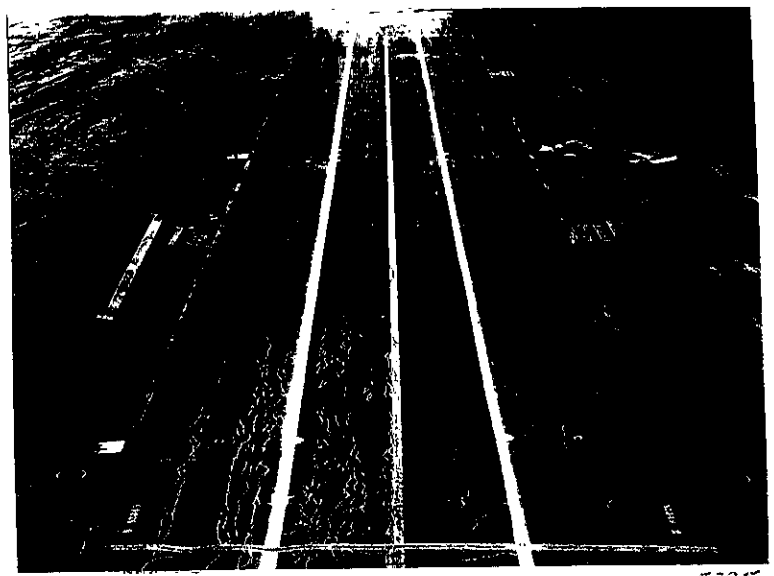


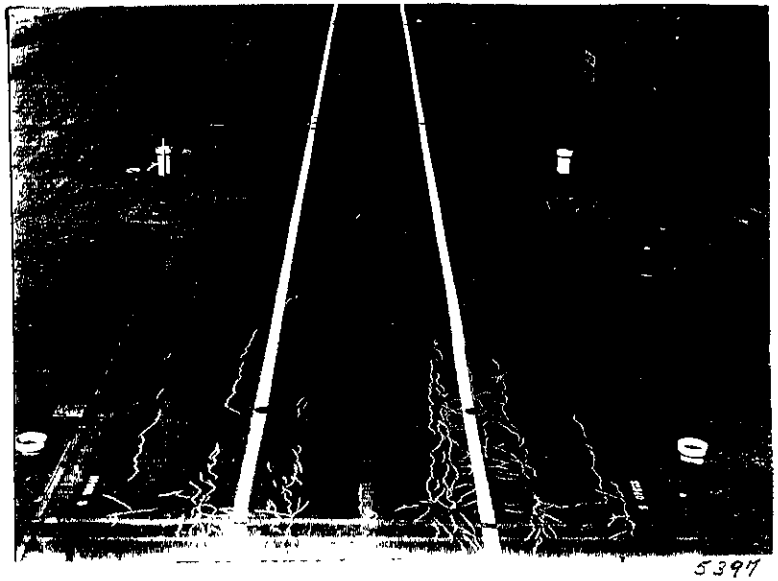
5398

Appearance after 100 trips, cracks marked with chalk.
Left:30% B.V.Untr. Right:100% B.V. Crusher Run



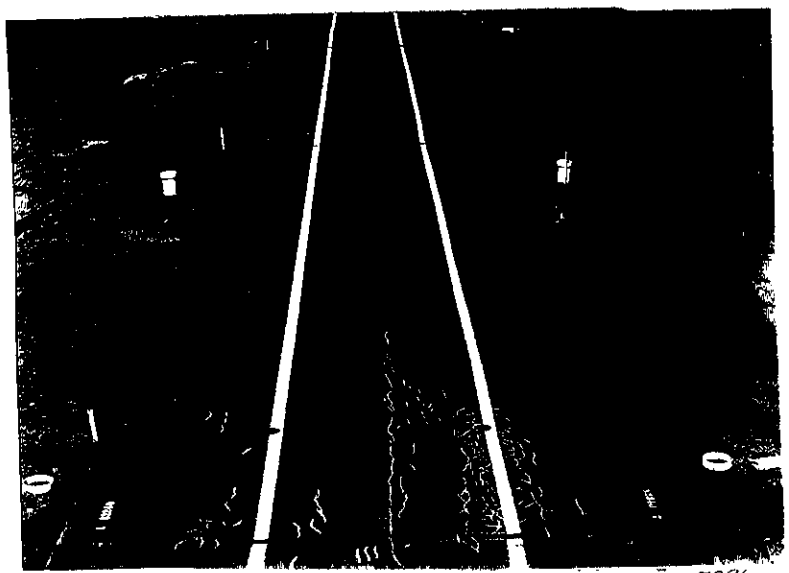
5395

Left:50% B.V.Untr. Right:50% B.V.Cement Treated



5397

Left:50% B.V.Emuls. Right:30% B.V.Emuls.



5396

Left:30% B.V.Cement Tr. Right:30% Cutback

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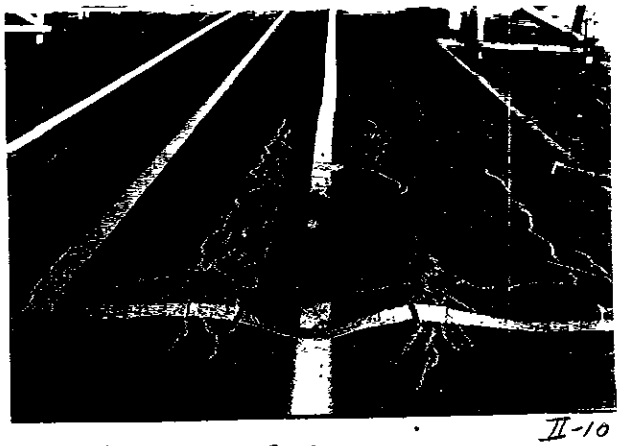
After 150 Trips

III-1

30% CBR Cutback

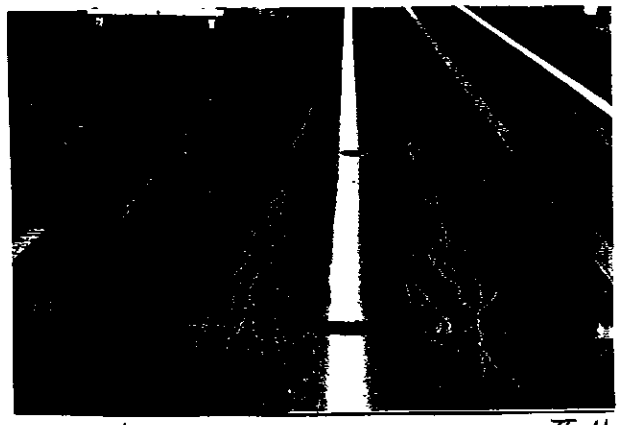
III-3

50% CBR Untreated



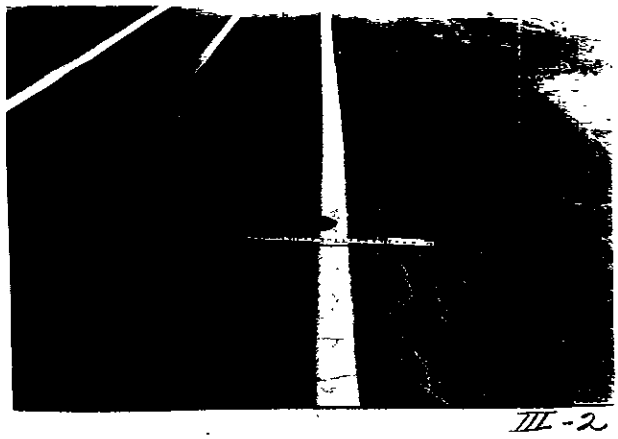
II-10

30% CBR Emulsion



II-11

50% CBR Emulsion



III-2

30% CBR Cement

III-4

50% B.V. Cement

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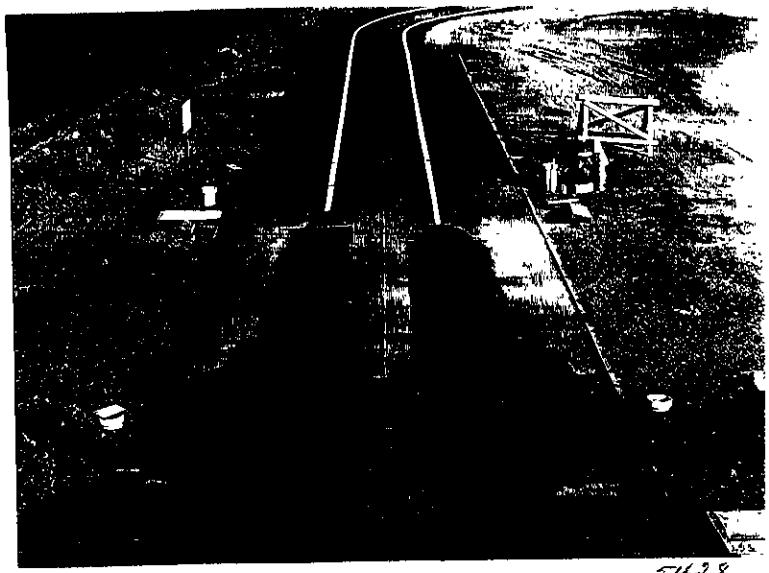
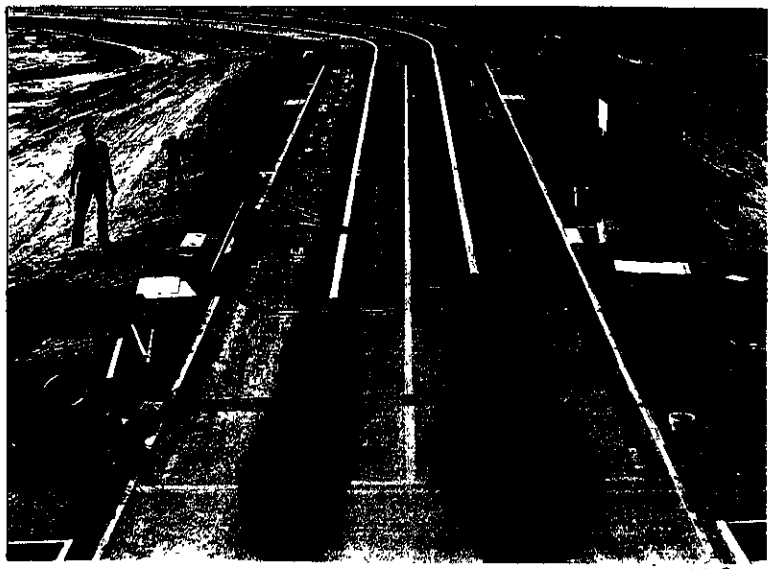


5428

Patch Sections after 400 Trips.
Left:30% B.V.Untr. Right: 100% B.V. Crusher Run

Left:50% B.V.Untr. Right:50% B.V. Cement Treated 5426



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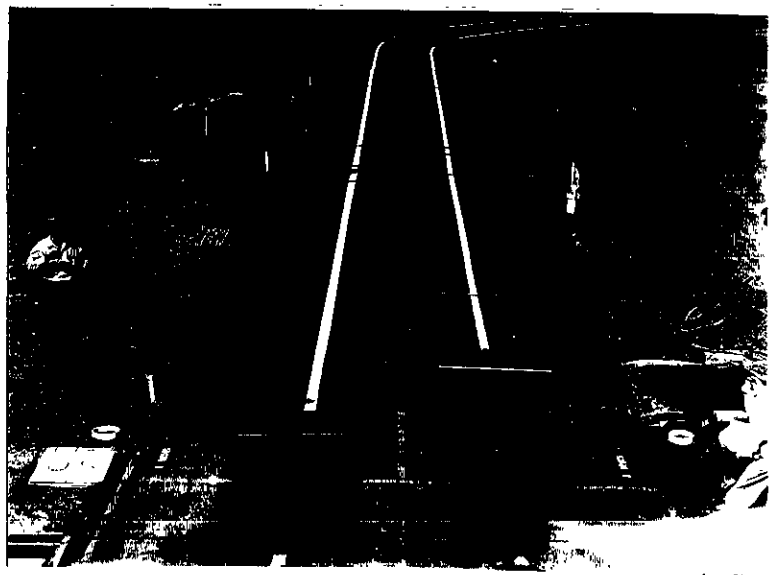
Left: 50% B.V. Emuls. Right: 30% B.V. Emuls.



5427

Left: 30% B.V.Cement Tr. Right: 30% Cutback

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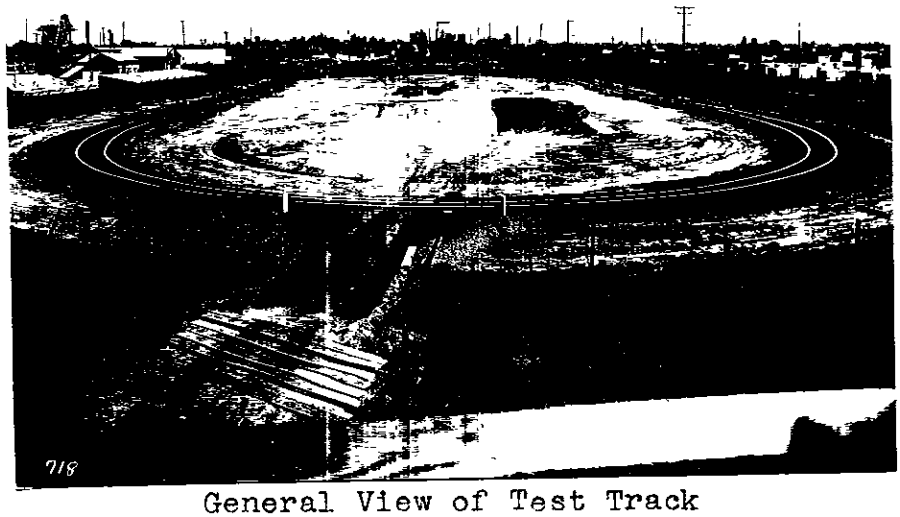
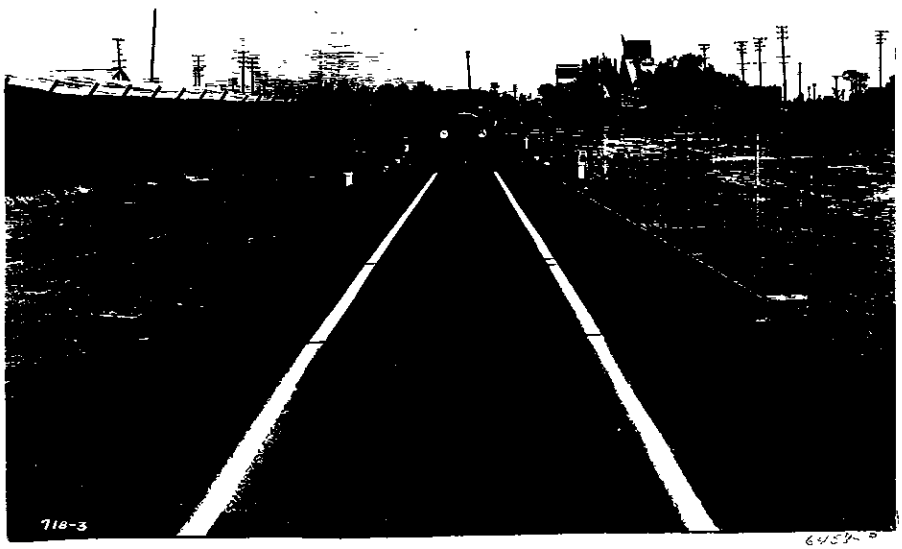
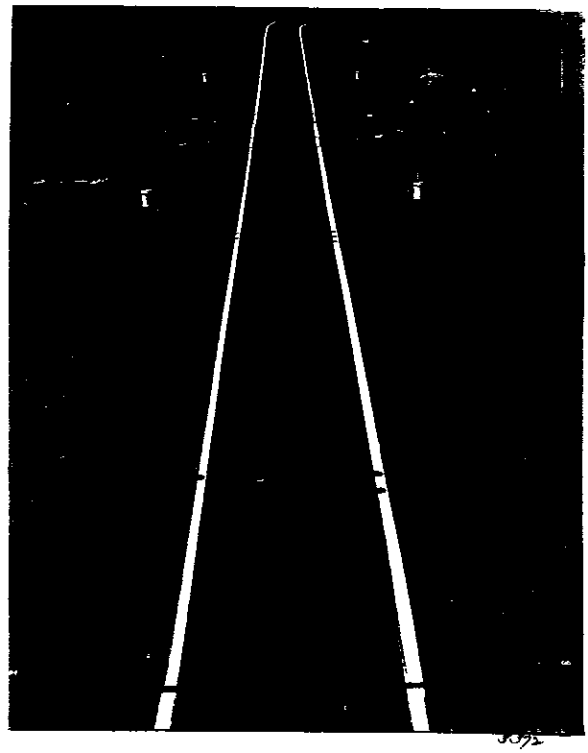


General View of Test Track



North side looking east



South side looking west

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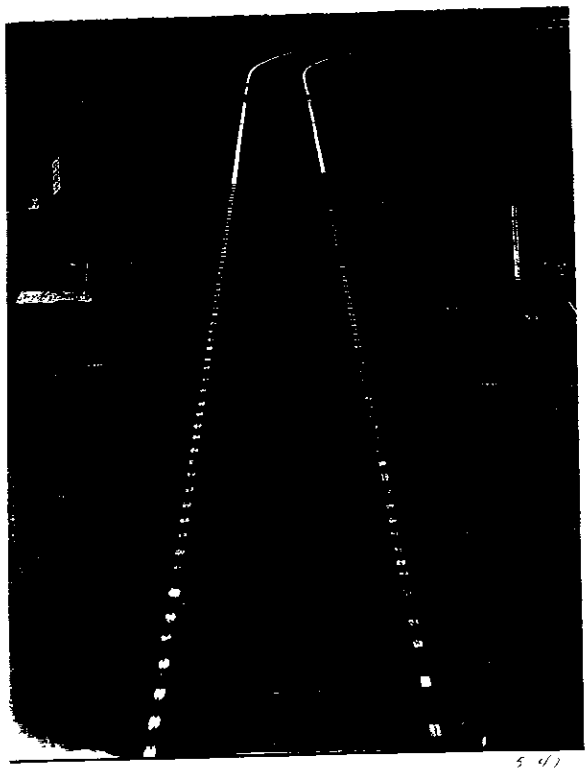
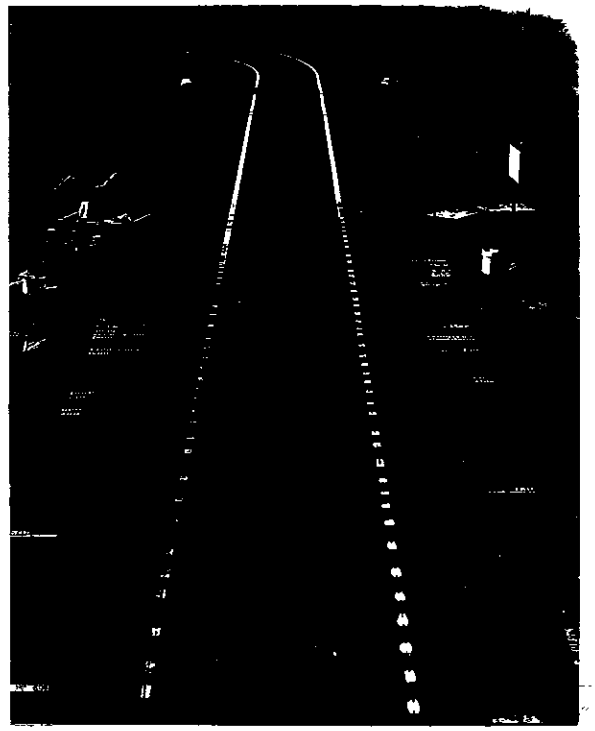
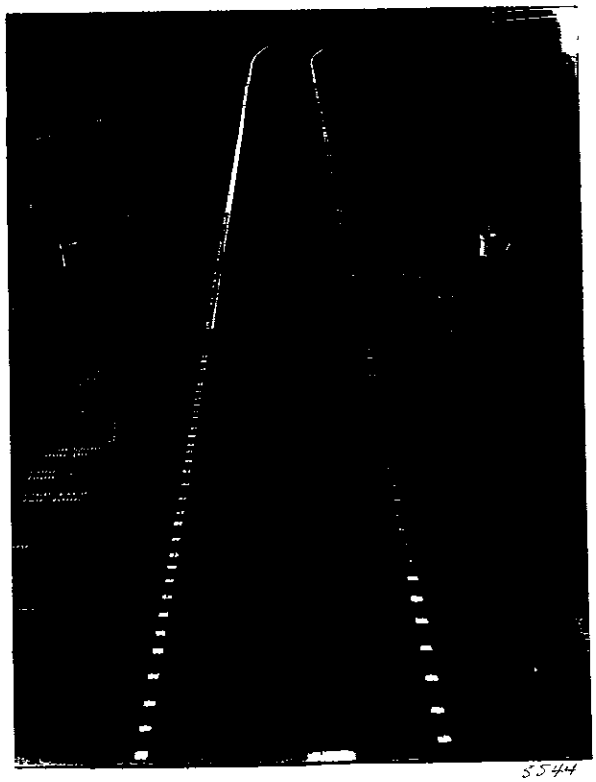
General View of Sections After Completed Repair at 10000 Trips



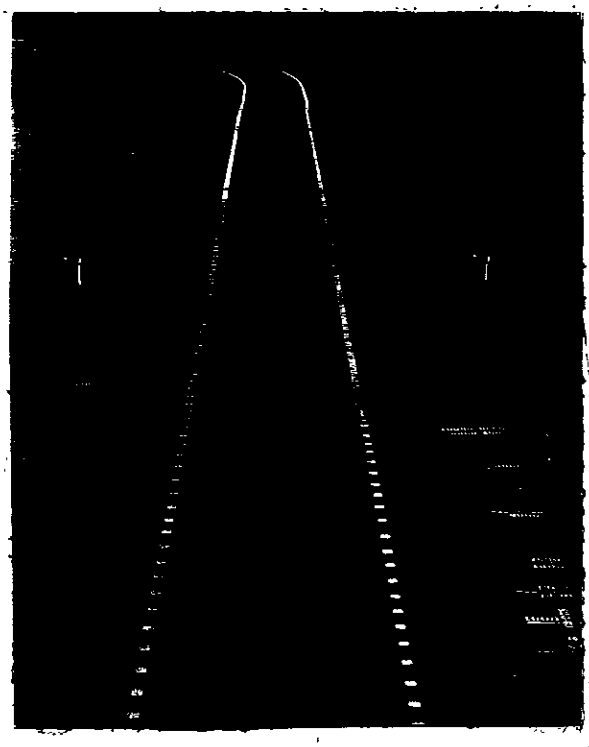
Left: 30% B.V. Untreated
Right: 100% B.V. Crusher Run



Left: 50% B.V. Emulsion
Right: 30% B.V. Emulsion



Left: 30% B.V. Cement
Right: 30% B.V. Cutback



Left: 50% B.V. Untreated
Right: 50% B.V. Cement

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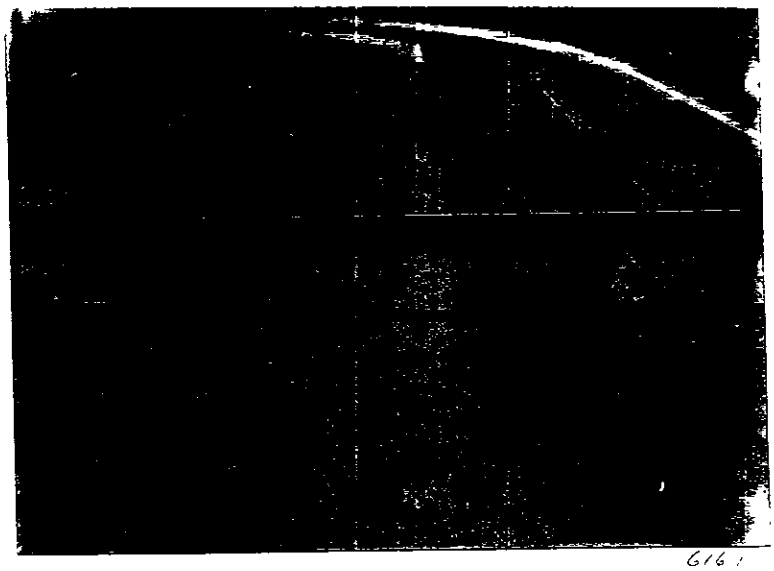
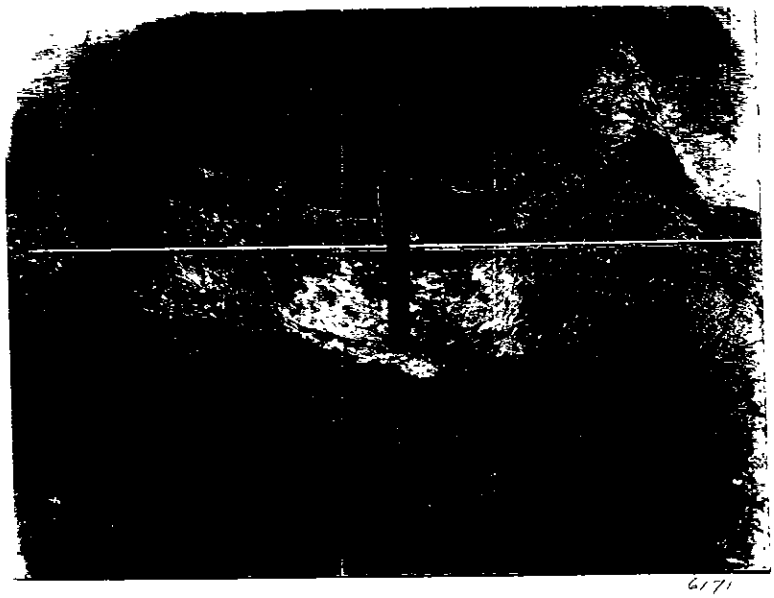
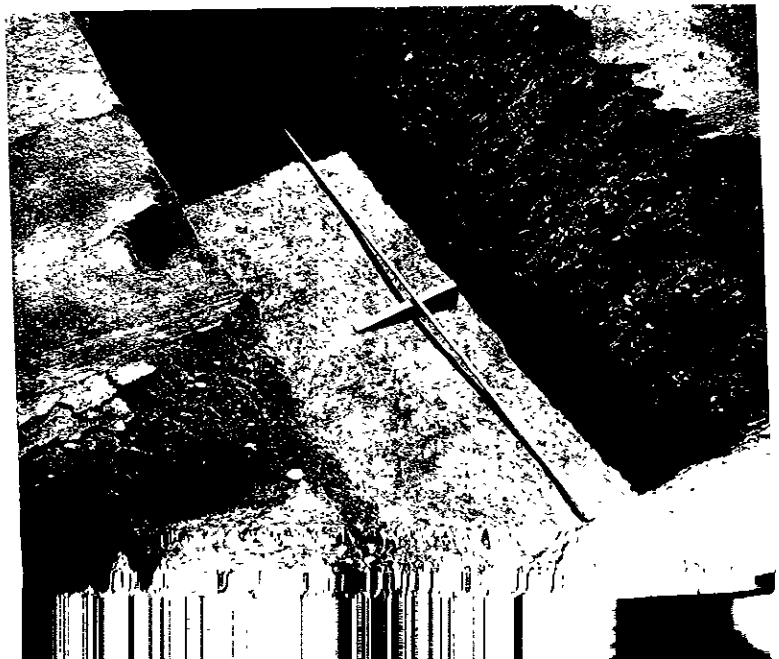
Cross Trench in 50% B.V. Untreated at 15½" After 38000 Trips



Before Removal of Surface



After Removal of Surface Showing Distortion of Base Material



After Removal of Base Showing Distortion of Subgrade 9/16"

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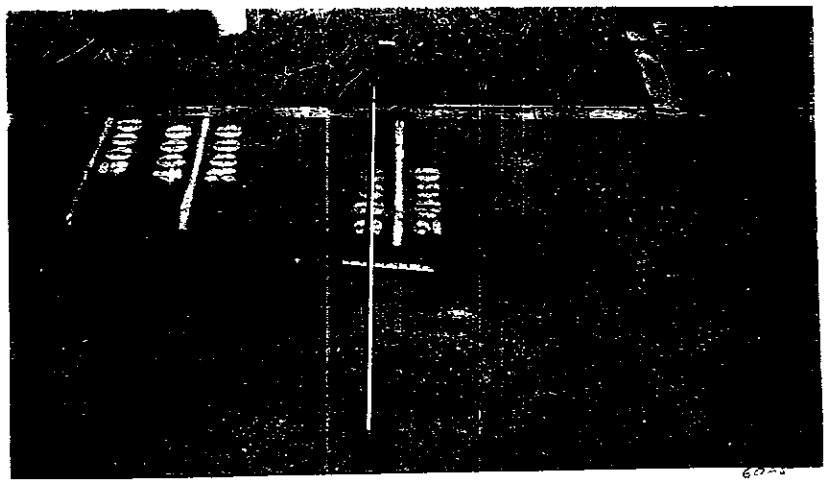
Off Center Trips with 18000 lbs.

Load on Rear Axle (Single Tire)



30% B.V. Emulsion at 10", 15 trips

50% B.V. Cement at 6"
25 Trips

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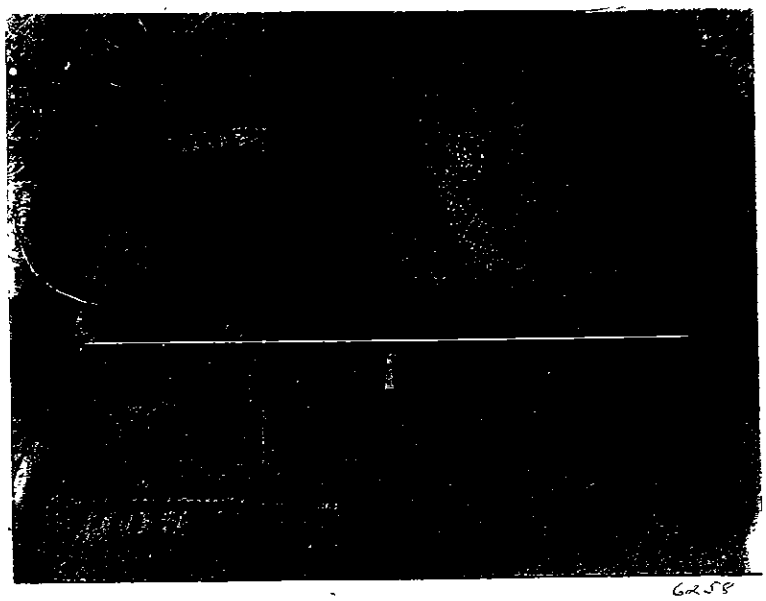
Off Center Trips with 7000 lbs.

Dual Tired Axle Transport Truck



6258

1002 B.V. Crusher Run at 10"
80 Trips

6184

Dual Tired Transport Truck

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BRIGHTON TEST TRACK

TEST SERIES II

1943

Water Level Since October, 1942, Maintained at 2" Below Top of Subgrade

February 8, 1943	Moisture samples taken. Subgrades not completely saturated as yet.
February 10, "	Raised water level 6", this is 4" above bottom of base materials.
March 24, "	Complete set of moistures for all test sections. (Moistures are still low)
March 26, "	Painting traffic stripe.
April 21, "	Lowered water level to 2" below top of subgrade.
April 26-30, "	Deflection measurements(after soaking subgrade) 6000 lbs. single-tire wheel 6000 " dual-tire wheel 9000 " dual-tire wheel
May 7, 1943	Raised water level to 4" above bottom of base.
May 14, 1943	Lowered water level to 2" below top of subgrade.
May, 18, "	Started Truck Traffic. 6000 lbs. load on single-tire wheel (12000 lbs. on rear axle)
May 24, "	Deflection measurements, 6000 lbs. single-tire wheel, 2200 trips.
May 26, 1943	3100 trips, cement treated base over 3% B.R. Subgrade failed at 6½" total thickness, repaired to 7".
June 7, 1943	5500 trips. Increased load for each tire to 6800 lbs. which is the legal permissible load

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for a 12" tire.

June 11-15,1943 7500 trips. Deflection measurements after one night's rest and also after week-end in order to determine if rest reduced deflections. Also check effect of temperature.

June 18, 1943 Deflection measurements at night to determine effect of temperature.

June 22, 1943 9500 trips. Traffic staggered, with alternate 25 trips on each side of wheel track to see if more rapid breakup occurs. (Bulging on sides of wheel track was reduced by staggering)

June 25, 1943 10800 trips. Started traffic back in wheel tracks. (1300 staggered trips)

June 28, 1943 12000 trips. End of 6800 lbs. single-tired traffic. 3% B.R. cement and also 3% B.R. Untreated base showed failures and had to be repaired.

3% B.R. cement treated base repaired 7-7½"

3% B.R. untreated base repaired 6-8½"

No failures so far in 10%, 20%, and 30% B.R.

July 6, 1943 Started dual-tired truck with 9000 lbs. per wheel (18000 lbs. on rear axle) at 12000 trips.

July 12, 1943 Deflections with 9000 lbs. per dual-tired wheel, 10" x 20" tires. (2000 trips with 9000 lbs. dual tire). Total trips to date 14,000.

July 13, 1943 Increased load to 10,500 lbs. per dual-tired wheel. Deflection measurements.

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July 16, 1943 15,500 trips. End of 10,500 lbs. wheel load traffic (1500 trips were made with this load)

July 27, 1943 One moisture test from 10% B.R. untreated base section at 6-3/4" thickness.(11% - 12% moisture)

July 28, 1943 Started dual-tired truck with 11" x 20" tires at 10,800 lbs. per dual wheel. This is the legal permissible load for a 11" tire. (No traffic from July 16 to July 28)

July 29, 1943 Deflection measurements with 10,800 lbs. wheel load on dual tires at 15,900 trips.

Aug. 27, 1943 23,500 total trips. Cement treated base over 10% B.R. subgrade failed at 6½", repaired to 7". Moisture of 10% B.R. 11% - 12% wght/cu.ft. ranges from 122-132 lbs.

There has been practically no change since 15,000 trips in all the other sections. 10% B.R. subgrade with untreated base still standing up good.

Sept. 13, 1943 Deflection measurements with 10,800 lbs. wheel load at 26,500 trips. (10600 trips since last deflections, in general deflections are somewhat less than at 15,900 trips, probably due to consolidation of subgrade)

Sept. 14,1943 27,150 trips, end of 10,800 lbs. wheel load (21,600 lbs. on rear axle)

Sept. 15, 1943 Started traffic with Teichert's 5-axle semi-trailer dual tired truck of 71,000 lbs. gross load. (Average approximately 8000 lbs. per dual tired wheel, tires 10" x 20").

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Sept. 16, 1943 Deflection measurements with 5-axle truck.

Sept. 24, 1943 30,750 round trips. End of traffic with 5-axle semi-trailer truck. 3600 trips with this truck. If each heavy axle is counted as one pass, the load repetitions are (4) (3600) = 14,400 and total load repetitions are 27150 + 14400 = 41550. Practically no change occurred in sections during 5-axle traffic.

Sept. 29, 1943 Started traffic again with 10,800 lbs. wheel load on dual tire. (21600 lbs. on rear axle, same truck as from July 28 to September 14).

Oct. 22, 1943 End of traffic for 1943. 34,300 round trips or 45,100 heavy axle repetitions. (Counting Teichert's 5-axle semi-trailer as 4 repetitions per round trip)

Nov. 2, 1943 Raised water level to 3" above top of subgrade.

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October 5, 1943

Summary of Results for 1943 Traffic

Section	Failures: 1/2" Depression in wheel tracks	Failures: By appearance pav. failed to	Section Repaired to	Order of appearance
3% B.R. Untr.Base	11¼"	9½"	8½"	4
10% B.R. " "	6½"	—	—	1 (Best)
20% B.R. " "	8-3/8"	6½"	—	3
30% B.R. " "	—	—	—	2
3% B.R. Cement Tr.Base	8¼"	7½"	7½"	4
10% B.R. " " "	8-1/8"	7"	7"	3
20% B.R. " " "	—	—	—	1 (Best)
30% B.R. " " "	—	—	—	2

Load Repetitions

Front Axles, single tire, 3700-4000 lbs. = 34,300 Rep.
Rear Axles, " " 6000-6800 lbs. = 12,000 Rep.
Rear Axles, dual tire, 7000-10800 " = 33,100 Rep.
45100

12,000 ~~to~~ plus 33,100 = 45,100 Total Rear Axle Load Repetitions.

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DEFLECTIONS
A. C. Base
Single Tire - 6000 lb. Wheel Load

Job 154-A
Test Track

Remarks		Temperature Top	Temperature Bot.	Depth Inches	Dynamic - % B.V. 3	Dynamic 10	Dynamic 20	Dynamic 30	Static - % B.V. 3	Static 10	Static 20	Static 30
Before Soaking	9-1-42			7"	.016	.017	.009	.014	.054	.046	.025	.032
After "	4-29-43				.017	.016	.028	.024	.119	.088	.086	.088
	5-25-43				.074	.054	.117	.057				
	6-11-43				.052	.030	.070	.036				
	6-16-43	127	93		.128	.077	.106	.056				
Before soaking	9-1-42			9"			.008	.009			.030	.029
After "	4-29-43						.028	.027			.084	.079
	5-25-43						.071	.057				
	6-11-43						.032	.024				
	6-16-43	129	95				.072	.054				
Before soaking	9-1-43			11"	.021	.015	.011	.009	.048	.036	.032	.031
After "	4-29-43				.019	.015	.024	.024	.074	.061	.065	.061
	5-25-43				.036	.030	.036	.042				
	6-11-43				.023	.017	.021	.026				
	6-16-43	130	97		.058	.045	.040	.049				
Before soaking	9-1-42			13"			.017	.013			.022	.017
After "	4-29-43						.038	.038			.058	.053
	5-25-43						.051	.055				
	6-11-43						.030	.036				
	6-16-43	130	97				.047	.053				

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Job 154-A
Test Track

DEFLECTIONS
A. C. Base
Single Tire - 6000 lb. Wheel Load

Remarks		Temperature Top	Temperature Bot.	Depth Inches	Dynamic - % B.V. 3	Dynamic - % B.V. 10	Dynamic - % B.V. 20	Dynamic - % B.V. 30	Static - % B.V. 3	Static - % B.V. 10	Static - % B.V. 20	Static - % B.V. 30
Before soaking	9-1-42			15"	.022	.015			.043	.043		
After "	4-29-43				.021	.015			.073	.045		
	5-25-43				.028	.026						
	6-11-43				.020	.015						
	6-16-43	130	97		.035	.032						
Before soaking	9-1-42			20"	.008	.010			.027	.038		
After "	4-29-43				.021	.010			.047	.020		
	5-25-43				.022	.008						
	6-11-43				.020	.010						
	6-16-43	130	97		.027	.014						

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Job 154-A
Test Track

DEFLECTIONS
A. C. Base
Dual Tires - 6000 lb. Wheel Load

Remarks		Temperature Top	Temperature Bot.	Depth Inches	Dynamic - % B.V. 3	Dynamic 10	Dynamic 20	Dynamic 30	Static - % B.V. 3	Static 10	Static 20	Static 30
Before soaking	9-1-42			7"	.012	.010	.010	.011	.023	.010	.014	.014
After "	4-26-43				.023	.027	.029	.024	.059	.052	.067	.054
Before soaking	9-1-42			9"			.011	.009			.015	.016
After "	4-26-43						.012	.015			.041	.042
Before soaking	9-1-42			11"	.012	.009	.005	.006	.022	.015	.014	.018
After "	4-26-43				.014	.016	.009	.015	.038	.040	.030	.036
Before soaking	9-1-42			13"			.007	.010			.010	.014
After "	4-26-43						.017	.026			.023	.029
Before soaking	9-1-42			15"	.011	.008			.021	.013		
After "	4-26-43				.008	.008			.027	.024		
Before soaking	9-1-42			20"	.010	.005			.019	.010		
After "	4-26-43				.010	.007			.024	.011		

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DEFLECTIONS
A. C. Base
Dual Tires - 9000 lb. Wheel Load

Job 154-A
Test Track

Remarks		Temperature Top	Temperature Bot.	Depth Inches	Dynamic - % B.V. 3	Dynamic - % B.V. 10	Dynamic - % B.V. 20	Dynamic - % B.V. 30	Static - % B.V. 3	Static - % B.V. 10	Static - % B.V. 20	Static - % B.V. 30
Before Soaking	9-5-42			7"	.017	.011	.012	.015	.034	.024	.020	.021
After "	4-30-43				.025	.022	.026	.025	.110	.078	.081	.076
	7-12-43	116	92			.070	.098	.060	-			
10,500 lb. wheel load	7-13-43	124	98			.082	.130	.067				
10,800 " " "	7-29-43	133	100			.109	.118	.063				
10,800 " " "	9-13-43	120	94			.078	.096	.063				
10,800 " " "	10-22-43	92	70			.047	.077	.049				
Before Soaking	9-5-42			9"			.010	.011			.020	.021
After "	4-30-43						.031	.028			.061	.057
	7-12-43	128	100				.070	.048				
10,500 lb. wheel load	7-13-43	125	100				.084	.061				
10,800 " " "	7-29-43	133	100				.097	.059				
10,800 " " "	9-13-43	120	94				.070	.052				
10,800 " " "	10-22-43	92	70				.048	.041				
Before Soaking	9-5-42			11"	.013	.010	.010	.013	.035	.022	.017	.023
After "	4-30-43				.023	.016	.023	.025	.065	.045	.047	.050
	7-12-43	129	101		.050	.038	.056	.040				
10,500 lb. wheel load	7-13-43	126	101		.069	.045	.050	.050				
10,800 " " "	7-29-43	134	106		.073	.053	.058	.048				
10,800 " " "	9-13-43	120	94		.052	.042	.043	.047				
10,800 " " "	10-22-43	92	70		.032	.024	.027	.029				
Before Soaking	9-5-42			13"			.010	.017			.011	.018
After "	4-30-43						.035	.042			.044	.048
	7-12-43	130	102				.040	.048				
10,500 lb. wheel load	7-13-43	127	102				.047	.048				
10,800 " " "	7-29-43	134	106				.049	.045				
10,800 " " "	9-18-43	120	94				.040	.054				
10,800 " " "	10-22-43	92	70				.036	.043				

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DEFLECTIONS
A. C. Base
Dual Tires - 9000 lb. Wheel Load

Job 154-A
Test Track

Remarks		Temperature Top	Temperature Bot.	Depth Inches	Dynamic - % B.V. 3	Dynamic - % B.V. 10	Dynamic - % B.V. 20	Dynamic - % B.V. 30	Static - % B.V. 3	Static - % B.V. 10	Static - % B.V. 20	Static - % B.V. 30
Before soaking	9-5-42			15"	.012	.008			.032	.022		
After "	4-30-43				.019	.013			.040	.032		
	7-12-43	112	93		.028	.027						
10,500 lb. wheel load	7-13-43	124	98		.039	.036						
10,800 " " "	7-29-43	133	100		.036	.036						
10,800 " " "	9-13-43	120	94		.030	.028						
10,800 " " "	10-22-43	92	73		.026	.019						
Before soaking	9-5-42			20"	.011	.006			.024	.010		
After "	4-30-43				.020	.006			.034	.010		
	7-12-43	108	91		.026	.011						
10,500 lb. wheel load	7-13-43	124	98		.034	.012						
10,800 " " "	7-29-43	133	100		.026	.011						
10,800 " " "	9-13-43	120	94		.028	.012						
10,800 " " "	10-22-43	92	73		.017	.014						

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Job 154-A
Test Track

DEFLECTIONS
Cement Treated Base
Single Tire - 6000 lb. Wheel Load

Remarks		Temperature Top	Temperature Bot.	Depth Inches	Dynamic - % B.V. 3	Dynamic 10	Dynamic 20	Dynamic 30	Static - % B.V. 3	Static 10	Static 20	Static 30
Before soaking	9-1-42			7"	.011	.011	.005	.007	.014	.014	.004	.006
After "	4-29-43				.019	.024	.013	.022	.045	.050	.014	.024
	5-25-43			Repair-	.050	.034	.021	.028				
6800 lbs. per wheel	6-11-43				.112	.057	.025	.036				
6800 " " "	6-16-43	130	117		.099	.139	.036	.051				
	6-28-			Repair								
Before soaking	9-1-42			9"	.009	.009	.005	.009	.013	.010	.004	.006
After "	4-29-43				.015	.023	.007	.011	.022	.028	.008	.016
	5-25-43				.027	.032	.010	.017				
	6-11-43				.034	.035	.013	.027				
	6-16-43	130	118		.040	.047	.015	.024				
Before soaking	9-1-42			11"	.007	.007	.005	.005	.014	.008	.005	.006
After "	4-29-43				.013	.017	.007	.015	.013	.014	.004	.011
	5-25-43				.020	.020	.007	.012				
	6-11-43				.023	.026	.009	.014				
	6-16-43	130	118		.025	.028	.010	.015				
Before soaking	9-1-42			13"	.009	.008	.005	.007	.014	.008	.005	.006
After "	4-29-43				.009	.009	.005	.009	.013	.014	.004	.011
	5-25-43				.010	.013	.007	.010				
	6-11-43				.017	.017	.008	.012				
	6-16-43	130	118		.012	.017	.006	.013				

Job 154-A
Test Track

DEFLECTIONS
Cement Treated Base
Dual Tires - 6000 lb. Wheel Load

Remarks		Temperature Top	Temperature Bot.	Depth Inches	Dynamic - % B.V. 3	Dynamic 10	Dynamic 20	Dynamic 30	Static - %. B.V. 3	Static 10	Static 20	Static 30
Before Soaking	8-28-42			7"	.007	.007	.003	.004	.011	.009	.006	.008
After soaking	4-28-43				.018	.018	.010	.015	.033	.034	.013	.018
Before soaking	8-28-42			9"	.006	.007	.004	.005	.012	.011	.005	.010
After soaking	4-28-43				.009	.015	.007	.010	.016	.019	.008	.014
Before soaking	8-28-42			11"	.009	.008	.003	.005	.009	.007	.004	.005
After soaking	4-28-43				.010	.011	.006	.008	.013	.015	.005	.009
Before Soaking	8-28-42			13"	.008	.006	.003	.005	.010	.007	.005	.006
After soaking	4-28-43				.008	.008	.005	.007	.011	.010	.004	.007

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DEFLECTIONS
Cement Treated Base
Dual Tires - 9000 lb. Wheel load

Job 154-A
Test Track

Remarks		Temperature Top	Temperature Bot.	Depth Inches	Dynamic - % B.V. 3	Dynamic 10	Dynamic 20	Dynamic 30	Static - % B.V. 3	Static 10	Static 20	Static 30
Before Soaking	9-5-42			7"	.011	.009	.005	.009	.017	.015	.008	.014
After "	4-30-43				.036	.040	.014	.025	.059	.056	.020	.029
	7-12-43	97	88			.068	.029	.044				
10,500 lb. wheel load	7-13-43	108	89			.084	.036	.053				
10,800 " " "	7-29-43	127	99			.093	.039	.057				
10,800 " " "	9-13-43	113	86			.044	.040	.053				
10,800 " " "	10-22-43	87	69			.041	.032	.042				
Before Soaking	9-5-42			9"	.011	.011	.005	.009	.014	.014	.005	.010
After "	4-30-43				.016	.026	.009	.016	.027	.032	.012	.021
	7-12-43	97	88		.026	.040	.014	.030				
10,500 lb. wheel load	7-13-43	110	100		.042	.054	.016	.036				
10,800 " " "	7-29-43	128	100		.045	.060	.024	.037				
10,800 " " "	9-13-43	114	87		.044	.038	.016	.030				
10,800 " " "	10-22-43	87	69		.021	.027	.013	.025				
Before Soaking	9-5-42			11"	.011	.010	.005	.005	.015	.014	.006	.008
After "	4-30-43				.014	.020	.007	.014	.018	.025	.007	.015
	7-12-43	102	89		.028	.030	.010	.015				
10,500 lb. wheel load	7-13-43	112	91		.029	.035	.013	.020				
10,800 " " "	7-29-43	129	101		.027	.035	.014	.020				
10,800 " " "	9-13-43	114	87		.026	.027	.010	.019				
10,800 " " "	10-22-43	88	69		.013	.018	.010	.019				
Before Soaking	9-5-42			13"	.010	.008	.005	.007	.012	.010	.007	.009
After "	4-30-43				.009	.013	.007	.013	.014	.015	.006	.014
	7-12-43	106	90		.012	.015	.006	.014				
10,500 lb. wheel load	7-13-43	118	92		.013	.017	.010	.019				
10,800 " " "	7-29-43	130	102		.013	.017	.010	.020				
10,800 " " "	9-13-43	116	88		.011	.014	.013	.014				
10,800 " " "	10-22-43	88	69		.011	.012	.006	.012				

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OK 11/10/43

DEFLECTION READINGS - TAKEN AT TEST TRACK
Using a 5-axle truck with total load 72,300 Lbs.

Depth	1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle
3% Material - Cement Treated Base					
7"		.017	.016	.023	.022
9"	.010	.011	.012	.018	.020
11"	.009	.009	.010	.012	.013
13"					
10% Material-Cement Treated Base					
7"		.030	.030	.039	.039
9"	.011	.020	.020	.032	.032
11"	.010	.016	.016	.020	.020
13"		.008	.009	.011	.013
20% Material - Cement Treated Base					
7"	.018	.027	.023	.032	.031
9"	.014	.020	.018	.024	.024
11"		.010	.010	.012	.013
13"		.007	.008	.010	.010
30% Material - Cement Treated Base					
7"	.025	.038	.035	.047	.046
9"	.012	.020	.020	.026	.029
11"		.014	.016	.020	.022
13"		.010	.011	.012	.014

Depth	1st Axle	2nd Axle	3rd Axle	4th Axle	5th Axle
3% Material - A.C. Base					
7"					
11"	.023	.039	.036	.050	.046
15"	.019	.023	.024	.032	.031
20"	.017	.020	.021	.026	.023
10% Material - A.C. Base					
7"	.039	.054	.054	.066	.064
11"	.017	.029	.028	.040	.037
15"	.010	.018	.018	.023	.024
20"	.007	.008	.007	.009	.009
20% Material - A.C. Base					
7"	.067	.054	.058	.073	.077
9"	.028	.038	.036	.055	.049
11"	.013	.023	.022	.035	.028
13"	.021	.026	.025	.034	.030
30% Material - A. C. Base					
7"	.035	.046	.045	.060	.059
9"	.024	.036	.034	.046	.043
11"	.025	.029	.028	.036	.034
13"	.032	.036	.034	.041	.039

Readings taken September 16, 1943.

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