Highway Research Laboratory
Room 3, Olds Hall, M. S. C.
East Lansing, Michigan

June 20, 1952

Charles W. Allen, Chairman
Group 2, Subcommittee IV, D-1 ASTM
Ohio Department of Highways
101 North High Street
Columbus, Ohio

RE: 1951 ASTM Cooperative Traffic Paint Tests
Research Project 47 G-36, Report 177

Dear Mr. Allen:

This is to report to you on the results of our field and laboratory tests of the six traffic paints which we received from Mr. Zimmerman on July 3, 1951. The machine used in the laboratory tests is similar to the one described in TT-P-115, except that two abrasive rubber wheels are used instead of one. The first wheel drives the table and the second is moderately braked. Wet and dry cycles of 500, 2000, and 5000 revolutions each were produced by periodic water spray. The painted mortar panels were air-dried for 24 hours, then cured ten days in an oven at 130° F. The machine and method of test were described in detail in our report on the 1950 tests.

Field tests also were performed in essentially the same manner as the 1950 tests. The stripes were put down transversely across two lanes of a four-lane concrete pavement from center to edge in groups of three stripes for each paint. The paints were applied in September of 1951 by spraying to film thicknesses of 13 to 15 thousandths as determined by a wet film gage and periodic inspections made thereafter to determine the number of days to produce an estimated 50 percent wear.

Following are the durability ratings of the six paints in two laboratory wear tests and the outside traffic lane of the field tests. Some of the paints on the inside (passing) lane had not passed the 50 percent mark at the time of the last inspection on June 9, 1952, and so this lane is not recorded.

Paint	ASTM Code	Laboratory Wear Test No. Revolutions to 50% Reduction, Thousands				Field Wear Test No. Days to 50% Reduction	
		Test 1	Test 2	Ave.	Order of Rating	Traffic Lane	Order of Rating
A	MW 1479	56	65	61	2	89	3
B	MW 1503	76	127	102	1	162	1
C	MW 1517	29	62	46	3	106	2
D	MW 1689	21	55	38	4	67	4
E	MW 1713	18	37	28	6	43	5
F	MW 1715	19	41	30	5	43	6

Although the two consecutive laboratory tests do not give the same numerical results, they do place the paints in the same order of durability rating. The only explanation offered for the greater apparent durability in the second test is that some loss of volatile constituents during handling might have resulted in a greater dry film thickness for the later test.

Very truly yours,

W. W. McLaughlin
Testing and Research Engineer

WWM:COR:mw

cc: E. A. Finney
W. K. Parr