



Somat Engineering, Inc.

26445 Northline Rd, Taylor, MI 48180
Tel: 734-946-4966 Fax: 734-946-1147

ASTM D6938

REPORT NUMBER: 201 SHEET: 1 OF 2

DENSITY & MOISTURE DETERMINATION REPORT

DATE: 7/30/2020

JOB NUMBER: 2019057B

PROJECT NAME: Kercheval Streetscape(PW-7005)

LOCATION: Detroit, MI

GAUGE NUMBER: 27260

CLIENT: AECOM & City of Detroit

OWNER: City of Detroit (Public Works)

CONTRACTOR: Motor City Electric / Major Concrete

PROJECT ENGINEER: Allen Ostrowski (AECOM)

WEATHER: Clear

TEST PERFORMED ON:		X	SUBGRADE		SUBBASE	X	AGGREGATE BASE	X	BACKFILL		OTHER			
STRUCTURE: Class II sand backfill for electrical conduit, existing sand subgrade and recycled crushed concrete subbase.														
TEST			WET DENSITY		MOISTURE			DRY DENSITY			TEST LOCATION			
ORIG.	RETEST	DEPTH	DENSITY COUNTS	WET DENSITY	MOIST. COUNTS	MOIST.	MOIST.	DRY DENSITY	MAX DENSITY	COMPACT.	STATIONING/LOCATION	OFFSET OF CL (FT)		DBG (FT)
		INCH	DC	PCF	MC	PCF	%	PCF	PCF	%		LEFT	RIGHT	
1		10	800	117.0	139	11.1	10.5	105.9	110.1	96.2	55+50		37.0	2.5
2		12	476	115.5	132	10.5	10.0	105.0	110.1	95.3	57+00		36.0	1
3		10	918	112.5	64	4.4	4.1	108.1	110.1	98.2	59+50		37.0	2.5
4		12	533	112.1	63	4.3	4.0	107.8	110.1	97.9	61+00		37.0	1
5		12	522	112.5	125	9.9	9.6	102.6	109.3	93.9	51+00		39.0	1
7/30	5	12	527	112.3	104	8.0	7.7	104.3	109.3	95.4	51+01		39.0	1
6		4	2126	125.8	122	9.6	8.3		128.6	97.8	49+75		38.0	0.5
7		12	624	106.8	91	6.8	6.8	100.0	105.8	94.5	52+80		36.0	1
7/30	7	12	558	110.3	124	9.8	9.7	100.5	105.8	95.0	52+82		36.0	1
8		4	2275	122.2	123	9.7	8.6		128.6	95.0	53+25		40.0	0.5

MAXIMUM DETERMINATION (FIELD) NOTE: To convert (g) to (lbs): Wt (g) / 453.59 = Wt. (lbs)											STANDARDIZATION		
TEST #	MOIST. %	MOLD VOL. (CFT)	WET SOIL + MOLD (g)	MOLD (g)	WET SOIL (g)	WET SOIL (lbs)	COMPACTED WET SOIL PCF	MAX DENSITY	OPTIMUM MOIST. %	MATERIAL	DENSITY		MOISTURE
											READING 1	1771	664
1	10.5	0.0447	4348	1890	2458	5.42	121.2	110.1	15.1	Class II	READING 2	1770	667
5	9.6	0.0447	4309	1890	2419	5.33	119.3	109.3	15.4	Existing Sand	READING 3	1778	669
6	8.3	0.0333	4115	2172	1943	4.28	128.6	128.6	6.8 - 9.8	Recycled Stone	READING 4	1773	666
7	6.8	0.0447	4160	1890	2270	5.00	112.0	105.8	16.7	Existing Soil	OPERATING STANDARD (READING 5)		
											DENSITY	1778	MOISTURE 663

MIN. COMPACTION REQUIRED:			100.0%		98.0%	X	95.0%		90.0%		OTHER	
MAXIMUM DRY DENSITY BY:		X	MICH. CONE		D1557		T-99	X	T-180		OTHER	

REMARKS:	
Tests 1-4 were done on Class II sand backfill for motor city electric conduit. Tests 5, 7 & 9 were done on existing sand subgrade by Major.	
Tests 6 & 8 were done on recycled crushed concrete for subbase by Major.	

SOMAT FIELD REPRESENTATIVE:	Cody Cervelli	DATE:	7/30/2020
SOMAT PROJECT MANAGER(s):	Steve Drummond, P.E.	DATE:	8/7/2020

*All results noted in this report relate only to items inspected or tested by Somat Engineering, Inc. and/or Somat Engineering of Ohio, Inc. (Somat). This report shall not be reproduced, except in full, without the prior written approval of Somat.