



Concrete Cylinder Test Report

PROJECT INFO

ASTM C31, ASTM C39, AASHTO T23, AASHTO T22, ASTM C172, AASHTO R60

Client	HRC	Date Of Placement	08/11/2020
Project Name	HMA Resurfacing 20+ Locations	Specimen Type	Concrete Cylinder
Project Number	2019086C	Contractor	merlo
Project Location	Detroit, MI	Concrete Supplier	Superior Materials, LLC
MDOT Job Number	205935A, 207914A	Field Tested By	Sean Joseph
MDOT Control Section	82000	Date Issued	09/08/2020

Results Recorded In	English Units
Supplier Mix Description	MDOT P1 - 3" Slump

DESIGN PARAMETER

Mix Design Number	0738 P155E7CQA032				
Design Compressive Strength (psi)	3500				
Air (% Max)	8.5	Slump (in Max)	3.00	Unit Weight (lbs/ft ³)	
Air (% Min)	5.5	Slump (in Min)	1.50		

TESTING DATA

Placed	50.00	+/- yds ³ /ft ³ of concrete at the following location:	Curb on SE corner of Lafayette and Meldrum, Sidewalk on SW corner of Lafayette and Meldrum
--------	-------	--	--

Time Tested	Truck Num	Slump ASTM C143 (in)	Air ASTM C231 or C173 (%)	Unit Weight ASTM C138 (lbs/ft ³)	Air Temp (°F)	Mix Temp ASTM C1064 (°F)	Concrete Cylinder Set	Water Added (gal)	Cumulative Concrete Placed At Test (yds ³ /ft ³)
9:00 AM	3207	3.50	6.80	0.0	75	84	1	0	2

MATERIAL DATA

Concrete Cylinder Set	Concrete Cylinder Num	Diameter (in)	X-Sec Area (in ²)	Weight (lbs)	Fracture Type	Capping Process	Age Of Concrete Cylinder (Days)	Date Tested	Total Load At Failure (lbs)	Cumulative Strength (psi/mpa)
1	79438	4.00	12.57	8.39	3-(Vertical)	Unbonded Cap	28	09/08/2020	54910	4370
1	79439	4.00	12.57	8.40	2-(Cone/Vertical)	Unbonded Cap	28	09/08/2020	55710	4430

Average 28 Day Compressive Strength (psi): 4400

*Cylinders tested with Unbonded Caps followed ASTM C1231, cylinders tested with Bonded Caps followed ASTM C617.

*All Air Content % tests were performed per C231 unless otherwise noted in the remarks.

*Inspector was notified of non-conformance items, if any.

*Average Compressive Strength results did meet project specifications.

Remarks:	
Results Reported To:	HRC(Kevin Surhigh)
Report Approved By:	Matthew Johnson



Concrete Cylinder Test Report

PROJECT INFO

ASTM C31, ASTM C39, AASHTO T23, AASHTO T22, ASTM C172, AASHTO R60

Client	HRC	Date Of Placement	08/11/2020
Project Name	HMA Resurfacing 20+ Locations	Specimen Type	Concrete Cylinder
Project Number	2019086C	Contractor	merlo
Project Location	Detroit, MI	Concrete Supplier	Superior Materials, LLC
MDOT Job Number	205935A, 207914A	Field Tested By	Sean Joseph
MDOT Control Section	82000	Date Issued	09/08/2020
Results Recorded In	English Units		
Supplier Mix Description	MDOT P1 - 3" Slump		

DESIGN PARAMETER

Mix Design Number	0738 P155E7CQA032			
Design Compressive Strength (psi)	3500			
Air (% Max)	8.5	Slump (in Max)	3.00	Unit Weight (lbs/ft ³)
Air (% Min)	5.5	Slump (in Min)	1.50	

TESTING DATA

Placed 50.00 +/- yds³/ft³ of concrete at the following location: Curb on SE corner of Lafayette and Meldrum, Sidewalk on SW corner of Lafayette and Meldrum

Time Tested	Truck Num	Slump ASTM C143 (in)	Air ASTM C231 or C173 (%)	Unit Weight ASTM C138 (lbs/ft ³)	Air Temp (°F)	Mix Temp ASTM C1064 (°F)	Concrete Cylinder Set	Water Added (gal)	Cumulative Concrete Placed At Test (yds ³ /ft ³)
2:30 PM	123	3.25	7.30	0.0	86	89	2	0	42

MATERIAL DATA

Concrete Cylinder Set	Concrete Cylinder Num	Diameter (in)	X-Sec Area (in ²)	Weight (lbs)	Fracture Type	Capping Process	Age Of Concrete Cylinder (Days)	Date Tested	Total Load At Failure (lbs)	Cumulative Strength (psi/mpa)
2	79440	4.00	12.57	8.31	3-(Vertical)	Unbonded Cap	28	09/08/2020	52180	4150
2	79441	4.00	12.57	8.40	3-(Vertical)	Unbonded Cap	28	09/08/2020	53180	4230

Average 28 Day Compressive Strength (psi): 4190

*Cylinders tested with Unbonded Caps followed ASTM C1231, cylinders tested with Bonded Caps followed ASTM C617.

*All Air Content % tests were performed per C231 unless otherwise noted in the remarks.

*Inspector was notified of non-conformance items, if any.

*Average Compressive Strength results did meet project specifications.

Remarks:	
Results Reported To:	HRC(Kevin Surhigh)
Report Approved By:	Matthew Johnson