



## Concrete Cylinder Test Report

### PROJECT INFO

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

|                          |                               |                   |                      |
|--------------------------|-------------------------------|-------------------|----------------------|
| Client                   | AECOM                         | Date Of Placement | 10/26/2020           |
| Project Name             | PW-7005 Kercheval Streetscape | Specimen Type     | Concrete Cylinder    |
| Project Number           | 2019057B                      | Contractor        | Major Cement         |
| Project Location         | Detroit, MI                   | Concrete Supplier | McCoig Materials LLC |
| MDOT Job Number          |                               | Field Tested By   | Cody Cervelli        |
| MDOT Control Section     |                               | Date Issued       | 11/23/2020           |
| Results Recorded In      | English Units                 |                   |                      |
| Supplier Mix Description | MDOT P1 + MR - 6" Slump       |                   |                      |

### DESIGN PARAMETER

|                                   |              |                |      |                                    |  |
|-----------------------------------|--------------|----------------|------|------------------------------------|--|
| Mix Design Number                 | 0799 P1-DETM |                |      |                                    |  |
| Design Compressive Strength (psi) | 3500         |                |      |                                    |  |
| Air (% Max)                       | 8.5          | Slump (in Max) | 6.00 | Unit Weight (lbs/ft <sup>3</sup> ) |  |
| Air (% Min)                       | 5.5          | Slump (in Min) | 3.00 |                                    |  |

### TESTING DATA

| Placed 65.00 +/- yds <sup>3</sup> /ft <sup>3</sup> of concrete at the following location: Curb & Sidewalk infill on NB side of Kercheval from Seyburn to Sheridan. Also Driveway between Van Dyke & Seyburn. |           |                      |                           |                                              |               |                          |                       |                   |                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|---------------------------|----------------------------------------------|---------------|--------------------------|-----------------------|-------------------|-------------------------------------------------------------------------|
| Time Tested                                                                                                                                                                                                  | Truck Num | Slump ASTM C143 (in) | Air ASTM C231 or C173 (%) | Unit Weight ASTM C138 (lbs/ft <sup>3</sup> ) | Air Temp (°F) | Mix Temp ASTM C1064 (°F) | Concrete Cylinder Set | Water Added (gal) | Cumulative Concrete Placed At Test (yds <sup>3</sup> /ft <sup>3</sup> ) |
| 8:10 AM                                                                                                                                                                                                      | 995       | 5.00                 | 5.80                      | 0.0                                          | 43            | 58                       | 1                     | 0                 | 1                                                                       |

### MATERIAL DATA

| Concrete Cylinder Set | Concrete Cylinder Num | Diameter (in) | X-Sec Area (in <sup>2</sup> ) | Weight (lbs) | Fracture Type      | Capping Process | Age Of Concrete Cylinder (Days) | Date Tested | Total Load At Failure (lbs) | Cumulative Strength (psi/mpa) |
|-----------------------|-----------------------|---------------|-------------------------------|--------------|--------------------|-----------------|---------------------------------|-------------|-----------------------------|-------------------------------|
| 1                     | 81375                 | 4.00          | 12.57                         | 8.62         | 2- (Cone/Vertical) | Unbonded Cap    | 28                              | 11/23/2020  | 67460                       | 5370                          |
| 1                     | 81376                 | 4.00          | 12.57                         | 8.60         | 3-(Vertical)       | Unbonded Cap    | 28                              | 11/23/2020  | 61730                       | 4910                          |

**Average 28 Day Compressive Strength (psi): 5140**

\*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: | AECOM(Alan Ostrowski) |
| Report Approved By:  | Matthew Johnson       |



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|                          |                               |                   |                      |
|--------------------------|-------------------------------|-------------------|----------------------|
| Client                   | AECOM                         | Date Of Placement | 10/26/2020           |
| Project Name             | PW-7005 Kercheval Streetscape | Specimen Type     | Concrete Cylinder    |
| Project Number           | 2019057B                      | Contractor        | Major Cement         |
| Project Location         | Detroit, MI                   | Concrete Supplier | McCoig Materials LLC |
| MDOT Job Number          |                               | Field Tested By   | Cody Cervelli        |
| MDOT Control Section     |                               | Date Issued       | 11/23/2020           |
| Results Recorded In      | English Units                 |                   |                      |
| Supplier Mix Description | MDOT P1 + MR - 6" Slump       |                   |                      |

### DESIGN PARAMETER

|                                   |              |                |      |
|-----------------------------------|--------------|----------------|------|
| Mix Design Number                 | 0799 P1-DETM |                |      |
| Design Compressive Strength (psi) | 3500         |                |      |
| Air (% Max)                       | 8.5          | Slump (in Max) | 6.00 |
| Air (% Min)                       | 5.5          | Slump (in Min) | 3.00 |

### TESTING DATA

|                                                                                                                                                                                                              |           |                      |                           |                                              |               |                          |                       |                   |                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|---------------------------|----------------------------------------------|---------------|--------------------------|-----------------------|-------------------|-------------------------------------------------------------------------|
| Placed 65.00 +/- yds <sup>3</sup> /ft <sup>3</sup> of concrete at the following location: Curb & Sidewalk infill on NB side of Kercheval from Seyburn to Sheridan. Also Driveway between Van Dyke & Seyburn. |           |                      |                           |                                              |               |                          |                       |                   |                                                                         |
| Time Tested                                                                                                                                                                                                  | Truck Num | Slump ASTM C143 (in) | Air ASTM C231 or C173 (%) | Unit Weight ASTM C138 (lbs/ft <sup>3</sup> ) | Air Temp (°F) | Mix Temp ASTM C1064 (°F) | Concrete Cylinder Set | Water Added (gal) | Cumulative Concrete Placed At Test (yds <sup>3</sup> /ft <sup>3</sup> ) |
| 3:20 PM                                                                                                                                                                                                      | 840       | 4.75                 | 5.80                      | 0.0                                          | 48            | 59                       | 2                     | 0                 | 51                                                                      |

### MATERIAL DATA

|                       |                       |               |                               |              |                    |                 |                                 |             |                             |                               |
|-----------------------|-----------------------|---------------|-------------------------------|--------------|--------------------|-----------------|---------------------------------|-------------|-----------------------------|-------------------------------|
| Concrete Cylinder Set | Concrete Cylinder Num | Diameter (in) | X-Sec Area (in <sup>2</sup> ) | Weight (lbs) | Fracture Type      | Capping Process | Age Of Concrete Cylinder (Days) | Date Tested | Total Load At Failure (lbs) | Cumulative Strength (psi/mpa) |
| 2                     | 81377                 | 4.00          | 12.57                         | 8.59         | 2- (Cone/Vertical) | Unbonded Cap    | 28                              | 11/23/2020  | 67230                       | 5350                          |
| 2                     | 81378                 | 4.00          | 12.57                         | 8.62         | 3-(Vertical)       | Unbonded Cap    | 28                              | 11/23/2020  | 68290                       | 5430                          |

**Average 28 Day Compressive Strength (psi): 5390**

\*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.

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| Remarks:             |                       |
| Results Reported To: | AECOM(Alan Ostrowski) |
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