

## Engineer's Opinion of Costs

|                                                                                                                               |                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Project Number:</b> 105546A<br><b>Estimate Number:</b> 2<br><b>Project Type:</b> Miscellaneous<br><b>Location:</b> Detroit | <b>Project Engineer:</b> Robert Karber<br><b>Date Created:</b> 10/8/2009<br><b>Fed/State #:</b><br><b>Fed Item:</b><br><b>Control Section:</b> STU 82400 |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|

**Description:** ADA Curb Ramp Construction and Upgrades for Intersections between the Detroit River, I-75, M-10, and I-375

| Line | Pay Item | Description                                             | Quantity  | Units | Unit Price   | Total        |
|------|----------|---------------------------------------------------------|-----------|-------|--------------|--------------|
| 0001 | 1000001  | Mobilization, Max. ____ 10%                             | 1.00      | LS    | \$139,835.40 | \$139,835.40 |
| 0002 | 2030011  | Dr Structure, Rem                                       | 1.00      | Ea    | \$200.00     | \$200.00     |
| 0003 | 2040010  | Masonry and Conc Structure, Rem                         | 100.00    | Cyd   | \$100.00     | \$10,000.00  |
| 0004 | 2040013  | Sidewalk, Rem                                           | 12,554.00 | Syd   | \$3.00       | \$37,662.00  |
| 0005 | 2047001  | _ Curb, Rem, Modified                                   | 13,221.00 | Ft    | \$5.00       | \$66,105.00  |
| 0006 | 2047011  | _ Pavt, Rem, Modified                                   | 2,414.00  | Syd   | \$5.00       | \$12,070.00  |
| 0007 | 2047021  | _ Basement Cleanout, Modified                           | 90.00     | Cyd   | \$30.00      | \$2,700.00   |
| 0008 | 2057021  | _ Excavation, Earth, Modified                           | 300.00    | Cyd   | \$6.00       | \$1,800.00   |
| 0009 | 2057021  | _ Granular Material, Cl II, Modified                    | 200.00    | Cyd   | \$12.00      | \$2,400.00   |
| 0010 | 2080006  | Erosion Control, Inlet Protection, Fabric Drop          | 100.00    | Ea    | \$75.00      | \$7,500.00   |
| 0011 | 3020010  | Aggregate Base, 4 inch                                  | 159.00    | Syd   | \$5.00       | \$795.00     |
| 0012 | 4020033  | Sewer, Cl A, 12 inch, Tr Det B                          | 5.00      | Ft    | \$32.00      | \$160.00     |
| 0013 | 4021275  | Video Taping Sewer and Culv Pipe                        | 19.00     | Ft    | \$1.50       | \$28.50      |
| 0014 | 4030061  | Dr Structure, Tap, 6 inch                               | 10.00     | Ea    | \$150.00     | \$1,500.00   |
| 0015 | 4037001  | _ Sewer Cleanout, Modified                              | 2,500.00  | Ft    | \$1.00       | \$2,500.00   |
| 0016 | 4037030  | _ ADA Grate                                             | 1,000.00  | Lb    | \$2.00       | \$2,000.00   |
| 0017 | 4037030  | _ Dr Structure Cover, Modified                          | 1,000.00  | Lb    | \$1.00       | \$1,000.00   |
| 0018 | 4037050  | _ Catch Basin BT, Modified                              | 1.00      | Ea    | \$1,000.00   | \$1,000.00   |
| 0019 | 4037050  | _ Catch Basin, 18 inch x 12 inch, Special 'Y', Modified | 1.00      | Ea    | \$600.00     | \$600.00     |
| 0020 | 4037050  | _ Dr Structure Cleaning, Modified                       | 100.00    | Ea    | \$70.00      | \$7,000.00   |
| 0021 | 4037050  | _ Dr Structure Cover, Adj, Case 1, Modified             | 105.00    | Ea    | \$300.00     | \$31,500.00  |
| 0022 | 4037050  | _ Dr Structure Cover, Adj, Case 2, Modified             | 3.00      | Ea    | \$300.00     | \$900.00     |
| 0023 | 4037050  | _ Reconstructing Dr Structure, Case 1, Modified         | 10.00     | Ea    | \$600.00     | \$6,000.00   |

| Line | Pay Item | Description                                                    | Quantity  | Units | Unit Price | Total        |
|------|----------|----------------------------------------------------------------|-----------|-------|------------|--------------|
| 0024 | 4037050  | _ Reconstructing Dr Structure, Case 2, Modified                | 10.00     | Ea    | \$600.00   | \$6,000.00   |
| 0025 | 4037050  | _ Water Shutoff, Adj, Modified                                 | 10.00     | Ea    | \$150.00   | \$1,500.00   |
| 0026 | 4040083  | Underdrain, Subgrade, Open-Graded, 6 inch                      | 1,000.00  | Ft    | \$5.00     | \$5,000.00   |
| 0027 | 5020025  | Hand Patching                                                  | 481.00    | Ton   | \$75.00    | \$36,075.00  |
| 0028 | 5027011  | _ HMA Surface, Rem, Modified                                   | 2,874.00  | Syd   | \$15.00    | \$43,110.00  |
| 0029 | 6020108  | Conc Pavt, Nonreinf, 10 inch                                   | 151.00    | Syd   | \$50.00    | \$7,550.00   |
| 0030 | 6027131  | _ Cement, Modified                                             | 50.00     | Ton   | \$200.00   | \$10,000.00  |
| 0031 | 6030020  | Joint, Contraction, Crg                                        | 678.00    | Ft    | \$9.00     | \$6,102.00   |
| 0032 | 6030030  | Lane Tie, Epoxy Anchored                                       | 4,696.00  | Ea    | \$5.00     | \$23,480.00  |
| 0033 | 6057021  | _ Concrete Quality Control, Modified                           | 3,454.00  | Cyd   | \$4.50     | \$15,543.00  |
| 0034 | 7060010  | Substructure Conc                                              | 50.00     | Cyd   | \$400.00   | \$20,000.00  |
| 0035 | 7060034  | Reinforcement, Steel                                           | 4,180.00  | Lb    | \$1.50     | \$6,270.00   |
| 0036 | 7070002  | Structural Steel, Rolled Shape, Erect                          | 1,000.00  | Lb    | \$0.50     | \$500.00     |
| 0037 | 7077030  | _ Structural Steel, Rolled Shape, Furn and Fab, Modified       | 1,000.00  | Lb    | \$2.00     | \$2,000.00   |
| 0038 | 7100008  | Membrane, Preformed Waterproofing                              | 2,000.00  | Sft   | \$3.00     | \$6,000.00   |
| 0039 | 7107010  | _ Drainage Composite                                           | 1,000.00  | Sft   | \$5.00     | \$5,000.00   |
| 0040 | 7120028  | Adhesive Anchoring of Horizontal Bar, 3/4 inch                 | 80.00     | Ea    | \$20.00    | \$1,600.00   |
| 0041 | 7120034  | Adhesive Anchoring of Vertical Bar, 3/4 inch                   | 350.00    | Ea    | \$15.00    | \$5,250.00   |
| 0042 | 7120040  | Bolt, Adhesive Anchored, 1/2 inch                              | 40.00     | Ea    | \$8.00     | \$320.00     |
| 0043 | 8027001  | _ Curb and Gutter, Conc, Det C3, Modified                      | 13,234.00 | Ft    | \$14.00    | \$185,276.00 |
| 0044 | 8027001  | _ Curb, Conc, Detail CD, Modified                              | 1,855.00  | Ft    | \$15.00    | \$27,825.00  |
| 0045 | 8027050  | _ 24 inch x 60 inch Detectable Warning Surface Tiles, Modified | 613.00    | Ea    | \$120.00   | \$73,560.00  |
| 0046 | 8037010  | _ Sidewalk Ramp, ADA, 6 inch, Modified                         | 54,286.00 | Sft   | \$6.00     | \$325,716.00 |
| 0047 | 8037010  | _ Sidewalk, Conc, 4 inch, Modified                             | 60,685.00 | Sft   | \$4.00     | \$242,740.00 |
| 0048 | 8037010  | _ Sidewalk, Conc, 6 inch, Modified                             | 1,000.00  | Sft   | \$5.00     | \$5,000.00   |
| 0049 | 8077050  | _ Relocate/Reset Mail Box                                      | 7.00      | Ea    | \$500.00   | \$3,500.00   |
| 0050 | 8077050  | _ Remove Minor Object                                          | 10.00     | Ea    | \$100.00   | \$1,000.00   |
| 0051 | 8077050  | _ Reset Misc Item                                              | 4.00      | Ea    | \$200.00   | \$800.00     |
| 0052 | 8077050  | _ Reset Planter                                                | 2.00      | Ea    | \$400.00   | \$800.00     |

| Line                                  | Pay Item | Description                                                                 | Quantity | Units | Unit Price  | Total       |
|---------------------------------------|----------|-----------------------------------------------------------------------------|----------|-------|-------------|-------------|
| 0053                                  | 8077050  | _ Reset Sign                                                                | 107.00   | Ea    | \$200.00    | \$21,400.00 |
| 0054                                  | 8080007  | Fence, Protective                                                           | 300.00   | Ft    | \$4.00      | \$1,200.00  |
| 0055                                  | 8087001  | _ Remove and Replace Existing Fence                                         | 300.00   | Ft    | \$5.00      | \$1,500.00  |
| 0056                                  | 8100179  | Sign, Type IB                                                               | 6.00     | Sft   | \$25.00     | \$150.00    |
| 0057                                  | 8100200  | Sign, Type I, Rem                                                           | 1.00     | Ea    | \$200.00    | \$200.00    |
| 0058                                  | 8110150  | Rem Spec Mrkg                                                               | 5,849.00 | Sft   | \$0.65      | \$3,801.85  |
| 0059                                  | 8117001  | _ Pavt Mrkg, Preformed, Patterned, 12 inch, White Zebra Crosswalk, Modified | 1,290.00 | Ft    | \$4.00      | \$5,160.00  |
| 0060                                  | 8117001  | _ Pavt Mrkg, Preformed, Patterned, 18 inch, Stop Bar, Modified              | 1,258.00 | Ft    | \$10.00     | \$12,580.00 |
| 0061                                  | 8117001  | _ Pavt Mrkg, Preformed, Patterned, 6 inch Crosswalk, Modified               | 7,353.00 | Ft    | \$2.00      | \$14,706.00 |
| 0062                                  | 8120030  | Flag Control                                                                | 1.00     | LS    | \$22,500.00 | \$22,500.00 |
| 0063                                  | 8120035  | High Intensity Light, Type B, Furn                                          | 20.00    | Ea    | \$10.00     | \$200.00    |
| 0064                                  | 8120036  | High Intensity Light, Type B, Oper                                          | 15.00    | Ea    | \$5.00      | \$75.00     |
| 0065                                  | 8120042  | Lighted Arrow, Type C, Furn                                                 | 4.00     | Ea    | \$400.00    | \$1,600.00  |
| 0066                                  | 8120043  | Lighted Arrow, Type C, Oper                                                 | 3.00     | Ea    | \$100.00    | \$300.00    |
| 0067                                  | 8120050  | Minor Traf Devices                                                          | 1.00     | LS    | \$22,500.00 | \$22,500.00 |
| 0068                                  | 8120090  | Pavt Mrkg, Type R, 4 inch, White, Temp                                      | 1,200.00 | Ft    | \$1.00      | \$1,200.00  |
| 0069                                  | 8120100  | Plastic Drum, High Intensity, Furn                                          | 80.00    | Ea    | \$20.00     | \$1,600.00  |
| 0070                                  | 8120101  | Plastic Drum, High Intensity, Oper                                          | 50.00    | Ea    | \$2.00      | \$100.00    |
| 0071                                  | 8120120  | Sign, Type B, Temp, Furn                                                    | 3,280.00 | Sft   | \$4.00      | \$13,120.00 |
| 0072                                  | 8120121  | Sign, Type B, Temp, Oper                                                    | 2,624.00 | Sft   | \$1.00      | \$2,624.00  |
| 0073                                  | 8160025  | Mulch                                                                       | 100.00   | Syd   | \$0.50      | \$50.00     |
| 0074                                  | 8160042  | Seeding, Mixture TUF                                                        | 100.00   | Lb    | \$4.00      | \$400.00    |
| 0075                                  | 8160090  | Water, Sodding/Seeding                                                      | 50.00    | Unit  | \$25.00     | \$1,250.00  |
| 0076                                  | 8167021  | _ Topsoil Surface, Furn, LM, Modified                                       | 200.00   | Cyd   | \$15.00     | \$3,000.00  |
| 0077                                  | 8200065  | Fdn, Rem                                                                    | 7.00     | Ea    | \$350.00    | \$2,450.00  |
| 0078                                  | 8207050  | _ Non-Ferrous Handhole, Adj                                                 | 7.00     | Ea    | \$250.00    | \$1,750.00  |
| <b>Estimate Total: \$1,538,189.75</b> |          |                                                                             |          |       |             |             |