

City of Newark Public Works and Water Resources Infrastructure Replacement Worksheet

September 7, 2017

| Infrastructure Type       | Inventory and Units(3) | Service Life   | Cost per Unit (7) | Comment                         | Need per year (4) |        | Cost per year   | 2017 Budget Funding | 2017 Funding Gap | 2018 Budget Funding | 2018 Funding Gap |
|---------------------------|------------------------|----------------|-------------------|---------------------------------|-------------------|--------|-----------------|---------------------|------------------|---------------------|------------------|
| Water Mains               | 140 miles              | 100 years      | \$ 1,200,000.00   | Replace - restores full life    | 1.4               | miles  | \$ 1,680,000.00 | \$ 1,000,000.00     | \$ 680,000.00    | \$ 500,000.00       | \$ 1,180,000.00  |
| Sanitary Sewer Mains (6)  | 95 miles               | 100 years      | \$ 700,000.00     | Reline - restores 50-years      | 0.95              | miles  | \$ 665,000.00   | \$ 500,000.00       | \$ 165,000.00    | \$ 700,000.00       | \$ (35,000.00)   |
| Streets (City) (5)        | 65 miles               | 17.5 years (1) | N/A               | Per Pavement Management Plan    | N/A               | miles  | \$ 1,750,000.00 | \$ 1,515,000.00     | \$ 235,000.00    | \$ 1,545,000.00     | \$ 205,000.00    |
| Storm Sewer (Concrete)    | 80 miles               | 85 years       | \$ 1,200,000.00   | Replace - restores full life    | 0.94              | miles  | \$ 1,128,000.00 | \$ -                | \$ 1,128,000.00  | \$ -                | \$ 1,128,000.00  |
| Storm Sewer (Metal)       | 5.01875 miles          | 15 years (2)   | \$ 1,000,000.00   | Replace with concrete or reline | 0.33              | miles  | \$ 330,000.00   |                     | \$ 330,000.00    | \$ 420,000.00       | \$ (90,000.00)   |
| Handicap Accessible Ramps | 1689 Units             | 25 years       | \$ 3,500.00       | Replace non-compliant ramps     | 67.56             | Units  | \$ 236,460.00   | \$ 120,000.00       | \$ 116,460.00    | \$ 130,000.00       | \$ 106,460.00    |
|                           |                        |                |                   |                                 |                   | Total: | \$ 5,553,000.00 | \$ 3,135,000.00     | \$ 2,418,000.00  | \$ 3,295,000.00     | \$ 2,258,000.00  |

- (1) \$1,750,000 needed per year for the next 5 years to maintain the current average pavement condition per the 2016 Agile Assets Pavement Management Plan
- (2) Metal storm pipe has not been used in the City for many years. Traditionally I would apply a 25 year life for CMP but most is already severely deteriorated and in need of replacement
- (3) Inventory lengths reflect our best available current records. Road miles are the only survey grade values at this point and all others will change as we complete surveys
- (4) Replacement costs include structures like manholes, valves, catch basins, curbing, etc. in an effort to give a simple replacement value for an average street, main, etc.
- (5) 2017 Funding held at \$1,515,000 with the expectation that State CTF money will make up the difference to get to \$1,750,000 target
- (6) Sewer replacement cost includes \$200,000 per year of inspection and prioritization cost assuming inspection of entire sanitary sewer system on a 15-year cycle
- (7) All costs are approximate based on previously bid projects for a variety of projects and locations. Future costs may vary from these figures.