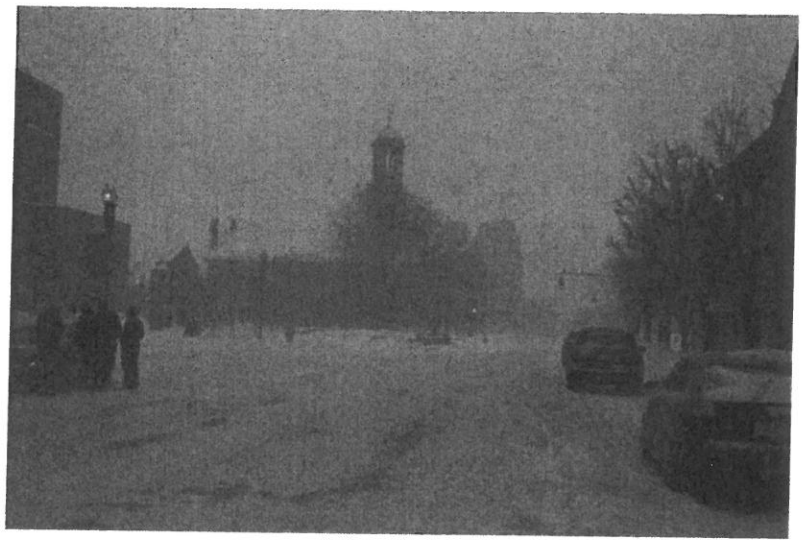
Commonwealth of Massachusetts DPW

City of Quincy

Department of Public Works



Fiscal Year 2015

Annual Report

July 1, 2014 to June 30, 2015

THOMAS P. KOCH, MAYOR

DANIEL G. RAYMONDI, COMMISSIONER

CLEAN WATER IS EVERYBODY'S BUSINESS

Acknowledgments

Produced by the men and women of the Department of Public Works.

Photos by John Sullivan.

Printed in-house by the Information Technology Department.

TABLE OF CONTENTS

Introduction.....1

Mission Statement 1

Mail Services 2

Water and Sewer Operations 2

Drain Operations.....8

Highway Operations 10

Waste Management Operations 16

Community Outreach 20

Engineering Division.....23

Traffic and Parking Division 26

INTRODUCTION

City Engineer Henry Nilsen in 1938. Mr. Nilsen worked for the City of Quincy for 40 years.

In 1888, as Quincy transitioned from a Town to a City form of governance, the Department of Public Works was established. At that time, sleds, horses, plows and stone crushers were utilized to perform the responsibilities of the newly organized Public Works Department. In 1900, the population of Quincy was 23,899. Today, more than 100,000 people live, work and play in Quincy. Over the past century, our work has become more diversified, automated, complex, computerized, technical and multifaceted.

What has not changed, however, is the dedication of public works employees and their steadfast commitment to meet the needs of the public that they are honored to serve each and every day. The Department is pleased to provide you with its fiscal year 2015 Annual Report.

We want to keep you informed about the excellent work that we have performed and the quality of services that we have delivered to you over the past year. As you will see, we are proud of our accomplishments and we thank you for your support and for taking the time to review our Report.

MISSION STATEMENT

Through the judicious use of personnel, materials, equipment, resources, and scheduling: to plan, construct, maintain and facilitate through inter-Divisional cooperation, past, present, and future municipal infrastructure, wetlands and open space, thereby providing the best possible environment for the citizens of Quincy.

The Department of Public Works, under the leadership of Commissioner of Public Works Daniel G. Raymondi performed its duties and responsibilities through the following Division and Operations, namely; Water and Sewer, Drain, Highway, Waste Management, Engineering Division, and Traffic & Parking. Legal Counsel was added to the staff to address increasing legal and regulatory issues.

MAIL SERVICES

Supervised three (3) Mail Clerks in the daily collection and processing of thousands of inter-Departmental mail pieces. In addition, the City of Quincy mailed out 529,000 pieces of mail through the US Postal Service at a cost of $232,685 under the direction of the Treasurer Collector, Deborah Coughlin.

WATER AND SEWER OPERATIONS

Responsible for water distribution and sewer management to the commercial and residential communities of the City. Operations conducted business 24 hours a day, 7 days a week with a workforce that consisted of City Engineer Shawn Hardy, Senior Civil Engineer Peter Hoyt, General Foreman Mark Vialpando and highly skilled, experienced, trained, certified and licensed personnel. Primary objectives were to ensure clean, safe, quality drinking water and sewer services for residences and businesses that met or exceeded regulatory requirements.

Operations continued to partner with the Information Technology Department to develop and implement a Workforce Management System. This system created, logged and tracked all work order requests.

Operations also worked cooperatively with the Massachusetts Water Resource Authority (MWRA). Sixty (60) communities, including Quincy, purchased some or all of their water from the MWRA. Quincy's water was drawn from the Quabbin Reservoir in western Massachusetts where it was tested, treated and sent through an extensive network of water mains to Quincy. Our network of water mains was then utilized to bring the water to individual homes and businesses throughout the City. Waste water was then collected through our sanitary sewer system and returned to the MWRA for processing.

We are proud to service and deliver the highest quality, best tasting water possible.

Enterprise Fund

Water and Sewer Operations was funded through an Enterprise Account established pursuant to M.G.L. c. 44 § 53F1/2. All of the costs associated with Water and Sewer Operations were paid by Water and Sewer ratepayers. The City did not use tax revenues to subsidize the costs of providing water or sewer services. Conversely, Water and Sewer customers did not pay for items that were not related to providing water and sewer services. The intent was to have efficient, cost effective Water and Sewer Operations with clearly identified costs and revenues.

The Enterprise Account has operated at a surplus since its inception in 2009. This year, Water Operations ended with a surplus of $1,653,432 and Sewer Operations ended with a surplus of $2,018,261. Surplus revenues are generally transferred to a stabilization fund.

The stabilization fund can be used to pay for unexpected costs, major improvements or repairs to our water or sewer systems.

Water and Sewer rates were set in July at $5.92 per 100 cubic feet for water and $12.98 per 100 cubic feet for sewer. These rates were established at a level to cover Water and Sewer Operations and capital expenses. The Water and Sewer Enterprise Fund paid the MWRA $29,806,934 for water and sewer services. This payment represented 65% of the Water and Sewer budgets.

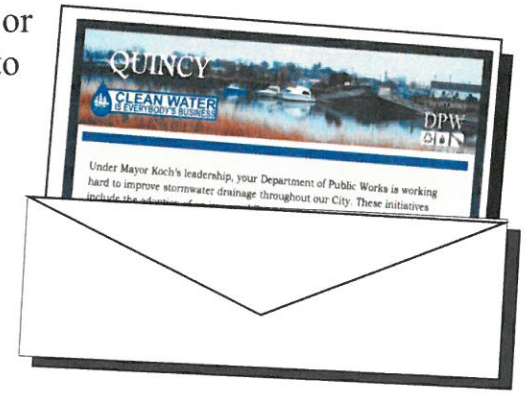
Billing Office

Under the leadership of Operations Manager Michael Coffey, Billing Office Manager Rhonda Merrill and highly skilled, efficient and dedicated staff, the Water and Sewer Billing Office was responsible for auditing and issuing bills to water service customers and was available to answer customer concerns regarding billing and usage issues.

The Billing Office issued Water and Sewer bills in the total amount of $44,218,929 ($18,368,080 for water and $25,850,849 for sewer). Included in the Water and Sewer billings were charges in the amount of $594,309 for high-strength use backflow prevention tests, manual meter readings, unauthorized connections and final water readings.

The Billing Office also:

- Continued to monitor a new remote metering system for our water customers. This initiative allowed the billing office to remotely monitor and gather consumption levels across the City that improved billing accuracy and reduced customer service issues.
- Placed approximately 3,700 calls to customers advising them that our remote metering system had identified a significant increase in their water usage. Spikes in water usage can be indicative of a leak in a customer's plumbing like a running toilet or appliance. These calls enabled our customers to address these problems before they became costly.
- Distributed 23,500 water conservation brochures to our water customers. These brochures provided helpful hints and suggestions for our customers to improve water efficiency and help control costs.



Water Distribution:

A critical function of the Water Distribution team was to provide clean, safe, quality drinking water for the daily essential needs of our 23,500 metered residential and commercial customers, in conformity with stringent State and Federal distribution

guidelines such as the Safe Drinking Water Act, originally passed by Congress in 1974. Water customers used 3.4 billion gallons of water and $10,605,214 was paid to the MWRA for that water consumption.

Water/Sewer/Drain Engineer Peter Hoyt, second from left, and General Foreman Mark Vialpando, far right, accepted the Drinking Water Award from DEP Commissioner David Cash (l) and State Representative Bruce Ayers, second from right.

In addition to receiving the Commonwealth of Massachusetts Department of Environmental Protection (DEP) Drinking Water Program Public Water System Award for Outstanding Performance and Achievement for the fourth consecutive year, Water Operations also:

- Managed, maintained, repaired or replaced 230 miles of water main pipes, gate valves, service lines, pumping stations, and water storage tanks required to provide clean water to customers.
- Responded to 1,026 work orders to repair water meters, conduct site inspections for leaks, test accuracy of water meters, perform final reads, and install valve replacements.
- Managed over 2,786 calls for water main breaks, leaks, frozen pipes, low water pressure, water quality and other water service related calls.
- Repaired 89 water main, service and meter leaks.
- Repaired 37 water main breaks.
- Responded to 59 water pressure calls and 58 water quality calls.
- Uncovered and tested 162 gate valves.
- Successfully completed our annual flushing program in which 2,549 fire hydrants were tested and flushed. The process of periodically flushing fire hydrants was an important preventive maintenance activity. This allowed Water Operations to ensure that each hydrant was in serviceable condition and delivering sufficient flow.
- Public service announcements were placed in the Quincy Sun and on QATV informing residents of the fire hydrant flushing program with "do's and don'ts."
- Repaired or replaced 173 fire hydrants.
- Painted 38 fire hydrants.
- Completed a Citywide leak detection survey designed to identify underground leaks in our water

Water Operation employee Eric Wood flushed a fire hydrant as part of our annual fire hydrant flushing program.

distribution system. Surveyed 230 miles of pipe using the latest leak detection technology. Twenty (20) leaks, ranging in size from ¾ inch service connections to 12 inch water mains, were found and repaired. It was estimated that this important initiative saved water ratepayers $250,000 dollars per year.

- Performed 132 new installation inspections and 52 flow tests.
- Tested 1,289 backflow prevention devices. A backflow prevention device is used to protect potable water supplies from cross contamination or pollution due to backflow. In water supply systems, water is normally maintained at a significant pressure to enable water to flow from the tap, shower, or other fixture.
- Certified and licensed personnel conducted 940 cross connection surveys at 332 sites. These inspections and tests generated $79,319 in revenue and ensured that our water main system remained protected from external contaminants.
- Collected 1,121 water samples from locations across the City. These samples were sent to the MWRA weekly for analysis to ensure that our water quality remained at the high levels we expect and our customers deserve. Operations achieved its goal of staying under the 15 parts per billion (ppb) action level for lead.
- Installed a Supervisory Control and Data Acquisition (SCADA) control system that allowed our operators to remotely monitor and control the level of water in our water tanks and the flow of water through our water pumps.
- Contracted with Lorusso Corp. for $348,675.50 to repair 80 road trenches.
- Contracted with C. Naughton Corp. for $351,651.44 to replace 1,770 feet of water main on Dorchester Street.
- Contracted with A. Vozella & Sons for $1,014,542.63 to replace 5,175 feet of water main on Edison Street, Newbury Avenue, Glover Avenue and Faxon Road.
- Responded to 3,779 requests for Dig Safe mark-outs. Residents were reminded and State Law required that any person performing excavations call Dig Safe at 811 or 888-DIG-SAFE or online at www.digsafe.com to prevent damage to underground utilities.

Sewer Operations

Sewer Operations maintained 205 miles of sanitary sewers to ensure the proper delivery of safe, efficient sewer services. In this process, Sewer Operations:

- Submitted Quincy's 2015 Municipal Discharge Permit Application to the MWRA detailing our sewer system and highlighting efforts to reduce infiltration and inflow (I&I) removal. This document provided information on the City's sewer usage and recent sewer system alterations to assist the MWRA in the operation and maintenance of its interceptors.

- Sent over 5 billion gallons of wastewater this year or 13.7 millions of gallons of wastewater per day to the MWRA and paid $19,001,720 for processing.
- Completed upgrades to the Fort Square Sewer Pump Station at a cost of $2,458,318. As part of the Mayor's long -standing program of upgrading the City's sewer system the upgrades included new electrical and control systems, standby generator, heating and air conditioning system, roof, and odor control unit.

A temporary sewer by-pass was installed while upgrades were made at the Fort Square Sewer Pump station.

- Completed design of the Quincy Point Pump Station which is the largest City-owned sewer station in the City. This project is similar to the Fort Square pump station improvement project. Construction was scheduled for fiscal year 2016.
- Maintained sewer main infrastructure including general maintenance on our pump stations at Fort Square, Quincy Point, Evelyn Place, Carlisle Street, Squantum Gardens and The Strand to ensure continuous, uninterrupted service.
- Responded to 1,809 sewer related calls, 22 odor issue calls and 182 pump station alarms.
- Cleaned 824 sewer mains and performed 18 sewer repairs.
- Cleared 411 sewer laterals and main line blockages.
- Assisted planners, engineers, and contractors in their investigation of sewer and drain infrastructure for the proposed Adams Green project in Quincy Center and guided planning for future infrastructure.
- Continued to operate the closed circuit television (CCTV) truck to proactively investigate the internal condition of sewer and drain piping. This vehicle responded to sewer backups and emergency situations and was routinely scheduled for I&I investigations.

Fats, oils and grease that enter your sewer pipe through your drain, harden and stick to inside walls of the pipe reducing the flow capacity of the pipe. This increases the chance of messy and unsanitary sewer back up into your home or place of business.

Infiltration and Inflow (I & I) Program

All of the City's wastewater was collected and sent to the MWRA for processing and treatment. In addition, any rainwater, sea water and groundwater that entered our sewer system through leaky or cracked pipes was also sent to the MWRA. This additional wastewater is called I&I.

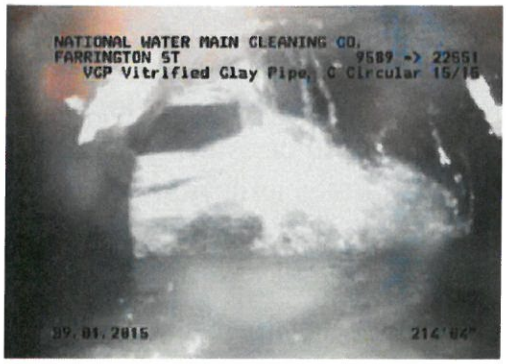
It was estimated that I&I passing through our system cost rate payers millions of dollars per year in additional charges from the MWRA. We were charged for that volume by the MWRA even though it was not all rate payer generated wastewater. This dramatically illustrates the necessity of continuing to invest in our I&I reduction program. Removal of I&I from our system helps us stabilize our sewer costs.

Sewer Operations technicians Greg Cooper and Joe Kidney prepared a closed circuit camera for deployment in the sewers to look for prohibited discharges such as fats, oils and grease

In this fiscal year cycle Sewer Operations:

- Invested $283,000 dollars into the City's fourth I&I removal project. Of this $283,000, 55% will be paid back to the MWRA through a low interest loan. The remaining 45% was a grant from the MWRA that does not need to be paid back. This important initiative was started by Mayor Koch in 2009.
- Completed the construction of a sewer replacement for Rice Road. This repair became necessary because of settlement and suspected infiltration. The project replaced approximately 1,500 linear feet of sewer and service laterals. A final infiltration removal quantity will be estimated upon completion of construction. The project cost $1,213,490.
- Completed emergency sewer repairs to a portion of East Squantum Street.
- Completed emergency sewer repairs to a portion of Lansdowne Street.

I&I removal projects planned in fiscal year 2015 and scheduled for construction in fiscal year 2016 include the design and bid of Phase II-B Sewer Inflow/ Infiltration Reduction Project that included 8,800 linear feet of CIPP (Cured in Place Pipe) lining to rehabilitate tidally influenced sewer mains in the City. This important Public Works initiative included:



In the photo above, I&I is recorded entering our sewer system by our submersible, closed circuit TV camera. Removal of I&I stabilized sewer costs and reduced potential environmental hazards.

- Design of 2,400 linear feet of CIPP lining of sewer pipes along Sea Street and Manet Avenue.
- Design of 1,700 linear feet of CIPP lining of the sewer main in the Meadowbrook salt marsh adjacent to Sea Street.
- Design of 1,770 linear feet of CIPP lining of the sewer main located under the Seawall along Manet Ave to Parkhurst Street.
- Design of 3,000 linear feet of CIPP lining of the sewer main located beneath Black's Creek running from Quincy Shore Drive through to Lafayette Street.

- Design of 988 linear feet of CIPP lining of the sewer main from Curtis Street to Carroll's Lane. This area is heavily influenced by groundwater.

The total cost of this project was $1,901,307. Engineering for the project was $228,000. The project, as designed, is expected to remove 300,000 gpd of I/I from this portion of the sewer system. Removal of I&I allowed us to stabilize sewer bills.

DRAIN OPERATIONS

Our stormwater collection system consisted of 150 miles of underground drain pipes and 9,329 catch basins and other drain assets. This complex system required continuous maintenance and improvements. City drain crews responded to street flooding, broken catch basins, and clogged drain lines on a regular basis and:

Drain Operations Technician Steve Kozlowski removed debris from a catch basin on Billings Road.

- Completed the second year of its proactive Comprehensive Storm Drain/Catch Basin Cleaning and Evaluation Program. Utilizing internal personnel and a private contractor, 1,245 tons of debris was removed from 1,868 catch basins across the City, dramatically improving the efficiency of our drainage system.
- Repaired 63 catch basins.
- Inspected and maintained the City's 52 tide gates to prevent rising tides from entering the system and causing flooding. Tide gates were monitored during storm conditions to provide flood protection to residents. Four of the gates are large electro-mechanical gates that require regular inspection and maintenance.
- Revised the protocol for the operation of the tide gates at Blacks Creek. Worked with consulting engineers to upgrade and provide operational controls for the gates and implemented a comprehensive plan to manage tidal flow in and out of the estuary to minimize potential flooding concerns.
- Maintained outfalls allowing stormwater to efficiently drain into brooks, waterways, marshes and eventually into the ocean.
- Cleaned debris and branches from Furnace Brook, Town Brook, Blacks Creek and Haywards Creek.
- Deployed and monitored 50 portable pumps at various locations around the City to minimize flooding during large storm events. Sandbags were filled and made available for residents when significant storm surges or severe storms were forecast.

Over 200 outfalls in Quincy carry stormwater from city streets directly to creeks, rivers, ponds and beaches like this one on Wollaston Beach.

- Responded to 300 calls for flood relief services. These calls concerned 250 flooded streets, 34 flooded basements, and 10 flooded yards.
- Partnered with the Norfolk County Mosquito Control District and the City of Quincy Health Department to implement an expanded mosquito control program in the City. Targeting a prime breeding ground for the potentially dangerous pests, standing water in our catch basins and storm drains, Operations employees deposited fast-acting and effective mosquito insecticide tablets into 9,329 catch basins. This timely action eradicated the potential for catch basins to act as mosquito breeding grounds.
- Developed the logo for "Clean Water is Everybody's Business" campaign and executed several outreach measures that included public service announcements on QATV, news articles in the Quincy Sun, a sticker campaign, brochures and mailers. The "Clean Water is Everybody's Business" campaign was an effort to brand DPW clean water programs. As part of our best management practices followed daily by the DPW, Operations urged residents to modify their own practices and behaviors. Every person contributes to water pollution and therefore every person must be part of the solution.

CLEAN WATER IS EVERYBODY'S BUSINESS

- Planned and implemented a citywide Medallion Placement Program, which was designed to educate the public about the vital role our storm drains play in the safety and health of our community and the potential hazards that can occur from misuse of this system. Storm drains are separate from our sewer systems and lead directly into our local waterways. Commonly misused by the public to dispose of waste such as paint, motor oil, antifreeze, pesticides and other pollutants, this improper disposal can seriously damage water quality and the environment. Catch Basin Medallions inform and help deter this activity.

Awareness campaigns are crucial to educating residents and changing behavior.

Storm Drain Projects

Quincy's waterways have both a utility and recreational component. Many of the City's waterways, such as Town Brook and Furnace Brook, serve a utility function and protect neighborhoods from flooding during intense storms. Other waterways used in this fashion, such as the Neponset River, Town River and Quincy Bay also provide recreational opportunities to residents including swimming, fishing and boating.

- Completed design improvements to North Quincy drainage and sewer infrastructure.

- Completed assessments and investigations of drainage and sewer infrastructure in Quincy Center, including MBTA pump station and siphon structure.
- Designed improvements to drainage infrastructure in Miller Street, Cross Street and Furnace Avenue neighborhoods.

Workers installed new drainage lines along Furnace Avenue.

Compliance Projects

- Prepared and submitted NPDES MS4 General Permit Annual Report to the EPA.
- Implemented City of Quincy Stormwater Management Ordinances – Regulations.
- Prepared Budgeting Costs for NPDES Stormwater Program.

HIGHWAY OPERATIONS

Superintendent Lawrence Prendeville, Operations Manager Joseph Newton, General Foreman Edward Leary and highly skilled, experienced, trained, certified and licensed personnel of Highway Operations were responsible for the maintenance and repair of the City's 190 miles of roads and 320 miles of sidewalks. Duties included road, sidewalk, pothole and trench repairs, street sweeping, motor equipment repair, fuel dock management, litter clean-up, rear yard management, snow and ice management and support to other City Departments.

Sidewalk/Pothole/Trench Repairs

- With assistance from the Engineering Division, repaired the most damaged (priority 1 rated) sidewalks reported to Highway Operations. Requests for repair were documented and inspected by a Division Engineer and given a numerical rating of a "1, 2 or 3". A "1" rating was assigned to those sidewalks where a public safety issue was present and that location was given a top priority for repair. A "2" rating was assigned to sidewalks that needed repair but the condition did not rise to the level of an immediate public safety concern. A "3" rating was assigned to a sidewalk that was not aesthetically pleasing but was not an immediate public safety concern.
- In a pilot program, the Department utilized the latest in sidewalk technology called sidewalk cutting to eliminate trip and fall hazards making sidewalks safe and more pedestrian friendly. Thirty two (32) sidewalks were repaired in this fashion saving taxpayers thousands of dollars when compared to complete reconstruction.

- The sidewalk maintenance repair program list was posted on the Department's website and impacted residents were informed of the process by mail. Sidewalk repairs proceeded from Ward Three sequentially through to Ward Two. All 363 of our targeted asphalt sidewalks (including all of the top rated priority sidewalks), were repaired and 176 concrete sidewalk repairs were repaired through the combined efforts of Highway Operations and a publicly bid contract with Tasco, Inc. totaling $496,373.00.

Highway Operations put the finishing touch on a sidewalk in Wollaston.

- Following a historic winter of record-breaking cold and snow the Department responded with an aggressive program to repair damage roads. The City deployed teams of engineers to assess and prioritize the pothole situation and another two crews to attend to repairing potholes. In addition, Highway Operations utilized two contractors, Cacciatore Brothers and Tasco, Inc. to assist in repairs. Highway crews repaired 5,813 potholes, Cacciatore Brothers repaired 3,381 and Tasco repaired 1,092 for a total of more than 10,000 potholes repaired.
- Eighty trenches were repaired by Lorusso Corp. contractors at a cost of $276,047.

Street Sweeping

Highway Operations continued its spring and fall street sweeping blitzes. This efficient program reduced street sweeping by five (5) weeks allowing crews to dedicate more time for litter clean-up, vegetation management, pothole repair and street and sidewalk construction.

One innovative strategy of the street sweeping "blitz" entailed sweepers in tandem for a faster, more efficient process.

In addition, Operations continued its daily sweeping of main thoroughfares, business districts and trash routes removing 1,500 tons of waste materials from city streets. This prevented that material from migrating into the drainage system. Street sweeping schedules were printed in the Quincy Sun and Patriot Ledger Newspapers, City of Quincy Website, Cable Access Television and the bi-annual Department InfoLetter. "Street Sweeping in Area Today," electronic information boards were also placed in the affected neighborhoods.

An important component to our street sweeping strategy was the elimination of sand from our roadways during the winter. Unfortunately, the region experienced unprecedented snow fall as well as one of the coldest winters of record and it became increasingly difficult to have our salt restocked. Highway Operations reluctantly added sand to a 50/50 salt/sand mix. Operations restored the salt-only policy going forward to prevent sand from entering our catch basins which would be costly and diminished the effective operation of our drainage systems. In addition, our "salt-only" strategy saved sweeping, collection and disposal costs.

Motor Equipment Repair

Motor Equipment Repair General Foreman Lawrence Levasseur and Foreman Paul Devereaux and Motor Equipment Repair personnel were responsible for keeping our fleet of 140 vehicles and equipment safe and operational year-round, Motor Equipment Repair also serviced and maintained Public Buildings' and Inspectional Services' fleet of vehicles and equipment. Duties also included auto body work, painting and preventive maintenance.

Bombardiers played a major role in keeping sidewalks cleared in major foot traffic areas during snow storms.

Fuel Dock Management

The Fuel Dock operated 24 hours a day, 7 days a week. In addition to the City of Quincy, the fuel dock was also accessible to the Quincy Housing Authority and the Quincy Public Schools. The Fuel Dock dispensed 240,950.06 gallons of unleaded gasoline and 115,282.59 gallons of diesel fuel at a total value of $1,232,412.50. Additionally, the Department billed the Quincy Public Schools and the Housing Authority a total of $264,385.24 for fuel.

Litter Clean-up

- Crews picked up litter and debris from the public rights of ways and collected trash from public trash receptacles.
- Weeded and maintained public islands, sidewalks and grass borders. Weeded and replaced stones underneath tree grates in the business districts and on Hancock Street.
- Supplied manpower and equipment to clean up designated areas for "Cleaner Greener Day."
- Cleaned the city after events such as parades, road races and the August Moon Festival.

Rear Yard

Rough brush was run through a tub grinder to break it down into more manageable material for decomposition.

Rear yard operations were significantly improved through the management of new Working Foreman Special Heavy MEO Frank Maher. Perimeter roads and buffer zones were established and pads were graded and expanded to enhance operations. Accrued yardwaste was composted and recycled. Demolition debris such as asphalt, concrete, brick, catch basin material and street sweepings were separated for reuse and/or disposal. The total reorganization resulted in a more efficient, compliant operation.

- The 22.19 acres at 55 Sea Street acted as the staging area for all of our operations as well as for the storage of equipment, materials and all the City's collected yardwaste.
- The rear yard was open to Quincy residents for drop-off of yard waste, recycling and electronic materials Monday through Friday from 7:30 a.m. to 3 p.m. The rear yard was also open to residents on Saturdays July 5 through November 28, 2014 and April 6 through the end of the fiscal year, from 7:30 am to 2:30 pm.
- Continued to apply the Operations and Maintenance Plan into our everyday activities. Each employee was provided with the necessary training to ensure that all operations were carried out in an environmentally responsible manner through assigned roles and responsibilities.

Snow and Ice Management

Crews worked day and night to keep roads and sidewalks clear and safe for travelers and pedestrians.

The winter of 2015 was the 2nd coldest winter since 1934. Thirty one storm events dropped a total of 115.7" of snow. In a 3 week period between January 26 and February 15, fourteen snow events dropped an all-time record of more than 7 feet (84 inches) of snow onto city streets. The average snowfall for an entire year in Quincy is 48 inches.

At the direction of the Mayor, Highway Operations worked with the Police Chief, Fire Chief, School Superintendent and other city officials to develop a detailed, multiphase snow removal plan. In the plan, high traffic streets and walkways were identified for snow removal to ensure public safety and access to neighborhoods. Snow was removed from streets, sidewalks and parking lots for the 20 Quincy districts school buildings to

The snow farm at the Quincy shipyard operated around the clock through February.

provide safe driving and walking areas for residents as well as school bus access. Snow was also removed from the city business districts and sidewalk areas used by commuters.

Five areas within the city were set up as snow farms: Faxon Park, DCR Lot at Marina Bay, Pageant Field, Crown Colony and Fore River Shipyard. Snow farm operations were conducted 24 hours a day, seven days a week through March 2015. Snow farms received a combined total of 500,000 tons of snow; enough snow to fill the Empire State Building. The last of the snow was removed at the end of June.

Highway employees and equipment, City employees from other Departments and private contractors:

- Worked successive days and nights as necessary to keep roads and heavily traveled sidewalks free from snow and ice.
- Kept the main roads open and essential traffic moving safely.
- Provided safe routes of travel at all times.
- Prepared for each storm by:
    1. Contracting with private companies to ensure that equipment would be available to the Department during snow events,
    2. Calibrating equipment,
    3. Training drivers,
    4. Designating plow routes.
    5. Preparing materials for pre-treating and treating of roads.
    6. Organizing police, tow operators and supervisors.
- Cleared municipal and school parking lots, City Hall, Quincy Police Station and walking routes for students.

The Mack Snow Fighter had the ability to spread salt on city streets while scraping hard packed ice off of our roadways.

- C. Naughton, Corp. and Feeney Brothers Excavation were the two large snow removal contractors that bolstered our snow fighting equipment with an additional 130 pieces of equipment.

- Utilized our recently built 10,000 square-foot salt shed which increased our salt storage capacity. Salt was bought and loaded in bulk, thereby enhancing our ability to fight back-to-back storms. The larger shed also improved mobility of the loaders by allowing the loaders to work simultaneously.

- Treated our salt with magnesium to enhance its effect on roadways in subfreezing temperatures.

Winter Parking Rules were as follows:

1. To find out about Snow Emergencies residents were instructed to;

   a) Call 617-770-7669 for a recording.

   b) Tune into cable television channels 8 or 11.

   c) Go to the City's web site at www.quincyma.gov.

Abandoned automobiles on Emergency Arteries posed a serious threat to effective delivery of emergency services like Police, Fire and Emergency Medical Services during snow emergencies. Consequently these automobiles were towed.

2. To receive alerts directly to a personal e-mail or cell phone, residents were advised to sign up at www.quincyma.gov/CityLink/

3. Once a Snow Emergency was declared, a resident could get further help by calling the Snow Hotline at 617-376-1927.

4. No parking was allowed on either side of all Emergency Arteries during a declared Snow Emergency.

5. Residents on non-emergency side streets were allowed to park on the odd side of the street.

6. Throughout the year, overnight parking on the street was prohibited without a residential parking permit which was available at the Quincy Police Department (617) 479-1212. Residential parking permits were void during Snow Emergencies.

7. Violators of Quincy parking rules and vehicles that hampered snow removal operations were towed at owner's expense.

Solid Waste Disposal

Burning trash to make electricity is considered a Zero-Waste classification by industry officials.

Supervised by Director of Waste and Recycling John Sullivan, Covanta Semass provided for the proper disposal of Municipal Solid Waste (MSW) from more than 32,000 households including all municipal facilities, schools and public housing.

Solid waste was collected daily, weighed at the Covanta Semass Transfer Station in Braintree and transported to a Waste to-Energy (WTE) facility in Rochester, MA. There it was burned as fuel for turbines to produce electricity. The electricity was then sold to the electric grid. This was the second year of a ten-year contract with Covanta Semass for MSW disposal. Under the contract, the price per ton for disposal of MSW was $69.02 per ton.

For the 3rd consecutive year total MSW disposal decreased—this year by 1,403 tons. This reduction in tonnage represented a savings to the taxpayer of $96,835 over the FY 2014 disposal cost. Savings over the 10-year contract are projected to be $10 million.

Curbside Collection

The City was in the 2nd year of a 10-year contract with Sunrise Scavenger of Hyde Park, MA. The City continued to provide weekly curbside collection of household trash, recycling, appliances, electronics, bulky items and yard waste to over 32,000 households consisting of single family units, certain condominiums, and multi-families up to 8 units. Also included in the curbside collection operation were schools, municipal buildings, public housing and public litter barrels. According to the contract, the cost for this service is fixed for the first 2 years. The contract will save the City several million dollars over 10 years. The following are additional benefits of the new contract:

Our second year collection contract with Sunrise Scavenger cost taxpayers the same as our last year with Capitol Waste—3 years ago.

- Fixed annual increases in the contract are not tied to inflation.
- No fuel surcharge.
- Six additional weeks of yard waste curbside collection for a total of 24 weeks at no additional cost ($50,000 value).
- Disposal of all televisions collected curbside at no cost to City ($60,000 value).
- First 150 roll-off dumpsters hauled at no charge ($30,000 value).
- Serviced by five new eco-friendly hybrid trucks.
- The new recycling robot, donated by Sunrise Scavenger, was activated and a "Name That Robot" contest involving Quincy third graders resulted in the children choosing Mr. R.E. Cycle as the robot's new name.

Recyclable Materials Collection and Processing

Since initiating the highly efficient Single Stream method of recycling in fiscal year 2009, the City has reaped the benefits of a mostly upward spiral in recycling tonnage. This year however, Quincy recycled over 5,019.83 tons of curbside waste which was a slight decrease over the prior year of 5,081.29. Nevertheless, this recycling tonnage saved taxpayers $346,000 in disposal fees.

Quincy's recycling is separated at the materials recovery facility and baled for resale as raw material. Market conditions in FY '15 forced many municipalities to pay for processing while Quincy's long-term contract exempts the City from ever paying for processing.

In this 26th year of comprehensive recycling, the City was in the 2nd year of a 10-year contract with Recycle America of Avon, MA. Under the contract, the City could earn revenue but never pay for the processing of recycling materials. This ten year contract ends at the same time the new waste collection and waste disposal contracts end, thereby, providing the Department with better options for leverage and bundling services.

To promote Single Stream Recycling, the Department offered residents a $10 coupon towards the purchase of a 48-gallon recycling container (The Perfect Recycling Barrel), at Curry or Danny's Hardware stores. In addition, free Single Stream and yardwaste stickers were available by mail, at City Hall, Curry's and Danny's Hardware stores and at the DPW.

Yardwaste

Curbside yard waste collection service ran from April 7 through December 11 at no additional cost in the contract. Over 32,000 households and various other Municipal Departments generated approximately 10,000 cubic yards of yard waste. In addition to 24 weeks of curbside collection of yardwaste, the rear yard was open to accept yardwaste from residents year-round. The City also collected over 6,000 Christmas trees curbside in January for an additional 2 weeks at no additional cost.

Diverting yardwaste from the municipal waste stream saves tens of thousands of dollars.

Appliances

The contract featured no additional charge to residents for curbside/condo collection and disposal of washers, dryers, refrigerators, water heaters, stoves, computer monitors, televisions and air conditioners - saving taxpayers approximately $50,000.

Condominiums

The City collected waste and recycling including appliances from over 6,000 condominium units across the City. Sunrise continued to utilize rear-load only dumpsters to collect condo waste and recycling during regular curbside collection allowing the contractor to pass on substantial savings to the City for a value of nearly $100,000 annually. The City of Quincy was one of only a handful of municipalities that collected and disposed of trash for condominium owners at no additional cost to condominium owners.

The Aquarius was one of over 90 condominium complexes receiving waste and recycling collection at no extra charge.

30-Yard Roll-offs

30-yard roll-offs were placed at the Department's rear yard, the Park Department maintenance yard and around the City as needed. The containers were used to deposit waste collected from street sweeping, litter control, events and waste collection in the parks and cemeteries. Disposal costs were included in the City's annual MSW tonnage. The City continued to pay $0 for the use of 30-yard dumpsters saving the City $25,000.

Public Litter Barrels

Highway workers Dan Mooney and Michael Routier deliver BigBellies to the North Quincy Business district.

Maintained 120 public waste litter receptacles in businesses, tourist and recreation areas. Collected with the daily curbside schedule, tonnage from the City's litter barrels was included in the gross MSW tonnage

The Department purchased and deployed another 20 hi-tech BigBelly Solar Compactors and 25 traditional litter barrels were removed. The units use solar power to compact litter in a 5:1 ratio and to transmit daily "Fullness Alerts" to management and collector/contractors. This technology saves time, money and the environment. By not driving large diesel trucks across the city to check every individual litter barrel every day, the City also reduced its carbon footprint.

Household Hazardous Waste

To facilitate the safe and lawful disposal of household hazardous material for Quincy residents, the Waste Management Operations contracted with Clean Harbors of Braintree, MA for two household hazardous material collection events at no additional cost to residents. On October 4, 2014 and May 16, 2015 the City received 456 households and paid $30,221 to Clean Harbors for these services.

Household Hazardous Waste Drop-off Days were held rain or shine on October 4, 2014 and May 16, 2015.

Rear Yard

Residents were urged to dispose of recyclable material including paper, plastic, cardboard, glass, electronics, books, textiles, yard waste, and scrap metal year-round at the facility in the rear yard of 55 Sea Street. Disposal of televisions brought to the DPW cost $12,000 to recycle. Hours of operation were Monday through Friday 7:30 am to 3:00 pm and Saturdays from July 5 through November 28, 2014 and April 6 through June 30, 2015 from 7:30 am to 2:30 pm.

Quincy Public Schools

Operations partnered with the Quincy Public School's Recycling Committee to ensure the efficient collection of waste and recycling and to plan educational strategies for the year. As part of this strategy, Director of Waste and Recycling, John Sullivan visited every 3rd grade class with Mr. R.E. Cycle, a recycling robot used to educate students about the importance of recycling from both an economic and environmental stand point.

Textile Recycling

Textile recycling bins were available 24/7 in every public school yard. Supplied by Bay State Textile of Hanover, MA, these textile collection bins diverted more than 90 tons of waste from the municipal waste stream and provided over $9,000 to Quincy Parent Teacher Organizations.

Textile recycling bins accepted all clothing, bedding and drapery, ripped or torn and without hazardous material stains.

COMMUNITY OUTREACH

In its commitment to communication and education through the timely and efficient use of all available media the Department of Public Works:

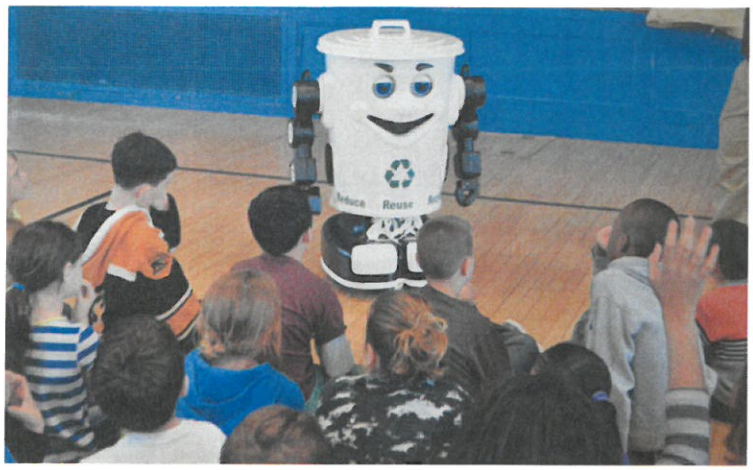
- Utilized the City web site and the Department's web page.
- Distributed over 43,000 InfoLetters to every household in Quincy including condominiums, community centers, libraries, City Departments, coffee shops and businesses.
- Made four seasonal appearances on Quincy Access Television entitled Update DPW.
- Partnered with the Great American Rain Barrel of Hyde Park, MA to sell 42, 50-gallon rain barrels at state grant enhanced discount price of $75.
- Sold 55 Earth Machine composters at the state grant reduced price of $45 in an effort to promote food composting as a way to reduce waste the Department.

DPW 2014 Spring/Summer InfoLetter

Your Quincy Water:
Providing Quality and Transparency

The Department's InfoLetter covered important information from all of the DPW's Operations and Divisions including schedules and service updates.

- Appeared with Mr. R.E. Cycle robot at all 11 elementary schools.
- Designed informational Water Bill inserts.
- Participated in municipal, community and neighborhood special events.
- Organized community meetings to inform and educate the public about the City's storm drains, catch basins and sewers.



Hundreds of Quincy 3rd graders were educated about the importance of recycling during Mr. R.E. Cycle's annual visit to every 3rd grade class in the District.

- Created QATV public service announcements, crawls and bulletin boards on channels 8 and 11.
- Submitted articles and advertisements in the Quincy Sun and Patriot Ledger newspapers.

Disseminated important information in a timely manner regarding:

- Snow emergencies
- Road and sidewalk construction projects
- Street closings
- Water conservation
- Special events and holidays
- Trash collection delays
- Waste and recycling education
- Coupons for the purchase of larger, more efficient recycling toters
- Street sweeping and yardwaste collection schedules
- Employee spotlight
- Special events and projects

Residents turned out for an informational tour of the DPW rear yard on a Saturday morning in March.

Provided outreach, support and assistance to many groups and organizations including:

Mayor's Bicycle Commission

MA Department of Environmental Protection

Quincy Access Television

Mayor's Office

Quincy Council on Aging

Local Civic Organizations

Fore River Bridge Project

Community Garden Clubs

Safe Routes to School

Public Buildings Department

MA Department of Transportation (*massDOT*)

Germantown Neighborhood Center

Quincy Public Schools

Veterans Organizations

Friends of Sailors Pond

Department of Conservation and Recreation

Inspectional Services

Police Department

Quincy City Council

Green Communities

Health Department

Quincy Historical Society

Friends of Butler Pond

The Department set up information tables at dozens of public and private events.

Friends of Manet Lake

Fire Department

Department of Energy Resources

Park, Cemetery and Forestry

Mayor's Office of Constituent Services

Quincy Asian Resources

Thomas Crane Library

Recreation Department

Cub Scouts

Quincy Housing Authority

Conservation Commission

Climate Change Committee

Friends of Wollaston Beach

Quincy Environmental Network

Neponset River Watershed Association

Boys Scouts

Planning Department

Chamber of Commerce

ENGINEERING DIVISION

The Engineering Division led by City Engineer Shawn Hardy, P.E. and his staff of highly skilled, experienced, trained, certified and licensed personnel:

- Provided oversight for the improvement, maintenance and delivery of essential City services including roadways, sidewalks, and water, sewer and drain systems.
- Oversaw all Public Works infrastructure projects and coordinated those projects with the Building Department, Zoning Board of Appeals, Planning Department, Conservation Commission and other municipal departments and governmental agencies.

A base layer of asphalt was applied to the Glover Avenue street reconstruction.

- Attended bi-weekly construction meetings sponsored by Massachusetts Department of Transportation to discuss the progress of the Fore River Bridge Replacement project. Acted as liaison with *massDOT* to resolve resident complaints.
- Responded to numerous requests for services from individuals and agencies to provide assistance with property line determinations, flood complaints, accident cases and other matters.
- Maintained a public service counter to answer questions, address complaints and provide technical support services.
- Provided project review to City Departments including the City Council, Building Department, Zoning Board of Appeals, Planning Department and Conservation Commission.
- Designed and prepared roadway construction contracts, coordinated with various consulting engineers and performed numerous other support activities.
- Provided technical support to all City Departments and residents including:
    1. Investigation and preparation of 3 accident claim reports and testifying at court hearings as requested.
    2. Preparation of 17 building grade reports for proposed new construction, examination of drainage and site plans for numerous Building Permit applications and examination

Above is an artist's rendering of the West of Chestnut complex which was one of the first new, major construction projects to break ground in Quincy Center.

of many Demolition Permits, Building Permits and Occupancy Permits for the Inspectional Services Department.

3. Reviewing and commenting on more than 75 Zoning Board of Appeals applications, 50 Planning Board applications and 25 Conservation Commission applications.
4. Assisting the Quincy Police Department with confirmation of approximately 5 field distance reports for court cases and in-court testimony.
5. Responding to requests regarding roadway, sidewalk and drainage concerns and attending community meetings to update residents on the status of various projects.
6. Maintenance and updating of the City Assessors' plans and records for all property transfers, subdivisions, building additions, new construction and demolition within the City.
7. Reviewing and processing of 684 street opening and curb-cut permit applications which generated over $68,400 in revenue to the City. In addition, each location was inspected post-construction to ensure that proper construction standards were met.

Work on Rice Road replaced approximately 1,500 linear feet of sewer and service laterals. This repair became necessary because of settlement and suspected infiltration.

8. Providing land surveying services to various Departments to determine property line and jurisdiction for various requests including tree removal, fence damage and other repairs and other support and technical expertise relating to drainage, grading and construction standards.
9. Preparation of contract plans and documents for roadway and sidewalk repairs, water main, sewer and drainage improvements within the City and supplying oversight and inspection of all sidewalk, roadway, sewer, drainage and water main construction.
10. Assisting more than 2,000 residents regarding revised FEMA Flood Maps effective June 9, 2014. Assistance included flood zone determinations, providing maps and answering resident questions. Coordinated the preparation of over 1,500 Elevation Certificates for residents and assisted with filing Letters Of Map Amendments (LOMA) requests to FEMA.

Geographic Information System (GIS)

Continued to update GIS layers by adding and modifying Water Distribution, Drainage, Sanitary Sewer Systems, Zoning, Flood Plain, and Ward/Precincts on the GIS mapping that was available to the public on the City's website. The GIS proved to be a very useful tool in conjunction with Pavement Management, street sweeping, catch basin cleaning and snow plowing operations. It also served as an analysis tool to the FEMA Flood Map updates, Sex Offender Ordinance, Wind Turbine Ordinance as well as Chapter 40B Compliance. The GIS program was also updated to reflect new construction and development.

Public Works Construction Projects

- Road Improvements 2014 – Rice Road
  Contractor: Derbes Construction LLC
  Contract Amount: $792,138.80

- Trench Repair Fiscal 2015
  Approximately 80 trenches in various locations were repaired.
  Contractor: Lorusso Corp.
  Contract Amount: $348,675.50

- Road Improvements 2014-Phase II
  Streets and sidewalks were repaired on Albatross Road, Field Street, Hamilton Street and Moffat Road.
  Contractor: Derbes Construction, LLC.
  Contract Amount: $1,215,943.44

- Road Improvements 2014-Phase III
  Streets and sidewalks were repaired on Parke Avenue, Whiton Avenue, Ellis Street, Victoria Road, Bartlett Street, Owens Place, Mortimer Terrace and Highland Avenue.
  Contractor: Derbes Construction, LLC
  Contract Amount: $1,388,017.88

- Road Improvements 2015-Dorchester Street.
  Contractor: Derbes Construction, LLC
  Contract Amount: $630,500.75

- Sidewalk Repairs 2014
  Replacement of 159 asphalt and concrete sidewalks citywide.
  Contractor: Tasco, Inc.
  Contract Amount: $229,791.50

Jr. Civil Engineer Dan Giannandrea observed the application of sidewalk cutting. Demonstrated in a pilot program, this innovative and cost-saving technology makes sidewalks safe and ADA compliant while saving taxpayers thousands when compared to complete sidewalk reconstruction.

- Water Main Improvements-Dorchester Street
  Replaced 1,770 feet of water main on Dorchester Street.
  Contractor: C. Naughton Corp.
  Contract Amount: $351,651.44

Crews ripped up portions of Calumet to reconstruct new sidewalks.

- Edison Street and Glover Avenue Area Water Main Improvements
  Replaced 5,175 feet of water main on Edison Street, Newbury Avenue, Glover Avenue and Faxon Road.
  Contractor: A. Vozella & Sons
  Contract Amount: $1,014,542.63

- Sidewalk Repairs
  Concrete cutting for sidewalk repairs at 32 locations.
  Contractor: Safe Sidewalks, Inc.
  Contract Amount: $4,850

- Pothole Repairs 2015
  Repair 1,092 potholes at various locations.
  Contractor: Tasco, Inc.
  Contract Amount: $35,000

Highway Operations worker Brian Noonan fills a large pothole on Sea Street.

- Pothole Repairs 2015-Phase II
  Repair 3,381 potholes at various locations.
  Contractor: Cacciatore Brothers
  Contract Amount: $35,000

Community Rating System (CRS)

The Division maintained flood plain management activities as required by Federal Emergency Management (FEMA). These activities qualified Quincy residents for a 10 percent reduction on flood insurance premiums from the National Flood Insurance Program (NFIP). Currently, Quincy is one of the highest rated local communities.

TRAFFIC AND PARKING OPERATIONS

The team welcomed Traffic Engineer Deborah Finnigan in October of 2014. Together with Operations Manager Fred Sousa, General Foreman Steven Kubit, Sr. Traffic Engineering Aide Fran Doherty, Traffic Signal Electrician Michael Doherty and several other skilled and trained personnel. Traffic and Parking Operations was responsible for the City's transportation network, City-owned decorative street lights and the operation of all public parking facilities.

Traffic and Parking Operations:

Senior Traffic Engineering Aid, Fran Doherty inspected a control box on Hancock Street in Quincy Center.

- Was on-call 24 hours a day, 7 days a week assisting the Police and Fire Departments in emergency situations.
- Responded to traffic signal malfunctions and blocked roadways.
- Repaired damaged City equipment including guard rails, signage, traffic and street signs, street lighting, traffic signal equipment and control boxes.
- Provided traffic and parking assistance to the following:
  1. Local, State and National Elections
  2. Road Races
  3. Lunar New Year, North Quincy High School
  4. Memorial Day Parade
  5. Flag Day Parade
  6. Houghs Neck July 3 Celebration
  7. August Moon Festival
  8. Christmas Parade
  9. Memorial Day Parade
  10. Historical Wreath Laying

Traffic and Parking worker Billy Foley made sure the traffic cones were in place during road repair operations.

- Provided recommendations for traffic initiatives and traffic and parking related ordinances.
- Reviewed all development proposals through the Planning Department to ensure that traffic impacts were mitigated by the project.
- Evaluated pedestrian, bicycle and MBTA bus operations.
- Provided essential support services such as maintenance of decorative street lighting, and lighting of public areas including ball fields and parking facilities.
- Evaluated new equipment such as light emitting diode (LED), traffic and lighting technology, school zone flashers and solar panels that reduce energy and maintenance costs to the City.

Parking Operations:

- Managed the Ross and Hancock Parking areas. The Hancock Lot had 493 parking spaces and the Ross Garage had 728 parking spaces generating $718,730.76 in combined revenues.
- Issued 13,877 parking citations generating $304,398 in revenue.
- Attended parking ticket appeals at City Hall every Thursday between the hours of 9 am and 11 am.

Pavement Marking Operations:

- Painted the City's main roadway pavement markings including edge lines, skip lines, lane lines and center lines twice, once in the spring and once in the fall, totaling 162 miles of four inch lines.

LED traffic lights and freshly painted pedestrian crosswalks made intersections safer and more economical to operate.

- Painted the City's 536 crosswalks twice, once in the spring and once in the fall, for a total footage of 150,524 feet.
- Partnered with Quincy Public Schools to re-stripe the following parking lots on a three year cycle:

Della Chiesa Early Childhood Center
North Quincy High School
Quincy High School
Wollaston Elementary School
Montclair Elementary School
Parker Elementary School
Sterling Middle School

Signage Operations:

- A citywide street name sign replacement program was started, so the City becomes compliant with the United States Department of Transportation Federal Highway Administration's Manual on Uniform Traffic Control Devices mandate concerning reflectivity. Two hundred and eighty four (284), of these

Above are two of the approximately 7,000 street name signs in the city of Quincy.

signs have been installed. The city contracted with the Massachusetts Department of Corrections to manufacture this signage featuring six-inch, high prismatic lettering.

- Replaced 85 Stop Signs with the new, standard 30 inch high prismatic stop sign.
- Lettered Police, Fire and Department vehicles and offices.

Maintenance Operations:

- Completed 485 Work Orders which initiated the following:
  1. Five informational signs were installed.
  2. 210 Regulatory Signs were installed or replaced.
  3. 40 Warning Signs were installed.
  4. 186 poles were installed.

Freshly painted crosswalks simplified even the busiest intersections.

- Repaired, maintained and/or replaced 500 historical streetlights.
- Maintained full traffic control signals at 77 intersections.
- Maintained pedestrian crossing signals at 11 intersections.
- Maintained "20 MPH" School Zone flashers at 10 locations:

North Quincy High School	Parker Elementary School
Central Middle School	Montclair Elementary School
Sterling Middle School	Atherton Hough Elementary School
Atlantic Middle School	Snug Harbor Elementary School
Wollaston Elementary School	Lincoln Hancock Elementary School

Respectfully submitted,

Daniel G. Raymondi

Daniel G. Raymondi

Commissioner of Public Works