

DEPARTMENT OF ENGINEERING, PUBLIC WORKS, FACILITIES MANAGEMENT & PARK MAINTENANCE

Mission

The mission of the Department of Engineering, Public Works, Facilities Management & Park Maintenance is to provide and administer professional design and construction services for the planning, development and maintenance of the County's infrastructure, while supporting various other County departments, divisions and agencies in bringing to fruition the Capital Program.

Programs & Services

Division of Public Works

The Division consists of five Bureaus:

Bureau of Roads & Bridges

This Bureau repairs and maintains a safe riding surface on 174 miles of County roadways, 386 bridge and culvert surfaces, County Park roads and paths, County Golf Course parking lots and paths, and over 30 County-owned facilities and parking lots, including Runnels Specialized Hospital.

The Bureau completes up to 3000 work orders per year. There are currently no outstanding work orders.

Roadways are swept a minimum of twice each month, and storm drains are cleaned and maintained on a regular schedule in compliance with the Federal Clean Water Act and requirements of Union County Highway Agency Storm Water General Permit NJ0141887 dated 2005, as required by the state of New Jersey.

The Bureau of Roads & Bridges is responsible for snow and ice removal on all county roads and bridges, and assists with snow removal for various other County agencies. Records such as snow accumulation totals, cost of material, cost of labor, and duration of

storms are kept for future use and reference. 146 bridges and 240 culverts are inspected and maintained on a regular schedule. Major and minor repairs on these structures are performed as outlined through a bi-annual inspection. Debris blockages are cleared when needed to help the downstream flow. Bridge rails, decks, and walkways are cleaned, repaired and repainted as required. Graffiti is removed instantly.

Beam guiderail repair, replacement, and installations are performed as required for the benefit of public safety. Right-of-way maintenance is conducted whereby vegetation is cut back or removed through treatment to aid in driver visibility on County roads, intersections, and bridges.

In late winter and early spring a widespread annual pothole repair program is instituted. Several crews are dispatched to repair potholes that appear as a result of the winter snow plow operation. In 2012 the Bureau filled over 600 potholes.

Crack sealing of county roadways and parking facilities is carried out during the winter season. Locations are chosen and prioritized by inspection and work order data.

Residents, Municipalities, and other County agencies and officials are assisted daily with information, requests, and complaints via telephone, e-mail and in-person requests. Requests for assistance are logged through the use of a work order system and completed on a priority basis.

A Bi-Annual Road Rating Survey is conducted. The intent of this survey is to provide the means to establish priority repairs and preventive maintenance measures. It acts as a catalyst to provide recommendations for the County's Resurfacing Program conducted in cooperation with the Division of Engineering.

The Bureau maintains an active mutual aid/shared services agreement with other County agencies and Municipalities, providing them use of equipment, personnel, and/or materials. Examples of these services include milling, paving, vegetation removal, equipment loans and miscellaneous repairs and construction.

Solid waste and recyclable hauling is performed weekly. Roll-off containers are located in a number of locations throughout the county. The containers are dropped off, picked up, emptied and returned upon request. The roll-off is also used to assist with County-sponsored recycling events through the Bureau of Environmental Services through mutual aid and in conjunction with the County Clerk's Office, for the incineration of documents for both County and Municipal shared services.

The Bureau of Roads & Bridges is proactive on employee safety, providing up-to-date training and equipment for employees. The Bureau maintains a trained and equipped Confined Space Rescue Team on staff to monitor safety when confined space entries must be performed. Snow plow safety training is performed in-house yearly for new employees.

Equipment maintenance is performed daily. Snow removal equipment undergoes routine maintenance year-round to ensure readiness at the start of the winter season. Repair to snow equipment is also made available to other county departments and divisions.

The Bureau of Roads & Bridges is on call twenty-four hours a day, seven days a week, year-round for emergency services, weather events, and hazardous road conditions.

Bureau of Mosquito Control

The Bureau of Mosquito Control is responsible for controlling the mosquito population in Union County. The Bureau inspects, constructs, and maintains drainage ditches to eliminate standing water where mosquitoes breed. Application of pesticide is kept to a minimum as long as the Bureau can keep mosquito breeding in check. However, Union County, because of its proximity to the ocean and its tributaries, has many marshes and wetland areas that need to be monitored and treated when mosquito breeding reaches levels endangering the health of human and animal populations. A regimented surveillance and data collection program is essential to maintaining a handle on mosquito population and breeding by this Bureau. Mosquito samples are gathered for identifying species and to

track the number of mosquitoes through the use of New Jersey light traps.

The Bureau of Mosquito Control ends its active monitoring and treatment on November 1. The Bureau also assists in Union County's annual Leaf Collection Program.

Public education for the elimination of potential breeding sites is performed by the Bureau by way of appearances at elementary schools, senior citizens groups and Municipal Health Fairs.

Bureau of Shade Tree & Conservation

The Bureau maintains approximately 15,000 trees along County roads. Resolution 493-2000 states that at least one tree is to be planted for every tree removed in the county. Every year since then the Bureau has planted more than one-for-one to keep the County roads tree-lined. The Parks Shade Tree Bureau has been added to the Public Works Shade Tree Bureau. With this addition, the Bureau now also maintains the thousands of trees throughout the County parks system.

The leaf removal season, which begins during autumn each year, brings in over 150,000 cubic yards of leaves into the County leaf compost facility located within the Houdaille Quarry in Springfield. Nineteen of the County's 21 towns participate in this program. The County charges a minimal fee of \$2 per cubic yard for loose leaves and \$4 per cubic yard for compacted leaves. This service saves Municipalities a great deal. The management and maintenance of this conservation facility is another responsibility of this Bureau.

Bureau of Inspections

Utilities such as water, sewer, electric, cable and wastewater are commonly found under the road. This Bureau is responsible for the proper restoration of roadway excavation performed by private contractors and utility companies. The safeguarding of our underground utilities and a properly restored roadway are essential in a congested area like Union County.

Bureau of Heavy Equipment & Truck Repair

This Bureau repairs all county-owned heavy equipment and a large fleet of trucks utilized by the Divisions of Public Works, Parks and Golf Operations. Within this Bureau there are hydraulic and diesel mechanics, as well as a welding shop that fabricates and repairs a wide array of equipment, including security devices for the Union County Jail and local Law Enforcement agencies.

Division of Engineering

The Division of Engineering consists of Engineering Services, the Bureau of Traffic Safety & Maintenance and the Bureau of Geographic Information Services. In support of the mission of the Division several goals have been established: provide for a well-trained, knowledgeable staff, provide adequate space for staff, automate file storage and retrieval of engineering drawings, maps and project files, complete electronic inventory of all of the County's infrastructure assets, and fully integrate the operations of the Department into the County's Geographic Information System (GIS).

Engineering Services

- Responsible for the inspection, design, rehabilitation, and replacement for 146 bridges, 240 culverts, and 12 dams.
- Coordinate and manage the annual resurfacing program for 174 miles of County roadways, averaging about 12 miles of rehabilitation per year.
- Manage environmental remediation programs for underground storage tanks (UST) and other contaminated sites.
- Support all of the Municipalities within the county with design and construction programs for traffic signal rehabilitation and replacement, as well as analyzing traffic needs for new traffic signals.
- Manage the New Jersey Storm Water Program for Union County and its municipalities, and support their flood control efforts.
- Inventory and maintain records of the County's entire infrastructure.
- Support other County departments and agencies, including the Department of Parks and Community Renewal, the Office of Open Space, Recreation and Historic Preservation Trust Fund, the Department of Public Safety, and Runnells Specialized Hospital in

fulfillment of their capital programs by providing design services for and supervising construction on their facilities.

- Provide engineering review of site plans and subdivision applications that are brought before the Union County Planning Board.

Bureau of Traffic Safety & Maintenance

The Bureau of Traffic Safety & Maintenance serves the residents of Union County by maintaining the traffic control devices (traffic signs and roadway striping) along 174 miles of county roadway providing the citizens of the county with safer travel-ways. The Bureau also designs and implements temporary traffic control work zones, collects and documents traffic movement data, designs and installs custom signs and vehicle markings, conducts traffic safety studies and audits, and provides support for other Division responsibilities including project inspections. Each task is vital in protecting the county by limiting its liability in traffic tort claim cases, saving the county untold thousands or millions of dollars in any given year. The Bureau also interfaces with the County's twenty-one municipalities through co-op purchasing and shared services, as well as providing technical guidance on various traffic issues.

The functional units of the Bureau are: Sign Shop, Sign Installations, Line Striping, Data Collection, GIS/Asset Management, Traffic Studies and Investigations, and Work Zone Traffic Control.

The Bureau of Traffic Safety and Maintenance:

- Provides for the safe transit of motor vehicles and pedestrians on County roadways through the maintenance of over 8,000 highly visible roadside signs and over 500 miles of roadway striping that is managed through the GIS Asset Management System.
- Conducts pedestrian, intersection, and traffic studies and investigations through Traffic Data and Studies units in order to determine unsafe conditions and their causes, and makes recommendations to the County Engineer on corrective action. Most corrective action is implemented directly through the Bureau using in-house resources.
- Supports the County's municipalities through mutual aid and the Municipal Striping and Signage Programs, assists with traffic

control for local events and emergencies, and supports communities by providing traffic data and studies.

- Reviews detour and work zone traffic control plans for private and public construction and maintenance projects through the Work Zone unit, which develops work zone traffic control and detour plans and implements those plans on Department of Engineering & Public Works projects. The Bureau also developed and maintains a page on the County's web site providing the public with educational material and up-to-date roadway traffic construction project information.
- Supports other County departments and agencies by manufacturing and installing specialty signs for various County events, fabricating vehicle markings, and striping parking lots through Bureau's fully equipped Sign Shop and Line Striping Shop.
- Assists municipalities and other County agencies with advice and guidance on traffic related issues, and works with community and professional organizations to further traffic safety.

Bureau of Geographic Information Systems (GIS)

The Bureau of GIS programs and services include updating County maps and no loitering zone maps as well as maintaining and managing county GIS investment by updating GIS layers in a regular basis. Updates include county parcel layer, road layer, public and private school layers, board of election layers and community organization layer. Bureau of GIS has been actively supporting our twenty one municipalities and their engineering and economic developments initiatives by providing data, which reduce their cost tremendously.

The bureau maintains certified digital drug free zone maps. These certified maps are distributed by the Bureau through a secured website to the local law enforcement entities. Bureau of GIS implements the CarteGraph work order and asset management system across the county departments including Public works, Facilities, Parks and IT. Bureau prepares approximately 40 to 50 maps per month for Union County Prosecutors office for crime scene analysis and for various incidents, which is assisting in the prosecution process of the criminals. We continue to prepare County maps, digitized photographs and specific information for County departments and

municipalities to deal with issues of public safety, economic development, and transportation.

Division of Facilities Management

The Division of Facilities Management's primary function is to service, maintain and repair State Court System facilities and all property and facilities owned and operated by Union County. Operations also include but are not limited to general trades, custodial maintenance and printing.

The Division provides and maintains technical and mechanical services required by all County agencies for their safe and efficient operation. This encompasses two million square feet of multi-purpose facility space including the maintenance of boilers, generators, electrical, plumbing, and structural, elevators, HVAC and carpentry in addition to providing custodial services for all County facilities.

In addition, the Division provides coordination for the County's capital improvement projects working collectively with various professional service consultants to accomplish set goals in a timely, cost efficient manner. The majority of standard utilities such as Public Service Electric, Water and Gas are monitored and paid through this division in addition to the Natural Gas Cooperative Extension Project. Monitoring also incorporates contractual bids and non-bid agreements.

The Division consists of five Bureaus:

Bureau of Construction Management/Bureau of Trades

The Bureau of Construction Management maintains approximately 30 Union County buildings, leased and owned, consisting of the non-mechanical trades. The Bureau sees to all maintenance issues such as cleanliness, recycling, personnel moves, etc. Trades governed by this Bureau are the carpenters, masons, painters and maintenance repair (day shift).

- Conducts and coordinates Countywide renovation projects such as, but not limited to, framing and dry wall of new offices, ceiling tile replacement, painting and the installation of vinyl base and carpet tile, in addition to

setting up or modifying cubicle layouts provided by staffed furniture installers. Cost effective carpentry cabinet work and furniture is manufactured in-house as opposed to buying same from outside vendors at increased prices.

- Directs compliance and maintenance with safety regulations and standards such as the replacement of damaged sidewalks, retaining walls, steps etc., and snow removal from the County Complexes and parking lots.
- Completes approximately 12,000 work orders annually, generated from a computerized work order system that records the job type, and designates the shop performing the task and the man-hours used to complete the job.

Bureau of Custodial Maintenance (Night Shift)

The Bureau of Custodial Maintenance works in conjunction with its day shift counterparts maintaining approximately 22 Union County buildings at various locations. Primary nightly responsibility is to develop an effective work schedule with employees conforming to necessary cleaning, garbage removal, recycling, stripping and waxing of floors and carpet shampooing.

- Responsible for the direct supervision of 19 employees.
- Daily record keeping and equipment inventory required to provide cost effective measures and the ability to complete the job.
- Oversight of work areas in order to ensure safety for all employees and the general public.
- Enforce proper training of new employees consisting of building familiarity, uniforms, the proper use of safety equipment, emergency situations, cleaning techniques and the use of cleaning products and chemicals, individual employee conduct, and individual responsibilities.
- Works collectively with the day shift on snow removal and emergency situations such as the use of snow plows, shovels and salt deposits in addition to addressing any crisis situation on an as needed basis.

Bureau of Stationary Engineers

- Strictly coordinates and monitors four mechanical trade units within the Division of Facilities Management, consisting of electricians, plumbers, HVAC and stationary engineers to ensure adherence to Federal, State and County mandates regarding health, safety and fire code enforcement.
- Maintains approximately 28 buildings with two million square feet, 24 hours per day, seven days per week. The electricians, plumbers and HVAC function on the standard time frame with the exception of being on an on-call basis when needed.
- Oversees larger scale capital projects, in-house renovations and reconstruction independently and in conjunction with architects and engineers retained by the County. The Bureau Chief will attend vital meetings to enforce and monitor progress tracked by computerized system and work orders.
- Monitors the Automatic Logic Control System (ALC) reporting and regulating individual building temperature control.
- Enforces compliance and consistency with New Jersey EPA STACK testing mandates, guideline and permits.
- Maintains power house consisting of:
 - ✓ Three high pressured vessels.
 - ✓ Electrical buss with 480 switch gears.
 - ✓ All generators within the county buildings.

Bureau of Administrative Support

The Bureau of Administrative Support has four employees (not including the contracted Xerox employees) and offers a wide range of Countywide services including printing, typesetting, graphic design, image scanning, plate making, document scanning, lamination, creation of digital files including .pdf, .tiff, .jpg, .qxd, .indd, .ai, image and file preparation for use in Digital Printing, Offset Printing, Sign Making, Vehicle Lettering, installation of custom signs made of vinyl, plastic, foam board, aluminum, paper etc., and the production and creation of forms, carbonless (NCR) forms, flyers, business cards, invitations, tags, nameplates, labels, SLATS, menu directories, event

signs, temporary signs, indoor and outdoor banners signs & posters and presentation checks etc.

- Provides countywide support, management, production, installation and job tracking of Union County's In-house Print Services and Facilities Sign/Banner Shop with oversight of contracted Print Services vendor (a five-year Xerox contract at \$324,840.00 per year).
- Orders and tracks all copy paper countywide, maintains various consumable inventories, and supports numerous computer, equipment, printer, software and office applications at the division level.
- Maintains the Division of Facilities Management work order system database and creates various spreadsheets (printed and digital) for tracking, monitoring and logging at the division level.
- Offers design, layout/paper suggestions, software usage and troubleshooting advice.
- Utilizes a variety of software such as Adobe Photoshop, Illustrator, and In-Design, Acrobat, Live Cycle Designer, MS Word, Excel, Power Point, SQL Query Analyzer/Enterprise Manager, Quark Express, Gerber Omega, and Onyx Postershop.
- Operates equipment such as the Gerber Edge II, Gerber HS15 plotter, HP z6100 60" printer, Gerber PS2 60" plotter, Xante Impressia Platemaker, Xante Platemaker 4, AB Dick DPM 2340 and various other equipment including offset presses, digital presses, and numerous pre-press and post-press equipment.

Division of Park Maintenance

Bureau of Park Maintenance

- Preserves and improves the County's parks and recreational facilities, provides the necessary technical resources to ensure the smooth operation of all park facilities and special events, and provides custodial and janitorial services as well as general park maintenance.

- Supports recreation initiatives and programs to facilitate the public use and enjoyment of County parks and recreational facilities.
- Financial and administrative services such as accounts payable, budgeting and purchasing will be managed by the Department of Engineering, Public Works & Facilities.

Bureau of Recycling and Planning

- Responsible for implementing county-wide recycling programs including computer and electronics, tires, used motor oil and motor oil filters, and mobile paper shredding events.
- Coordinates environmental programs for homeowners to properly dispose of old oil based paints, pesticides and other household hazardous waste.
- Disseminates environmental education and recycling materials and implements Union County's Clean Communities Program.

2012 Accomplishments

Division of Public Works

Bureau of Roads & Bridges

Roads were swept twice per month and basins, manholes, inlets, and storm lines were cleared periodically in compliance to DEP Stormwater Regulations. Catch Basins and Inlets were repaired and replaced throughout 2012.

Potholes were repaired; minor and major road surface repairs and preventive maintenance including crack-sealing were completed. Repairs to related infrastructure on county roadways were performed.

Sidewalks were repaired and replaced in coordination with the Bureau of Shade Tree and Conservation following damage by county trees.

Roadside vegetation was trimmed and/or removed by request. Railroad crossings were cleaned up and maintained; vegetation was cut back as needed.

The 2012 Leaf Removal Program is in progress concurrent with clean up from Super storm Sandy.

Routine and preventive maintenance and repairs of bridges, culverts and parapets were conducted throughout the county. Graffiti removal was performed at various locations. Priority 1 & 2 repairs are evaluated, schedule and repaired via reports from DOT and consultants.

Snow and Ice Removal and Flood Control were performed throughout 2012 before, during and after severe weather events. Preventative maintenance and repairs were performed on all Bureau of Roads & Bridges Equipment and Snow removal Equipment. General housekeeping and maintenance projects of the Public Works Complex were performed.

Routine maintenance and repairs were conducted on all Public Works equipment and vehicles. Safety pre-trip inspections were performed.

Assistance was provided to the Division of Park Maintenance for various improvement projects in Cedar Brook Park, the Loop Playground, and Water Tower parking area, Mattano Park, and Warinanco Park.

Provided assistance to the Bureau of Recycling and Planning during recycling events through the use of roll off equipment and labor.

The Bureau provided assistance to law enforcement agencies via hauling and disposal of controlled substances and fireworks.

The Bureau provided assistance to municipalities through equipment and personnel loans and shared services.

Bureau of Roads and Bridge Work Order Request Summary for 2012

Total work order request -1,281
Labor & Material - \$3,139,876.55

Bureau of Inspections

During 2012 the Bureau issued 511 permits, collected \$86,697.90 in permit fees and \$165,841.40 in refundable bond fees, for a total of \$252,539.30

The Bureau is responsible for all of the permitting of road openings on Union County roads and right-of-ways. In addition to permits for water, gas, electric, cable, communications, sanitary and other public utilities found underground, are the permits for curb alterations by public and private contractors. The Bureau provides continuous monitoring of curbing installation, and roadway and right-of-way excavations in order to ensure proper restoration and compliance with County specifications. This Bureau also provides personnel for snow removal operations.

In addition to Road & Bridges Inspectors, the Bureau houses the Departments Safety Coordinator, who is responsible for scheduling safety programs and ensuring compliance with Local, Federal and State regulations. Examples of these regulations are: OSHA and Right to know Compliance, Commercial Drivers Licensing, Storm Water Management, and Work Zone Safety. In house training is also scheduled such as forklift, backhoe, and bucket truck operation, fire extinguisher and ladder usage, and proper flagging techniques, just to name a few. The reporting and recording of all departmental employee injuries and motor vehicle accident issues also fall under this Bureau.

Bureau of Shade Tree & Conservation

This year the Bureau concentrated on completing work orders. The Bureau started in Berkeley Heights and ending in Elizabeth, removing all dead or dying trees. There were a total of 300 trees removed along with 400 trees being trimmed throughout the county that posed a potential safety or traffic hazard. These trees were mainly identified through requests from the public as well as county personnel. This year the Bureau had a large request for tree trimming and removal throughout the county. New Providence Summit, Mountainside, Union, Roselle have all been in our daily work. Also, due to Super Storm Sandy, a large amount of trees approximately 1000 lost or damaged throughout Union County roadways and parks. The Bureau has been working seven days a week beginning early morning and

working late to clear up most debris from the storm along with leaf pick up. The Bureau continues to promote arboriculture and the preservation and planting of shade trees within the county.

The Bureau continues to work with the local electrical companies removing trees and limbs that are located in their power lines. This year we removed 75 trees throughout Union County.

Mutual Aid- the Shade Tree Department assisted Summit, Mountainside, Roselle, Union, and Garwood in removing large trees and hangers. The Department also loaned out equipment to assist in their duties.

The Bureau has addressed concerns of trees in various parks:

Cedar Brook – due to the super storm sandy 100 trees were uprooted and at least 100 trees have hangers that need to be removed or taken down.

Warinanco Park – was hit extremely hard. The County lost 200 trees that were either uprooted or destroyed. Also, all of our picnic areas have to be cleared of all hangers. (**hanging tree branches**)

Echo Lake – County lost 100 trees and has hangers throughout the park that have to be removed before the picnic area can be opened, also 50 trees were trimmed. The Bureau is continuing to address all concerns in this area and all of the parks throughout the county.

Oak Ridge Park – was also hit hard. Not only did we lose 50 large Oak trees we lost 50 Pine trees. All tree work will be completed in a timely manner.

Rahway – is another one of our heavily used parks that was devastated. There were 100 trees lost and hundreds of trees that need to be trimmed and hangers removed.

Ashbrook Golf Course – 13 trees have been removed and trimmed 75 trees.

Gallop Hill Golf Course – 20 large dead or dangerous trees were removed and 50 trees were trimmed.

Bureau of Mosquito Control

The 2012 mosquito season started out very dry with low rainfall amounts. What did occur was an increase early on of the species of

mosquito called Anopheles. These are mosquitoes that do not need to surface in order to breed. Anopheles do not have air tubes and breathe by attaching themselves to aquatic plant stalks underwater. They were found in light traps close to permanent fresh water swamps. More normal rainfall at the beginning of the summer and higher temperatures aided in the outbreak of West Nile Virus in collected samples. The theory is that the lack of water in the early season contributed to the concentration of the vectors, and the reservoir for the virus. (i.e. corvids). The first positive pool was found on June 1, 2012 in Summit. This was a month ahead of normal schedule when the first WNV pool is usually collected.

The equipment required to run an effective mosquito control program is quite varied. The Bureau used several different mosquito traps. We set out 22 of the standard New Jersey Light Traps, which are semi-permanently sited, throughout the county. They are used to track species in order to determine trends and populations. Our inspectors collect the samples 2x a week, and they are brought into the lab where they are separated from other insects and male mosquitoes. 22,391 female mosquitoes from the New Jersey light traps were identified in our lab from 5/29/2012 through 9/24/2012. Portable traps are set in areas to be determined by calls for service and nuisance complaints. These traps are used for the West Nile Virus surveillance. Last year was a record year for West Nile Virus in New Jersey, and Union County was the second highest county with 114 positive pools out of 314 submitted for testing. (Last year was 17 out of 176). Over 10,850 female mosquitoes collected in the PORTABLE traps were submitted for testing in those pools.

Union County Mosquito Control responded to 502 complaints in 2012, a record that is unprecedented for the Union County Bureau of Mosquito Control. We saw an upswing after the second half of the summer in *Aedes albopictus* (i.e. Asian Tiger) mosquito that we attribute to the high temperatures that we experienced and the difficulties in controlling that species. Most of the complaint calls were found to be ATMs.

This Bureau did employ the new method of liquid larviciding that was approved by the USEPA and the NJDEP early this year. All of the trial work we did the last three years paid off as we accomplished our

goal of getting a label change that allowed us to use a low volume adulticiding sprayer to deliver a liquid larvicide. This was used in the treatment of heavy Aedes albopictus areas.

Mosquito Control performed 21 adulticiding operations in response to complaints from residents. That number of spraying operations is the highest for Union County Mosquito Control in the years following the creation of the NJDEP. In addition, for the first time, we employed up to 4 vehicles in different areas of Union County during a single spraying operation.

Another first, in developing an innovative way to be more efficient, was used during the 2012 mosquito season. For the first time we used 2 sprayers on one truck; one machine to spray adulticide, and a second machine to spray the liquid larvicide.

The Bureau continues to be a part of the leaf collection crew along with snow plowing and salt spreading for the Bureau of Roads and Bridges. All of Mosquito Control's employees are licensed by the NJDEP as Pesticide Applicators in the 8B category, as well as being NJDOT CDL drivers and 4 staff members are equipment operators. We are currently continuing in the clean up after Hurricane Sandy, which our staff remained in action to assist with any emergencies that we were faced with at the time the storm hit Union County.

Bureau of Heavy Equipment & Truck Repair

- Repair Work Orders.....830
- Total Cost.....\$454,553.79
- Hours7853

These figures include the Repair, Welding and Spreader Shops in-housework performed by the Bureau.

Division of Engineering

The Division of Engineering continues to accomplish more with less by having consultants assume more responsibility for project coordination and quality assurance. The performance of the Division's consultants has been very good and project design costs

have in some cases been reduced as result of fewer layers of review. The implementation of the Cartegraph Asset Management system database has allowed for management control of large amounts of infrastructure information.

Engineering Services

Engineering Services accomplished projects in the following municipalities:

- **Berkeley Heights**
 - A) Design and permitting for replacement culvert at Valley Road and Glenside.
 - B) Design of traffic signal upgrade at intersection of Diamond Hill road and McMane Avenue.
 - C) Design Fire Alarm System for Church Store in Deserted Village
 - D) Construction of Solar Panel array at Runnells Hospital parking area.
 - E) Construction of elevator upgrades at Runnells Hospital.

- **Clark**
 - A) Award contract for Resurfacing and Handicapped Ramps Construction of Raritan Road from Oak Ridge Road to Garden State Parkway.
 - B) Design and permitting for improvements to Oak Ridge Park.

- **Cranford**
 - A) Resurfacing and Handicapped Ramp Construction of Raritan Road from Oak Ridge Road to the Garden State Parkway.
 - B) Construction of replacement Nomahegan Lake Dam.
 - C) Removal of organic silts and bank improvements for Nomahegan Lake
 - D) Design of Centennial Avenue Corridor traffic signals.
 - E) Design of Traffic Signal upgrade on Springfield Avenue at Union County College and Nomahegan Park.

- **Elizabeth**
 - A) Traffic Signal Improvements – The completion of 12 intersections (ARRA Funding);
 - B) Resurfacing and Handicapped Ramps Construction of West Jersey Street from West Jersey Avenue to Cherry Street.

- C) Perform Alternative Analysis and submitted funding application to NJTPA for the South Front Street Bridge.
 - D) Design and permitting for the Summer Street Bridge
 - E) Design Traffic Signal upgrades for intersections at Magie Avenue and Galloping Hill Road and at Magie Avenue and Summit Road
 - F) Design turf field and lighting improvements at Mattano Park.
 - G) Design and Construction of Courthouse Fire protection improvements.
 - H) Design and Construction of UC Jail Facility improvements
 - I) Design of Board of Election exterior renovation
 - J) Construction of solar panel array on roof of Ruotolo Building
 - K) Complete Traffic Study for Block surrounded by Elizabethtown Plaza, Cherry Street, Rahway Avenue, and West Jersey Avenue.
- **Fanwood**
 - A) Traffic Signal Improvement - The completion of the Terrill Road Corridor (ARRA Funding).
 - **Hillside**
 - A) Traffic Signal Improvement (ARRA Funding) the completion of 2 Intersections. (Lower Road)
 - B) Design Traffic Signal upgrade at intersection of Chestnut Avenue and Hillside Avenue
 - C) Design Traffic Signal upgrade at intersection of North Broad Street and Central Avenue.
 - **Kenilworth**
 - A) Construction of Galloping Hill Golf Course Clubhouse and Learning Center
 - B) Construction of Galloping Hill Golf Course Maintenance facility.
 - **Mountainside**
 - A) Award contract for Resurfacing and Handicapped Ramps Construction of Ackerman Avenue from Deer Path to Coles Avenue.
 - B) Construction of Greenhouse at Trailside Nature Center
 - C) Design and permitting for Watchung Stable paddocks.

- D) Design and permitted for Watchung Stable Riding Rings
 - E) Design and permitting for Lake Surprise Dam replacement
 - F) Construction of solar array on roof of Trailside Nature Center building
 - G) Construction of maintenance facility expansion at Echo Lake Park
- **Linden**
 - A) Resurfacing and Handicapped Ramps Construction and Rehabilitation of Roselle Street from Elizabeth Avenue to St. Georges Avenue.
 - B) Design and permitting for three culverts located on Lower Road, Chandler Avenue and Elizabeth Avenue respectively.
 - C) Construction of turf field and lighting improvements at Wheeler Park.
- **New Providence**
 - A) Traffic Signal Improvement completion at the intersections of Springfield Avenue and Union Avenue.
- **Plainfield**
 - A) Traffic Signals Construction (ARRA Funding) - the completion of Terrill Road Corridor and Park Avenue Corridor.
 - B) Design and permitting for the Raymond Avenue Bridge over the Green Brook.
 - C) Award contract for Resurfacing and Handicapped Ramps Construction of Park Avenue from Ninth Avenue to Sloan Boulevard.
 - D) Design and permitting for the Pemberton Avenue Culvert over stream in Cedar Brook line.
 - E) Design and permitting for Pedestrian Bridge in Green Brook Park
- **Rahway**
 - A) Design and permitting of dam improvement of the Rahway Park Lake Dam to pre Hurricane Irene conditions (FEMA).
 - B) Bridge Restoration - Emergency scour repair of the Madison Hill Bridge, over Rahway River following Hurricane Irene (NJDOT).

- C) Dam Improvement- The restoration of Jackson's Pond; including the restoration riprap, curb, and sidewalk replacement (FEMA).
 - D) Design of traffic signal upgrade at intersection of Elizabeth Avenue and Grand Avenue.
 - E) Design and permitting of rehabilitation of the Madison Hill Avenue Bridge over the Rahway River.
 - F) Design turf field and lighting improvements at Rahway River Park.
 - G) Design and permitting for removal of organic silts and bank improvements for Rahway Park Lake.
- **Roselle**
 - A) Resurfacing and Handicapped Ramps Construction of the Warinanco Park Loop Road. Resurfacing and Handicapped Ramps Construction of Locust Street Road from Westfield Avenue to Ninth Avenue. Resurfacing and Handicapped Ramps Construction of Linden Road from Westfield Avenue Road to Warinanco Park.
 - B) West Brook Flood Control Phase IV Project Design and Permit Approval.
 - C) Bridge Improvement - Gordon Street Bridge - design progress on Federal Scoping Study.
 - D) Design and permitting of culvert on First Avenue near Locust St.
 - E) Design improvements to Warinanco Park Comfort Station.
 - F) Design turf field, lighting and bleacher improvements at Warinanco Park Stadium.
 - **Roselle Park**
 - A) Resurfacing and Handicapped Ramps Construction of Locust Street from Westfield Avenue to 9th Street.
 - B) Bridge Improvement - Gordon Street Bridge- design progress on Federal Scoping Study.
 - **Scotch Plains**
 - A) Park Improvement - The opening of the Ponderosa Park multi use recreational facility.
 - B) Design and permitting for the Raritan Road Culvert over stream near Ashbrook Reservation

- C) Construction of solar array on roof of Police Academy Building
- D) Design of fire alarm improvements at UC Public Works Facility.

- **Springfield**

- A) Park Improvement - Progress of Meisel Park multi use recreational facility.
- B) Resurfacing and Handicapped Ramps Construction of Mountain Avenue from Shunpike Road to Hillside Avenue. Resurfacing and Handicapped Ramps Construction of Shunpike Road from Mountain Avenue to Route 78.
- C) Design and permitting of the Short Hill Avenue Culvert over stream near Milburn.
- D) Design and permitting of the Hillside Avenue Culvert over stream near Ann Place.
- E) Design and permitting for removal of organic silts and bank improvement for Meisel Park Pond.

- **Summit**

- A) Traffic Signal(s) replacement completed on Summit Avenue.
- B) Design and permitting of the Locust Drive Culvert over stream near Tulip Street.
- C) Construction of Prospect Street Culvert over Salt Brook.
- D) Design and permitting for removal of organic silts and bank improvements for Briant Park Lake.
- E) Design Traffic Signal upgrade at intersection of Broad Street and Springfield Avenue.
- F) Design Traffic Signal upgrades at three intersection including Springfield Avenue and New England Avenue; Passaic Avenue and Springfield Avenue; and Passaic Avenue and Kent Place Boulevard.

- **Union**

- A) Construction of the Vauxhall Road Culvert near the fire station.
- B) Resurfacing and Handicapped Ramps Construction of Chestnut Street from Galloping Hill Road to Summer Street.
- C) Design Traffic Signal upgrades at three intersection including Vauxhall Road and Pine Street; Vauxhall Road and Caldwell Avenue; and Chestnut Street and Parkview Terrace.

D) Design Traffic Signal upgrade at intersection of Vauxhall Road and Valley Street.

E) Design turf field and lighting improvements at Rizzuto Park.

- **Westfield**

A) Design Traffic Signal upgrades at two intersections including Rahway Avenue and Lamberts Mill Road; and West Broad Street and Scotch Plains Avenue.

B) Construction of Dispatch Center at Ralph Froehlich building.

C) Pedestrian Hybrid HAWK signal design underway on North Avenue at Lord and Taylors.

- **Winfield**

Bureau of Traffic Safety & Maintenance

Departments and bureaus that benefited from our services include: Engineering, Roads & Bridges, Shade Tree, Mosquito Control, County Manager's Office, County Police, Sheriff's Office, County Security, Emergency Management, Environmental Services, Park Maintenance, Parks Golf Courses, Building Services, Human Services, Rutgers Cooperative Extension, Cultural and Heritage Affairs, Board of Elections, Runnels Specialized Hospital, Parks & Community Renewal, Motor Vehicles.

Our Functional units have processed the following requests in 2012:

- **Sign Shop Unit** - fabricated 837 signs.
- **Sign Shop Unit** - fabricated 36 vehicle marking sets.
- **Sign Repair & Installation Unit** - installed/repared 1,181 signs (includes signs from Hurricane Sandy), and trimmed brush around signs along each County Road.
- **Line Striping/Markings Unit** - striped approximately 82 miles of 4-inch road lines.
- **Line Striping/Markings Unit** - striped 17 parking lots and 63 marking locations.
- **Data Collection Unit** - performed 128 traffic collections.
- **GIS/Asset Management Team** - tagged 632 assets.
- **Survey Team** - performed 10 surveys.
- **Traffic Studies & Investigations** - studied approximately 15 traffic issues.

- **Work Zone Traffic Control** - implemented/designed 27 work zone projects.
- **Traffic Municipal Aid** - the bureau has processed 29 mutual aide requests from the municipalities.
- The Bureau has continued to provide the County Counsel's Office with information and professional consultation related to depositions, and interrogatories, and expert testimony in regard to tort claims and law suits during 2012.
- The Bureau of Traffic Safety & Maintenance has maintained our **Traffic Information Program** that consists of a page on the County website dedicated to providing the citizens of Union County with up-to-date information on construction and maintenance projects that impact traffic flow on the County's 174 miles of road, along with 5 brochures designed to educate the public on traffic safety issues. Improvements have been made to the website to enhance its interactive capabilities.
- The Bureau has supported the County's municipalities through Mutual Aid and Shared Services with our **Municipal Striping and Sign Program**. Beneficiaries of this program were Berkeley Heights, Clark, Linden, Cranford, Fanwood, Hillside, Kenilworth, Garwood, Rahway, Roselle, Roselle Park, Springfield, Summit, and Union. This program generated **\$20,137.00** in 2012. It has also provided signage support, traffic data, and traffic control materials to almost all municipalities as well as other County affiliated agencies at no cost.
- The Bureau has provided Work Zone Traffic Control design, planning, and implementation on many construction projects including the **Annual Road Resurfacing Program**. This ensures that the County has immediate control of the project and can respond to the concerns of local officials and citizens quickly.
- The Bureau has many other ongoing traffic safety and maintenance initiatives including: **General Guide and Warning Signs Upgrades**; Compilation of **Traffic Data for G.I.S.** relative to traffic movements/speed/volume/accidents for future GIS mapping layers; and meeting the Federal **M.U.T.C.D. Compliance** mandates for signage, striping, and work zones

associated with the current edition of the *Manual on Uniform Traffic Control Devices*. The Bureau's *Sign Shop* and *Line Striping Shop* also provided other County Divisions and Departments with event signage, vehicle lettering and markings, and parking lot striping.

- The Bureau has processed 364 work orders for signs assets that were damage/missing due the *Hurricane Sandy*.
- The Bureau has completed for 2012, a survey to collect data on all county roads to asses *Pedestrian Safety* crossings on our roadway system.

Bureau of GIS

- Continued to maintain and update existing parcel layer for 21 municipalities, enabling government and private agencies to fully utilize the County's Geographic Information System.
- Over 150 drug free zone maps were created, printed in Mylar, certified by the county engineer and filed in the court house.
- Trained over 30 employees from the prosecutor's office on using the secured website to access the digital certified maps.
- Support all IT operation for Public Works department and the Bureau, which includes 5 server maintenance, backup, restore.
- Maintain and manage 4 SQL servers daily and perform backup restore and all IT management.
- Continue to incorporate major and minor subdivision changes to the tax parcel layer in order to keep it updated. Updating owner information every three months is also part of the ongoing process.
- Prepared and printed an average of 09 to 12 maps per week for the Union County Prosecutor's office for prosecution, crime scene analysis, drug free zone prosecution and various other needs. Also, maintained and managed the Megan's law database and printed about 5 to 10 maps per week for notification, as well as prosecution purpose.
- Prepared and printed an average of 10 to 15 maps per week for the State of New Jersey public defender's office. These maps include

crime scene analysis, drug free zone prosecution and various other needs.

- Continue to update and reprint as necessary our 'No Loitering Zone' maps, which are based on the new county ordinance. We located and identified all playgrounds, created a buffer area where sex offenders are not permitted, and printed 25,000 copies of the map for distribution.
- Completed a massive cleanup of the CarteGraph system database since its implementation.
- Updated our public and private school locations for the Prosecutes office and published through the website for internal use.
- Trained two new employees from the Megan's Law unit on GIS and creating buffers, maps and reporting for notification purpose.
- Completed the edits to our County park maps as requested by the Parks and Community Renewal and completed set of park maps for residents use.
- Continue to support City of Summit's GIS and Asset Management system as part of the County's shared service initiative.
- Received, updated and implemented new Pictometry flight data and distributed to all law enforcement departments among the Municipalities and across the county.
- Provided GIS maps for various community organizations for their various community initiatives.
- Provided over 200 maps for Bio-blitz 2010 in support of the project.
- Change the wards and districts maps for the Board of Election department, which are based on the new census redistricting.
- Printed over 800 Board of Election maps for the department to sell to the public.

- Currently in the process of updating union county map and we will print another 25,000 copies towards end on December or January.
- Located and mapped foreclosure properties located in seven municipalities as part of federal grant initiatives through the Division of Community Development.
- Division of Parks Maintenance: Bureau is supporting every aspect of Parks operation by providing prints, analyzing various property lines and stream cleanup disputes.
- Supporting, maintaining and managing, CarteGraph system for the county while running prints cost analysis and various other reports weekly and monthly.
- County Road layer has been updated to match with Engineering and Traffic Bureaus with their projects which are in CarteGraph.
- Updated road layer and created road repaved history in the system, which was used to make a thematic map for the department.
- Road ratings were collected and incorporated to the CarteGraph system, which will be used to determine future road projects based on the road conditions.
- GIS Websites: Continued to maintain and manage four GIS websites, which are linked to the County's website serving both, public and county departments. The website has been enhanced with new tools, enabling municipalities utilizing these enhancements to save money on the purchase of GIS software since the information is accessible on the County website.
- Shared Services: The Bureau assisted 20 municipalities with GIS services as a part of the County's Inter-local Agreements for shared services to reduce their operating costs as follows:
- Berkeley Heights: Using the County's GIS system to maintain and manage their Asset Management software, which is reducing their operating cost considerably. We support and manage their operation by updating GIS layers and providing phone support.

- **City of Summit:** The County is hosting a GIS website, which eliminated the need for mailing various schedules to the general public such as recycling and garbage pickup dates. The Bureau is also in the process of integrating their asset management system and the County's GIS database, which will result in an approximate yearly savings for the City of \$50,000.

- **911 System Support:** The County is providing 911 system supports to the City of Elizabeth, the City of Rahway and the City of Linden through the quarterly updates.

- **Working with County 911 system** to implement mapping to the existing system.

- **Pictometry:** The Bureau continues to support and manage every aspect of Pictometry software. The Bureau in conjunction with the Divisions of Emergency Management and Information Technologies, installed, configured, and made the 2011 Pictometry flight available, acquired using UASI funding, to all departments and municipalities.

- **Water Layer:** Bureau of GIS has edited and finalized 15,000 Fire Hydrants for the use of 21 fire departments.

- **OEM Project:** assisting in the special project to collect and implement all citizens with special needs for emergencies. Bureau of GIS has been assisting to shift over 30000 fire hydrants for 21 Municipalities, which will be used for the fire departments.

- **Bridge Inventory:** assisting in the process of bridge inventory, inspection reports and every aspect of engineering projects using CarteGraph.

- **Bureau of Mosquito:** mapped over 400 points in GIS where they set traps and test Mosquito sample. They use CarteGraph and mapping the test results are one of the benefits of CarteGraph and GIS.

- **Bureau of Traffic:** Every road segments is separated and attached to projects as necessary to track various projects in CarteGraph. In

addition, over 18,000 signs are in GIS, which is maintained in CarteGraph by the Bureau.

- Maintaining and managing the State Bridge Soft system to create, update and maintain priority bridge work orders from NJDOT.
- Continue to update and revise labors, materials, tools, equipment's and work orders in the system.
- Division of Facility: we are supporting every aspect of facility management CarteGraph operation for 5 employees.
- Division of Engineering: we are managing six engineering projects currently and the number of projects will continue to grow.
- Division of InfoTech: we are supporting every aspect of their daily operation by making changes, running reports and troubleshooting daily issues by supporting 5 employees.
- Parks Maintenance: we are supporting every aspect of their daily operation by making changes, running reports and troubleshooting daily issues by supporting 8 employees.
- Communication: we are supporting every aspect of their daily operation by making changes, running reports and troubleshooting daily issues by supporting 4 employees.
- Located all outfalls in the county for State mandate project: located all outfalls within the county by field verifying them by Municipality. Updating Street database and submitted the final report for the State DEP.
- Pictometry 2010 Database install and configuration: Installed 20100 imagery and configured for 21 municipalities. Imagery distribution and training for 21 police departments with Server update and software update
- Supporting Summit GIS applications and their usage: maintaining GIS layers and database, supporting Summit's Asset Management

Software by weekly updates, troubleshoot and supporting every aspect of their operation

- Maintain the GIS partnerships and relationships: State government, DEP and 20 Counties GIS departments.

Division of Facilities Management

Administration Building

The second air conditioning unit will be replaced the first unit was replaced 2011. This is ongoing, completion scheduled for 2013.

Andrew K. Ruotolo Justice Center

Demolition of the existing Day Care Center to allow the overhaul of space to expand the UC Prosecutors Justice Center office 90% complete.

Architectural On-Call Service and Engineering On-Call Services

County retained consultants for 2013 and monitored by the Div. of Engineers.

Board of Elections

Emergency netting was installed to protect the general public and employees from falling concrete and building debris prior to the Exterior Fenestration and Weatherization renovations expected to commence in 2013. Provision for contractual enhancement initiated in 2012 and will be re-bid in 2013.

Elizabeth Complex

The Justice Complex Project:

Phase #1: Chancery Court renovations, New Annex, Fire Suppression and Garage restoration was 100% competed during 2012.

Phase #2: Juvenile Detention Center (old bldg.) restoration; Courthouse Rotunda and Tower elevators; Oriscello Correctional Facility - kitchen renovations; 48 inmate showers on PODS project is 50% complete with an anticipate 2013 completion time.

Phase #3: The Oriscello Correctional Facility installation of approximately 250 surveillance cameras; secure Correctional Officers

area on PODS; booking and receiving area, lobby, visitation area, control center, locker room reconstruction and elevator upgrade. Specifications and drawing are being updated and project bid expected to begin in 2013.

UC Courthouse Tower and old Annex Building

Develop specifications and project time-line on the upgrade of a new Security and Camera System.

Oriscello Correctional Facility - Refer to Justice Complex Phase# I, II & III

Westfield Complex

UC County Police Building Control Center & 911 Emergency Response area - Equipment upgrade project has begun in 2012 and underway.

Division of Park Maintenance

**2012 Division of Park Maintenance
Accomplishments**

Bureau of Park Maintenance

- All ball fields were cut, lined, dragged, etc. on a regular schedule.
- All bathroom facilities were serviced on a daily basis including week-ends.
- In addition to routine maintenance the division assisted Public Works with Super Storm Sandy clean-up.
- All special events were successfully set up and broken down by Park Maintenance staff.
- Permits were obtained from the DEP and work completed to clean the Green Brook in Plainfield of natural and man-made debris and litter.
- Permits were obtained from the DEP and work completed to clean the Rahway River in Cranford along Crane Parkway of natural and man-made debris and litter

- Walking paths were re-paved as needed at Cedar Brook Park in Plainfield, Warinanco Park in Roselle, and Madison Ave Park in Rahway.
- A new spray-ground was installed at Cedar Brook Park in Plainfield.
- Sport Surfacing was installed on basketball courts in Cedar Brook Park, Green Brook Park, Unami Park, and Mohawk Park and on tennis courts in Unami Park.
- A new asphalt basketball court was built in Rahway River Park.
- The Loop Playground was completely renovated including barrier free equipment, rubberized safety surface, new trash receptacles and picnic tables. Preparations for a gazebo and misters are on-going.
- Cedar Brook Park and Green Brook Park playgrounds were completely renovated including new equipment and rubberized safety surfacing.
- Artificial turf field projects were bid and work is almost complete for Wheeler Park in Linden and Rizzuto Park in Union.
- Bid documents are being prepared to reconstruct the track in Warinanco Park, Roselle. Additional work will include a lighted artificial turf field as well as a new bathroom and storage facility.
- Echo Lake Service Yard renovations were completed. Revised plans cut cost from \$1.5 million to \$750,000.
- Octagon bathroom and spray ground in Warinanco Park bids were over budget so project will be re-bid.
- Parts of the Watchung trails were renovated.
- Playground equipment parts were replaced throughout the Parks system on an as needed basis.

Bureau of Recycling and Planning

Recycling Event Accomplishments

The Bureau of Recycling continued to host various one-day recycling collection events throughout Union County. Participation for most programs remains consistent except for mobile paper shredding – both participation and tonnage numbers went up significantly in 2012.

Union County not only continued to maintain a no-cost electronics recycling program but a new price/pound revenue was negotiated for the county and all participating municipalities which began in July of 2012.

While a cork recycling was not implemented, two more relevant recycling programs were successfully initiated – scrap metal and fluorescent bulbs.

The numbers for all recycling events were as follows:

- Electronics Recycling – 338,761 lbs. collected at one day events.
1,220,886 lbs. collected via municipal and facility drop off program.
1,559,600 total pounds collected (thru September).
2,774 residents participated in one-day events.
- Household Hazardous Waste Days – 114,420 lbs. collected.
2,027 participants.
- Paper Shredding – 164,308 lbs. collected.
4,158 residents participated.
- Tire Recycling - 545 tires collected and recycled at four events .
- Propane Tanks – 392 propane tanks were collected and recycled at four events.
- Mercury Thermostat Collection/Home Depot Gift Card – Union County, through a joint partnership with Covanta Energy, handed out 176 Home Depot gift cards to residents who turned in thermostats for recycling.

Program Accomplishments

- **Electronics Recycling**
Union County continued to work with our e-waste vendor as well as electronics manufacturers to help offset costs associated with recycling of electronics. Not only were we able to recycle

all covered and non-covered materials at no-cost, a \$.03/lb revenue source was realized through these partnerships.

- **Scrap Metal Pilot Program**

In response to residents not having local opportunities to easily recycle appliances and other metal related materials, a scrap metal drop off program was initiated. Four county park locations were designated as scrap metal recycling drop off areas when the new program began in June.

- **Fluorescent Bulb Recycling**

In an effort to increase convenience and opportunities for residents to properly recycle fluorescent bulbs, Union County partnered with ten (10) municipalities to offer local drop offs. Union County manages and pays for the program, while the towns serve as collection points.

- **Recycling in County Buildings**

As a follow up to the recycling audits completed in 2011, Union County replaced recycling containers throughout the county complex and many of the county buildings. Park Maintenance continued to add recycling containers throughout the county park system to encourage the separation of trash from recyclables.

- **CRP Agreement**

In accordance with new legislation requiring a CRP to sign off on all tonnage reports, Union County served as the Certified Recycling Professional (CRP) for eight (8) municipalities in 2012.

2013 Initiatives

Division of Public Works

Bureau of Roads & Bridges

As affected by winter conditions roadways, bridges, culverts, parapets, catch basins, manhole, and storm water inlets will be prioritized for in-house repair along with ongoing routine maintenance.

Bridge maintenance consisting of sidewalk, rail repair and replacement, structural deck repairs, and drainage will be scheduled.

General bridge cleaning and clearing under bridge obstructions will continue as required. In-house forces shall respond to priority repairs as recommended through the division of engineering.

The Bureau will continue to flush, clean, repair and survey all storm sewer inlets, catch basins and manholes on roadways throughout Union County. Repairs will be prioritized according to results of the surveys conducted. Cleaning and inspections will be conducted on a yearly schedule ensuring basins and manholes in all municipalities are addressed approximately three times per year.

Street sweeping will be conducted on a monthly schedule. All County roads are scheduled to be swept twice per month, weather permitted.

Rights of Way maintenance will be conducted from spring through autumn on all County roadways.

The Bureau will continue with the Mutual Aid/Shared Services program through equipment, personnel and material loans. Assistance will continue with the Bureau of Shade Tree and Conservation with sidewalk replacements as required. The Solid Waste and Recycling hauling will continue to operate according to requests. Requests will be completed as received.

The Leaf Removal Program will commence on or about November 1, 2012. The 2013 leaf pickup schedule will be made available to all municipalities for notification to residents. The 2013 Schedule will also be posted on Union County's web site.

The Bureau's in-house paving program will provide resurfacing to various County facilities prioritized as requested through County departments, divisions, and bureaus. Requests are submitted to the Bureau of Roads & Bridges and will commence on or about May 1, 2013.

Various park paving projects will be coordinated with the Division of Park Maintenance. Projects will include resurfacing paths, roadways and lots.

The Bureau of Roads & Bridges will continue to improve the in-house Milling and Paving, of County Roadways Program. Upon conclusion

of Winter Operations, roadways and roadway sections will be evaluated and prioritized for resurfacing. The following roadways are slated to be resurfaced in 2013. Mountain Ave., New Providence from South Street to Division Ave, Hillside Ave, Springfield from Mountain Ave to Springfield Ave and Parkway Drive (Lake Drive) from Valley Road to Stiles Street.

Preventative maintenance and surface repairs will be conducted on roadways on various County roads by work order requests. Surface repairs will be performed by milling, cutting and removing deteriorated sections of roadway and replacing with new hot mix asphalt. Preventative maintenance will also include crack sealing and drainage improvements.

The Bureau will continue with efforts to augment training and improve safety awareness for all bureau employees.

Bureau of Inspections

The Bureau will continue to closely monitor all construction, maintenance, and repair being performed on County roads as it pertains to the proper permitting for curbing, road openings, excavations and alterations, and continue to assure compliance with County specifications. The Safety Coordinator will continue to conduct training in areas, and will continue to assure compliance with Local, Federal, and State regulations. A goal is to become an injury and accident free workplace.

Bureau of Shade Tree & Conservation

The Bureau will continue to maximize all its efforts in completing all work orders and put in place a plan to assist the department in working along with all the departments. The Bureau will continue to observe trees throughout the County to identify dangerous or dying trees and their condition to determine which will be in need of trimming or removal due to decay. The Bureau also receives approximately 100 calls months for trimming, inspection or removal of trees. The Bureau also conducts insect and disease management and takes the necessary protection measures to save the trees. The Bureau assess all trees which have the potential of being removed based on condition, structural integrity, life expectancy, infestations and diseases.

continue to seek efficiencies in operation in order to provide a cost effective solution for the maintenance of County owned trucks and equipment.

Division of Engineering

Bridge and Culvert Projects

- Summer Street Bridge, Elizabeth is planned to start construction.
- Raymond Avenue Bridge, Plainfield is planned to start construction.
- Lower Road Culvert, Linden is planned to start construction.
- Chandler Avenue Culvert, Linden is planned to start construction.
- Elizabeth Avenue Culvert, Linden is planned to start construction.
- Valley Road at Glenside Culvert, Berkeley Heights is planned to start construction.
- First Avenue Culvert, Roselle is planned to start construction.
- Hillside Road Culvert, Springfield is planned to start construction.
- Locust Drive near Tulip Culvert, Summit is planned to be advertised for construction.
- Pemberton Avenue Culvert, Plainfield is planned to be advertised for construction.
- Raritan Road Culvert, Scotch Plains is planned to be advertised for construction.
- Short Hills Avenue Culvert, Springfield is planned to be advertised for construction.
- South Front Street Bridge, Elizabeth application for NJTPA funding is anticipated.
- Madison Hill Bridge, Clark/Rahway is planned to be 75% designed.
- East Hazelwood Ave. Bridge, Rahway is planned to be 75% designed.

Road Resurfacing Projects

- 2012 Road Resurfacing Project approximately 6 miles will be constructed. Delayed to 2013 due to Storm Sandy.
- 2013 Road Resurfacing Project (12.1 miles) is planned for to be constructed.
- 2014 Road Resurfacing Project is planned to begin design.

Intersection Improvement Projects

- Centennial Avenue Corridor Traffic Signal Project, Cranford is planned to start construction.

- Chestnut and Hillside Traffic Signal Project, Hillside is planned to start construction.
- Two Intersection Traffic Signal Project, Elizabeth is planned to start construction.
- Two Intersection Traffic Signal Project, Westfield is planned to start construction.
- Broad and Springfield Traffic Signal Project, Summit is planned to complete construction.
- Vauxhall and Valley Traffic Signal Project, Union is planned to start construction.
- Diamond Hill and McMane Traffic Signal Project, Berkeley Heights is planned to start construction.
- North Broad and Central Traffic Signal Project, Hillside is planned to be designed.
- Grand Avenue and Elizabeth Traffic Signal Project, Rahway is planned to be designed.
- Three Intersection Traffic Signal Project, Summit is planned to be designed.
- Three Intersection Traffic Signal Project, Union is planned to be designed.
- South Avenue and Center Traffic Signal Project, Garwood, is planned to be designed.

Other Projects

- Lake Surprise Dam Replacement is planned to finish design and advertise for bid.
- Long Term Environmental Remediation Projects at various sites are planned to progress in accordance to NJDEP/LSRP program.
- Westbrook Phase IV Flood Control Project, Roselle is planned to be constructed throughout the year.

Bureau of Traffic Safety & Maintenance:

- Will be working in support of the County Engineers initiatives for participation in NJTPA grant program for *Sign Reflectivity Compliance* and developing a *Roadway Inventory System*.
- Will continue to assist County Counsel's Office by providing *information and professional consultation* to answer depositions, interrogatories, and provide expert testimony when needed in regard to tort claims and law suits.

- Will in 2013 begin addressing issues that were identified in our 2012 survey of *Pedestrian Safety on County roads*.
- Will continue to improve its *Traffic Information Program* and *Incident Management Initiatives* via the expanded use of portable “Variable Message Boards,” new safety brochures, and enhanced traffic interruption notification systems. The Bureau will also continue to work with community and professional organizations to further Traffic Safety.
- Will continue its **MUTCD Compliance** initiatives addressing the new requirements established by the FHWA.
- Will continue compilation of traffic data relative to the *Traffic Data for G.I.S.* project and expand this initiative by adding traffic movements, speed/volume, and crash data for future GIS mapping layers. Additionally the Bureau will continue researching new pedestrian and turning movement technology.
- Will continue its *General Guide and Warning Signs Upgrades* for roads resurfaced in 2013.
- The Bureau’s *Sign Shop* and *Line Striping* will continue providing other County divisions and departments with event signage, vehicle lettering and markings, and parking lot striping, and it will be researching new striping materials to enhance safety on the County road system.
- During 2013, the Bureau will continue to provide traffic control and work zone safety for the 2013 *Road Resurfacing Program* and the remainder of the 2012 *Road Resurfacing Program*. It will also continue to support the local municipalities through Mutual Aid and Shared Services.
- The Bureau will continue to provide *Work Zone safety training* to other County agencies, departments, and municipalities, and will continue to participate in research Traffic Safety Grants.

Bureau of Geographic Information Systems:

- The Bureau will take CarteGraph to the next level by implanting an online version with training and additional resources.
- The Bureau will update the County Street Map by locating and identifying missing streets, and updating CarteGraph Street view database.

- The Bureau will update CarteGraph bridge view database and the sign view database.
- The Bureau will update Union County Map and reprint 25,000 copies as soon as the edits are completed.
- The Bureau will coordinate new Pictometry flight and distribute to all law enforcement departments.
- Bureau will upgrade new GIS server and switch all information from a 10 year old server.
- The Bureau will continue to maintain the GIS website and support the various layers of GIS including tax maps, enforcement zones and OEM information.
- The Bureau will continue to maintain the secured website that contains certified drug free zone maps and continue to train and support all 21 municipal police departments.

Division of Facilities Management:

Andrew K. Ruotolo Justice Center

The remaining 10% of the UC Prosecutors Office – Homicide Unit expansion will be completed in 2013.

Architectural On-Call Service and Engineering On-Call Services

County will retain consultants for 2013 monitored by the Div. of Engineers.

Board of Elections

Exterior Fenestration and Weatherization renovations for 271 Broad Street, Elizabeth will be re-bid in 2013 with the expectation to have architectural drawing complete by year end.

Elizabeth Complex

The Justice Complex Project:

Phase #2: Juvenile Detention Center (old bldg.) restoration; Courthouse Rotunda and Tower elevators; Oriscello Correctional Facility - kitchen renovations; 48 inmate showers on PODS project remaining 50% will be completed in 2013.

Phase #3: The Oriscello Correctional Facility installation of approximately 250 surveillance cameras; secure Correctional Officers

area on PODS; booking and receiving area, lobby, visitation area, control center, locker room reconstruction and elevator upgrade. Will go out for public bid in 2013.

UC Courthouse Tower and old Annex Building

Develop specifications and project time-line on the upgrade of a new Security and Camera System.

Oriscello Correctional Facility

Water proofing, glass etching and re-caulking of windows and the replacement of broken security glass where necessary will be completed in 2013.

Westfield Complex

UC County Police Building Control Center - Equipment upgrade project has begun in 2012 and expected to be completed in 2013.

Division of Park Maintenance Initiatives 2013

Bureau of Park Maintenance

Playground Safety Improvements

In an effort to make County playgrounds as safe as possible for children, the County will continue to convert the playground safety surfacing material at some locations from wood chips to bonded rubber.

Where appropriate, guard rails will be erected to ensure a stronger separation between vehicles and children playing.

Continue safety inspections for playgrounds and replace damaged parts as needed.

Spray Pools

The County will replace the existing spray ground in Warinanco Park with new equipment and features. These facilities provide cooling relief to families in urban areas during the summer months.

Synthetic Turf on County Athletic Fields

Award contracts to begin construction in Warinanco Park and Rahway River Park. Identify potential new sites and design accordingly.

Rahway River Park Service Yard

Repave the interior yard lot including appropriate facilities for cleaning and servicing equipment.

Cedar Brook Service Yard

Asphalt top the interior yard lot including appropriate facilities for cleaning and servicing equipment.

Master Plan

Evaluate the recommendations in order to prepare plans and budget estimates to carry out suggested initiatives. Work closely with Parks & Community Development in identifying priorities.

Bureau of Recycling and Planning 2013 Initiatives

- Begin a county-wide recycling enforcement program
- Union County will work to increase its overall county recycling rate through efforts to improve commercial and institutional reporting.
- Implement a Cork Recycling Program for restaurants and bars in Union County