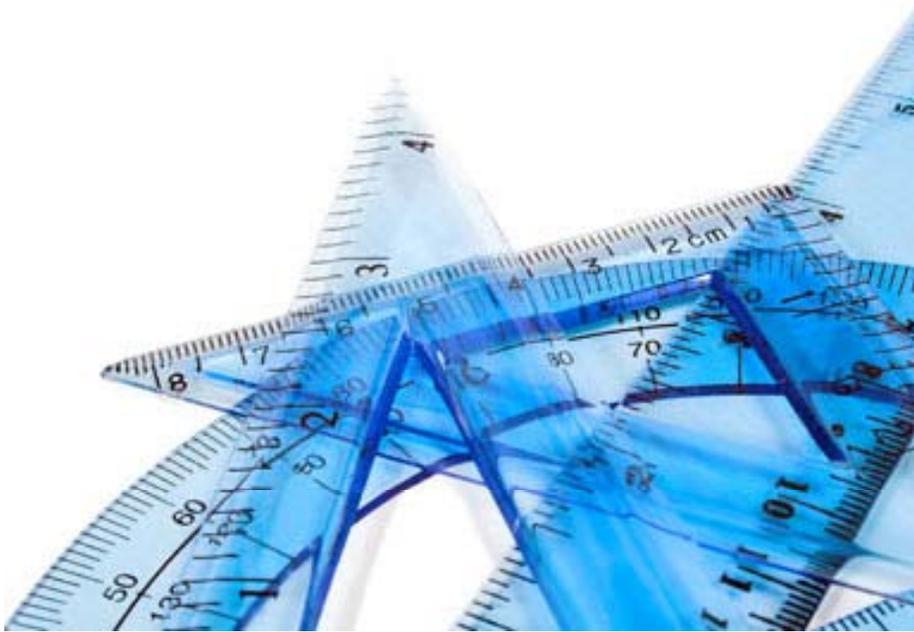


2011 ANNUAL REPORT PUBLIC WORKS DIVISION OF ENGINEERING



BY: KIRK NIEMEYER, P.E.
CITY OF LIMA
DIVISION OF ENGINEERING
2011 ANNUAL REPORT

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2011 CAPITAL IMPROVEMENTS

Vine Street Rail Road Grade Separation (RRGS), Project No. 7-10

This project commenced in May of 2010 and had an 18-month duration. The total cost for construction of the grade separation was \$7,084,508 with \$2,741,207 of the work being completed in 2010 and \$4,343,301 in 2011. Now that the project is complete, south Lima will no longer endure traffic delays, partial isolation from the rest of the city, emergency response delays, or frustrations and hazards due to rail/roadway conflicts. The project was a truly a cooperative effort between the City, ODOT, FHWA, CSXT railroad, NS railroad and the design and construction professionals involved. The total project costs from start to finish are listed below.



Preliminary Engr.	\$	170,048
R/W Acquisition Services	\$	248,170
R/W (real property and relocation)	\$	788,843
Permits	\$	4,633
Demolition	\$	21,341
Detailed Engr.	\$	827,073
Norfolk Southern Force Account Engr.	\$	25,000
CSX Force Account Engr.	\$	55,000
Norfolk Southern Force Account Const.	\$	408,339
CSX Force Account Const.	\$	2,544,081
Const. Inspection/Admin.	\$	590,012
Const. Cost	\$	7,084,508
Total Project Cost	\$	12,767,048

S. Metcalf Street and W. Fourth St. Intersection Improvements, Project 11-10



This project was originally scheduled to be completed in 2010, however a longer than expected lead-time on the traffic signal equipment pushed the project into 2011. The intersection was upgraded with mast arm poles, pedestrian facilities, drainage, and pavement resurfacing. The improvements aid the high number of pedestrians that cross S. Metcalf St. on the south leg of the intersection with overhead lighting; visible

crosswalks, and push button activated pedestrian signals. The cost of the improvements was \$161,711.30 whereas 80% (\$129,369.04) was funded through OPWC and 20% (\$32,342.26) through the City's portion of Allen County's Permissive License Plate fund.

2011 Sidewalk Project, Project 1-11

This project reconstructed those sidewalks that were determined to be unsatisfactory and not repaired by owners who were sent notices in the spring of 2010. Of 172 notices that were sent to property owners, 130 were placed on this project. The total



cost of the project was \$59,808.72 of which \$36,983.1139 was assessed to property owners. The remainder of the project was paid for with CDBG account D-10 (\$20,786.89) and General Fund (\$2,038.72). As part of the sidewalk project new ADA ramps were installed at intersections where

sidewalks were replaced.

2011 Residential Demolition, Project No. 2-11

See Building and Zoning Section of this Report



ALL-Cable Road Sidewalks, Project No. 3-11

This project constructed 24,200 square feet of sidewalks on both sides of Cable Road from Elm St. to University Boulevard. A West Middle School Walking Routes Study completed by LACRPC in 2003 and past pedestrian/vehicle incidents revealed the need for the project. The total cost of the project was \$160,067.21 and was funded through ODOT CMAQ funds and City of Lima

Permissive License funds at an 80/20 split, respectively. In addition to the Federal construction funds, the City was reimbursed \$7,903.75 for construction inspection costs (labor).

ALL-Cole St. Sidewalks, Project No. 4-11

A multiuse path was constructed along Cole St. to provide a physical connection for pedestrians and bicyclists between Brower Road and Robb Park. The Edgewood subdivision, Jerry Lee subdivision, residential and multifamily homes on Brower Road and Cole Street now have a non-motorized means of accessing Robb Park and schools on the City's north



side. The total length of the 10-foot wide asphalt path is 0.75 miles. The cost of the project was \$229,185.29 and was funded through ODOT CMAQ and CDBG funds at an 80/20 split. Like the Cable Road Sidewalk Project, the City was reimbursed \$2,802.63 for construction inspection costs (labor).

South Metcalf Street Reconstruction, Project No. 5-11



This project reconstructed (full depth) 2100 feet of street with curbs, drive approaches, ADA wheel chair ramps, and drainage on South Metcalf between the railroad underpass and Kibby Street. The cost of the project was \$637,716.51 and was paid for with \$573,944.86 from OPWC State Issue I funds and \$63,771.65 from CDBG Funds (90/10). The project was a continuation of improving the main corridors into the city.

Renovation of Fire Stations No. 3, No. 4, and No. 6, Project 7-11



With the restructuring of Lima Fire Department came the need to improve their existing facilities. At Station No. 3 improvements included a new shower, renovated dorm room, one overhead door, new gear lockers, and two entry doors. Station No. 6 received a renovated dorm room, and a new concrete approach slab at the rear overhead door.

Total cost of improvements at these two stations was \$65,090. No improvements were completed at Station 4 as it was closed during the restructuring process. All design and inspection was performed by the Engineering Department.



Parking Garage Equipment, Project 9-11



After thirteen years of constant service, it was time to replace the existing equipment and add new equipment to improve the operation and efficiency of the parking garage. A pay-in-lane collection station was added to the garage to allow for payment by credit card or cash when no attendant is on duty. Existing

equipment that was replaced with new included card readers, ticket dispensers, barrier gates, a fee computer, and a computer with Iparc software. The total cost of the project was \$96,324, which was divided equally between the City and Allen County.



Various Storm Sewer Cleaning & Video Documentation, Project 10-11

See Storm Water Utility Section of this Report

State Issue I Various Street Resurfacing, Project 11-11

Just over eight miles of streets were resurfaced this year at a total cost of \$1,004,184.86. Those streets that had existing curbs in good condition were first planed before being resurfaced.

Resurfacing costs were paid for with \$683,707 from State Issue I funds, \$220,544.12 from CDBG funds, \$48,383.74 from City Permissive Funds, \$41,800 from Storm Water Utility funds, and \$9,750 from Utilities. The funds from both utilities were used to adjust manholes to grade and add storm drainage to Faze Ave. prior to resurfacing.



Western Lake Erie Basin EAB Community Grant (Phase I), Project 12-11



11 The damage caused by the emerald ash bore became very evident in 2011, especially in the tree lawns and parks. With the help of a \$50,000 grant (matching 50/50) from the Ohio Department of Natural Resources (ODNR), the City was able to contract for the removal of 35 large ash trees (24” to 36”). The cost of this removal was \$19,748.59 of the \$50,000 made available through the grant. The City’s in-kind match to the grant included removal of smaller ash trees (< 24”) with its crews and removals by American Electric Power crews (AEP).

Various Storm Sewer Improvements, Project 13-11

Project will be performed in 2012



Energy Retrofits – Lima, Ohio (Phase V) Material Only, Project 14-11

The Engineering Division continued to scour the City’s lighting systems looking for locations where retrofits would reduce operation and maintenance costs. Those locations included the following:

- 1) Kibby Corners Street Lighting,
- 2) Hoover Park Decorative Lighting,
- 3) Faruot Park Pavilion,
- 4) Schoonover Pool,
- 5) Ottawa River Bikeway,
- 6) Town Square,
- and 6) City of Lima Welcome

Signs. A majority of the energy retrofits installed were LED or light emitting diode, which can reach up to 68% savings over traditional HID luminaries. The total cost of the materials purchased under this contract was \$202,424.24 and funds were made available under the RZ bond program. The city’s electricians continue to install this equipment in conjunction with their other daily repairs and maintenance responsibilities.

Energy Retrofits – Lima, Ohio (Phase VI), Project 15-11



This project also continues the energy savings pursuits of the City by replacing all T12 fluorescent tube fixtures with T8 and just over 150 HID Garage Luminaries with LED Garage Luminaries. The light quality was also improved in the parking garage making it a brighter, safer, and more inviting place to park your vehicle. The total cost of the project was \$123,570.66 and made possible through an RZ Bond, which is a low interest rate loan through the EECBG program.

Western Lake Erie Basin EAB Community Grant (Phase II), Project 16-11



Phase II of the grant included planting 159 trees in the City Parks and along the streets in accordance with ODNR specifications. Eleven different species of trees were planted and the trees had an average caliper of 2". The total project cost for this phase was \$29,800, therefore, the two phases together totaled \$49,548.59.

Commercial Demolition, Project 17-11

Project will be performed in 2012.

2011 Stormwater Utility

Stormwater Regulations

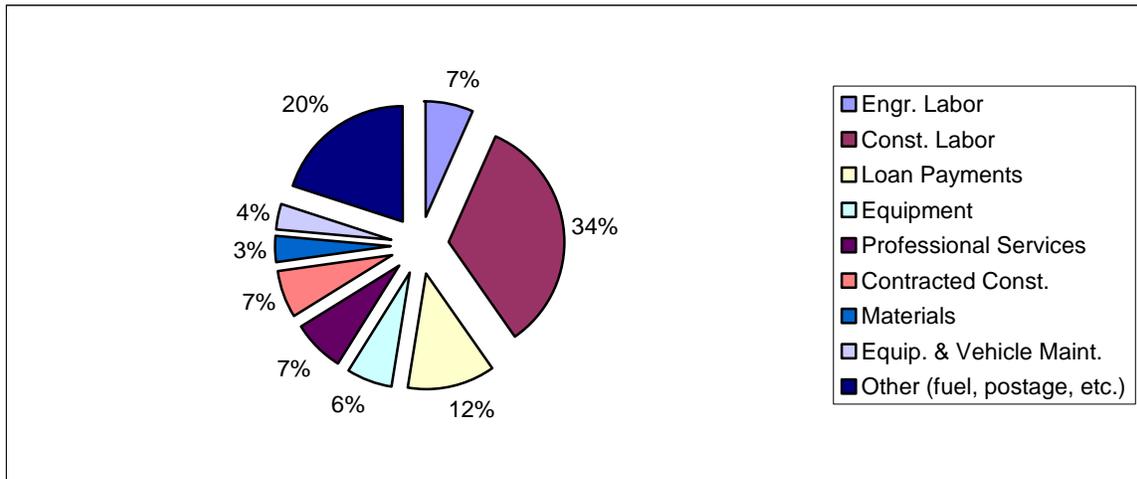
The City is required to maintain compliance with its EPA Municipal Separate Storm Sewer System (MS4) Permit. This permit is a part of the 1972 (revised in 1978) Clean Water Act and the National Pollutant Discharge Elimination System (NPDES) permit program. The permit includes the following **Six Minimum Control Measures**:

1. **Public Education and Outreach**
2. **Public Participation /Involvement**
3. **Illicit Discharge Detection and Elimination**
4. **Construction Site Runoff Control**
5. **Post-Construction Runoff Control**
6. **Pollution Prevention/Good Housekeeping**

The City is required to submit an annual report in March to EPA detailing all tasks completed under the six minimum control measures. EPA officials audited the City's current stormwater management plan in May of this year.

Budget

During the 2011 calendar year, a total of \$2,078,867.06 was collected by the utility with \$714,773.24 from residential customers and \$1,364,093.82 from commercial customers. Of the total collected, \$1,168,235.24 was expended on labor, equipment, materials, and contracted services in 2011. A large equipment expense of \$485,369.70 was not included in 2011 as the vactor truck did not arrive by the end of the budget cycle. Of the funds expended, 6.8 % was for engineering labor, 33.6% for construction labor, 12.3% for loan payments, s, 6.4 % for equipment, 7.2 % for professional services, 6.7 % for contracted construction, and 3.5 % for materials, 3.8 % for equipment and vehicle maintenance, and 20% for other expenses (fuel, postage, copies, computer supplies, etc.)



1. ***Public Education and Outreach and***
2. ***Public Participation /Involvement***

Allen Soil and Water Conservation District

The City contracted with the Allen Soil and Water Conservation District (SWCD) for assistance with three (3) of the six (6) Minimum Control Measures. The SWCD is a great benefit to both the urban and rural areas of Allen County through their technical and education service expertise. The three (3) control measures they performed for the utility included: 1) Public Education and Outreach, 2) Public Involvement and Participation, and 3) Elimination of Illicit Discharges. Some of the activities included under these measures were: Conducting stormwater education in the public schools within grades K-12, staff hours toward Ottawa River Cleanup, development of brochures and webpage, development of a Watershed Watchgroup, Dry weather monitoring of 201 Storm sewer outfalls, and analysis of flows and pollutant characterization of samples collected at outfalls. The total cost of the professional services associated with this contract was \$28,000. From this revenue, SWCD was able to leverage state funds at 83% to complete additional work for the City's Stormwater Utility.

3. ***Illicit Discharge and Detection***

Illicit Discharge Investigation

The Engineering Division investigates reports of illicit discharge to the storm sewer system. During 2011, the number of investigations was five. Most investigations result in an immediate action such as finding a customer discharging a contaminant knowingly or unknowingly to the storm drain. These investigations are documented in the City's annual report to EPA.

4. ***Construction Site Runoff and***
5. ***Post Construction Runoff***

Private Erosion Control Permits

The Engineering Division is the authorized inspector for all commercial properties, for utility installation and for grading areas outside the building footprint. A permit is required for earth disturbing activities over 1 acre in size. The inspector works with each developer to ensure sediment is properly contained on site. In 2011, 14 permits were issued for site development

Public Erosion Control

The Engineering Division is also responsible for inspecting many capital improvement projects, which involve earth-disturbing activities. The City's plans and specifications call for protection of all storm and combined sewer inlets during and after construction. The inspector requires of the contractor maintain the protection especially following a

rain event. Once grass has established on the project, the sediment and erosion control devices are removed. In 2011, \$4,345 was the cost for erosion and sediment control on four of our public projects involving earth disturbance.

6. *Pollution Prevention and Good Housekeeping*

Street Sweeping

The Streets Department sweeps all streets a minimum of once a month. In the Central Business District, night sweeping is performed and parking restrictions are in place to better access the curb-line that is the dirtiest part of the street.

	2010	2011
Sweeping Debris (CY)	2866	2782

Catch Basin Cleaning

The Storm Water Utility maintains approximately 5,343 catch basins (CBs) and treatment devices with vacuor equipment. The maintenance schedule varies from once per year up to four times per year. In 2011, The street department staff collected 507 cubic yards tons of debris out of our CB sumps. In addition to the cleaning, the street department staff repairs basins that come in many different shapes, sizes, and materials. In 2011, 82 basins were repaired and or reconstructed.

	2010	2011
Catch Basin Debris (CY)	507	2130

Leaf Collection

The Storm Water Utility funds the Street Departments' annual operation to collect leaves along the curblines of each street. This operation directly keeps material out of the storm sewer system, rivers, and streams. A summary of the material collected annually is provided below.

	2010	2011
Leaf Collection (CY)	3033	2596

Capital Improvement Projects

Various Storm Sewer Cleaning & Video Documentation, Project 10-11



With the implementation of the City's Storm Water Utility and a storm sewer assessment study in hand, at risk areas were first cleaned then video taped. From the video, those sections of pipe and structures in a state of disrepair were identified. The project cleaned and video taped approximately 9000 lineal feet of storm pipe in seven locations and over 90 structures at a cost of \$28,356.80. The information will be used by the Engineering Division to prepare plans and specifications for the

repair work. This process allows the City to pinpoint the areas requiring repair and utilize funds more cost-effectively.

Schoonover Dam

Schoonover Lake is not only a great place to visit in our park system, but also a place where storm water is stored prior to being released to the Ottawa River. In September

Existing Spillway



2008, Ohio Department of Natural Resources (ODNR) conducted a safety inspection of Schoonover Dam. Following the inspection of our class III dam, ODNR required several remedial measures be taken by the City to ensure the dam remains safe. The remedial measures included providing an emergency spillway, investigate signs of seepage, repair and rebuild eroded downstream slope, and repair of erosion on the upstream slope. Following a Field Reconnaissance and

Preliminary Report in February 2011, the City contracted for additional engineering and geotechnical services at a cost of \$39,982. The report, which will detail the recommendations for repairing the dam, will be delivered to the City in January of 2012 and will allow for the development of plans and specifications.

Stormwater Quality Initiatives

Stormwater quality initiatives implemented in 2011 include first and foremost the Storm Water Credits Program. The Credits Program allows for commercial land owners to take credit for storm water quantity and quality practices previously implemented on their property. These include items such as bio-retention swales, detention and retention ponds, water quality structures, and permeable pavements to name a few. Altogether,

\$17,949.32 was issued as credit to various schools, hospitals, and businesses who took advantage of the program. This program also is an incentive for future development inside the City as engineers and architects work to reduce their client's storm water utility fee in the planning and design of each project.

NPDES Small MS4 General Permit (OHQ000002) Annual Report – EPA

Report is available upon request.

Additional Stormwater Services Provided

Review flood plain permits.

Provide flood plain information for insurance companies and mortgage investigations.

Maintain and update sewer maps and composites.

Research and provide location, depth, tap and various other information concerning both storm and sanitary sewers.

Provide possible solutions to residential and commercial properties regarding localized flooding.

Future Considerations

It is expected the Total Maximum Daily Load (TMDL) of the Ottawa River (yet to be established by EPA) will add additional responsibilities to the City's Storm Water Utility. The TMDL is a plan that is created to estimate the total load of a specific pollutant to a particular impaired water source. The Ottawa River TMDL is focused on the loading of both soluble Phosphorus and Total Suspended Solids (TSS). The point is to estimate the amount of pollutant the river can withstand, calculate the necessary reductions to reach that point, and then distribute the requirements for pollutant reductions to various areas (urban and rural) throughout the watershed. The efforts that are currently underway will enable the City to comply with future requirements.

Other Responsibilities of the Engineering Division

Other activities in addition to the projects previously listed are performed on a daily basis by the Engineering division. The City Engineer and staff act as technical advisors to the Mayor and other city departments in the following ways:

Traffic

Operation of 106 traffic signals throughout the City

Provide signal timing and various street design information.

Study accident reports and perform traffic counts and speed studies and advise the Traffic Commission on various topics.

Record and study various traffic accidents which happen in the city.

Retain maps recording the decisions of the traffic commission concerning parking, sign, and signal placement.

Prepare accident drawings of every fatal accident which occurs in the city.

Storm Water/Sewers

Review parking lots and flood plain permits.
Provide flood plain information for insurance companies and mortgage investigations.
Maintain and update sewer maps and composites.
Research and provide location, depth, tap and various other information concerning both storm and sanitary sewers.
Implementation of Storm Water Phase II program
Provide possible solutions to residential and commercial properties regarding localized flooding.

Inspection

Investigate curb cut permits and advise the Building and Zoning Division on driveway placement.
Inspect all Public Works construction projects performed under contract.
Inspect city streets following the moving of buildings and oversize loads.
Inspect storm sewer connections.
Provide inspection for sidewalk and curb replacement.
Inspect all street cut patching to ensure they meet city specifications.
Process requests for the city curb rebate program.
Calculate street cut bonds and coordinate with all city utilities.

Surveying

Track and provide legal descriptions for city easements, city initiated alley vacations and right of way purchases.
Maintain records and descriptions of all city easements and property purchases.
Provide surveys for Division of Engineering Designs.
Provide right of way and boundary surveys for the city.
Maintain city plat maps.
Provide staking for various city construction projects.

Future Construction

Design, draw and provide specifications for various city construction projects.
Assist in preparing project estimates and other details for the yearly budget.
Search and apply for various grants.
Prepare project estimates and apply for funding reimbursements for these grants when required.
Maintain a schedule of engineering projects and provide status reports as requested.
Design, draw and provide specifications for various city construction projects.
Process requests for alley paving.
Advise the City Planning Commission.
Review all proposed alley and street vacations.
Review all subdivision plans within the city.
Coordinate future projects with the City Planning Commission.

Work closely with the Ohio Department of Transportation on street repair, resurfacing of state routes and bridge inspection issues.

Coordinate with private utilities concerning placement, removal and repair of their facilities.

Miscellaneous

Assist in requests for street lighting.

Assist in requests from citizens concerning drainage, traffic, sidewalk, alley, curb, sign and parking problems.

Attend council meetings, public hearings and neighborhood meetings as needed.

Participate in press conferences and assist in planning for major economic development projects.

Take measurements and testify in drug cases.

Establish policies and procedures regarding construction and maintenance of city streets and drainage facilities.

Provide advice for building maintenance at the Lima Municipal Center and Hall of Justice.

Provide bid packets for various Divisions of our Department.

Administer consultant designs and studies for the city.

Provide street numbers and addresses for new construction in the city.

Copy and provide plan size sheets of maps and drawings to contractors, the general public and various local and state agencies.

Provide statistical information on city streets.

Establish policies, especially those involving municipalities and Local Projects.

Coordination with other county and State departments

Work with Lima-Allen Regional Planning on a long and short range planning for the city so that federal highway monies can be allocated.

Work with county officials on mapping and street maintenance projects.

Provide information for the State of Ohio Liquor Control Board.

Strive to minimize expense and inconvenience for the Citizens of Lima.