

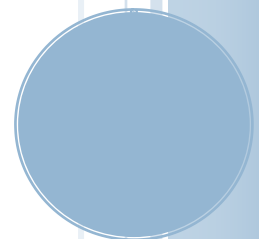
# ENGINEERING DEPARTMENT

*2020 ANNUAL REPORT*



City Engineer: Dale Vandersommen, P.E.

3/1/2021



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## DEPARTMENT'S MISSION STATEMENT

The mission of the City of Lorain Engineering Department is to provide expedient technical engineering services and advice to all city departments, the administration, and the general public. Generally the technical support is related to design, inspection, and contract administration of public improvements and subdivisions, plan review, grading, draining and general construction information.

## ENGINEERING DEPARTMENT STAFF



The Engineering Department is comprised of Professional Engineers, Professional Surveyors, Engineering Aides, a Contract and Prevailing Wage Administrator, a Storm Water Manager, and a Technical Administrative Assistant.

- Elva Martes, Technical Administrative Assistant
  - Mrs. Martes has over 24 years experience in municipal office and technical assistance in public works projects. She is responsible for the daily administrative and technical operations of the City Engineer's Office, including ordinances, departmental budget, permitting, and payroll. She is the key communications coordinator in our public response services.
  - Certifications:
    - EPA Water Supply Class I
- Matthew Kusznir, Contract and Prevailing Wage Administrator
  - Education:
    - Bachelor of Arts, Political Science and Legal Studies, Baldwin-Wallace College
- Kathryn Golden, CPMSM, CFM, Stormwater Manager
  - Mrs. Golden has over 15 years of experience in the stormwater and water quality field. Her responsibilities include the administration of

## ENGINEERING DEPARTMENT STAFF –CONT

\$25 million of Great Lakes Restoration Initiative environmental restoration grants, overseeing the City’s steel mill byproduct recycling operation, managing the City’s MS4 Stormwater program, and floodplain administration. Ms. Golden’s previous experience includes private sector consulting, water quality, stormwater, and wastewater planning in Clark County, Nevada, and watershed coordination in Lorain County, Ohio.

- Certifications:
  - Municipal Separate Storm Sewer Management
  - Floodplain Management
- Education:
  - Bachelor of Science, Urban and Regional Planning, Geography, and Environmental Science, Miami University
  - Master of Public Administration, University of Nevada, Las Vegas
- Doug Hasel, P.S., Engineer III
  - Certifications:
    - Certificate of Registration Professional Surveyor State of Ohio
  - Education:
    - Bachelor of Science, Surveying and Mapping, University of Akron
- Katherine McGannon, Engineering Aide III
  - Ms. McGannon has over 7 years experience in public works projects. She serves the department as an inspector. She provides expertise in construction inspection of road, sewer, bridge rehabilitation, subdivision, new construction, sidewalk/apron, laterals, etc. Also, she provides expertise in project quantification and quality assurance of plan designs. She also has over 20 years of survey experience.
  - Certifications:
    - ODOT Roads Scholar Level III
    - ODOT Bridge Inspector Level II
    - ACI Field Testing Technician Grade I
- Seth Schilling, Engineering Aide III
  - Mr. Schilling has over 14 years experience in public works projects. He serves the department as an inspector. He provides expertise in construction inspection of road, sewer, bridge rehabilitation, new construction, sidewalk/apron, laterals, etc.
  - Certifications:
    - ODOT Roads Scholar Level III
    - ODOT Bridge Inspector Level I
    - ACI Field Testing Technician Grade I
    - EPA Wastewater Class I
    - PACP, MACP, LACP Certification
    - Backflow Prevention

## ENGINEERING DEPARTMENT STAFF –CONT

- Veronica A Newsome, P.E., Engineer III
  - Mrs. Newsome serves as one of the design engineers for the City of Lorain. Her technical background includes a wide variety of municipal infrastructure and capital improvements projects.
  - Certifications:
    - ODOT Bridge Inspector Level I
    - ACI Field Testing Technician Grade I
  - Education:
    - Associate of Applied Science, Architectural and Construction Engineering, Cuyahoga Community College
    - Bachelor of Arts, Historic Preservation, Ursuline College
    - Bachelor of Civil Engineering, Cleveland State University
    - Master of Civil Engineering, Cleveland State University
- Jessica Potter, Civil Engineer I
  - Ms. Potter serves as one of the design engineers for the City of Lorain. Her technical background includes a wide variety of municipal infrastructure and capital improvements projects. Jessica has over 5 years of survey experience. She was honorably discharged from the USAF as a senior airman after 6 years of service in civil engineering.
  - Certifications:
    - ODOT Bridge Inspector Level I
    - ACI Field Testing Technician Grade I
    - CESSWI
  - Education:
    - Associate of Arts, Lorain County Community College
    - Associate of Civil Engineering, Concrete Specialization, Rhodes College
- Guy Singer, P.E., Deputy Director of Engineering
  - Mr. Singer has over 23 years of experience in municipal infrastructure and capital improvements projects.
  - Education:
    - Bachelor of Civil Engineering, Case Western Reserve University
    - Master of Civil Engineering, Cleveland State University
- Dale Vandersommen, P.E., City Engineer
  - Mr. Vandersommen has over 25 years of experience in municipal infrastructure and capital improvements projects. He directs the Engineering Department and key personnel on their assignments and requirements of their scope of work.
  - Certifications :
    - Certified Professional in Erosion and Sediment Control
    - Certified Professional in Storm Water Quality
    - ODOT Bridge Inspector Level I and Level II
    - EPA Wastewater Operator Class III
  - Education:
    - Bachelor in Engineering, The Ohio State University



## ENGINEERING DEPARTMENT RESPONSIBILITIES

The Engineering Department is responsible for approximately 285 miles of public right-of-way, bridges, and culverts. The Engineering Department's responsibilities include design, construction management, permitting, and construction inspection of roadways, bridges, culverts, and sewer systems in the City of Lorain.

## DUTIES AND FUNCTIONS

- Inspection of sidewalks and aprons
- Inspection of storm sewer and sanitary sewer connections, sanitary backflow preventers
- Inspection of new subdivisions
- Inspection of all public works projects
- Construction management and inspection of all Engineering Department projects for paving, sewer, storm, etc.
- Construction management and inspection for city ODOT-LPA projects funded by NOACA
- Design and engineering of roadway paving, storm, sanitary, and water projects
- Design and engineering of simple waterfront structures
- Design and engineering of parking lots
- Project manager for all OPWC projects
- Preparation of all department construction contracts and bidding
- Preparation of all department service contracts
- Applies for all OPWC project funding
- Applies for all NOACA/ODOT project funding
- Applies for all ODNR project funding
- Keeps and maintains records of all sanitary and storm sewer connection locations
- Keeps and maintains records for all public improvements
- Performs records research for external engineers and surveyors
- Operates pavement management system
- GIS mapping and data input for all city departments
- Liaison to ODOT projects
- Liaison to USACE projects
- Planning for annual roadway rehabilitation projects

## DUTIES AND FUNCTIONS – CONT

- Prepares Request for Qualification packages
- Prepares Request for Proposal packages
- Property Surveying
- Construction Surveying
- Obstruction and topographic surveying
- GPS surveying
- Hydrographic surveying
- Property description writing
- Clerical work
- Data entry and scanning of current records
- Digitization of paper records
- Stormwater Management
- Oversees Best Management Practice for stormwater run off
- Prepares petitions for street and alley vacations
- Prepares petitions for paving projects
- Prepares city permit applications for submission to EPA and USACE
- Prepares application for ODNR permits, including submerged land leases
- Reviews plans for new subdivisions
- Reviews plans for commercial sites
- Reviews plans for Lorain City school sites
- Reviews lot split submissions
- Site plan reviews for drainage, etc.
- Engineering and surveying for all other city departments
- Issues permits and collects fees for sidewalk, storm, sanitary, and water connections; apron and pavement openings
- Collects fees for plan reviews, lot split reviews
- Prepares ordinances
- Operates material testing lab for Portland cement concrete; sampling, testing, and destructive testing
- Prepares estimates for paving, storm, sanitary, and water
- Prepares annual capital improvements projects budget for Engineering Department projects
- Annual inspection of all city bridges and culverts
- Preparation of Developers' Agreements and collects fees for inspection
- Approves plats for new subdivision

## DUTIES AND FUNCTIONS – CONT

- Issues and collects fees for sewer digger licenses
- Collects, deposits, and issues refunds for grading deposits held in trust
- Maintains address atlas and assigns address in city
- Assists general public and contractors in locating storm and sanitary connections
- Enforces EPA regulations, permit acquisition, permit to install, construction permits, and municipal separate storm sewer system permits
- Education administrator for storm water
- Public involvement coordinator for storm water issues
- FEMA grant administrator
- Flood zone administrator
- OUPS location coordinator
- Prepares NDPES Storm Water Permit and Annual Report
- Approves new street names and assigns addresses
- Monitors air testing on new sanitary sewer installations
- Monitors mandrel testing on new sanitary sewer installations

## CITIZEN INFORMATION

Citizens can request information from the COL Engineering Department; including the grading of their property, drainage concerns, main sewer, and lateral locations back up information, etc.

The Engineering Department maintains web pages for all roadway projects to inform citizens on current projects. These web pages are available on the COL website under Engineering.

Also, the Engineering Department maintains the COL Utilities Projects on the COL website and in the COL Engineering Department. This information provides details on current COL utilities projects, including, but not limited to project area, project schedule, project cost, and environmental reviews by agencies such as the Ohio Environmental Protection Agency (OEPA) and Ohio Department of Natural Resources (ODNR).

## INVESTIGATIONS

Field investigations are carried out when the situation warrants it.

2020 Investigations include:

- 7 Drainage complaints, grading
- 4 Drainage complaints, alley, yard, downspout/underdrain
- 2 Right of Way Obstructions

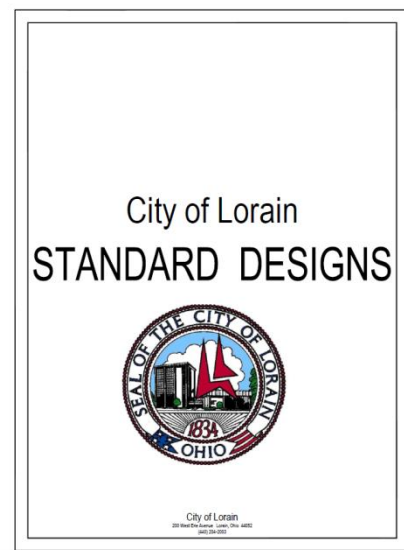
## STANDARD DESIGNS

The Engineering Department updates the City of Lorain Standard Designs and Specifications for roadway and new construction to provide guidance to developers, engineers, surveyors, contractors, public and private utilities, various city departments, and private property owners. Design standards include sanitary, storm, pavement, and miscellaneous items that those mentioned are expected to follow designs.

Standards are divided into 2 Groups:

1. Roadway
2. New Construction

City of Lorain contract work shall be governed by all provisions set forth in the State of Ohio Department of Transportation Construction and Material Specifications, current version, and any other supplemental specifications per individual project contract documents.



## PROJECTS

### OHIO PUBLIC WORKS COMMISSION (OPWC)

OPWC provides financing for local public infrastructure improvements through both the State Capital Improvement Program (SCIP) and the Local Transportation Improvement Program (LTIP). SCIP is a grant/loan program for roads, bridges, water supply, wastewater treatment, storm water collection, and solid waste disposal. LTIP is a grant program for roads and bridges only. See Exhibit A for a list of projects completed with OPWC funding in 2020.

### OHIO DEPARTMENT OF TRANSPORTATION (ODOT)

We are collaborative partners with ODOT who oversees Interstate, State and US routes. ODOT oversees the planning, engineering, and construction of many of the major roadways, bridges, and culverts on the state transportation system.



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### EAST 36<sup>TH</sup> STREET

Project is planned for fiscal year 2024. Our office applied for and received federal funding (80% federal/20% local) for the rehabilitation of East 36th Street from Globe to Grove, along the East 36th Street ditch. However, when we began design we uncovered underlying issues that will greatly complicate construction and increase cost. Put simply the roadway is sitting on 12” of topsoil, causing it to be unstable.

Rehabilitation will require the roadway (Globe to Clinton) be removed at an approximate depth of 1 foot, a new roadway base installed, and then the roadway repaved with asphalt. This would be extremely disruptive to the residents on East 36th Street. All local vehicle traffic would have to be detoured along East 34th Street. Residents of East 36th Street would only be

able to access their homes via the north/ south side streets via sidewalk. Initial construction time estimates for the work is 2 months.

The Engineering Department is working with the administration and ODOT to address this issue.

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#### EAST 28<sup>TH</sup> STREET

East 28<sup>th</sup> Street will be removed and replaced from Grove Avenue to Tacoma Avenue in 2021.

There are several right of way issues that have been addressed by sending letters to the residents. ODOT requires all Right of Way issues be addressed prior to work beginning.

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#### STATE ROUTE 58 – LEAVITT ROAD

State Route 58/Leavitt Road will be resurfaced in 2021. The bike lanes will be extended down to US6 – West Erie Avenue.

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#### SAFETY FUNDING

The City of Lorain was awarded (\$1,107,500.00) 90/10 funding to remove and replace the signalization at 3 intersections: SR611/SR58, SR611/Oberlin Ave, and SR611/Washington Ave. Construction to occur in 2023.

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#### OHIO WATER DEVELOPMENT AUTHORITY (OWDA)

OWDA provides financial assistance for environmental infrastructure from the sale of municipal revenue bonds through loans to local governments in Ohio and from issuance of industrial revenue bonds for qualified projects in Ohio.

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#### DIVISION OF ENVIRONMENTAL AND FINANCIAL ASSISTANCE (DEFA)

Through the Water Pollution Control Loan Fund (WPCLF), DEFA provides financial and technical assistance to public or private applicants for planning, design and construction of a wide variety of projects to protect or improve the quality of Ohio's water resources. Similarly, through the Water Supply Revolving Loan Account (WSRLA), DEFA assists applicants with projects

that address human health and failing drinking water infrastructure needs.  
See

#### COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG)

The Community Development Block Grant (CDBG) Entitlement Program provides annual grants on a formula basis to entitled cities and counties to develop viable urban communities by providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low- and moderate-income persons. The program is authorized under Title 1 of the Housing and Community Development Act of 1974, Public Law 93-383, as amended; 42 U.S.C.-530.1 et seq.

Rosecrest Drive (Edgewood to Tanglewood), East 26<sup>th</sup> Street (apple to Elyria), and East 37<sup>th</sup> Street (Gary to Palm) were rehabilitated in 2020 with CDBG funding. Work included base repair, resurfacing, underdrains, new curbs, removal and replacement of sidewalk past its useful life and aprons.

## SAFE ROUTES TO SCHOOL (SRTS)

The purpose of Safe Routes to School is to encourage and enable students in grades K-8 to walk or ride their bicycle to school.

Projects can be either engineering (improved crossings, sidewalks, etc.) or non-engineering (education and encouragement programs). Since the program began in 2018, walking and bicycling to school has increased in Ohio communities with active Safe Routes to School (SRTS) programs. The responsibility of a safe route to school is ultimately shared by the user, government agencies, elected officials, and safety advocates.

### SRTS 2021 – 611 SIDEWALKS – PID 109068

Work continues for the 2018 SRTS grant of \$185,553.97 from the Ohio Department of Transportation (ODOT) for sidewalks on SR611-West 21<sup>st</sup> Street from Oakdale Avenue to Leavitt Road to remove and replace sidewalks past their useful life. This work is currently under design and is funded for ODOT's fiscal year 2021. Project bid and awarded to Terminal Ready mix. Work to begin April 2021.

### SRTS 2022 – OAKDALE AND 30<sup>TH</sup> STREET SIDEWALKS – PID 110932

Work continues for the 2019 SRTS grant of \$399,122.69 from the Ohio Department of Transportation (ODOT) for sidewalks on Oakdale Avenue from West 30<sup>th</sup> Street to West 17<sup>th</sup> Street and 30<sup>th</sup> Street from Marshall Ave to Clifton Ave to remove and replace sidewalks past their useful life. This work is currently under design and is funded for ODOT's fiscal year 2022.



Puts the Lorain Active Transportation Plan into action.

Since launching in 2018 through today:

**\$1,045,756**

awarded to our partners for infrastructure, education, encouragement, and enforcement activities.



**646**

children impacted by educational and encouragement activities, like Walk to School Day and Girls in Gear.



**8**

projects funded and scheduled to be complete in the next five years - including sidewalk, street, and playground improvements.



**5%**

reduction in bicycle and pedestrian crashes in the City of Lorain since 2017.



#### WHO ARE WE?

Lorain Connected is a dedicated group of stakeholders and residents that work to create and expand safe, accessible, and effective options for walking, biking, and busing throughout the City that are equitable and reliable for residents and visitors of all ages and abilities for a healthy Lorain.

Read the plan and learn more:

[CityOfLorain.org/500/Active-Transportation-Planning](http://CityOfLorain.org/500/Active-Transportation-Planning)  
[LorainCountyPublicHealth.com/ActiveCommunities](http://LorainCountyPublicHealth.com/ActiveCommunities)





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SRTS 2023 – SAFE AND COMFORTABLE SCHOOL ZONES – PID 113537

In 2020 the City of Lorain was awarded a grant of \$396,554.37 from the Ohio Department of Transportation (ODOT) for improved pedestrian accommodations at 3 elementary schools: Admiral King, Hawthorne, and Garfield.

These improvements would include: Removal and replacement of sidewalks that are beyond their useful life and/or are not up to current design standards, Removal and replacement of non-compliant ADA curb ramps,



areas.

Installation of new “SCHOOL” crossing paint, Installation of word on pavement “SLOW” at midblock of school sites, Update existing school zone signage to meet new Ohio MUTCD standard, Installation of new digital speed limit signs prior to school zone

TRANSPORTATION FOR LIVABLE COMMUNITIES INITIATIVE (TLCI)

NOACA's Transportation for Livable Communities Initiative (TLCI) provides assistance to communities and public agencies for integrated transportation and land use planning and projects that strengthen community livability.



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TLCI 2020 LORAIN BICYCLE AND PEDESTRIAN FACILITIES CONNECTIVITY PROJECT – PID 110315

Construction has been completed on the bike lane improvements on SR 611 – West 21<sup>st</sup> Street and East 31<sup>st</sup> Street. In cooperation with NOACA and the councilman, Rey Carrion, green paint improvements will be completed in 2021 with materials donated as part of NOACA’s Street Supplies Program.

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## TLCI 2020 PLANNING APPLICATION – EAST 28<sup>TH</sup> STREET CORRIDOR

The City of Lorain applied for a Planning study of the East 28<sup>th</sup> Street corridor (SR57) in 2020. The application was made at the urging of the 6<sup>th</sup> Ward councilman, Rey Carrion, who is concerned about the future of the East 28<sup>th</sup> Street Corridor. TLCI awards will occur in spring of 2021.

## CONGESTION MITIGATION AND AIR QUALITY (CMAQ)

The Congestion Mitigation and Air Quality (CMAQ) program provides federal funding statewide for transportation projects located in the largest urban areas of Ohio that improve congestion and air quality.

The purpose of the CMAQ program is to fund transportation projects or programs that will contribute to attainment or maintenance of the National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide (CO), and particulate matter (both PM10 and PM2.5).

The CMAQ program supports two important goals of the U.S. Department of Transportation (Department): improving air quality and relieving congestion. The CMAQ program provides funding for a broad array of tools to accomplish these goals. By choosing to fund or sponsor a CMAQ project, a State or local government, transit agency, or other eligible project sponsor can improve air quality and make progress toward achieving attainment status and ensuring compliance with the transportation conformity provisions of the Clean Air Act (CAA). Projects are awarded at 80% federal share with 20% local share.

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## WASHINGTON AVENUE BIKEWAY

Work continues for the 2017 CMAQ grant of \$179,500.00 grant for restriping portions of West 26th Street and Washington Avenue to add bike lanes, and constructing a 10-foot wide paved bike path along the south side of West 24th Street between Oberlin Avenue and Washington Avenue. Contract bid and awarded to Terminal Ready Mix. Work will begin in April 2021.

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## LORAIN CITYWIDE TRAFFIC SIGNALS

Work continues for the 2017 CMAQ grant of \$485,000.00 grant for signalized intersections within the City of Lorain, mainly along the State Route 57 and East 28th Street corridors along with some signals additional signals located near the two (2) main corridors. Construction will occur in summer 2023.

## MISCELLANEOUS PROJECTS

### WEST SIDE FIRE STATION

The Engineering Department worked with the Fire Department to put together Design Build contracts for the West Side Fire Station. Through the qualifications based selection process, we selected the most qualified criteria architect and a design build firm to build a new Fire Station on the corner of Kolbe and West Erie, for an estimated \$1.4 million dollars. Construction was completed in 2020.

### CENTRAL SERVICES FACILITY

The Engineering Department worked with the Public Properties Department to put together Design Build contracts for the Central Service Complex. Through the qualifications based selection process, we selected the most qualified criteria architect and a design build firm to build a new Central Service Complex at West Park Drive for an estimated \$8.25 million dollars. Construction will be completed in 2020.

### LORAIN COUNTY METROPARKS – BLACK RIVER TRAIL



The Engineering Department collaborated with the Lorain County Metroparks on the creation of an urban trail to connect the North Coast Inland Trail to Lakeside Landing in the City of Lorain. This project culminated in the creation of a 104 mile trail from Toledo to Lorain, Ohio. Bicyclists can be seen travelling in large groups along the trail and within the bike lanes (also part of the trail and US bike route 30) in the City of Lorain. Construction completed in 2020.



## SURVEY / RIGHT OF WAY

### SURVEYING

The Engineering Department performs construction, topographic, hydrographic, boundary, quantity, right of way, obstruction, and GPS surveys. Surveying is required for all engineered plans and is the first step in a properly designed project. Surveys performed for the city have assisted in settling legal issues, clarified right of way, determined boundary limits for city owned properties, and have accelerated the timeline of public works projects allowing both city employees and hired contractors to complete public works projects on time.

Larger surveys have been completed on several roadways to begin construction in 2020. Surveys have also been done on active job sites that were constructed in 2020 to improve design and functionality of those jobs.

The following are some additional surveys:

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### UTILITIES

- Research, survey & stake utility easement along W. 37<sup>th</sup> Street, Dayton Ave and Lexington Ave. for clearing to improve neighborhood drainage.
- Survey and stake Kolbe Rd. lift station boundary easement for clearing.
- Survey & design parking lot for the new location of the City of Lorain Utilities Department.

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### STREET DEPARTMENT

- Research, survey and stake Pickle ball court, Oakwood Park.
- Research, survey and stake various alley right of ways to clarify obstructions.
- Research, survey and stake additional gravesites, Elmwood Cemetery.

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### SAFETY/SERVICE DIRECTOR

- Research, survey and record additional parcels acquired by the City of Lorain
- Survey & design Oakwood Park service drives.

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## GRADING APPROVALS

Preliminary Grade review for drainage. Certified Grade review for occupancy.

- Preliminary Grade Approvals: 125
- Certified Grade Approvals: 67

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## PLAT REVIEW

The following plat reviews were performed by our Professional Surveyor:

- Monarch Grove Phase #2

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## LOT SPLITS REVIEWED

- Arizona @ Bascule Dr.
- Metro Parks west of Oak Point Rd.
- E. 28<sup>th</sup> @ Fulton.
- Villages @ Lighthouse Point.
- Meijer's store Leavitt Rd. 4 parcels.
- Arizona Ave s/o E. Erie.
- Leavitt @ Tower Blvd.

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## LOT SPLITS PREPARED

- Cooper Foster w/o Broadway

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## EASEMENTS REVIEWED

- Prepare Reid @ W. 38th
- Prepare Dayton s/o of Dayton



## INSPECTIONS

Inspection services validate that the work performed complies with the scope detailed in the permit description. The types of inspections vary depending on the nature of the project. Before a permit can be completed and closed, all required inspections must be approved.



In 2020 the Engineering Department performed the following inspections:

### CONCRETE – INSPECTION

- Sidewalk – 487
- Apron - 260
- Open Pavement – 157
- Catch Basin – 44

### STORM SEWER AND SANITARY SEWER – INSPECTION

- Sanitary – 210
- Storm – 118



## NEW SUBDIVISIONS – INSPECTION

- Monarch Grove Subdivision No. 2- Created 43 new lots. Ward 8
- Sandy Springs Subdivision No 1- Created 9 new lots. Ward 8
- Cornerstone Farms Sub. No. 5- Created 53 new lots. Ward 8

## PROJECTS – INSPECTION

- OPWC Round 34 C- Rosecrest Dr., E. 26<sup>th</sup> St., and E. 37<sup>th</sup> St.
- Lorain Bicycle and Pedestrian Facilities Connectivity Project- W. 21<sup>st</sup> St and E. 31<sup>st</sup> St.
- 7490 Industrial Parkway 72” Storm Sewer
- Meister Rd. Pedestrian Bridge Rehabilitation

## PAVEMENT MANAGEMENT RATINGS

New Street Logix Program implemented. In 2020, Engineering contracted with SreetScan Inc. to rate all the city street and create a comprehensive database with mapping functionality. All streets have been rated. Engineering is also utilizing software developed by StreetScan Inc., called StreetLogix to develop master planning. In 2021, Engineering will:

- Develop a 5-year roadway capital improvement plan
- Create a crack sealing plan and other maintenance tools for the Street Department
- Develop the public facing and online tools for viewing city-wide street conditions and planned projects.

## CONCRETE TESTING

Concrete testing is performed on all capital improvement projects. Testing is done in accordance with applicable American Society for Testing and Materials (ASTM) standards by an American Concrete Institute (ACI), Certified Concrete Field Technician. A sample is obtained in the field, and then allowed to cure, then compression tested in a lab. Concrete samples are



obtained in the field during paving operations as well as other operations where a substantial volume of concrete is being used. Samples are cured for at least 7 days before first compression test is performed. Multiple samples are taken so that compression testing can also be performed at 28 days.

Multiple samples are taken so that compression testing can also be performed at 28 days.

Concrete is said to be fully cured and have developed the majority of its strength at 28 days.

Testing is performed to make sure that what is being specified in plans and contract documents is what is being constructed in the field.

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#### ASTM TESTING PERFORMED

- ASTM C172 - Sampling
- ASTM C143 - Slump
- ASTM C438 - Density
- ASTM C231 - Air Content
- ASTM C31 - Cylinders



## CONTRACT MANAGEMENT

### CONTRACTS

- Purchase of Chemicals
- Purchase of Distribution Materials
- Purchase of Street Materials
- Purchase of Water Meters
- 610 Broadway Sidewalk Rehabilitation
- 7490 Industrial Parkway Storm Sewer
- OPWC 34C Roadway Rehabilitation
- Demolition of 223 W. 23<sup>rd</sup> St., 1503 Reid Ave., 216 E. 31<sup>st</sup> St.
- Demolition of 1685 E. 32<sup>nd</sup> St. & 2100 E. 28<sup>th</sup> St.
- Demolition of 2133 Elyria Ave., 920 Euclid Ave., 312 W. 26<sup>th</sup> St.
- Demolition of 225 Washington Ave., 233 Washington Ave., 239 Washington Ave., 488 W. 13<sup>th</sup> St., 700 W. Erie Ave., 1120 W. Erie Ave., 2243 Oakdale Ave., 2375 Apple Ave.
- Distribution Building Roof Replacement
- 2020 Sewer Relining Project
- Root Rd. & E. Erie Stormwater Outfall Project

### AGREEMENTS

- Renewal of Health Care Insurance and Stop-Loss Coverage
- Asbestos Remediation of Residential Demo Properties
- Asbestos Surveys of Residential Demo Properties
- Grass Cutting for BHP Owned Properties
- Stoveworks Redevelopment Site Plan
- Black River Dredge Reuse Facility Residual Solids Evaluation
- Service Agreement for Heating Ventilation and Air Conditioning Units
- Traffic Engineering Services
- Risk and Resiliency Report (America's Water Infrastructure Act Requirements)
- I-Site Flow Monitoring Program
- WIFA Loan Services for Water Treatment Plant Improvements

- FEMA BRIC Grant Application Services
- Final Digester Improvements Design
- Utilities Performance Audit

## PROPERTY SALES

- 401 Idaho Avenue
- 2245 West Park Drive

## PLAN REVIEW

The Engineering Department is responsible for plan reviews. Plans related to any of the following areas must be submitted and reviewed, depending on the nature of the project:

- Residential and Commercial Development
- Sanitary and Storm Sewers
- Street Construction
- Storm Water Management
- Waterline replacements

## BUSINESS AND COMMERCIAL

- Fire Station #7
- Convenient Store/Gas Station (Silver Maple Way)
- Express Car Wash (Silver Maple Way)
- Mercy Health Parking Lot Expansion
- Shops on 58 Phase II Parking Lot Expansion
- Novita Industries (1522 Iowa Ave.)
- Oberlin Ave Storage Facility
- Old Colorado Ave Storage Facility

## SUBDIVISIONS –

- Monarch Grove No. 2
- Cornerstone Farms Subdivision No. 5
- Crossings at Martin's Run No. 4-6 (Development Plan only)
- Sandy Springs No. 1
- Sandy Springs No. 2 (not yet approved)

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## UTILITIES ENGINEERING - WATERLINE

- Designs completed in 2020:
  - Red Hill Water Main Improvements
  - Pole Ave Water Main replacement (W.19th to W.21st)
  - Water Main Replacement Year 1
    - Vine Ave from E.28 to E.33
    - W.40th St. from Ashland to Oberlin
    - E. 37th St. from Pearl to Lorain
    - Woodward from E.37th to Fulton

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## UTILITIES ENGINEERING – SANITARY SEWER

- Sewer and Manhole Rehab (CIPP lining) Year 2 and Designed and Constructed Sewer and Manhole Rehab (CIPP lining) Year 3

## TECHNICAL DEVELOPMENT ASSISTANCE

City of Lorain staff offer ongoing technical support to developers and homebuilders of commercial and residential properties within the City of Lorain. This technical assistance is related to design, inspection, and fee structure, as well as approvals for commercial development, subdivisions, grading, draining, and general construction information. In addition to the 2020 plans reviewed, the following projects were active and/or received technical assistance or inspection throughout the year.

### Commercial:

- Meijer
- Meijer Outlots
- Shops on 58 - Charley's and Pulp
- City of Lorain Central Services Facility

### Residential Subdivisions:

- Landings at Martin's Run No. 4
- Landings at Martin's Run No. 5
- Cornerstone Farms No. 1
- Cornerstone Farms No. 2
- Cornerstone Farms No. 3
- Cornerstone Farms No. 4
- Gardens No. 4

## RESIDENTIAL ADDRESS ASSIGNMENTS

The Landings No. 5

Monarch Grove No. 2

Sandy Springs No.1





Mapping is also a function of the Engineering Department. Maps are requested by citizens, other city departments, and the Administration. Listed below are maps that were provided to various city departments in 2020:

- City Cemetery Map updates
- Pavement Condition Rating Maps
- Maps of rehabbed streets
- Maps of city GIS points
- Ward/Precinct Maps
- LMI/CRA Maps
- Location maps for Contracts
- Maps for presentations and various projects
- Location maps for OPWC applications
- Location maps for NOACA applications
- Location maps for SIB applications
- Location maps for Sewer Relining
- Maps showing easements
- Parking area maps
- Bridge and culvert maps
- CDBG area maps

## MAPPING – CONT

- ZCA maps for zone change applications
- Zoning change updates (GIS)
- Maps for various petitions (paving, assessing, vacations)
- Urban Renewal Area maps
- Maps requested by Council Members
- Entertainment District maps
- Central Business District Maps
- Active Transportation/TLCI maps
- Water distribution areas map
- Towing district maps for Police
- Location map of Columbia Gas Projects (GIS)
- Safe Routes to Schools map
- Miscellaneous maps upon request for outside entities

## STORMWATER MANAGEMENT

- Implemented and managed the requirements of the City of Lorain Stormwater Management Program.
- Performed 508 storm water inspections on 125 sublots and 8 sites within the City issuing 274 violation notices and 4 enforcement actions.
- Performed quarterly site inspections of the following City properties: Compost Facility, Street Department Complex, and Sewer Department Complexes.
- Provided storm water training to employees in the following departments/divisions: Sewer, Landscaping, Water Distribution, and Public Properties.
- Administered the Long Term Operation and Maintenance standards for all existing post-construction BMPs. Landowners are required to submit certified inspection reports annually by May 1.
- Continued communication with City departments and facilities to ensure all facilities within the City are brought into compliance with minimum storm water standards.
- Completed the Martin's Run Ecological Restoration Project Phase II and the design for the Martin's Run Wetland Complex, the facility intended to reduce downstream peak flows within Martin's Run.
- Secured a Purchase Option for the purchase of the property needed for the Martin's Run Wetland Complex.
- Worked with State of Ohio Departments on funding for the future Martin's Run Wetland Complex.

## ENVIRONMENTAL RESTORATION PROGRAM

- Coordination of the 2020 Black River Summit to be held in May 2020. (cancelled due to Covid)
  
- Grant management and restoration projects active in 2020 include:
  - Martin's Run Ecological Restoration Project Phase II - Ohio Department of Natural Resources Funding: The project completed design for the wetland complex south of Cooper Foster and west of Broadway with the goal of reducing peak flows in Martin's Run. The funding provided 50% of the assessment cost, with the remaining 50% funded from the Storm Fund. (\$60,000 project award; \$120,000 project cost)
  - Black River Dredge Reuse Facility – The City continued work under the \$4,000,000.00 Healthy Lake Erie grant award to design and construct an upland dredge dewatering facility to ensure continued navigational dredging of the Black River. An additional \$150,000 was awarded to the City to assist with the pilot project completed under the original award. An additional \$11.75 million in funding has been requested to complete the total site build-out.
  - Black River Concern Remediation and Restoration Program- Federal EPA Funding. The funding has provided for the following 2020 activities (\$15,184,138 project award):
    1. Project completion date extended to August 2022.
    2. Continued management of the groundwater treatment system to address contaminant entry into the Black River.
    3. The Seep Remediation System modification was design and permitted with construction intended for 2021.
    4. Substantial Completion of the Black River Reclamation Site restoration work.
    5. The final project to be funded under this award will complete bank restoration between the larger Reclamation site project and the Seep system was designed and permitting submitted. Project bidding expected spring 2021 with construction anticipated in fall 2021.



## LORAIN BLACK RIVER RECLAMATION FACILITY

- Staff managed and operated the City of Lorain Class 4 Composting Facility.
- Onsite staff coordinated with City departments on the movement and management of material into the facility.
- Onsite staff worked to manage and produce leaf humus, topsoil, and mulch.
- Onsite staff assisted in the onsite management and coordination of all environmental restoration projects occurring on the property including the Black River Remediation and Restoration project as well as the Dredge Facility project.

## PERMITTING

A permit authorizes a homeowner or contractor to begin the work described on the permit. The Engineering Department issues permits for aprons, sidewalks, open pavement, and sanitary and storm sewers repair/replacement and new construction taps for residential and commercial. The following number of permits were issued in 2020:

- Apron and Sidewalk – 509
  - Sanitary and Storm Repair/Replace/Check Valve– 79
  - Open Pavement – 92
  - Water Permits (service line insp / meter downsize) – 38
  - New Construction (Sewer & Water Tap in) Residential – 126\*
  - New Construction (Sewer & Water Tap in) Commercial – 7\*
- \*(New Construction Permits include sanitary, storm, water, sidewalk and apron permits)

## FINANCES

### 2020 Engineering Collections

Sewer Permits	\$25,920.00
Miscellaneous Sales	\$0.00
Parkland Trust Fund	\$76,925.00
Sewer License Fees	\$1,200.00
Deposit Held Trust Fund	\$50,113.00
Reimburse Engineering Service	\$45,985.00
Inspection Fees Allotment Impr Fund	\$81,569.80
Contract	\$1,415.80
Storm Sewer Fees	\$136,700.00
Sanitary Tap in Fee	\$154,830.00
Sanitary Capital Improvement Fee	\$151,594.88
Sanitary Sewer Interceptor Fees	\$41,468.50
Water - Capital Improvements	\$74,283.40
Water - New Main Frontage	\$0.00
Water Service Connection Taps	\$130,700.00
Meter Charge	\$38,591.00
Manifolds	\$1,500.00
Street Excavation	\$0.00
Water Works Inspection	\$16,830.00
Building Water Fee	\$6,854.40
Total Collections	\$1,036,480.78

## EXHIBIT A

### OPWC 34 – Planned 2020 work, some delayed to 2021 due to COVID19

Construction Year	Street	From	To	Scope	Street Rating	Length	Width	Funding Source	Estimated Total Cost	Ward	CDBG
2020	Redbud	West Culesac	Ashland	Concrete Replacement	37-2017	660	28	OPWC/CDBG	\$ 206,382.00	4	Y
Completed 2020	E 26th	Apple	Elyria	Mill/Fill, Pvmt Repair, Casting Adj, Curb Ramps	46.8-2019	520	26.5	OPWC/CDBG	\$ 104,416.00	5	Y
Completed 2020	Rosecrest	Edgewood	Tanglewood	Concrete Replacement	38.4-2017	246	28	OPWC/CDBG	\$ 76,924.20	4	Y
2020	Rosecrest	Timberview	Edgewood	Concrete Replacement	60.8-2017	328	28	OPWC/CDBG	\$ 102,565.60	4	N
2020	E. 34th	SR 57	Palm Ave	Concrete Replacement	44.3-2019	1262	27.3	OPWC/CDBG	\$ 393,744.00	6	Y
Completed 2020	E. 37th	Gary	Palm	Mill/Fill, Pvmt Repair, Casting Adj, Curb Ramps, Curb, Underdrains	63.5 - 2019	685	28	OPWC/CDBG	\$ 188,169.50	6	Y
2020	W 26th	Ashland	Oberlin	Concrete Replacement	52.7-2019	985	27.3	OPWC	\$ 307,320.00	3	N
2020	E 41st	Palm	Homewood	Mill/Fill, Pvmt Repair, Casting Adj, Curb Ramps, Curb, Underdrains	48-2015?	780	27.3	OPWC	\$ 213,720.00	6	N
2020	G St	Colorado	Iowa	Concrete Replacement	30-2014?	1501	27.3	OPWC	\$ 468,312.00	1	N
2020	King Ave	West Erie	W. 11th St.	Concrete Replacement	44-2014?	738	27.3	OPWC	\$ 230,256.00	7	N
2020	W 35th St	Palm Springs	Ashland	Concrete Replacement	65-2014?	1300	27.3	OPWC	\$ 405,600.00	8	N
2020	Lexington Ave.	33rd	32nd	Mill/Fill, Pvmt Repair, Casting Adj, Curb Ramps	66-2017	441	27.3	OPWC	\$ 88,200.00	3	N
									\$ 2,785,609.30		