

# OFFICE OF THE CITY ENGINEER 2007 ANNUAL REPORT





#### On the cover:

Milestone Contractors construct a concrete retaining wall and barrier wall on the west side of Marr Road.

Overtime, Haw Creek has migrated closer and closer to the west side of Marr Road. The retaining wall will protect the newly constructed Marr Road and People Trail. Because of limited space between the creek and roadway at this location, the trail is located very close to the edge of the roadway. To protect the pedestrians using the trail, a barrier wall was also constructed.

#### Top photo:

Clearing and preliminary excavation for retaining wall.

#### Bottom photo:

Concrete footings complete with partial wall in place. Timber forms are ready for the next concrete delivery. Steel sheet piling is used to build a coffer dam around the construction to keep the creek from flooding the site. The transit in the foreground is used to keep the forms straight and level.

# Fun Facts

# Retaining wall and footings

Concrete 102.4 cubic meters = 133.9 cubic yards= 271 tons of concrete = 15 trucks Reinforcing Steel = 5776 kilograms = 12,734 pounds = 6.4 tons

#### Barrier wall

Concrete 121.2 cubic meters =158.5 cubic yards = 321 tons of concrete = 18 trucks

# City Engineering Staff

Steve Ruble.....City Engineer

Steve Rucker.....Assistant City Engineer

Randy Sims.....Senior Engineering Technician

Becky Douglas.....Engineering Technician Jason Perry.....Engineering Technician Aimee Morris.....Engineering Technician



### **Overlay Program**

In September of 2007, Milestone Contractors was awarded the City's annual overlay program with a contract amount of \$359,779.38. Before overlaying began, Milestone completed 1110 square yards of patching, using 325 tons of asphalt. Patching extends the pavement life and mitigates the need to cut into newly paved streets. As part of the overlay project, Milestone raised manholes, raised water valves, and installed thermoplastic pavement markings. Milestone placed 3020 tons of asphalt on 3.90 miles of City streets. Overlaying a one mile stretch of City street, 24 feet wide by 1 inch in depth, costs \$44,915.20. Milestone removed and replaced 630 feet of curb and gutter and 65 feet of cross gutter.



**Concrete street repairs in Riverview Acres** 



# **Crack Seal Program**

#### sealing contract in February with a low bid of \$32,575.65. Crack sealing consists of cleaning, preparing and sealing pavement joints and random pavement cracks on selected streets throughout the city. Reece crack sealed 16.5 lane miles to add longevity to the City's streets. Sealing cracks in city streets increases pavement life, allowing a longer

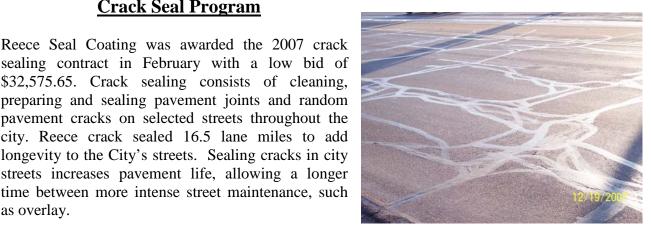
as overlay.



**Overlaying California Court** 

#### **Concrete Street Repairs**

Milestone Contractors was awarded the concrete street repair contract with a low bid of \$130,534. These concrete street repairs were the Riverview Acres neighborhood. Milestone removed and replaced 2455 square yards of concrete street, placed 800 tons of #73 stone and excavated 822 cubic yards of concrete and soil.



**Crack sealing on Central Avenue** 



#### **Drainage Repairs**

In March 2007, C.A.S.E. Construction was awarded a \$11,000 Miscellaneous Drainage Repair quote that included work at six locations. C.A.S.E. installed one new drywell, and removed and replaced 130 linear feet of sidewalk and 22 linear feet of curb.

In June 2007 Excavation Plus, Inc. was awarded the Central Avenue Drainage Improvement project with a low quote of \$33,609.46. Flooding at the northeast intersection of Rocky Ford Road and Central Avenue had become a problem due to a failing drywell. Excavation Plus extended 225 linear feet of pipe to connect to a larger drywell system along Central Avenue. In addition, they removed and replaced 300 linear feet of sidewalk and 17 linear feet of curb to improve the drainage in this area.



**Central Avenue Drainage Repair** 

Excavation Plus, Inc. was awarded a Miscellaneous Drainage Repair quote in August 2007 with a low quote of \$29,568.00. This project focused on multiple sinkhole repairs needed due to failing pipe joints and inlet boxes.

In November, a low quote of \$31,577.16 was awarded to Excavation Plus for multiple drainage repairs needed in Presidential Parks. Excavation Plus will remove and reseal 15 castings, remove and replace 310.5 linear feet of curb, patch 125 square yards of asphalt, repair 2 pipes and install 3 ADA accessible ramps. The work will begin Spring 2008.

Also in November, King's Trucking and Excavation, from Seymour, was awarded the Brookside Drive Storm Sewer Improvements project with a low bid of \$36,542. In this neighborhood, 315 linear feet of corrugated pipe has deteriorated and caused multiple sink holes. This project will begin Spring 2008 and will include 315 linear feet of new pipe, 2 new manholes, removing and replacing 93 linear feet of sidewalk and 40 linear feet of curb, as well as extensive seeding, mulching and fertilizing.

In total, through City contracts in 2007, 540 linear feet of pipe was added to the Columbus storm sewer system. Due to sinkholes, twenty-nine repairs were made to inlets and pipe. 400 linear feet of curb and 490 linear feet of sidewalk were removed and replaced.



#### **Infrastructure**

The City's infrastructure continued to expand in 2007 with the acceptance of Sycamore Bend Section 2, and McCulloughs Run, Section 5, This growth added approximately 3,992 linear feet of new streets and approximately 1440 linear feet of new storm sewer pipe. In 2008, with the anticipated acceptance of Roosevelt Park, Adams Park, Jackson Park and Wildflower Estates, approximately 15,000 linear feet of new storm sewer pipe and 4.8 new miles of street will be added to the city's infrastructure.

#### **Indiana Department of Transportation**

INDOT continues to implement their Major Moves Plan which outlines construction projects over the next ten years. Three Major Moves projects are programmed in Columbus.

INDOT is in the process of acquiring rights-of-way for the US 31 project, which is scheduled to begin construction in 2010. The City is coordinating the acquisition of right-of-way from the Circle K gas station at US 31 and 17<sup>th</sup> Street for both the City's 17<sup>th</sup> Street project and INDOT's US 31 project. The project includes 4 travel lanes with a center turn lane, new concrete curb and gutter, new storm sewer, new sidewalk, interconnected signal equipment, and two new bridges.

State Street is scheduled for improvements between Marr Road and Mapleton Street. The improvements include 4 travel lanes with a center turn lane, sidewalk, storm sewer, realignment of Mapleton/Pence Street, new traffic signals at Marr, Gladstone, and Mapleton, and new left turn lanes at intersections. These improvements are scheduled for contract in 2008.

Improvements are scheduled for I65 and State Road 58, with the project currently in the preliminary design stage. The exit ramps will be widened to two lanes, and the overpass bridge will be widened to add a center left turn lane. Turn lanes will be added to SR 58 at the interchange to improve traffic flow. Access to the gas station and residential property at the Northwest quadrant will be modified to reduce turning movement conflicts in close proximity to the interchange. This project is scheduled for contract in 2010.

# **Projects in Development**

The Rocky Ford Road improvement project was let in November 2006, and construction is well underway. In 2007 several notable items were completed; substantial utility relocation, Marr Road reconstruction, People Trail construction, Marr/Rocky Ford Road intersection realignment, and mainline reconstruction of Rocky Ford Road from the bridge over Haw Creek to Briar Drive.

Also under development are improvements to 17<sup>th</sup> Street from Central Avenue to US 31. Improvements will include four travel lanes, sidewalk, curb and gutter, storm sewers, and dedicated bicycle lanes. Strand and Associates is approximately fifty percent complete with the



right-of-way services. Much of 2008 will consist of purchasing right-of-way from adjoining property owners and making final revisions to construction plans. Construction is planned for 2009.

Due to funding shortages caused by property tax re-assessment, the construction of a project to eliminate 8<sup>th</sup> Street from Lindsey Street to Indianapolis Road was delayed until 2008. Construction plans prepared by Janssen & Spaans Engineering and Traffic Engineering, Inc. call for the installation of a modern roundabout at the intersections of Brown, Lindsey, 11<sup>th</sup> Street and Indianapolis Road.

Road 200 South between State Road 11 and 150 West is scheduled for improvements. Improvements will include a dual left turn lane, curb and gutter, and storm sewer. Plans are currently being reviewed by INDOT for public hearing approval. Construction is projected to begin in 2008.

Construction plans for Marr Road from Station Drive to 300 North, prepared by AECON, Inc. have been approved. The project will eliminate a sharp curve and dovetail into the Rocky Ford Road project which is already under construction. This project will likely let in April or May for the 2008 construction season.

Plans prepared by Christopher B. Burke Engineering, Ltd. are part of a storm sewer master plan which will extend a 60 inch diameter storm sewer pipe from 5<sup>th</sup> Street and Chestnut Street to 7<sup>th</sup> Street and Chestnut Street. Plans are ready for bid, but funding shortfalls may delay construction.

Preliminary Engineering continues and preliminary field check plans are in development for the following projects:

Westenedge from US 31 to Rocky Ford Road – Christopher B. Burke Engineering, LTD. Rocky Ford Road from Taylor Road to Talley Road – Strand Associates

Taylor Road from 25<sup>th</sup> Street to Rocky Ford Road - DLZ

Indiana Avenue from State Street to Marr Road – Hannum, Wagle & Cline Engineering

# **WalkWorks**

WalkWorks, the City's sidewalk replacement program, was established in 1991 to encourage property owners to replace unsafe, deteriorated the City reimbursed property owners \$10 per linear foot of sidewalk, after it was replaced and inspected. During the 2007 construction season, WalkWorks replaced approximately 1041 linear feet of concrete sidewalk WalkWorks funds were also used to pay for the installation of twenty-six ADA compliant accessible ramps and cast iron detectable warning plates for the ramps. In addition, WalkWorks participated financially in the Community Development Block Grant program.



New CDBG sidewalk on McClure Rd



#### **NPDES**

The NPDES permitting and certification process is designed to improve storm water quality in communities with populations greater than 10,000. In continued efforts to comply with the National Pollutant Discharge Elimination System (NPDES) Phase II storm water requirements for the City, the Engineering staff, various other City departments, and consultant DLZ have been working on the following in 2007:

The Illicit Discharge Ordinance was passed by the City Council on March 7, 2006, took effect January 1, 2007 and is currently being administered. The purpose of Illicit Discharge Ordinance is to protect and enhance the water quality of our watercourses and water bodies in a manner pursuant to and consistent with the Federal Clean Water Act (33 U.S.C. §1251 et seq). This ordinance also provides for the health, safety, and general welfare of the citizens of the City of Columbus through the reduction of pollutants in stormwater discharges and the regulation of non-stormwater discharges to the storm drainage system to the maximum extent practicable.

The Erosion Control Ordinance was passed by the City Council on August 1, 2006, took effect January 1, 2007 and is currently being administered. The purpose of this Ordinance is to establish minimum erosion and sediment control requirements to protect and safeguard the general health, safety, and welfare of the public by guiding, regulating, and controlling the design, construction, use, and maintenance of any development or other land altering activity which disturbs or breaks the topsoil or otherwise results in the movement of earth within the defined boundaries of the City and as specified herein. In January 2007, the Engineering office began reviewing construction plans for compliance with the erosion control measures as outlined in the ordinance. Seventeen site development reviews were completed this year.

Stormwater runoff contains many types and forms of pollutants that lead to impairments in our Nation's waterways. Best management practices (BMPs) or stormwater controls are an effective means of reducing the amount of pollutants in stormwater. A draft BMP Ordinance is complete. Public input meetings will be held during the 1<sup>st</sup> quarter of 2008 and revisions will be made based on public input. The ordinance will then be presented to the City Council for adoption.

The 2006 NPDES Annual Report has been submitted to IDEM. In an effort to continually meet Public Education and Outreach goals, two new steps were implemented in 2007. An EPA brochure, "After the Storm ~ A Citizen's Guide to Understanding Stormwater", is being included with all Erosion Control Site Development Approval letters. This brochure has also been placed at the Bartholomew County Public Library's information display table. Also, IDEM's pet waste education flyers and posters were placed at the City of Columbus Animal Control Shelter in an effort to inform shelter visitors of the effects of pet waste on water quality.

As a part of the ongoing NPDES training requirements, several City engineering staff members attended an IDEM training session in 2007. This session focused on construction erosion and sediment control, storm water quality measures and plan review basics.



#### **Permitting**

The City Engineer's office administers several types of permits to control day to day impacts to infrastructure and traffic. Applications for permits can be picked-up in the Engineering office, or can be accessed on-line. There is no charge for making these permit applications to the Engineering office.



A Special Use of Right-of-Way permit is required any time the right-of-way is going to be encumbered. Typical applications are for street closures, closure of sidewalks, or parking spaces. In 2007, **164** applications were processed, including requests for Central Middle School demolition, the construction of the Downtown Parking Garage, the county jail expansion, neighborhood block parties, City special events, parades, benefit walks, tree trimming, and the City of Columbus conduit and fiber optic projects.

**Street closing for Parking Garage** 

A Permit to Excavate in a Public Street, Alley or Right-of-Way is self explanatory. Applicants for this type of permit are generally accessing utilities that reside within the right-of-way of a City street. Some utilities lie under pavement necessitating a street cut to access the utility. Although there is no cost to make the permit application, contractors are required to bond their work for a period of three years to protect the City infrastructure which they have impacted. The City Engineer's office processed **190** permits to excavate in a public street, alley or right-of-way in 2007.



Right-of-Way Excavation on 4th Street

Improvement in the Right-of-Way Permits are required for work performed in the right-of-way that does not fall under the Permit to Excavate in Public Street, Alley or Right-of-way. Typical applications are for driveway or curb repairs. Improvements are required to meet City standards and the Engineer's office inspects all work. In 2007, **58** Improvement in the Right-of-Way Permits were processed by the City Engineers office.



The Engineer's office provides technical assistance to other City departments to facilitate, administer, or complete projects. The Engineer's office provided the following assistance in 2007:

#### **Redevelopment Commission**

- Construction of International Drive North in Woodside Northwest
- Downtown Parking Garage construction
- Commons Mall Jackson Street Connection
- Indigo Hotel

#### Mayor's office

- Columbus in Bloom
- Vision 20/20 Committee
- Technology Task Force Columbus Conduit System

#### **Community Development**

- Block Grant Sidewalk Project
- Veteran's Day Parade
- Ethnic Expo
- Garden plots

#### **Parks and Recreation Department**

- Festival of Lights Parade
- Mill Race Center

#### Fire and Police

- Mapping and Diagrams
- Training Tower Construction

#### **Planning Department**

- Plan Commission Member
- Subdivision/Plat Review Committee
- Improvement plan and Drainage review



International Drive at Woodside NW



**Indigo Hotel** 



**CFD Training Tower** 



# John A. McCauley

Friend of the Engineer's Office

In October 2007 John McCauley lost his lifelong battle with physical disabilities. John traversed Columbus in an electric wheel chair, frequently visiting his network of public offices, private businesses, construction sites, and other spots known only to him, to get current status on projects and future plans around his Town. Often John would come into the City Engineer's office and casually ask about a new business or activity in Columbus and we would know nothing of it. But John, ever the perceptive listener and keen observer, had already learned it elsewhere and so the news was out. John delighted in doing that.

John's tireless interest in Columbus made him always aware of progress on any public works project and always offer input on how to do it better, especially on matters of accessibility. That interest championed sidewalks, People Trails, transit system, and overflowed into volunteer work and elected office, but mostly he just loved the Town that had been so good to him. John was a gentle man, a great friend and will be long remembered.

#### 2006 INTERSECTION ACCIDENT REPORT CITY OF COLUMBUS

#### Introduction

The **2006 Intersection Accident Report** is a summary of intersection traffic accident data for the City of Columbus during the five-year period from 2002 through 2006. This report is intended for use by various city agencies and by the Indiana Department of Transportation to plan intersection improvements, changes in intersection control, and changes in enforcement. Conclusions should not be drawn without an examination of the accident reports for each intersection. It should also be noted that increases or decreases in number of accidents in a single year may not be significant, but trends over several years are usually more significant.

#### **Summary**

The intersection of National Road and 25<sup>th</sup> Street was the most frequent site of accidents in 2006 with 42. Between the years of 2002 and 2006, the number of accidents has fluctuated between 34 and 49, with a five year average of 40.6. This intersection also has the second highest five year average. Although natural fluctuations exist in the five year data, 2004 is the highest accident year by seven accidents. In 2005, INDOT added left turn phases to the signal at this intersection on the 25<sup>th</sup> street approaches. The current total is still well below the all time peak of 62 accidents in 1990.

The intersection of 25<sup>th</sup> Street and Central Avenue was the second most frequent accident location. Commercial development on north Central Avenue is likely increasing traffic volumes through this intersection. This year's total of 36 accidents is twelve more than the 2005 total.

The State Road 46 and State Road 11 South intersection was the third most frequent accident location. The number of accidents at this location jumped to 31 from 22 the previous year. This intersection was improved with the Front Door Project. With about 40,000 vehicles per day, it is one of the busiest intersections in Columbus.

Most of the intersections, where 10 or more accidents occur per year, have been improved or are being considered for improvements. The highest accident count at an intersection not scheduled for improvement is 21 at 25th Street and Home Avenue.

#### **Intersections to watch:**

- 25<sup>th</sup> Street and Central Avenue increased 5.8 accidents from its five year average and produced 12 more accidents than last year.
- 7<sup>th</sup> Street and Central Avenue increased to 5.3 accidents more than its five year average and had 9 more accidents than last year.
- 2<sup>nd</sup> Street and Brown Street produced 14 accidents this year, which is 5.2 more than its average and 5 more than last year.

#### **Most improved:**

- National Road and Washington Street had 15 fewer accidents in 2006 compared to its five year average of 31. This is likely due to the improvements recently made to the intersection by the Indiana Department of Transportation.
- 10<sup>th</sup> Street/Taylor Road and National Road improved by 10.2 accidents less than its five year average and 10 less than last year. This intersection has been ranked in the top four, each of the last 5 years, for number of accidents. Only time will tell if this decrease is the beginning of a trend or if it is a one time occurrence.



# 2006 INTERSECTION ACCIDENT REPORT CITY OF COLUMBUS

Map of intersections with 10 or more accidents.

