

Elkhart County
HIGHWAY DEPARTMENT

Year-in-Review

2010



Introduction

The Elkhart County Highway Department has two general divisions, engineering and maintenance, consisting of a total of 66 employees. The headquarters of the department is located in Goshen, with satellite garages located in Elkhart and New Paris, and additional salt storage locations along CR17 and in Middlebury.

The maintenance division consists of 59 full-time employees and is in charge of the day-to-day road operations. Some of their responsibilities include: plowing snow, mowing roadsides, striping roads, patching, spot paving, chip sealing, gravel road grading, ditching and berming, and maintaining bridges.

The engineering division has seven employees comprised of three engineering technicians, three full-time engineers, and one part-time engineer. The engineering department's responsibilities include long-term transportation planning, design of road and bridge projects, construction inspection and management of in-house and federal-aid projects, database management, traffic counts, and traffic management.

Two special sections within the Department deal with bridges and traffic issues (signs, markings, and signals).

Funding

The Highway Department receives funding from several state, federal and local sources for both maintenance and project activities.

Motor Vehicle Highway (MVH) is administered by the state and distributes money collected from the federal gas tax to all local agencies in the state via a formula. MVH money is generally used for maintenance activities. **Local Road and Street (LRS)** funding also comes from gas tax money and is administered by the state and distributed via formula to all local agencies. This money is also used largely for maintenance activities. **Cumulative Bridge** funds are collected locally as part of property taxes and are used for bridge repairs and replacements. **Major Bridge** funds are also collected as part of County property taxes, but are designated for use on projects connected to the longest bridges in the County. **Economic Development Income Tax (EDIT)** funds are collected locally from income taxes and are generally used for locally funded construction projects or the local matching portion of federally funded projects.

Basic County Figures at a Glance

Paved Roadway Miles	1076
Gravel Roadway Miles	70
Bridges (Over 20 feet)	169
Small Structures (Less than 20 feet)	22
Dump Trucks (single and tandem axle)	41

Bridge Projects

Six Span Bridge and CR 10

Cost Estimate: \$19,000,000

Construction Year: 2009-2011

Contractor: Northern Indiana Construction

Funding: Local Funds

The Six Span Bridge and CR 10 project continued to progress in 2010. Demolition of the old bridge was completed and construction of the remainder of the bridge (Phase 2) and construction of the Phase 2 roadway approaches to the bridge were completed. The boat ramp restroom building was also completed. The signal at CR 17 and CR 10 became active in December, allowing full use of the reconstructed CR 10. The final completion date for this project is August 5, 2011.



Johnson Street Bridge

Cost Estimate: \$11,000,000

Construction Year: 2008-2010

Contractor: Anlaan

Funding: Local Funds

The new section of Johnson Street Bridge was completed in September. The old northbound structure was also removed in 2010. Other elements also completed as part of this project were: storm sewers, traffic light installation, intersection reconstruction, and sidewalk installation.



Small Structure 115

Location: CR21 Between CR26 and CR19
Completed by: Highway Department Forces
Cost: \$ 12,300

The concrete box culvert was removed and replaced by a five-foot, double-wall plastic culvert with special ADS elbows. The work was completed by Highway Department forces.

Bridge #209

Location: CR33 Between CR131 and SR13
Completed by: Niblock Excavating
Cost: \$ 13,800

Wearing surface was removed and roadway approaches were milled. A new wearing surface and approaches were installed.

Bridge #194

Location: CR42 Between CR43 and SR13
Completed by: Moonrock Incorporated
Cost: \$ 6,000

Deteriorated concrete curbs on both sides were removed and replaced.

Bridge #314

Location: CR46 Between CR21 and SR15
Completed by: Beer and Slabaugh
Cost: \$ 14,800

Reconstructed the deteriorating east pier, restoring it to original condition.

Bridge #371

Location: Middlebury Street Between Goshen Ave. and Prairie Street
Completed by: Moonrock Incorporated
Cost: \$ 54,000

Removed unsound concrete on three piers and on concrete arches, and then placed gunite material on piers, arches, and decorative railings.

Other Bridge Projects

Sand blasted and sealed ten bridges. Four were completed by Elkhart County forces and six were completed by Beer and Slabaugh.

Road Projects

CR 17, Phase 2B

Cost Estimate: \$4,800,000

Construction Year: 2009-2010

Contractor: Phend and Brown

Funding: 80% Federal Aid

20% Local funds

CR 17 Phase 2B is an addition to the new CR 17 from CR 30 to CR 32. This project includes two bridges over CR 30 and CR 32. This road is a four-lane divided roadway with limited access.



CR 17 Phase 2A

Cost Estimate: \$5,500,000

Construction Year: 2010-2011

Contractor: Reith Riley

Funding: 80% Federal Aid

20% Local Funds

CR 17 Phase 2A will be a new four-lane divided roadway that connects CR 28 to CR 30. The road will connect to Phase 2B at the overpass at CR 30.



CR 16, Buggy Lane Widening

Cost of Project: \$398,000
Construction Year: 2010
Contractor: Niblock Excavating
Funding: Local Funds

This project added buggy lanes on CR 16 and improved the profile and drainage of the road. The design was completed by Butler, Fairman, and Seufert and matches projects being carried out by Lagrange County to remove non-motorized traffic from the through lanes on this busy link between Middlebury and Shipshewanna.



CR 15 and CR 45, Ox Bow

Cost Estimate: \$682,000
Construction Year: 2010
Contractor: Niblock Excavating
Funding: 90% HSIP, Federal Aid
10% Local Funds

This project realigned the entrance of Ox Bow Park with the intersection of CR 15 and CR 45 to improve the safety and efficiency of the intersection. A four-way stop was implemented at the intersection to improve the flow of traffic and turn lanes were added to the approaches.



Ivy Tech

Cost Estimation: \$436,000

Construction Year: 2010

Funding: Developer/TIF Funds

Construction of the new Ivy Tech Campus included improvements to the intersection of Old CR 17 and CR 18 which also intersected with the Ivy Tech entrance road. The Old CR 17 turning lanes were removed and the intersection was converted to a traditional 4-legged intersection. Other improvements included widening of CR 18 to add turning lanes for Ivy Tech and improvements to the roadway drainage.



ARRA Projects

Completed rehab projects on several stretches of road that included: CR 17 between CR 4 and CR 18, CR 45, CR 30, and Old US 33. These projects consisted of milling and replacement of the pavement, new signage, and striping.

Paving Program

Each year the paving program concentrates on roadways that are in most need of improvement to either grind and pave, spot pave, or chip and seal. Typically contractors are hired to complete the grind and pave jobs while Highway Department crews complete the spot pave and chip and seal jobs. A grind and pave consists of grinding down the existing roadway and using the ground material as base then paving over the grindings to complete the job. Spot paving consists of putting a thin overlay over an existing roadway to rehab any minor defects of the road. A chip and seal job entails laying chip and seal over a roadway to give the road a new surface and seal any cracks.

Paving

Miles Paved: 13.4

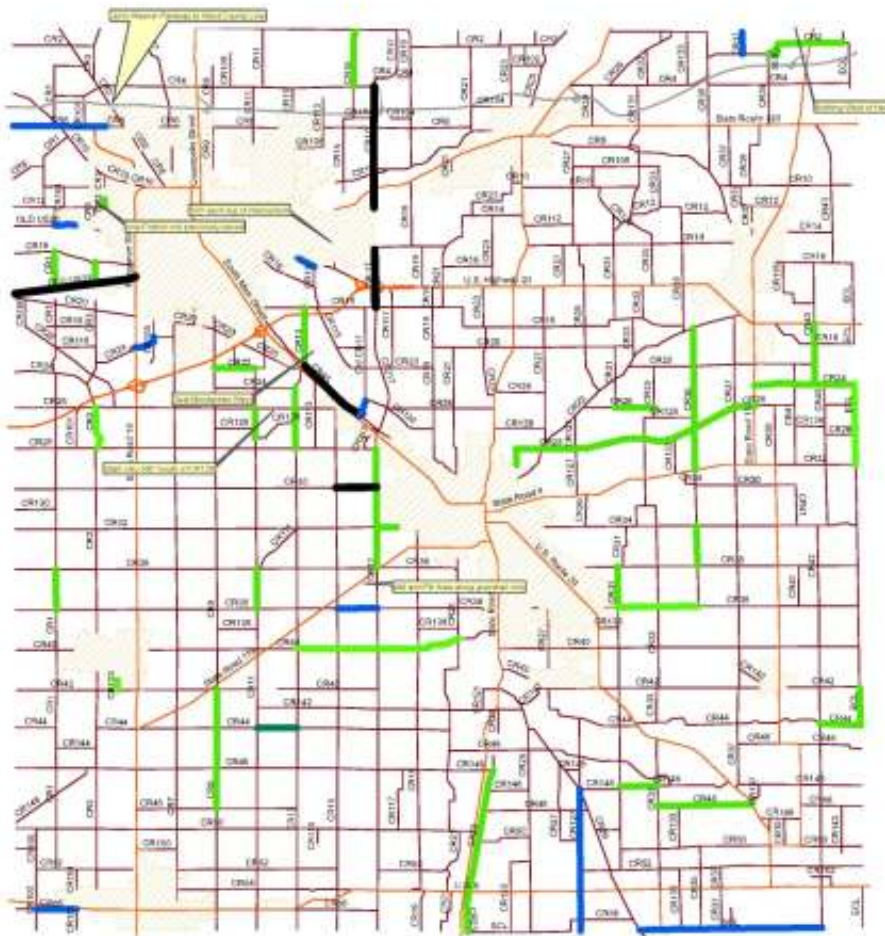
Cost: \$1,600,000

Chip and Seal

Miles Chip and Sealed: 34.5

Cost: \$380,000

2010 PAVING PROGRAM



Traffic Section

CR 17 and CR 10 Signal

Cost Estimate: Included with Six Span Project
Construction Year: 2010
Contractor: Michiana Contractors
Funding: Local

The CR 17 and CR 10 intersection included the installation of a new signal system mounted on mast arms and including intersection lighting, video, and radar vehicle detectors.



CR 6 and John Weaver Signal

Cost Estimate: \$5,000
Completed By: Highway Department Forces
Funding: Local

Replaced overhead span wires that had deteriorated and begun to break.



CR 6 and CR 17 Signal

Cost Estimate: \$35,000
Completed By: Highway Department Forces
Funding: Local

Replaced all signal heads and wiring and installed radar detection. Deterioration of original signal equipment due to age had resulted in intermittent electrical faults and complete loss of vehicle detection system.

CR 13 and Old US 20 Signal

Cost Estimate: \$85,000

Completed By: Michiana Contractors

Funding: Local

Replaced County's oldest signal with new system including: loop and radar detection, all signal heads, added backplates and protected left turn heads. Replaced all wiring and one damaged signal pole.

Baugo Schools' Flashers

Removed school zone solar flashers from CR 16 and reinstalled on CR 24. The work was completed by Highway Department forces.

CR 35 North of CR 28 Flasher

Cost Estimate: \$5,000

Completed By: Highway Department Forces

Funding: Local

Installed advanced warning solar flashers in advance of a hazardous intersection obscured by a hill.



County-Wide Sign Replacement

Cost Estimate: \$42,000

Construction Year: 2011

To Be Completed By: Highway Department Forces

Funding: 80% Federal (HSIP)

20% Local

Federally available safety money (HSIP) has been awarded to the County for the identification and replacement of signs not meeting the required retro-reflectivity standards, or defective in other manners. 1481 signs and 258 posts in 6 townships have been identified as meeting the criteria set-forth in this grant.

Sign Program

In 2010 the following sign work was completed by the Highway Department Traffic Section personnel. 342 of the following signs were produced in-house.

Signs Installed or Replaced (by reason)

Accident damage	771
Maintenance	1580
Road Construction	822
Theft	103
Vandalism	120
New by Ordinance or Request	122
Total	3518

Pavement Marking and Striping Program

2010 was the second year that the County striped its own roads. Previously the County contracted this work, costing in excess of \$250,000 annually. In accordance with national standards, roads with more than 2500 vehicles per day receive centerline markings each year, and roads with more than 6000 vehicles per day receive edge lines.

Road Striping Summary

Paint Used (gallons)	5,610
Glass Beads Used (pounds)	21,250
Centerline Miles Striped	830
Total Cost (including labor and fuel)	\$73,000

Markings at intersections are also replaced each summer. Reflectors in the center of CR17 from CR18 to CR28 were replaced this summer for the first time since the road was completed.



Development

Subdivision Acceptances

15 final residential acceptances and 2 commercial acceptances were issued. There were no initial acceptances issued.

Permits

121 drive permits and 17 commercial drive and drainage permits were issued. 194 utility or work in right of way permits were issued.

Roadway Management

Crash Database

The database was created to monitor all crashes that occur on roads that are maintained by the Highway Department. The crash information can be looked at in Microsoft Access or they can be seen on Google Earth. The database is used to identify locations with a safety issue, and also used to quickly access crash histories needed in project planning phases.



Priority List

The engineering division has developed and maintains a list of project priorities to aid in determining potential projects and problem areas. The report is broken down into three areas: safety, bridge, and capacity projects. The safety list is based off of the crash database and gives a priority rating to locations based on the number and severity of crashes. The bridge rankings are based on the bridge sufficiency ratings and roadway ADT. The capacity list tries to identify roads with the most need for improvements to their traffic capacity.

Engineering Design/Upcoming Projects

CR 17 Fiber Optic

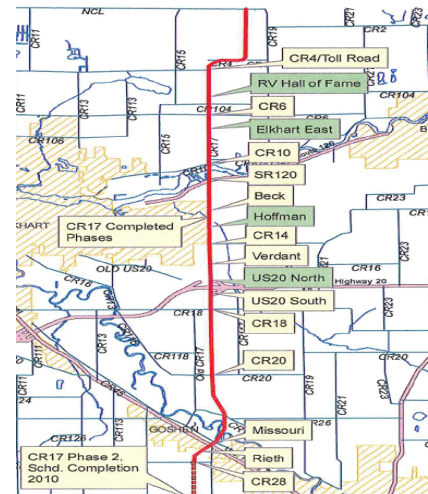
Cost Estimate: \$2,200,000

Construction Year: 2011

Contractor: J. Ranck Electric/ Wilcox

Funding: Federal Aid, 100% CMAQ

The CR 17 Fiber Optic project is a design/build project that will connect CR 17 traffic signals by fiber optic cables and link communications to a traffic operations center at the Highway Department. The completion date is Dec. 1, 2011.



CR 17 Phase 2C

Cost Estimate: \$12,000,000

Construction Year: 2011-2012

Designer: American Structurepoint

Funding: Local Funds

CR 17 Phase 2C will be a new four-lane divided roadway that will connect CR 32 to CR 38. The project will begin at the overpass at CR 32 and continue south to CR 38. The new road will intersect SR 119 where a traffic light will be installed. The project will be ready to bid in March 2011.



CR 20 Signal Upgrades

Cost Estimate: \$80,000

Construction Year: 2011

Designer: Highway Department

Funding: 90% HSIP, Federal Aid
10% Local Funds

CR 20 signal upgrades would improve the traffic lights along CR 20 at the intersections of CR 7, CR 9, Mall Drive, and Minuteman Way. This project will include the installation of new signal heads and linking of the signals along this corridor to act in a coordinated pattern.



Bridge #189

Cost Estimate: \$664,000

Construction Year: 2012

Designer: Highway Department

Funding: 80% Federal Bridge Fund
20% Local Funds

Bridge #189 is located on CR 40 between CR 43 and the East County Line. Bridge #189 will be a rehabilitation project in which the superstructure will be replaced.



Bridge #127

Cost Estimate: \$1,400,000

Construction Year: 2013

Designer: R.W. Armstrong

Funding: 80% Federal Aid
20% Local

Bridge #127 is located on CR 4 just east of CR 7 and crosses over Christiana Creek. This project will be a complete replacement of the current bridge which is functionally obsolete and is considered susceptible to scour.



Signal Upgrades at CR 20 and CR 111

Cost Estimate: \$160,000

Construction Year: 2013

Designer: Highway Department

Funding: 90% HSIP, Federal Aid
10% Local Funds

Signal Upgrades at CR 20 and CR 111 will replace the flashing light with a traffic signal.



CR 3 and CR 32

Cost Estimate: \$1,200,000

Construction Year: 2014

Designer: Highway Department

Funding: 80% Group 4 Federal Aid
20% Local Funds

This project will improve the sight distance at the intersection as well as drainage and other intersection improvements.



CR 8 Bike Path

Cost Estimate: \$400,000

Construction Year: 2014

Designer: Highway Department

Funding: 80% Transportation Enhancement
Funds
20% Local Funds

This project that will add a bike path along CR 8 east of CR 17 and will connect to the path being built as part of the Six Span Bridge project.



Bridge #409

Cost Estimate: \$2,700,000

Construction Year: 2015

Designer: Highway Department

Funding: Local Funds

Bridge #409 is located on Kercher Road (CR 38) between CR 21 and SR 15. This functionally and structurally obsolete bridge will be completely replaced.

