2019

ANNUAL REPORT
DEKALB COUNTY
HIGHWAY DEPARTMENT

Presented by
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## Index

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Introduction

This past year was a historic year for Illinois highway infrastructure. Prior to 2019, the last time Illinois adjusted the State Motor Fuel Tax (MFT) was January 1, 1990. For nearly 30 years, the amount of money put towards fixing roads and bridges in Illinois via MFT was 19 cents per gallon whether the price of gas was $1.00 per gallon or $4.00 per gallon. Over that nearly 3 decades, if the MFT rate had kept up with inflation, that 19 cents would have approximately doubled.

The most recent State capital bill raised the Illinois Motor Fuel Tax from 19 cents to 38 cents per gallon as of July 1, 2019. It also indexed that rate to inflation so the MFT rate would not fall behind again as it did for nearly 30 years. This increase is a much-needed boost for Illinois infrastructure. Over the years, public agencies including IDOT, counties, municipalities, and township road districts had deferred their maintenance of roads and replacement of deficient bridges due to a lack of funding. The backlog of projects is so great that the increased funding will not be able to address all of the needs right away.

The injection of new revenues will be noticeable throughout DeKalb County in 2020. The township road districts spent $1.89 million in 2019 on capital projects and have budgeted to spend $3.69 in 2020. The County Highway Department’s capital program fluctuates from year to year as it typically saves up for large road or bridge projects and sometimes receives grants for special projects. To make a fair comparison, the capital program on roads and bridges through the County Highway Department was an average per year of $3.61 million over the past 4 years, not including the one-time safety grants. In the next 2 years, there is an average of $5.76 million per year budgeted. These increased programs are a direct result of the increased State Motor Fuel Tax.

Another major capital funding source for the County Highway Department is the Federal Motor Fuel Tax. The Highway Department receives approximately $1 million annually from that fund. Similar to the State MFT not changing since the early 1990s, the Federal MFT rate has not changed since October 1, 1993. Each year there are discussions in Washington, D.C. about raising funds for much-needed infrastructure improvements. In addition to capital project funding, the United States Congress is trying to address the strained Highway Trust Fund.

The DeKalb County Highway Department has been fairly successful with competitive grants to fund specific projects over the years. Unfortunately, the needs for the County Highway System alone include over $110 million to increase the weight limit on County Highways to the State standard of 80,000 lb, over $40 million for County Highway safety projects and expansion projects, and over $5 million for alternative transportation projects including the construction of new trails. While the increase in state funding goes a long way to address the deferred maintenance on the County Highway System, the overall need for additional funds is still present.
Peace Road / Illinois Route 64 Intersection Safety Improvements

The intersection of Peace Road and Illinois Route 64 is one of the busiest intersections in the County. Large volumes of traffic typically result in a higher number of crashes. This intersection is no exception and therefore qualified for federal safety funds to make improvements in 2019.

Peace Road was a 5-lane highway south of Illinois Route 64 and a 2-line highway north of Illinois Route 64. The 5-lane cross section was extended north to allow drivers to merge long after they crossed the intersection. The project also included improved right turn lanes, offset left turn lanes for better sight distance of oncoming traffic, paved safety shoulders, and new traffic signals. The project was awarded the APWA Fox Valley Branch’s Public Works Project of the Year in the Transportation less than $5 Million category.

William Charles Construction Co, LLC of Rockford, IL performed the work at an estimated cost of $2,386,000. The estimated cost of the project was $2,319,800. Of the total, 90% was paid using Federal Highway Safety Improvement Program Funds. The remaining 10% was paid using local Matching Tax funds. Hutchison Engineering of Shorewood, IL performed the preliminary and design engineering for the project. Jerry Busse of the County Highway Department performed the construction inspection.
Plank Road Safety Improvements

In 2016, the County Highway Department applied for Federal Highway Safety Improvement Program Funds (HSIP) due to the number of serious and fatal crashes on Plank Road. IDOT selected this project in addition to the Peace Road intersection project.

The Plank Road improvements consisted of paved safety shoulders and general shoulder widening, ditch regrading, and improved lighting at intersections. The intersection lighting and centerline reflective pavement markers were not able to be completed due to an early winter.

William Charles Construction Co, LLC of Rockford, IL performed the work at an estimated cost of $1,758,430. The estimated cost of the project was $2,197,273. Of the total, 90% was paid using Federal Highway Safety Improvement Program Funds. The remaining 10% was paid using local Matching Tax funds.

Chastain & Associates, LLC of Schaumburg, IL performed the preliminary and design engineering for the project. Brad Hunold of the County Highway Department performed the construction inspection.
Waterman Road Shoulder & Ditch Reconstruction

The multi-year process of rebuilding the 5-mile highway between Waterman, IL and Perry Road started in 2017. In 2019, the County continued the reconstruction with a shoulder widening & ditch reshaping project.

In addition to the shoulder and ditch work, entrance pipes were replaced and a few crossroad pipes were modified. Due to the early winter, the north end of the project remains to be final graded and seeded.

Martin & Company Excavating of Oregon, IL was the contractor on this $885,403 project. The estimate of cost on the project was $1,034,476. 100% of the project was paid using County Motor Fuel Tax funds and local Matching Tax funds.

The DeKalb County Highway Department performed the preliminary and design engineering. Brad Hunold of the County Highway Department performed the construction inspection.
Base Line Road Bridge

This project included the replacement of a 60-year old bridge on Base Line Road just west of the Kane County line in Genoa Township. The 44 ft long bridge had a reduced weight limit capacity.

The new structure is 58 ft long and has a surface width of 30 ft versus the previous width of 24 ft. The project was completed and the road opened to traffic ahead of schedule.

Martin & Company of Oregon, IL was the contractor on this $613,327 project. The estimated cost of the project was $581,052. The project was paid using Federal Surface Transportation Funds (STP-Br) for 80% of the project, the local Aid to Bridges Tax fund for 10% of the project, and the remaining 10% split between the Genoa Township Road District and the Sycamore Township Road District.

Strand Associates, Inc. of Joliet, IL performed the preliminary and design engineering. Jerry Busse of the County Highway Department performed the construction inspection.
Peace Road Turn Lanes

This project created extended right turn lanes on Peace Road at the intersections with Freed Road and with Brickville Road. The turn lanes were constructed long enough to also serve as deceleration lanes. They were also offset from the Peace Road through lanes to help vehicles on the side roads see around traffic in the turn lanes.

The first part of the overall project included the widening of the aggregate road base and related earthwork. The second part of the project was the paving and striping of the new turn lanes. The first part of the project was completed in the spring while the paving occurred in late summer.

William Charles Construction Co, LLC of Rockford, IL was the contractor on the $131,734 earthwork and aggregate project. The estimate of cost was $244,958. 100% was paid using local Highway funds. Curran Contracting Company of Crystal Lake, IL was the contractor on the $164,177 paving project. The estimate of cost was $206,733. 80% was paid using Federal Surface Transportation Funds - Urban (STU) through the DeKalb-Sycamore-Cortland MPO (DSATS). The remaining 20% was paid using local Matching Tax funds.

The County Highway Department performed the preliminary and design engineering for the project. Jerry Busse of the County Highway Department performed the construction inspection.
Barber Greene Safety Shoulders and Turn Lane

This project is the paving of 4 ft paved safety shoulders along Barber Greene Road between Peace Road and Somonauk Road. The project also included the paving of a right turn lane for westbound traffic on Barber Greene Road turning north onto Peace Road. The County Highway Department prepared the aggregate base for the turn lane in 2018.

Until the proposed bike path separate from the road is completed, paved safety shoulders will eliminate the drop-off at the edge of the pavement, protect the pavement edge from cracking and breaking off, provide a safe area for drivers to regain control of their vehicle and re-enter their lane of traffic, and provide an area for cyclists to travel without being in the live lane of traffic.

Curran Contracting Company of Crystal Lake, IL was the contractor on this $153,155 paving project. The Highway Department used in-house crews to complete the aggregate shoulders outside the paved shoulders. The estimate of cost was $173,385. 80% was paid using Federal Surface Transportation Funds - Urban (STU) through the DeKalb-Sycamore-Cortland MPO (DSATS). The remaining 20% was paid using local Matching Tax funds.

The County Highway Department performed the preliminary and design engineering for the project. Jerry Busse of the County Highway Department performed the construction inspection.
Chicago Road Pipe Culverts

In the County’s Transportation Improvement Plan, Chicago Road is scheduled to be paved west of Illinois Route 23 in 2021. Prior to resurfacing a road, the Highway Department inspects the crossroad and driveway culverts to determine what needs to be replaced.

The Highway Department replaced 15 crossroad pipes in 2018 and replaced 45 driveway pipes in 2019. Just as in 2018, all work was performed using in-house labor by the Highway Department.

The DeKalb County Highway Department performed the surveying, design, and construction on this project. The cost of the pipe materials was $12,899.
Johnson Road Box Culvert

The Johnson Road box culvert in Mayfield Township Road District was built in 1955 and had a posted weight limit of 12 tons. The reduced weight limit was determined by IDOT after they did an analysis of the top slab of the box culvert and found it to be insufficient.

Instead of a complete replacement of the culvert, the County and Road District had an option to modify the top deck of the box culvert to remove the restricted weight limit. This option required a 3-week road closure instead of 3 months. It also saved approximately $300,000 of taxpayer funds.

Civil Constructors, Inc. of Freeport, IL was the contractor on this $29,571 project. The estimate of cost was $45,525. 50% of the project was paid using local County Aid to Bridges Tax funds and the remaining 50% by the Mayfield Township Road District.

Wendler Engineering of Dixon, IL performed the preliminary and design engineering. Jerry Busse of the County Highway Department performed the construction inspection.
Somonauk Road Sidewalk

This project included the replacement of deficient sidewalk and installation of new sidewalk where gaps existed along Somonauk Road in the Town of Cortland. The project also included new sidewalk along sections of Meadow Lane under the Town’s jurisdiction.

During the project, both the County and the Town increased the areas of sidewalk to be replaced. This was due to the extra deterioration which occurred during the two winters since the original plans were created.

Triggi Construction, Inc. of West Chicago, IL was the contractor on this $144,961 project. The estimate of cost was $115,782. The County’s portion of the project was $98,172. 55% was paid using County Motor Fuel Tax funds and 45% using County Matching Tax funds.

The DeKalb County Highway Department performed the preliminary and design engineering for the Somonauk Road Sidewalk project. Brad Hunold of the County Highway Department performed the construction inspection.
Township Resurfacing Projects

Each year, township road districts request the County Highway Department to prepare proposals and contracts as well as oversee construction activities. Some of these activities include hot-mix asphalt paving on subdivision streets and rural roads.

In 2019, 5 township road districts completed hot-mix asphalt paving projects throughout the County. These projects covered 5.75 miles of road at a cost of $868,453. They were paid using a combination of Township Motor Fuel Tax funds and Township local funds. The DeKalb County Highway Department prepared the plans for these paving projects and performed the construction inspection.

Seal Coat Projects

In 2019, 13 townships and 2 municipalities joined the County’s seal coat contract. Seal coat is a preventative maintenance process used to extend the life of a pavement. The County seal coated 14.7 miles at a cost of $220,090. The township road districts seal coated 38.6 miles at a cost of $729,323. The municipalities’ seal coat work cost $22,106. Brad Hunold of the County Highway Department was the resident engineer on these projects. The DeKalb County Highway Department prepared the plans for these seal coat projects and performed the construction inspection.

Rejuvenator Projects

The County also uses a liquid rejuvenator as a way to extend the life of its roads. 3 miles of County roads were sprayed at a cost of $57,082. One township road district sprayed 2.8 miles of roads at a cost of $30,982. One municipality sprayed various streets at a cost of $89,687. Jerry Busse of the County Highway Department was the resident inspector on these projects. The DeKalb County Highway Department prepared the plans for these projects and performed the construction inspection.
Crack Routing and Filling Projects

Crack filling is another preventative maintenance program used to extend the life of pavements. While the County uses in-house crews to rout and fill cracks on its roads, the townships and municipalities hire contractors to perform this work. In 2019, 5 townships had roads under this contract at a cost of $57,835. Two municipalities had streets under this contact at a cost of $10,767. Brad Hunold of the County Highway Department was the resident engineer on these projects. The DeKalb County Highway Department prepared the plans for these projects and performed the construction inspection.

Other Township Maintenance Projects

In addition to the above work, the 19 township road districts and 4 municipalities had the County prepare various maintenance contracts on their behalf in 2019. In addition to the above described projects, these included bituminous patching materials, various aggregates, calcium chloride, centerline and edge line striping, and drainage pipes. The DeKalb County Highway Department prepared the plans for these contracts.
2020 Projects

Peace Road / Mercantile Drive Resurfacing

Peace Road between Bethany Road and Illinois Route 64 is under the County’s jurisdiction and has traffic volumes ranging between 12,400 and 16,500 vehicles per day. Mercantile Drive between Illinois Route 23 and Peace Road is under the City of Sycamore’s jurisdiction and has traffic volumes ranging between 5,800 and 6,600 vehicles per day. Both roads are showing distress from the heavy traffic, particularly along the pavement joints between the lanes.

In 2020, both of these road segments are scheduled to be resurfaced. At the north end of this section of Peace Road, a new Meijer store is expected to open in late spring. To avoid performing construction during the opening months of business, the contractor will be instructed to start work later in the summer.

The estimated cost of the project is $1,362,384 with $987,079 being DeKalb County’s responsibility and $375,305 being the City’s responsibility. The project will be funded 80% using Federal Surface Transportation Funds - Urban (STU) through the DeKalb-Sycamore-Cortland MPO (DSATS). The remaining 20% will be split by the County using local Matching Tax funds and the City using local property tax funds.

McNeal Road Bridge

The McNeal Road bridge northwest of Kirkland in Franklin Township is the last bridge over the Kishwaukee River before it leaves DeKalb County. The 196 ft long bridge was built in 1978 and has significant section loss in the precast prestressed box beams which make up the bridge deck. This has caused the bridge to be posted at a maximum weight limit of 5 tons.

In 2020, the bridge is scheduled to be replaced with a cast-in-place concrete deck bridge. The estimated cost of the project is $2,602,356 with 80% paid using Federal Surface Transportation Funds (STP-Br) and the 20% local match to be split between the County’s local Aid to Bridges Tax fund and the Franklin Township Road District.
Motel Road Bridge

The Motel Road bridge on the west side of Sycamore has been the primary detour route when the intersection of Peace Road at Illinois Route 64 has been closed due to a crash. The bridge was built in 1982 has has experienced movement in the deck. This may have contributed to the advanced deterioration in the precast prestressed box beams which make up the bridge deck.

The 125 ft long bridge is scheduled to be replaced in 2020 with a new bridge comprised of a poured concrete deck on steel I-breams. The estimated cost of the project is $1,329,557 with 80% paid using Federal Illinois Special Bridge Funds and the 20% local match to be split between the County’s local Aid to Bridges Tax fund and the Mayfield Township Road District.

South First Street Box Culvert Replacement

The concrete box culvert under South First Street at the intersection with Gurler Road carries the Afton DeKalb Drainage Ditch No 5 and is scheduled to be replaced in 2020. The drop-offs at the ends of the structure are close to the intersection requiring guardrail along both South First Street and Gurler Road. The structure is skewed at an angle under South First Street but still directs water into the residential property on the downstream side.

The new box culvert will be extended to provide for wider roadway shoulders and safe foreslopes, thus eliminating the need for guardrail. It will also be realigned with a concrete outlet to redirect the water down the ditch as it leaves the culvert. The estimated cost of the project is $577,763 and is budgeted to be paid using the County’s local Aid to Bridges Tax fund.

Somonauk Road Box Culvert Extensions

This project is the extension of seven culverts under Somonauk Road and one culvert under Perry Road. Six of the culverts under Somonauk Road are located in the 2-mile stretch between Perry Road and Keslinger Road. These locations have steep foreslopes outside the roadway shoulders. The other culvert under Somonauk Road is located immediately south of Barber Greene Road. The culverts will be extended to widen the roadway shoulders and eliminate guardrail at that location. The last location is approximately ¼ mile east of Somonauk Road on Perry Road. This structure will be extended to eliminate a steep slope on one side of the road and eliminate the need for guardrail on the other side of the road.

Over 30,000 cubic yards of fill material was stockpiled on property owned by DeKalb County during the recent I-88 Tollway construction project. That material has been made available to backfill the culvert extensions and provide better slopes along Somonauk Road.

The estimated cost of the project is $400,000 and is budgeted to be paid using a combination of the County Motor Fuel Tax and local Aid to Bridges Tax fund.
Suydam Road Culverts

Similar to the culvert replacements along Chicago Road in 2018 & 2019, the County Highway Department expects to replace the culverts along Suydam Road between Illinois Route 23 and the City of Sandwich. The culvert work is in anticipation of the road being repaved in 2021.

The Highway Department is planning to use in-house labor and equipment to replace 11 crossroad pipe culverts and 22 entrance pipe culverts.

Bridge Timber Pile Repairs

Periodically, the County Highway Department prepares and oversees repairs to bridges to remove weight limit postings. Many times the weight limits are in place due to the poor condition of timber piles supporting the bridges. In 2020, two bridges are scheduled for repairs: Haumesser Road north of Perry Road and Anderland Road south of Perry Road.

For this type of project, the County works directly with the IDOT Bridge Office in Springfield to create a set of plans for the work. The cost of the project is estimated to be $120,000 and will be split between the County’s local Aid to Bridges Tax fund, the Milan Township Road District, and the Afton Township Road District.

New Salt Storage Shed

In typical years, the County Highway Department uses between $½ million and $1 million for rock salt to be used in our winter snow & ice removal operations. In some winters, when Mother Nature gives us storm after storm, salt deliveries can be delayed if every other public entity is ordering salt at the same time. During particularly cold winters, salt deliveries via barges can be halted if the river completely freezes over.

In 2020, the Highway Department is planning to construct another salt shed to double our storage capacity. This will allow us to enter into the winter season with nearly all the salt we can expect to use. The project is expected to cost $260,000 and be paid from the County Farm Fund and the Highway Department’s R & R Highway Facilities Fund.
Highway Department Funding Levels

Fiscal Year

Property Tax Levy or State Distribution of MFT

Highway
Aid to Bridges
Motor Fuel Tax
Federal Hwy Match