



# Bridge And Structure Asset Management Report – Volume 1

## FINAL

City of Waukegan, Illinois



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## **1.0 INTRODUCTION**

The following report contains data for the bridges and culverts indicated as maintained by the City of Waukegan. The data are analyzed and organized for planning purposes for maintenance, repair, rehabilitations and capital improvements for a ten-year period that goes from 2018 to 2027. A proposed Asset and Program Management is part of this report. The database attached to this report is an updateable tool that the City can use to plan Capital Investment and Asset Management for the structures that they are currently responsible for in the years to come. The data collected are based on the recent bridge and culvert inventory and inspections performed by Ciorba Group in 2017 for the City of Waukegan, based on our previous knowledge and data collection performed in coordination with Public Work in 2017.

The City of Waukegan currently has jurisdiction and maintains the following bridges in the NBIS system:

- 049-0150 Belvidere Street over UPRR
- 049-0151 Market Street-IL 120 Ramps over unused land
- 049-2050 Grand Avenue over UPRR
- 049-8000 Genesee Street over Waukegan River
- 049-9952 Greenwood Avenue over UPRR

Other structures over 20 feet in the NBIS system include the following:

- 049-0453 Grand Avenue Culvert at Waukegan River – IDOT Maintenance
- 049-0452 Belvidere Road Culvert at Waukegan River – IDOT Maintenance
- 049-0652 Bowen Park Pedestrian Bridge over Sheridan Road at Parmalee

The culvert that we reviewed as part of our effort are listed below. Only two are currently in the NBIS system. We identified the culvert by a C- # number including those with an NBIS number, following is the complete list:

- C-1. Cummings Avenue Culvert at SB Waukegan River
- C-2. Lincoln Avenue Culvert at SB Waukegan River
- C-3. George Avenue Culvert at SB Waukegan River
- C-4. Jackson Street Culvert/Tunnel at SB Waukegan River
- C-5. Belvidere Road Culvert at Waukegan River (SN 049-0453)
- C-6. Pershing Road Culvert at Waukegan River
- C-7. Sheridan Road Culvert at Waukegan River
- C-8. County Street Culvert at Waukegan River
- C-9. Martin Luther King Drive Culvert at Waukegan River
- C-10. Water Street Culvert at Waukegan River
- C-11. Washington Street Culvert at Waukegan River
- C-12. Jackson Street Culvert at Waukegan River
- C-13. Mc Clory Bike Path Culvert at Waukegan River
- C-14. Butrick Street Culvert at Waukegan River
- C-15. Grand Avenue Culvert at Waukegan River (SN 049-0453)
- C-16. New York Street Culvert/Tunnel at TBD
- C-17. Lewis Avenue Culvert at TBD
- C-18. Sheridan Road Culvert, E of Golf Course at TBD

The proposed “Bridge and Culvert Asset and Program Management 10-Year Plan” includes preliminary engineering recommendations and preliminary cost estimates for all structures, and investigates currently available sources of funding through currently

available programs administered by IDOT. This report also includes a suggested timeline for future maintenance and capital investments.

## **2.0 EXECUTIVE SUMMARY**

This report details the 10-year Asset Management plan for the City of Waukegan to maintain and improve 6 Bridges and 18 Culverts. This report provides a maintenance and improvement schedule for the entire City inventory of bridges and culverts.

For the bridge included in this plan we propose and report cost for the following scope:

- The Belvidere Road bridge is proposed to have its deck replaced with some other repairs under an ongoing federally funded contract, currently in Phase I. As part of this contract, we will investigate the possibility of a Jurisdictional Transfer to the State to reduce City' long term cost.
- Market Street Bridge is proposed to be re-decked from spans 1 to 8 and completely removed from spans 9 to 12. We will try to secure federal funding for this as part of the Belvidere project or independently
- The Greenwood Avenue bridge over UPRR will be proposed for federal funding for rehabilitation / replacement. If the funding is granted, we will also study the potential removal of the bridge or a Jurisdictional Transfer to the State.
- The Genesee Street Bridge was already proposed for rehabilitation as part of an approved federally funded Phase I study. We are proposing to restart the project by requesting funding for review of Phase I, completion of Phase II and construction.
- The Grand Avenue (Mathon Drive) bridges has been recently rehabilitated and will be only subject to inspection and general maintenance in the next 10 years.
- The Pedestrian bridge will be painted and rehabilitated with City funds.

This report includes all 18 culverts listed above. The types of culverts include Reinforced Concrete (RC) Box, RC Arch, RC Pipe, Corrugated Metal Pipe (CMP), Corrugated Plastic Pipe (CPP), and Stone Arch. Ciorba Group recommends replacement of 2 culverts and rehabilitation of 16 culverts based on a rating key, which subjectively measures the deterioration of different elements of the structure. Certain culverts are recommended for detailed inspection before any repairs due to their inaccessibility and long barrel lengths. Some culverts are part of the NBIS system some may qualify for being part of it.

The schedule for the financial plan is dictated by the bridge improvements because they can be funded through the federal STP-BR program, which has a timeline dictated by the State process. The proposed culvert program is used to even out the costs borne by the city over next 10 years. Genesee Street over Waukegan River is one of the costliest items and sits in the middle of the program. City will bear 100% costs for 16 culverts under its jurisdiction, and for the pedestrian and the Grand Avenue bridges. The proposed plan is only an initial recommendation and will be adjusted to the City budgetary constraints and the need to maintain structures for next 10 years.

### **3.0 FUNDING**

Following are the funding opportunities that the City of Waukegan can pursue for the bridge improvements:

Surface Transportation Program for Highway Bridge Program STP-BR - The Program provides federal funds for bridges which are structurally deficient and/or functionally obsolete and have a sufficiency rating of 80 or less. Under this program, 80% of the engineering and construction costs will be covered by federal funds. The funding covers the cost of bridge repairs and rehabilitations and related improvements to the approach roadway on each side of the bridges.

Congestion Mitigation and Air Quality (CMAQ) - The Congestion Mitigation and Air Quality funds projects and programs that are designed to help meet the standards of the Clean Air Act for air quality. Under this program 80% of the engineering and construction costs will be covered by federal funds.

Bicycle Facilities - The implementation of bicycle path on an existing structure may be authorized for federal aid participation under certain circumstances.

Motor Fuel Tax (MFT) - Motor Fuel Tax dollars may provide funding to cover the City share of funding for the purpose of improving, maintaining, repairing, and constructing highways and appurtenant structures. These funds can be used for the local agency match on a federal aid project.

### **4.0 BRIDGE STATUS AND FUNDING ELIGIBILITY**

The bridges and culverts under the NBIS system are eligible for federal funding for rehabilitation or replacement if they have a sufficiency rating below 80. It is normally assumed that a structure with a sufficiency rating below 50 qualifies for replacement. Structures with a sufficiency rating between 50 and 80 may still qualify for replacement or rehabilitation under the federal STP-BR program or fall in the general maintenance category, not funded by the program.

We have collected NBIS data for all the bridges and culverts that currently fall under the City of Waukegan to see which ones qualify for federal funding through the STP-BR program. In the table below, we also list the potential scope of work based on the Sufficiency Rating (SR), the Load Posting for bridges that don't meet required loading capacity, the date of the latest inspection and the inspection and reporting interval listed in the database.

S.N.	Bridge/Culvert Identification	SR	Federal Funding Eligibility				Posting	Report time	
			STP-BR	Eng.	Rehab	Repl.		Latest	Interval
049-0150	Belvidere Street over UPRR	79.5	Y	Y	Y	TBD	None	10/03/2017	24 mos
049-0151	Market Street-IL 120 Ramps over unused land	77.3	Y	Y	Y	TBD	None	10/03/2017	24 mos
049-2050	Grand Avenue (Mathon Dr.) over UPRR	92.5	N	N	N	N	None	7/8/2016	24 mos
049-8000	Genesee Street over Waukegan River	21.3	Y	Y	Y	Y	4 ton	10/03/2017	24 mos
049-9952	Greenwood Avenue over UPRR	38	Y	Y	Y	Y	Legal	7/8/2016	24 mos
049-0453	Grand Avenue Culvert at Waukegan River, C-15	81	N	N	N	N	N/A	2/17/2017	72 mos
049-0452	Belvidere Road Culvert at Waukegan River, C-5	71	Y	Y	Y	?	N/A	3/4/2015	48 mos
049-0652	Bowen Park Pedestrian Bridge over Sheridan Road at Parmalee	N/A	N/A	N/A	N/A	N/A	N/A	10/03/2017	24 mos

Funding through the STP-Bridge Program should be pursued as the main source of funding for the repairs to the bridges in the NBIS database. The program is administered by IDOT and any rehabilitation, replacement and repair to be funded with the 80/20 federal/local share, follow the IDOT requirements that consists of these steps:

- Request for funding – based on a preliminary anticipated scope of work and cost is submitted by the City to IDOT District One Bureau of Local Roads and Streets BLR&S. Typically, the request is approved based on the SR in 1-2 months from the submittal of the request. The request includes an anticipated scope of work and a preliminary cost estimate for engineering and construction.
- Phase I Preliminary Engineering – The City selects a consultant following Quality Based Selection criteria. The preliminary scope and fee is negotiated and approved by the City and then submitted to IDOT for review and approval for 80/20 funding participation. It normally takes 6-8 months to receive an approved agreement by IDOT and 14-18 months to complete Phase I and obtain Design Approval (DA).
- Phase II Final Design – Similar to Phase I, scope and fee are first negotiated with the City and the agreement submitted to IDOT District One BLR&S for approval after DA is granted for the Phase I report. The agreement approval process through takes 6-8 months after Phase DA.

The City can use its own funds or MFT dollars to cover the 20% share of a federally funded project. The normal process is that the City pays the expenses and applies for state refund. If after Phase I IDOT establish that a bridge only requires maintenance and small repairs the engineering and construction cost is responsibility of the City. The City can still obtain reimbursement for the previously authorized federally funded Phase I Engineering.

Ciorba can assist the City in the preparation of funding applications for inclusion in the IDOT bridge program for funding of local agency structures that qualify for federal funding through the Surface Transportation Program for Bridges STP-BR, managed by District One BLR&S.

## **5.0 PROPOSED 10 YEAR BRIDGE ASSET AND PROGRAM MANAGEMENT PLAN**

We performed field visits, data collection, and prepared preliminary engineering to determine the anticipated scope of work for each bridge and culvert to prepare a preliminary cost analysis for bringing each of the five (5) bridges, the pedestrian bridge and the eighteen (18) culverts to a state of good repair in the next 10-year period: 2018-2027. The goal of this plan is to provide an indication of the work required so that the City of Waukegan will have budgeting information for the next ten years.

The spreadsheet attached as **Exhibit A** shows all available culvert condition information as collected and put in the new City inventory. Attached as **Exhibit B** are the most recent printouts of the NBIS database for the five (5) highway bridges one (1) pedestrian bridge and two (2) culverts in the state system including current condition information collected by the City's Program Manager.

Through a review of the available data and additional collected data for the field inspections conducted by our NBIS qualified bridge inspection we prepared an analysis of proposed repair, rehabilitation or replacement of each structure. We performed a cost analysis using current construction costs and based on it formulate a possible capital improvement / maintenance plan over the specified ten-year period. We assume that the City will put in place a 10-year all-inclusive capital plan with the intent to complete all improvements in this timeframe. Time priorities were established based on the condition of the structures and the availability of federal funding for the bridges that qualify for it through the current STP-BR program.

The plan can be updated periodically after new data are collected through inspections and could then be used by the City as a planning tool for Capital Investment and Asset Management in the years to come. The plan could also be changed to identify a minimum level of expenditure to maintain the structures to a level that is below what is considered a state of good repair.

We have also included the estimate of cost for all the bridges and culverts for the following items:

1. Routine inspections. The five highway bridges and the pedestrian bridge are currently on a 24- month inspection schedule per NBIS mandate. Four bridges are on an "odd year" schedule and two are on "even year" schedule. The next inspections will have to be performed in 2018. Usually this service is performed by consultants qualified per IDOT and National Bridge Inspections Standards Regulation (NBIS) standards adopted by the Federal Highway Administration. We have also identified an inspection schedule for the culverts. Currently only two culverts are in the NBIS system: one is on a 48-month schedule and one on a 72-

- month schedule for routine inspection. We have divided the entire inventory of 18 culverts in two inspection groups, Group A and Group B and prepared a schedule of inspection based on initial "in-depth" baseline inspection to be performed in 2018 for Group A and in 2019 for Group B and then a routine inspection for each culvert on a 48-month schedule. We recommend the culvert inspection work to be performed by a NBIS certified inspector, that is based on the observation that several of the culverts present some complexity.
2. Basic Maintenance. We have assumed that these costs can be included in the regular duties of the Public Works staff an indication of required maintenance is specified on a per bridge basis in this report. Timely performance of this maintenance can reduce overall cost. We assumed that this routine maintenance will be performed at least every two years by City's crews and therefore we have not included this cost in our analysis.
  3. Special Maintenance. We have estimated cost of special maintenance item that have to be performed independently and prior to the repairs that may have to be planned for a later time due to funding opportunities. The special maintenance could be either directly performed by City's staff or by outside contractors.
  4. Repairs, rehabilitations and reconstruction. These costs are the capital improvement part of the plan. We have estimated cost of all the repairs and rehabilitation for all the bridges and culverts. We have proposed a timeline for the investments based on funding procedure, City input and with the idea of smoothing out City funding along the entire ten-year time frame.

The cost estimates and prepared using current (2017) construction costs with a yearly compounded inflation rate of 3% for the following years.

Other assumptions are:

- No Right of Way acquisition is expected for any of the repairs and rehabilitations
- Phase I, Phase II and IDOT contract authorization are required when federal funding is pursued.
- Culverts rehabilitations or replacements are not covered by federal funding and the culvert program is entirely supported with City funds. Design and construction engineering will be still performed by consultants.
- Recommendations for funding are based on the latest available NBIS inspections and records
- The work timeline is compatible with the 2018-2027 City of Waukegan "Infrastructure Improvement Plan"

The proposed plan has been designed around the available federal funding for the bridges: other than the newly rehabilitated Grand Avenue bridge, the pedestrian bridge, and the two culverts longer than 20 feet that are currently in the NBIS system and are under IDOT jurisdiction and maintenance responsibility, the other structures in the NBIS system currently under City jurisdiction all qualify for federal funding for rehabilitation or replacement.

All the cost estimates for the bridges are attached in **Exhibit C**, which includes the following:

- A ten-year plan timeline with plan for inspection, Phase I and Phase II engineering for bridge, design for culverts, construction and Phase III engineering for bridge and culverts.
- A summary of all estimated cost for culverts and bridges.
- Financial projections for the City share and the federal share.
- Financial projections for all the costs for the plan in 2017 dollars and adjusted for inflation.

A bar chart schedule of the proposed is also included as **Exhibit D**.

The above data are also summarized in **Exhibit E**: bar chart with yearly costs for bridges, culverts and total cost, and **Exhibit F**, which compares federal and City shares per year.

## **6.0 WEIGHT/LOAD LIMIT REVIEW AND ANALYSIS**

The City so far has not requested to identify any structures as potentially be included in a truck route that can accommodate 80,000 trucks. The bridge shall be rated for the code recommended loads.

## 7.0 **BRIDGES B1-B6: PROPOSED PLAN**

Following is an abbreviated report of our findings and proposed scope of work and strategy for each bridge part the City of Waukegan 10-year plan. Culvert photos are attached as **Exhibit G**.

**B-1: Belvidere Street over C&NW Railroad and Illinois Route 137 (Amstutz Expressway)**

Structure No. 049-0151 carries four (4) traffic lanes of Belvidere Street over the Illinois Route 137 (The Amstutz Expressway) in the Waukegan Township, Lake County, Illinois.

The bridge is a two-span continuous structure with a length of 157'-10". The span lengths are each 78'-11", measured between centerlines of bearing at the abutment and centerlines of piers. The out-to-out bridge deck width is 66'-0".

The superstructure consists of eleven (11) steel plate girders with flange cover plates. The bridge deck is a 7" cast-in-place reinforced concrete slab with no overlay. The bridge has aluminum handrails mounted on 1'-6" high concrete parapets along the north and south edges of the deck. The superstructure is fixed at Pier 2. The bridge deck drains to shoulder drains located at the west end of the bridge approach. Guardrail is present at the corners of the west end of the bridge. There are utilities attached to the bridge superstructure.

The superstructure is supported by a reinforced concrete high wall abutment at the west end, and reinforced concrete multi-column piers. The substructure is supported on spread footings. Reinforced concrete wingwalls are located at the ends of the West Abutment.

The bridge is on a tangent horizontal alignment and constructed with no skew. The profile is a crest vertical curve with a +7.0% arriving gradient, a -7.0% departing gradient and the PVI located near the middle of the bridge. Observations noted during the field visit include the following:

- The bridge deck is in poor condition. The deck underside had a significant amount of delaminated areas, leeching cracks, and isolated spalled areas with exposed reinforcement. The wearing surface of the deck had severe spalling throughout the length of the bridge.
- The superstructure is in fair condition with significant bearing and beam end deterioration below the expansion joints; Widespread paint failure has led to steel corrosion and section loss initiated in the beam webs near the bridge ends and in the bottom flanges near the mid-span locations
- The West Abutment and East Pier beneath expansion joints are both in poor condition with widespread spalling with exposed reinforcement, leeching cracks and delaminations.
- The southwest wingwall has several vertical cracks

Notes for 10-year plan

- The bridge currently qualifies for federal funding with the STP-BR and is currently under a recently re-started Phase I to be completed by October 2018. The recommended scope of work is deck replacement, with structural steel and substructure repairs. No significant roadway and geometric improvements are anticipated.
- Given the fact that Belvidere Road is a State route that ends at bridge west abutment, we recommend the City to coordinate a Jurisdictional Transfer, at the completion of the construction work. This will relieve the City for future obligation for maintenance, repair and future rehabilitation. We will also investigate the possibility of having the State cover the 20% share for funding not covered by the federal program. Construction is planned for 2020. There are no items that need to be repaired at this time. The proposed scope of work is subject to IDOT and

Bureau of Bridges and Structure (BB&S) approval of the BCR, that will be submitted in 2017.

Maintenance Items

- Clean the joints at either end of the bridge deck periodically to prevent dirt and debris from further eroding the joint systems. When these areas are clogged with debris, water tends to collect and deteriorate the bridge joints faster thus causing damage in other parts of the bridge.

### **B-2: Market Street over Unused Land**

Structure No. 049-0150 carries two (2) traffic lanes of Market Street over unused land in the Waukegan Township, Lake County, Illinois.

The bridge is a thirteen-span structure with a length of 832'-0" consisting of three (3) groupings; each with three (3) continuous spans. The span lengths are 62'-11" in Spans 1 and 13, and 63'-9" in all other spans, measured between centerlines of bearing at the abutments and centerlines of piers. The out-to-out bridge deck width is 37'-0".

The superstructure consists of six (6) precast prestressed concrete beams. The bridge deck is a 7" cast-in-place reinforced concrete slab with no overlay. The bridge has aluminum handrails mounted on 1'-6" high concrete parapets along the east and west edges of the deck. The superstructure is fixed at Piers 2, 5, 8, and 11. The bridge has floor drains spaced at 6'-0" centers along the east and west edges of roadway. Guardrail is not present at the corners of the bridge.

The superstructure is supported by a reinforced concrete counterfort wall abutment at the north end, a reinforced concrete pile bent abutment at the south end, and reinforced concrete hammerhead piers. The substructure is supported on spread footings, except at the South Abutment; which is supported on timber piles. Reinforced concrete wingwalls are located at the ends of the abutments. Reinforced concrete slope walls line the east and west slopes between the abutments and Piers in Spans 1 and 13. There are utilities attached to the bridge substructure.

The bridge is on a tangent horizontal alignment and constructed with no skew. The profile is a crest vertical curve with a +7.0% arriving gradient, a -7.0% departing gradient and the PVI located near the middle of the bridge. Observations noted during the field visit include the following:

- The bridge deck is in poor condition. The deck underside had widespread delaminated areas (mostly in the outside beam bays), spalled areas with exposed reinforcement, and leeching cracks. The wearing surface of the deck had significant spalling at the south half of the bridge and moderate spalling throughout the remaining bridge length
- The superstructure is in fair condition with significant spalling of concrete diaphragms above piers with expansion joints above; Significant spalling was also noted at beam ends with exposed prestressing strands beneath bridge expansion joints; Isolated spalling with exposed prestressing strands was noted within the center half of spans
- The deterioration of the superstructure was likely aided by the presence of the floor drains, which have been patched over
- The piers beneath expansion joints are in poor condition with widespread spalling with exposed reinforcement

#### Notes for 10-year plan

- The bridge currently qualifies for federal funding, but is not currently programmed to be studied under the STP-BR program. The use of the ramp south of Belvidere is limited. A possible scope of work will be to replace the deck and repair the substructure of the ramp north of Belvidere and remove the ramp south of Belvidere.
- This scope could be discussed with IDOT for inclusion in the Phase I study for the Belvidere Road Bridge. The City could maintain jurisdiction over the north portion

of the bridge and reduce the overall future maintenance cost by removing the south portion of the bridge. The improvement can be completed under the STP-BR program with 80% federal funding.

Maintenance Items

Clean the joints at either end of the bridge deck periodically to prevent dirt and debris from further eroding the joint systems. When these areas are clogged with debris, water tends to collect and deteriorate the bridge joints faster thus causing damage in other parts of the bridge.

#### **B-4: Grand Avenue (Mathon Drive) over Union Pacific Railroad**

Structure No. 049-2050 carries four (4) traffic lanes of Mathon Drive over the Union Pacific Railroad in the Waukegan Township, Lake County, Illinois

The bridge is a four-span continuous structure with a length of 342'-2". The span lengths are 53'-0" in Span 1, 92'-0" in Span 2, 128'-0" in Span 3, and 64'-0" in Span 4, measured between centerlines of bearing at the abutments and centerlines of piers. The out-to-out bridge deck width is 70'-10".

The superstructure consists of twelve (12) weathering steel plate girders. The bridge deck is an 8" cast-in-place reinforced concrete slab with no overlay. The bridge has decorative parapet railing mounted on 2'-10" high concrete parapets with aesthetic form lined surfaces along the north and south edges of the deck. The superstructure is fixed at Pier 2. The bridge deck drains to shoulder drains at the end of the west approach slab. Guardrail is present at all but the southeast corner of the bridge. There are embedded utilities in the parapets.

The superstructure is supported by a reinforced concrete pile bent abutments and reinforced concrete multi-column piers. The substructure is supported on concrete piles. Reinforced concrete wingwalls are located at the ends of the abutments. Reinforced concrete slope walls line the east and west slopes between the abutments and Piers in Spans 1 and 4.

The bridge is on a tangent horizontal alignment and constructed with no skew. The profile increases in elevation toward the east end of the bridge. Observations noted during the field visit include the following:

- Given the recent reconstruction, no defects were noted

#### Notes for 10-year plan

- The bridge currently does not qualify for federal funding it is a newly constructed structure that will not require any expense other than for regular routine inspection in the next ten years.

#### Maintenance Items

Clean the joints at either end of the bridge deck periodically to prevent dirt and debris from further eroding the joint systems. When these areas are clogged with debris, water tends to collect and deteriorate the bridge joints faster thus causing damage in other parts of the bridge

### **B-3: Genesee Street over the Waukegan River**

Structure No. 049-8000 carries four (4) traffic lanes of Genesee Street over the Waukegan River in the Waukegan Township, Lake County, Illinois.

The bridge is a three-span concrete arch structure with a length of 370'-10". The end span lengths are each 100'-0" and the center span length is 110'-0". The out-to-out bridge deck width is 64'-0".

The superstructure consists of five (5) concrete arches, cross beams and columns. The bridge deck is a 25" thick cast-in-place reinforced concrete slab with no overlay. The bridge has aluminum handrails mounted on 2'-4" high concrete parapets along the east and west edges of the deck. The bridge deck has floor drains. There are utilities attached to the bridge superstructure.

The superstructure is supported by pile-supported spill-through vaulted abutments at the ends and reinforced concrete piers on spread footings. Reinforced concrete curtain walls enclose the abutment spans.

The bridge is on a tangent horizontal alignment and constructed with no skew. The profile is a crest vertical curve with a +2.3% arriving gradient, a -1.5% departing gradient and the PVI located near the middle of the bridge.

Observations noted during the field visit include the following:

- The bridge deck is in poor condition. The deck underside had a significant amount of delaminated areas, leeching cracks, and isolated spalled areas with exposed reinforcement. The wearing surface of the deck had widespread longitudinal and transverse cracks and moderate scaling throughout the length of the bridge. The deck joints showed signs of gland abrasion and tares with adjacent spalling along the joints.
- The superstructure is in serious condition with widespread concrete deterioration and exposed reinforcement on the bridge's primary members
- The abutments were inaccessible due to fill placement in the abutment spans. The piers were in poor condition with large areas of leeching cracks and spalled or delaminated concrete

#### Notes for 10-year plan

- A Phase I study was completed for this bridge and Design Approval obtained for a full scope rehabilitation of the bridge using federal funding. We recommend proceeding with final design in 2022 after reinstating the request for funding. The process may require a revision to Phase for environmental documentation, inspection of the bridge and eventually hydraulic analysis. Data from the previous study can be used, but the proposed solution will be re-assessed. We propose a later start given the overall cost of the bridge.

#### Maintenance Items

Clean the joints at either end of the bridge deck periodically to prevent dirt and debris from further eroding the joint systems. Verify erosion of the slopes and clear vegetation.

### **B-5: Greenwood Avenue over Union Pacific Railroad**

Structure No. 049-9952 carries four (4) traffic lanes of Greenwood Avenue over the Union Pacific Railroad in the Waukegan Township, Lake County, Illinois.

The bridge is a three-span continuous structure with a length of 160'-0". The span lengths are 45'-0" in Span 1, 70'-0" in Span 2, and 45'-0" in Span 3, measured between centerlines of bearing at the abutments and centerlines of piers. The out-to-out bridge deck width is 80'-0".

The superstructure consists of twelve (12) steel plate girders. The bridge deck is a 7 ½" thick cast-in-place reinforced concrete slab with no overlay. An open longitudinal joint was noted along the length of the deck through a raised concrete median. The bridge has aluminum handrails mounted on 1'-6" high concrete parapets along the north and south edges of the deck. The bridge deck has floor drains at approximately 6' spaces along the length of the bridge. Guardrail is present at all corners of the bridge.

The superstructure is supported by a reinforced concrete pile bent abutments and reinforced concrete multi-column piers. Reinforced concrete slope walls line the east and west slopes between the abutments and Piers in Spans 1 and 3.

Because Ciorba does not have access to the record plans for this structure, substructure foundation type, bridge alignment and profile data, and the presence of utilities on the bridge are all unknown.

Observations noted during the field visit include the following:

- Paint failure on the beams and the poor joint condition at the abutments has accelerated the deterioration of the superstructure. The beams are in critical condition with severe corrosion at beam ends at west abutment. Complete web section loss in the webs of 3 beams, and crushing of the web in Beam 5 was noted. The West Abutment bearings have been removed and temporary wooden blocks are in-place.
- The bridge deck is in poor condition with leeching transverse and longitudinal cracks throughout the majority of the deck soffit and significant spalling with exposed reinforcement bars around floor drains. Additionally, greater than 40% of top surface at bridge deck spalled or delaminated. Delaminated concrete beneath the open longitudinal joint.
- Significant slope wall undermining was observed beneath the north and south deck edges in Spans 1 and 3. Collapse at the south end of the west slopewall has exposed 2-3 piles under west abutment.

#### Notes for 10-year plan

- We recommend preparing a request for funding for the bridge through the STP-BR program in early 2018. Given the condition of the bridge it is advisable to act on this rehabilitation or replacement. This timeline will allow to plan construction in 2020. As part of the Phase I study we recommend looking into a Jurisdictional Transfer to the State and a complete removal of the bridge based on the fact that many facilities in the area it serves have been recently repurposed. The cost of the full replacement was included in this plan.

#### Maintenance Items

Clean the joints at either end of the bridge deck periodically to prevent dirt and debris from further eroding the joint systems. Verify erosion of the slopes and clear vegetation.

### **B-6: Pedestrian Bridge over Sheridan Road**

Structure No. 049-6052 carries a pedestrian way for Bowen Park over Sheridan Road in the Waukegan Township, Lake County, Illinois.

The bridge is a single-span structure with a length of 79'-0". The span length is 65'-11". The out-to-out bridge deck width is approximately 6'-0".

The superstructure consists of a box truss composed of steel angle members. The bridge deck is an open steel grating. There are double-flight staircases, supported by steel frames, at each end of the bridge. The bridge has welded steel pipe handrails along the north and south edges of the deck and sides of the staircases.

Guardrail shields the substructure at the east end of the bridge. Concrete footings extend 3'-0" above ground and support the steel members which support the staircases and truss.

Chain link fencing surrounds the sides and top of the truss along the length of the bridge. Chain link fencing was also present along the sides of the staircases.

Observations noted during the field visit include the following:

- Paint failure and minor surface rust on a majority of the structure surfaces
- Bolts missing in scattered locations at stairway railing posts, however intermittent welds have not failed

A single bent angle member at the southwest corner of the bridge beneath the middle landing of the west staircase.

#### Notes for 10-year plan

We recommend cleaning and painting the structural steel and perform minor steel repairs to the railing, the open grate deck and other minor items noted in the in-depth inspections.

#### Maintenance Items

- Clear vegetation close to the bridge.

## 8.0 CULVERTS C-1 – C-18: PROPOSED PLAN

Following is an abbreviated report of our findings and proposed scope of work and strategy for each culvert part the City of Waukegan 10-year plan. Culvert photos are attached as **Exhibit H**.

### C-1: Cummings Avenue Culvert

The structure is located near the south end of a tributary to the South Branch of the Waukegan Ravine between South Jackson Street and South Lincoln Avenue and carries storm water from south-to-north beneath Cummings Avenue. This culvert is composed of a single-cell, reinforced concrete arch measuring 8' (W) x 5' (H) x 60' (L) with reinforced concrete headwalls and wingwalls at each end. The culvert has a natural bottom. The wingwalls are oriented parallel to Cummings Avenue. The structure lies beneath less than 5' of fill. The roadway above the culvert carries two (2) traffic lanes for a width of approximately 26'-0" and a 5'-6" wide sidewalk along the south side of Cummings Avenue. Steel pipe railings are located on each headwall and guardrail is present along the north side of Cummings Avenue above the culvert. Roadway drainage structures transmit storm water into the culvert from above.

Observations noted during the field visit include the following:

- A fallen tree at the north end of the culvert which now rests on the pipe railing above the north headwall
- Moderate scaling and spalling of the headwalls and wingwalls at the south end
- Leeching efflorescence on the headwall and wingwalls at the north end of the culvert
- Spalling surrounding cored barrel inlets from roadway drains
- No signs of significant erosion or scour

No signs of waterway obstruction and culvert is functioning properly

### Notes for 10-year plan

- The suggested scope includes removal and replacement of culvert's wingwall and headwall at both ends. The spalled cored barrel is proposed to be rehabilitated by concrete patching which amounts to roughly 20% of the culvert barrel surface area.

### Maintenance Items

- Stabilize the surrounding fill. Removal of fallen tree and debris to keep the channel clear.

### **C-2: Lincoln Avenue Culvert**

The structure is located where the south branch of the Waukegan Ravine crosses South Lincoln Avenue between Helmholtz Avenue and George Avenue. The culvert carries storm water from west-to-east beneath South Lincoln Avenue. This culvert is composed of three (3) reinforced concrete pipes measuring 6' diameter x 138'-6" long (south pipe), 7' diameter x 121'-0" long (middle pipe), and 7' diameter x 121'-0" long (north pipe). The culvert has no headwalls or wingwalls at the ends. The structure lies beneath approximately 10' of fill. The roadway above the culvert carries three (3) traffic lanes for a width of approximately 36'-0" and a 5'-0" wide sidewalk along the east side of Lincoln Avenue. Guardrail is present along the east side of Lincoln Avenue above the culvert.

Observations noted during the field visit include the following:

- Deflected guardrail above the east end of the culvert
- Moderate scaling and shallow spalling of the reinforced concrete pipes
- Pipe joint separation at the west end of the north pipe
- Pavement and sidewalk distress above culvert
- Significant amounts of trash and debris above and around culvert ends
- Signs of significant erosion at pipe ends leaving lengths of pipe completely exposed
- The culvert is functioning properly, however debris accumulation near the culvert openings and unstable debris on sloped embankment is a concern

### **Notes for 10-year plan**

- The 3-cell Reinforced Concrete (RC) Pipe culvert is recommended to be removed and replaced with a new 3-cell RC Pipe culvert due to non-functioning and deterioration of the existing pipe barrels. The existing culvert may be rehabilitated at lesser costs. However, the higher maintenance cost and an eventual replacement makes it cost effective to replace the culvert upfront. roadway rehabilitation and stabilization of channel slope will be part of the proposed replacement.

### **Maintenance Items**

- Stabilize the surrounding fill. Removal of fallen tree and debris to keep the channel clear.

### **C-3: George Avenue Culvert**

The structure is located where the south branch of the Waukegan Ravine crosses George Avenue between Powell Avenue and Archer Avenue. The culvert carries storm water from south-to-north beneath George Avenue. This culvert is composed of a single-cell, reinforced concrete box measuring 10' (W) x 6' (H) x 140' (L) with reinforced concrete headwalls and wingwalls at each end. The culvert has a slab bottom. The wingwalls at the north end of the culvert are oriented at 45° to George Avenue. The wingwalls at the south end of the culvert are oriented parallel to George Avenue. The structure lies beneath approximately 15' of fill. The roadway above crosses the ravine with a left-forward skew angle and the culvert carries a roadway cross section which transitions from two (2) traffic lanes east of the culvert to four (4) traffic lanes west of the culvert for a total width of approximately 30'-0" measured along the skew. 5'-0" wide sidewalks are present along both the north and south sides of George Avenue. Steel pipe railing is located along the outside of the north sidewalk and guardrail is present along the outside of the south sidewalk along George Avenue above the culvert. Roadway drainage structures transmit storm water into the culvert from above.

Observations noted during the field visit include the following:

- Damaged pipe railing above the culvert along the north sidewalk of George Avenue
- Low guardrail above the culvert along the sidewalk of the south side of George Avenue
- Several large fallen trees at the south end of the culvert which rests at the south culvert opening
- Significant cracking and moderate scaling and spalling of the headwalls and wingwalls at the south end
- Minor spalling and isolated leeching cracks in the top slab of the culvert
- Significant amount of trash and debris above and around culvert ends
- No signs of significant erosion or scour
- Large tree limbs partially obstruct the south end of the culvert, but do not appear to significantly arrest water movement thru the culvert

#### Notes for 10-year plan

- A possible scope includes structural repair of the south headwall and wingwalls with approximately 20% of total wingwall surface area estimated to be repaired. The culvert barrel surface area to be structurally repaired is negligible and estimated to be around 2%.

#### Maintenance Items

- Remove debris and trees resting on south culvert opening, stabilize the surrounding fill including removal of fallen tree. It is important to stabilize the slopes and keep the channel clear from debris to ensure proper functioning of the culvert.

#### **C-4: Jackson Street Culvert**

The structure is located where the south branch of the Waukegan Ravine terminates at the intersection of Jackson Street and West Dugdale Road. The culvert carries storm water from west-to-east beneath Jackson Street. Ciorba was unable to locate the west end of the structure due to access limitations. At the downstream (east) end, the culvert is composed of two-cells including a reinforced concrete box north cell measuring 6' (W) x 6'-8" (H) and a reinforced concrete pipe south cell measuring 7' inside diameter. The north and south culverts at east end are assumed to be 50' long while the north end is assumed to be a box culvert with dimensions 8' (W) x 8' (H) x 100' (L). The two cells to the east share a large reinforced concrete headwall and wingwalls. The north culvert cell has a natural bottom. The wingwalls at the north end of the culvert are oriented parallel to Jackson Street. The structure lies beneath approximately 10' of fill. The culvert carries a roadway cross section consisting of four (4) traffic lanes on Jackson Street for a total width of approximately 45'-0". The culvert extends westerly through the centerline of West Dugdale Road which carries 3 traffic lanes in the east-west direction for a total width of 36'-0". A 5'-0" wide sidewalk is present along the east side of Jackson Street above the east end of the culvert. Guardrail is located along the outside of the east sidewalk along Jackson Street above the west end of the culvert. Roadway drainage structures transmit storm water into the culvert from above.

Observations noted during the field visit include the following:

- Failed pipe joints and displaced sections of pipe segments in the south culvert cell
- Minor cracks near pipe joints and spalling around drainage inlet locations in south cell
- Moderate scaling of the east headwall and wingwalls
- Significant cracking and spalling with exposed reinforcement of the east headwalls and wingwalls in the area surrounding the north culvert cell
- Moderate spalling with exposed reinforcement and isolated leeching cracks in the top slab of the north cell
- Moderate amount of trash and debris around culvert ends
- No signs of significant erosion or scour
- Culvert appears to be functioning as intended

#### **Notes for 10-year plan**

- It is estimated that approximately 20% of total culvert barrel surface need to be structurally rehabilitated. The box culverts will use concrete patching while the RC Pipe culvert will be repaired using a polyurethane lining. The west and east headwall and wingwalls are also proposed to be structurally repaired approximately 20% of their total surface area.

#### **Maintenance Items**

- Remove debris around culvert openings and keep the channel clear from debris to ensure proper functioning of the culvert.

### **C-5: Belvidere Street Culvert (S. N. 049-0452)**

The structure is located where the south branch of the Waukegan Ravine crosses Belvidere Street between Besley Place and South McAlister Avenue. The culvert carries storm water from south-to-north beneath Belvidere Street. The culvert is composed of a single-cell corrugated metal arch on reinforced concrete bottom slab measuring 7'-0" (W) x 8'-0" (H) x 75'-0" (L) with reinforced concrete headwalls and wingwalls at both ends. The wingwalls at both ends of the culvert are oriented 45° to Belvidere Street. The structure lies beneath approximately 15' of fill. The roadway above crosses the ravine with a right-forward skew angle and the culvert carries a roadway cross section consisting of four (4) traffic lanes on Belvidere Street for a total width of approximately 45'-0". A 5'-0" wide sidewalk is present along the north side of Belvidere Street above the north end of the culvert and a 6'-0" wide asphalt bike path is present along the south side of Belvidere Street above the south end of the culvert. Wooden railing is located along the outside of the sidewalks along both sides of Belvidere Street above the ends of the culvert. Roadway drain pipes connect through the culvert headwall at the south end and through the northwest wingwall at the north end of the culvert.

Observations noted during the field visit include the following:

- Deteriorated concrete headwall at culvert's south end beneath roadway drain pipe
- Eroded slope and exposed length of roadway drain pipe above south headwall
- Moderate spalling of textured concrete surfaces on headwalls, wingwalls, and end sections at south end of culvert
- Detached section of corrugated west wall of pipe at south end
- Map cracks with efflorescence at ends of wingwalls at the north end of the culvert
- Missing liner anchors at north headwall
- Delaminated and spalled concrete around the area where the roadway drain pipe ports thru the northwest wingwall
- No signs of significant erosion or scour
- Culvert appears to be functioning as intended

### **Notes for 10-year plan**

- No cost for rehab and/or reconstruction is included in the ten-year plan, IDOT is responsible for inspection of maintenance of the culvert

### **Maintenance Items**

- Keep the channel clear from debris to ensure proper functioning of the culvert, protects the soil on the side of the culvert from erosion. IDOT is the indicated maintaining agency for the structure.

### C-6: Pershing Road Culvert

The structure is located where the Waukegan River crosses Pershing Road between E Water Street and Belvidere Street. The culvert carries storm water from east-to-west beneath Pershing Road. The culvert is composed of a single-cell stone arch 20'-0" (W) x 9'-0" (H) x 35'-0" (L) with stone wingwalls oriented parallel to the channel at the east end and at 45° to the channel at the west end. The structure lies beneath approximately 4' of fill. The culvert has a natural bottom. The culvert carries a roadway cross section consisting of two (2) traffic lanes on Pershing Road for a total width of approximately 25'-0". A sidewalk of varying width is present along the west side of Pershing Road above the west end of the culvert. A single section of guardrail with wide post spacing serves as a railing along the sidewalk on the west side of Pershing Road above the west end of the culvert. A double section of guardrail serves as railing along the east side of Pershing Road above the east culvert end. There is a ductile iron pipe that travels along the east right-of-way of Pershing Road and sits atop the southeast wingwall and ports thru the northeast wingwall. Several drain pipes port thru the southwest and northwest wingwalls.

Observations noted during the field visit include the following:

- Roadway seemingly lacked safety protection to prevent vehicles traveling above to fall in the Channel
- The stonework of the arch was intact minor deterioration and displaced stones were noted at the bottom of the arch at the northwest corner of the culvert cell
- Both wingwalls at the west end of the culvert had deteriorated stonework with broken grouted joints and missing sections of stone
- The roadway slab above seems to be added later and is supported at the wingwalls is scaled and spalled with exposed reinforcement bars at the west end
- The asphalt wearing surface of the roadway above the culvert was distressed
- Missing liner anchors at north headwall
- No signs of significant erosion or scour
- Culvert appears to be functioning as intended

### Notes for 10-year plan

- A possible scope includes asphalt patching on roadway top, rehabilitation of the deck and construction of parapets along each edge of roadway deck to improve roadway safety. The wingwall at the west end will be structurally repaired assuming 20% of the wingwall area is deteriorated.
- **Given the dimension, the culvert could be entered in the NBIS system**

### Maintenance Items

- Keep the channel clear from debris to ensure proper functioning of the culvert clear vegetation keeping it from growing in the masonry.

### C-7: Sheridan Road Culvert

The structure is located where the Waukegan River crosses South Sheridan Road between West Water Street and Prospect Drive. The culvert carries storm water from east-to-west beneath South Sheridan Road. The culvert is composed of a single-cell reinforced concrete arch measuring 24'-0" (W) x 10'-0" (H) x 150'-0" (L) with reinforced concrete wingwalls and headwalls. The northwest wingwall is oriented at 45° to Sheridan Road and the southwest wingwall is oriented perpendicular to Sheridan Road. Both wingwalls at the east end of the culvert are oriented 45° to Sheridan Road. The structure lies beneath approximately 15' of fill. The culvert has a slab bottom and carries a roadway cross section consisting of two (2) traffic lanes, a parking lane along the southbound side, and a striped median on Sheridan Road for a total width of approximately 48'-0". An 8'-0" wide sidewalk is present along the east side of Sheridan Road above the east end of the culvert. A 14'-0" wide sidewalk is present along the west side of Sheridan Road above the west end of the culvert. Decorative metal fencing lines the east and west sides of Sheridan Road and guardrail is present in front of the fencing along the east side of Sheridan road. A small diameter drain-pipe ports through the southwest wingwall.

Observations noted during the field visit include the following:

- The northwest wingwall showed significant deterioration with several large spalled areas, moderately scaled surface, and several wide full-height vertical cracks
- The west culvert headwall had a vertical crack near the south end
- The east headwall above the arch was heavily scaled with exposed reinforcement bars
- Leeching cracks were noted in the archway east end and at the end of the east wingwalls
- The southwest wingwall showed significant deterioration with lightly scaled surfaces, map cracking with efflorescence, and significant spalling near the waterline and at the end of the wingwall
- The culvert barrel had a large delaminated area with leeching efflorescence near the culvert's west end and light spalling near bonded construction joints
- Moderate amount of trash and debris above and around culvert ends
- No signs of significant erosion or scour
- Culvert appears to be functioning as intended

### Notes for 10-year plan

- The barrel is in good condition and needs minimal concrete patching. The possible scope includes structural repair of south headwall and wingwalls estimated to be 20% of their surface area. However, given the length of the culvert a more exact condition report and cost estimate can be provided after a more in-depth inspection.
- **Given the dimension, the culvert could be entered in the NBIS system**

### Maintenance Items

- Line the channel, remove stones and debris, and keep the channel clear from debris to ensure proper functioning of the culvert.

### **C-8: County Street Culvert**

The structure is located where the Waukegan Ravine crosses County Street between Lake Street and West Water Street and carries storm water from east-to-west beneath County Street. This culvert is composed of a single-cell, reinforced concrete arch measuring 18'-10" (W) x 18'-10" (H) x 150' (L) with reinforced concrete headwalls and wingwalls at each end. The culvert has a slab bottom. The wingwalls are oriented at 45° to County Street. The structure lies beneath approximately 15' fill. The roadway above the culvert carries two (2) traffic lanes and skewed parking along the west and east sides of County Street for a width of approximately 60'-0" and 5'-0" wide sidewalks are present along the west and east sides of County Street.

Observations noted during the field visit include the following:

- Wingwalls are out-of-plumb and lean outward toward the channel approximately 8" at all four corners of the culvert
- Asphalt pavement distress on roadway pavement above culvert
- Isolated locations of delaminated concrete on the wingwalls at both ends
- Spalling and delaminated concrete with efflorescence on the headwalls surrounding the barrel openings at both ends
- Isolated leeching cracks on the barrel top and sidewall surface throughout the culvert length
- No signs of significant erosion or scour or undermining of the bottom slab
- No signs of waterway obstruction and culvert is functioning properly

### **Notes for 10-year plan**

- The barrel, wingwalls and headwalls are in good condition and needs minimal structural repair.

### **Maintenance Items**

- Keep the channel clear from debris to ensure proper functioning of the culvert.

### **C-9: Martin Luther King Jr. Avenue Culvert**

The structure is located where the Waukegan River crosses South Martin Luther King Jr Avenue between Lake Street and West Water Street and carries storm water from east-to-west beneath South Martin Luther King Jr Avenue. This culvert is composed of a single-cell, reinforced concrete arch measuring 24'-0" (W) x 14'-0" (H) x 150' (L) with reinforced concrete headwalls and wingwalls and each end. The culvert has a natural bottom. The wingwalls are oriented at 45° to South Martin Luther King Jr Avenue. The structure lies beneath approximately 15' fill. The roadway above the culvert carries two (2) traffic lanes and parallel parking along the west and east sides of County Street for a width of approximately 40'-0" and 5'-0" wide sidewalks with wooden railings on telpar posts are present along the west and east sides of South Martin Luther King Jr Avenue.

Observations noted during the field visit include the following:

- Moderate scaling and leeching map cracks on all wingwalls
- Asphalt pavement and sidewalk distress above culvert
- Isolated locations of delaminated concrete on the wingwalls at both ends
- Spalling and delaminated concrete with efflorescence on the headwalls surrounding the barrel openings at both ends
- Isolated spalling throughout the length of the culvert barrel
- Spalling concrete and seepage evident along the construction joints inside the culvert barrel
- No signs of significant erosion or scour at the culvert, but some along the channel
- Significant amount of waterway obstructions, including sediment buildup and tree limbs, at the east culvert opening may be impacting the function of the culvert

### **Notes for 10-year plan**

- The barrel, wingwalls and headwalls are in good condition with no major concrete spalling and need minimal structural repair. The possible scope includes concrete patching of 5% of the barrel surface area. The culvert needs slope stabilization behind all wingwalls to ensure their integrity and performance.
- **Given the dimension, the culvert could be entered in the NBIS system**

### **Maintenance Items**

- Line the channel, remove stones and debris, and keep the channel clear from debris to ensure proper functioning of the culvert.

### **C-10: Water Street Culvert**

The structure is located where the North Branch of the Waukegan Ravine crosses West Water Street between Juniper Street and South West Street and carries storm water from north-to-south beneath West Water Street. This culvert is composed of a single-cell, circular corrugated metal pipe measuring 14'-0" inside diameter x 260' (L) with reinforced concrete headwalls and wingwalls at each end. Chain-link fencing is mounted at the top of the headwalls at each end of the culvert. The wingwalls are oriented at 45° to culvert's headwall. The structure lies beneath more than 20' fill. The roadway above crosses the ravine with a right-forward skew angle and the culvert carries a roadway cross section consisting of two (2) traffic lanes for a total width of approximately 36'-0" measured along the skew. A 5'-0" wide sidewalk is present along the south side of West Water Street and guardrail runs along both sides of the street above the culvert ends. Roadway drainage structures transmit storm water into the north end of the culvert barrel and thru the southeast wingwall from above.

Observations noted during the field visit include the following:

- The bottom of the corrugated metal pipe culvert barrel has complete section loss throughout a majority of the length of the culvert. This can in the long term cause the collapse of the culvert.
- Major erosion noted behind the northeast wingwall likely caused by failure of the buried roadway drain pipe connecting to the north end of the culvert barrel and subsequent erosion and slope failure in that area.
- Minor scour noted at center of downstream slab at south culvert end. The channel bottom was measured noticeably deeper than at a distance slightly south of the slab end. The slab was not undermined.
- Significant amount of waterway obstructions, including sediment buildup and fallen tree limbs, at the north culvert opening does not appear to impact the function of the culvert at the time of our inspection with moderate water flow.

### **Notes for 10-year plan**

- The possible scope includes polyurethane lining of culvert barrel from the invert to culvert mid-height, slope stabilization behind northeast wingwall to ensure its integrity and performance. The wingwalls and headwalls are in good condition and need negligible structural repair.

### **Maintenance Items**

- Remove stones and debris from the channel, and keep the channel clear from debris to ensure proper functioning of the culvert.

### C-11: Washington Street Culvert

The structure is located where the North Branch of The Waukegan Ravine crosses Washington Street between Glen Rock Avenue and South West Street and carries storm water from north-to-south beneath Washington Street. This culvert is composed of a single-cell, stone arch measuring 10'-0" (W) x 10'-0" (H) x 135' (L) with stone headwalls and wingwalls at each end. The headwall was extended with concrete above the north end of the culvert. The wingwalls are oriented at 45° to culvert's headwall. The structure lies beneath more than 20' fill. The roadway above crosses the ravine with a right-forward skew angle and the culvert carries a roadway cross section consisting of four (4) traffic lanes and a parallel parking along each side of the road for a total width of approximately 65'-0" along the skew. An 8'-0" wide sidewalk is present along the north side of Washington Street and a 5'-0" wide sidewalk is present along the south side of Washington Street. Wooden railing runs along the north side of the street above the north culvert end. Roadway drainage structures transmit storm water into the north end of the culvert barrel and through the southeast wingwall from above.

Observations noted during the field visit include the following:

- Within the culvert barrel, the grout between stone courses was intact
- Moderate grout failures were noted between stone courses at the north and south headwalls and wingwalls and several large stones were deteriorated and displaced
- The concrete facing that was seemingly added after the original construction has significant scaling, spalling, and large visible cracks
- The archway itself appeared to be intact
- Roadway drain pipes deposit stormwater along the backs of the wingwalls at the ends of the culvert contributing to accelerated deterioration and minor erosion at the ends of the culvert behind the wingwalls
- Significant amount of waterway obstructions, including sediment buildup and fallen tree limbs, at the north culvert opening appears to impact the function of the culvert
- The roadway pavement, although distressed, does not appear to be directly affected by the culvert defects

#### Notes for 10-year plan

- The culvert needs a detailed inspection to determine structural repair. The possible scope includes asphalt patching on top of roadway, slope stabilization, structural repair at north end of culvert barrel, and at north wingwalls and headwall.
- We are currently not including any repair cost for the tall vertical wall on the north side of the culvert, which appears to be a natural wall stabilized with shotcrete. There are some visible large cracks and the wall will demand an in-depth inspection

#### Maintenance Items

- Line the channel, remove stones and debris from the channel, and keep the channel clear from debris to ensure proper functioning of the culvert.

### **C-12: Jackson Street Culvert**

The structure is located where the North Branch of The Waukegan Ravine crosses North Jackson Street between Jackson Court and Low Avenue and carries storm water from north-to-south beneath Jackson Street. This culvert is composed of two (2) cells downstream and a single-cell upstream. It was not determined where the north cell originates from. At the south (downstream) end, the south cell consists of a reinforced concrete box with an embedded slab bottom at the northwest end which is extended by a reinforced concrete arch with natural bottom to the southeast. The reinforced concrete arch measures 9'-10" (W) x 11'-0" (H) x 89'-0" (L). The Box section measures 6'-6" (W) x 6'-6" (H) x 111'-0" (L) with concrete block headwalls and wingwalls at the southwest end and no headwalls or wingwalls at the northwest end. The north cell is a reinforced concrete circular pipe measuring 4'-0" inside diameter. The structure lies beneath approximately 5' of fill. The roadway above crosses the ravine with a left-forward skew angle and the culvert carries a roadway cross section consisting of three (3) traffic lanes for a total width of approximately 36'-0" measured perpendicular to curbs. 5'-0" wide sidewalks are present along both sides of Jackson Street. Guardrail and chain link fencing runs along the southeast side of the street above the southeast culvert end. An iron pipe runs across the culvert barrel width toward the southeast end.

Observations noted during the field visit include the following:

- Minor spalling with exposed reinforcement in isolated areas of the top slab within the culvert barrel
- Minor cracking with efflorescence was noted at the northwest end of the box section on the sidewalls
- Both ends of the south cell of the culvert showed moderate scaling near the water surface on the sidewalls
- Concrete blocks lining the channel at the southeast end of the culvert have become displaced and many are leaning inward toward the channel
- The archway itself appeared to be intact
- Significant amount of waterway obstructions, including sediment buildup and fallen tree limbs, at the north culvert opening appear not to impact the function of the culvert
- The roadway pavement, although distressed, does not appear to be directly affected by the culvert defects

### **Notes for 10-year plan**

- The barrel, wingwalls and headwalls are in good condition with no major concrete spalling and need minimal structural repair.
- The large concrete blocks that are displaced should be reinstalled and stabilized.

### **Maintenance Items**

- Line the channel, remove stones and debris, and keep the channel clear from debris to ensure proper functioning of the culvert.
- Remove vegetation that is causing the displacement of the blocks.

### **C-13: McClory Bike Path Culvert**

The structure is located where the North Branch of The Waukegan Ravine crosses Robert McClory Bike Path between Brookside Avenue and Grand Avenue and carries storm water from north-to-south beneath Jackson Street. This culvert is composed of a single-cell reinforced concrete arch with a natural bottom. The reinforced concrete arch measures 9'-10" (W) x 8'-6" (H) x 120'-0" (L) with reinforced concrete headwalls and wingwalls at the southwest end and no headwalls or wingwalls both ends. The structure lies beneath approximately 10' of fill. The 8'-0" wide gravel path above crosses the ravine with no skew angle. Chain link fencing runs along both sides of the path.

Observations noted during the field visit include the following:

- Spalling at the wingwall ends with some large cracks and scaling
- Significant cracking with efflorescence and delaminated concrete was noted at both ends of the culvert over a majority of the wingwall and headwall surfaces
- Significant cracking with efflorescence extends approximately 30' into the culvert barrel from each end on the top and sides of the arch
- The archway itself appeared to be intact

### **Notes for 10-year plan**

- The barrel in good condition and needs minimal concrete patching. The suggested scope includes structural removal and replacement of wingwalls and headwalls at both ends of the culvert opening.

### **Maintenance Items**

- Keep the channel clear from debris to ensure proper functioning of the culvert.

### **C-14: Butrick Street Culvert**

The structure is located where the North Branch of The Waukegan Ravine crosses North Butrick Street between Brookside Avenue and Tamara Court and carries storm water from west-to-east beneath Butrick Street. This culvert is composed of two (2) cells downstream and a single-cell upstream. It was not determined where the south cell originates from. At the south (downstream) end, the south cell consists of a Reinforced Concrete (RC) Arch with a natural bottom at the east end which is extended by a reinforced concrete box with slab bottom to the west. The RC Arch measures 8'-0" (W) x 8'-8" (H) x 50'-0" (L). The Box section measures 8'-0" (W) x 7'-4" (H) x 50'-0" (L) with reinforced concrete headwalls and wingwalls at the west end and no headwalls or wingwalls at the east end. The south cell is a corrugated plastic circular pipe measuring 5'-0" inside diameter. The structure lies beneath approximately 5' of fill. The roadway above crosses the Butrick Street with a slight left-forward skew angle and the culvert carries a roadway cross section consisting of two (2) traffic lanes with parallel parking along each side of the road for a total width of approximately 42'-0" measured along the skew. 5'-0" wide sidewalks are present along both sides of Butrick Street. Steel pipe railing runs along the west side of the road and chain link fence runs along the side of the street above the culvert ends. Roadway drain pipes deposit water into the culvert barrel. Timber walls, supported by steel soldier piles line the channel at the east end of the culvert.

Observations noted during the field visit include the following:

- Minor spalling and cracking with efflorescence at the wingwall ends and west end of the top slab at the west end of the culvert
- Minor cracking with efflorescence was noted at the end of the north arch sidewall at the east end
- Isolated cracks in the side walls of the north cell
- A large area of scaled concrete shows exposed reinforcement where the south culvert cell was added after the original construction
- The timbers composing the retaining walls are rotting and deteriorated and the wall along the south bank of the channel is leaning toward the channel
- Fallen tree limbs are present upstream (west) of the culvert but appear not to impact the function of the culvert
- The roadway pavement, although distressed, does not appear to be directly affected by the culvert defects

### **Notes for 10-year plan**

- The culvert is recommended to be removed and replaced with a new culvert due to deterioration of the existing barrels and the timber wall lining the east end of the culvert. The existing culvert may be rehabilitated at lesser costs. However, the higher maintenance cost and an eventual replacement makes it cost effective to replace the culvert upfront. The replacement costs also include roadway rehabilitation and stabilization of channel slopes.

**C-15: Grand Avenue Culvert (S.N. 049-0453)**

The structure is located where the North Branch of The Waukegan Ravine crosses Grand Avenue between Judge Avenue and New York Street and carries storm water from north-to-south beneath Grand Avenue. This culvert is composed of a double-cell precast concrete box, each measuring 8'-0" (W) x 6'-0" (H) x 128'-0" (L) with reinforced concrete headwalls and wingwalls at both ends. The boxes have slab bottoms. The wingwalls are oriented parallel to the ravine at the north end and southeast corner and at 45° to the ravine at the southwest corner. The structure lies beneath approximately 3' of fill. The roadway above crosses the Buttrick Street with a slight right-forward skew angle and the culvert carries a roadway cross section consisting of three (3) traffic lanes with parallel parking along each side of the road for a total width of approximately 52'-0" measured along the skew. 5'-0" wide sidewalks are present along both sides of Grand Avenue. Guardrail serving as railing is present along the north and south culvert ends. Roadway drain pipes deposit water into the culvert barrel. A reinforced concrete retaining wall lines the channel at the northeast end of the culvert. Steel pipe railing is present above the retaining wall along New York Street.

Observations noted during the field visit include the following:

- Minor spalling at the bottom of the center sidewall at the south end of the culvert
- Minor cracking with efflorescence was noted at the end of the north arch sidewall at the east end
- Isolated scaling of the top slab the west cell
- An isolated horizontal leeching crack was noted in the headwall above the east cell at the north end of the culvert
- Guardrail post spacing is large
- Guardrail is deflecting and displaced above the north end of the culvert
- The culvert barrel appeared to be in good overall structural condition
- Fallen tree limbs are present upstream (north) of the culvert but appear not to impact the function of the culvert
- The roadway pavement does not appear to be directly affected by the culvert defects

Notes for 10-year plan

- No cost for rehab and/or reconstruction is included in the ten-year plan, IDOT is responsible for inspection of maintenance of the culvert

Maintenance Items

- Keep the channel clear from debris and branches to ensure proper functioning of the culvert, protects the soil on the side of the culvert from erosion. IDOT is the indicated maintaining agency for the structure.

### **C-16: New York Street Culvert**

The structure is located along New York Street extending from the west end of the Garden Place to the north intersection of the New York Street and the West Glen Flora Avenue and carries storm water from north-to-south beneath New York Street. This culvert is composed of a single-cell Corrugated Metal Pipe at the upstream end measuring 13'-4" (W) x 8'-0" (H). At the south end, the culvert consists of three (3) cells composed of Reinforced Concrete (RC) pipes measuring 6'-0" diameter, 6'-0" in diameter, and 18" in diameter respectively from west-to-east. There are reinforced concrete headwalls and wingwalls at the north end. The wingwalls are oriented at 45° to the ravine. The structure lies beneath approximately 3' of fill. The precise orientation of the culvert is unknown, but it extends beneath four (4) traffic lanes for a total width of 48'-0" measured perpendicular between curbs and then beneath the east parkway of New York Street to the south. There is 5'-0" wide sidewalk present on the north and south sides of West Glen Flora Avenue and along the east parkway of New York Street. Steel pipe railing is present along the north culvert headwall. Roadway drain pipes deposit water into the culvert barrel. A railing composed of timber and telspar posts is present above the south end of the culvert.

Observations noted during the field visit include the following:

- Reinforced concrete pipe sections are misaligned seemingly from joint failure at the south end in the west cell
- Section loss at the bottom of the corrugated metal portion of the culvert
- An isolated vertical crack was noted in the north headwall
- Timber and telspar railing above the south end of the culvert is insufficient
- The roadway pavement does not appear to be directly affected by the culvert defects

### **Notes for 10-year plan**

- The culvert is estimated to be 1500' long determined by the location of its openings. It is assumed that each of the RC pipes and the single cell corrugated metal pipe are 750' long. The possible work scope includes lining the bottom of the CMP culvert with polyurethane lining. The RC Pipes will be lined at the south end and patched to reinforce joint integrity. It is estimated that approximately 10% of total RC Pipe surface area need to be structurally repaired. The north wingwalls and headwalls need negligible structural repairs. The cost estimate is based on preliminary assumptions and given the size of the culvert the scope will be better determined after an in-depth inspection and a hydraulic study backed by field inspections and records of flooding.

### **Maintenance Items**

- Keep the channel clear from debris to ensure proper functioning of the culvert.
- We recommend inspection the culvert for waterway discharge after a storm event

### **C-17: Sheridan Road Culvert**

The structure is located south of Miraflores Avenue where a channel extending from the Glen Flora Country club carries water from west-to-east beneath Sheridan Road. This culvert is composed of a single-cell reinforced concrete box measuring 6'-0" (W) x 6'-6" (H) x 120'-0" (L) with reinforced concrete headwalls and wingwalls at each end. The wingwalls at the east end of the culvert are oriented at 45° to the channel and the wingwalls at the west end of the culvert are oriented perpendicular to the channel. There is a reinforced concrete weir at the west end of the culvert on the country club property. The structure lies beneath approximately 3' of fill. The roadway above crosses the channel with a slight left-forward skew angle and the culvert carries a roadway cross section which includes four (4) traffic lanes and a striped median for a total width of approximately 60'-0" measured along the skew. A 5'-0" wide sidewalk is present along the east sides of Sheridan Road. Guardrail is present along both sides of Sheridan Road above the culvert ends and a chain link fence is also present behind the sidewalk above the east culvert end.

Observations noted during the field visit include the following:

- Construction joints have minor spalling in isolated locations throughout the culvert barrel
- Isolated leaching cracks in the retaining walls lining the channel at the west end of the culvert beneath the weir wall
- A single large tree limb partially obstructs the east end of the culvert, but does not appear to impact the functionality of the culvert
- The roadway pavement does not appear to be directly affected by the culvert defects

### **Notes for 10-year plan**

- The barrel in good condition and needs minimal structural repair.

### **Maintenance Items**

- Keep the channel clear of debris for normal functioning of the culvert.

### **C-18: Lewis Avenue Culvert**

The structure is located south of Golf Road where the Yeoman Creek extends from the Bonnie Brook Golf Course carrying water from west-to-east beneath North Lewis Avenue. This culvert is composed of three cells. At the upstream (west) end, the cells are composed of two reinforced concrete circular pipes each measuring 4'-0" (Dia.) x 65'-0" (L) and a reinforced concrete box measuring 6'-0" (W) x 4'-0" (H) x 65'-0" (L). A reinforced concrete junction box joins to 3 cells composed of CMP measuring 5'-6" (W) x 4'-0" (H) x 605'-0" (L). Reinforced concrete headwalls and wingwalls are present at the west end of the culvert. The wingwalls at the west end of the culvert are oriented at 45° to the headwall. The structure lies beneath approximately 3' of fill. The precise orientation of the culvert is unknown but it extends beneath five (5) traffic lanes for a total width of 53'-0" measured perpendicular between curbs and then beneath a large parking lot to the west. A 5'-0" wide sidewalk is present along the east side of Lewis Avenue. Decorative metal fence is present behind the west headwall.

Observations noted during the field visit include the following:

- Heavy spalling with exposed reinforcement at the west headwall above the center cell
- Spalling with exposed reinforcement at the top slab of the south cell box at the west end of the culvert
- Broken chain link fence spanning the channel at the west end threatens to eventually break loose and obstruct the culvert
- The roadway pavement does not appear to be directly affected by the culvert defects

### **Notes for 10-year plan**

- The culvert needs a detailed inspection to determine structural repair. A possible scope includes structural repair of the west headwall and wingwalls with approximately 20% of total wingwall surface area estimated to be repaired. The culvert barrel surface area to be structurally repaired is estimated to be around 20%.

### **Maintenance Items**

- Remove debris and obstructions on the west end of the culvert openings, stabilize the slopes, and keep the channel clear from debris to ensure proper functioning of the culvert.

# EXHIBIT A

## CULVERT CONDITION SUMMARY



**EXHIBIT A  
CULVERT CONDITION SUMMARY**



Ciorba Group  
5507 N. Cumberland Ave  
Suite 402  
Chicago, IL 60656

Calc by: SSM Date: 12/10/2017  
 Chk'd by: BWS Date: 12/10/2017  
 Job No: 20729.01  
 Client: City of Waukegan

Ratings Key			
1	100%	> 50% defects	Poor Condition
2	40%	35% - 50%	Fair condition
3	20%	10% - 35%	Satisfactory Condition
4	2%	<10%	Good Condition

Culvert Identification	049-0452												
	C1	C2	C3	C4			C5	C6	C7	C8	C9	C10	C11
	Cummings Avenue Culvert	Lincoln Avenue Culvert	George Avenue Culvert	Jackson Street Culvert/Tunnel 0.09 mi South of Belvidere Road (Three Barrel Types)			Belvidere Street Culvert	Pershing Road Culvert	Sheridan Road Culvert, 0.15 mi North of Belvidere Road	County Street Culvert	Martin Luther King Drive Culvert	Water Street Culvert	Washington Street Culvert
<b>Elements \ Type of Culvert</b>	<b>RC Arch</b>	<b>RC Pipe</b>	<b>RC Box</b>	<b>Unknown</b>	<b>RC Box</b>	<b>RC Pipe</b>	<b>CMP</b>	<b>Stone Arch</b>	<b>RC Arch</b>	<b>RC Arch</b>	<b>RC Arch</b>	<b>CMP</b>	<b>Stone Arch</b>
Culvert Barrel (Cell)	3	2	4	3	3	3	3	4	4	4	4	3	3
Wingwalls/Headwalls	2	2	3	3	3	3	3	3	3	4	4	4	3
Drainage Function	3	3	3	3	3	3	4	4	3	4	3	4	3
Erosion Scour Undermining	3	3	4	4	4	4	3	4	4	4	4	2	4
Channel condition	3	4	4	4	4	4	4	4	4	4	4	4	4
<b>Recommendation</b>	<b>Rehab</b>	<b>Replace</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>
<b>CULVERT DIMENSIONS</b>													
Cell Length	60	381	140	100	50	50	75	35	150	150	150	260	135
Cell Height	5	7	6	8	7	7	8	9	10	19	14	14	10
Cell Width	8	7	10	8	6	7	7	20	24	19	24	14	10
<b>CULVERT AREAS</b>													
Cell Surface Area	848	8379	4480	2400	967	1100	1885	1033	6102	7288	6300	11435	3471
Wingwall/Headwall Area including 20% buried (assumed)	451	230	332	562	905	0	768	243	829	2028	772	909	2000



**EXHIBIT A  
CULVERT CONDITION SUMMARY**



Ciorba Group  
5507 N. Cumberland Ave  
Suite 402  
Chicago, IL 60656

Calc by: SSM Date: 11/10/2017  
 Chk'd by: BWS Date: 12/10/2017  
 Job No: 20729.01  
 Client: City of Waukegan

Ratings Key			
1	100%	> 50% defects	Poor Condition
2	40%	35% - 50%	Fair condition
3	20%	10% - 35%	Satisfactory Condition
4	2%	<10%	Good Condition

Culvert Identification	C12			C13	C14			049-0453 C15	C16		C17	C18		
	Jackson Street Culvert, north of Jackson Ct (Three Barrel Types)			McClory Bike Path Culvert	Butrick Street Culvert (Three Barrel Types)			Grand Avenue Culvert	New York Street Culvert/Tunnel (Two Barrel Types)		Sheridan Road Culvert, E of Golf Course	Lewis Avenue Culvert (Three Barrel Types)		
Elements \ Type of Culvert	RC Box	RC Arch	RC Pipe	RC Arch	RC Box	RC Arch	CPP	RC Box	CMP	RC Pipe	RC Box	1-RC Box	2-RCP	3-CMP
Culvert Barrel (Cell)	4	4	4	4	2	2	4	4	2	3	4	3	3	3
Wingwalls/Headwalls	3	3	3	2	3	3	3	4	4	3	4	3	3	3
Drainage Function	3	3	3	4	3	3	3	3	4	4	3	3	3	3
Erosion Scour Undermining	4	4	4	4	3	3	3	4	4	4	4	4	4	4
Channel condition	3	3	3	3	2	2	2	4	4	4	4	4	4	4
<b>Recommendation</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Replace</b>	<b>Replace</b>	<b>Replace</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>	<b>Rehab</b>
<b>CULVERT DIMENSIONS</b>														
Cell Length	111	89	89	120	50	50	50	128	750	750	120	65	65	605
Cell Height	6.5	11	4	9	7.33	9	5	6	8	6	7	4	4	4
Cell Width	6.5	10	4	10	8	8	5	8	13	6	6	6	4	6
<b>CULVERT AREAS</b>														
Cell Surface Area	2886	2516	1118	2526	1533	1095	785	7168	23250	31809	2280	1300	1634	22808
Wingwall/Headwall Area including 20% buried (assumed)	0	0	0	354	524	0	0	379	216	0	329	60	60	0



# EXHIBIT B

BRIDGE AND CULVERT NBIS REPORTS



**Illinois Department of Transportation  
Structures Information Management System  
Structure Summary Report**

Date: 11/07/2017

Page: 1

Structure Number: 049-0150

District: 1

**Inventory Data**

<b>Facility Carried:</b>	BELVIDERE ST	<b>Bridge Name:</b>		<b>Sufficiency Rating:</b>	79.5	<b>Structure Length:</b>	157.8
<b>Feature Crossed:</b>	C&NW RR& L.F.F-WAY.	<b>Location:</b>	JUST E O SHERIDAN RD	<b>HBP Eligible:</b>	Yes	<b>AASHTO Bridge Length:</b>	78.9
<b>Bridge Remarks:</b>	RECEIVED V.CL.FORM 11/90.NEED K.RTE.UN.& STA.			<b>Replaced By:</b>	-	<b>Length of Long Span:</b>	82.0
<b>Bridge Status:</b>	1 OPEN - NO RESTRICT	<b>Status Date:</b>	04/1988	<b>Replaces:</b>	-	<b>Bridge Roadway Width:</b>	54.0
<b>Status Remarks:</b>				<b>Last Update Date:</b>	07/05/2012	<b>Appr Roadway Width:</b>	54.0
<b>Maint County:</b>	049 LAKE	<b>Maint Township:</b>	16 WAUKEGAN	<b>Parallel Structure:</b>	None	<b>Deck Width:</b>	66.0
<b>Maint Responsibility:</b>	04 MUNICIPALITY			<b>Multi-Level Structure Nbr:</b>		<b>Sidewalk Width Right:</b>	5.0
<b>Service On/Under:</b>	1 HIGHWAY	4 /	HIGHWAY-RAILROAD	<b>Skew Direction:</b>	N	<b>Sidewalk Width Left:</b>	5.0
<b>Reporting Agency:</b>	4 MUNICIPALITY			<b>Skew Angle:</b>	0 D	<b>Navigation Control:</b>	N N/A
<b>Main Span Matl/Type:</b>	4 STEEL CONTINUOUS	/	02 STRINGER/MULTI-BEAM/GIRDER	<b>Structure Flared:</b>	No	<b>Navigation Horiz Clear:</b>	0
<b>Nbr Of Main Spans:</b>	2	<b>Nbr Of Approach Spans:</b>	0	<b>Historical Significance:</b>	No	<b>Navigation Vert Clear:</b>	0
<b>***Approaches***</b>				<b>Border Bridge State:</b>		<b>Culvert Fill Depth:</b>	0.0
<b>Near #1 Matl/Type:</b>	/			<b>Bdr State SN:</b>		<b>Number Culvert Cells:</b>	0
<b>Near #2 Matl/Type:</b>	/			<b>Bdr State % Responsibility:</b>	0	<b>Culvert Opening Area:</b>	0.0
<b>Far #1 Matl/Type:</b>	/			<b>Structural Steel Wt</b>	347940	<b>Culvert Cell Height:</b>	0.00
<b>Far #2 Matl/Type:</b>	/			<b>Substructure Material:</b>		<b>Culvert Cell Width:</b>	0.00
<b>Median Width/Type:</b>	0 Ft. / 0	None		<b>Rated By:</b>	N N/A	<b>Rate Method:</b>	7 ALLOWABLE STRESS (AS) REPORTED BY RATING FACTOR (RF)
<b>Guardrail Type L/R:</b>	0None	/ 0	None	<b>Inventory Rating:</b>	1.220(43)	<b>Load Rating Date:</b>	01/01/1900
<b>Toll Facility Indicator:</b>	0 No Toll			<b>Operating Rating:</b>	1.860(66)	<b>Railroad Crossing Info</b>	
<b>Latitude:</b>	42.35511232	<b>S Longitude:</b>	87.82921841	<b>S</b>	<b>Design Load:</b>	02 HS20	<b>Crossing 1 Nbr:</b>
<b>Deck Structure Type:</b>				<b>Deck Structure Thickness:</b>	0	<b>SD:</b>	Y
<b>Sidewalks Under Structure:</b>	0	None		<b>FO:</b>	Y	<b>RR Lateral Underclear:</b>	27.8
				<b>RR Vertical Underclear:</b>	23	<b>Ft</b>	00
				<b>In</b>			

**Key Route On Data**

<b>Key Route Nbr:</b>	FEDERAL-AID URBAN	1225	<b>Station:</b>	3.1600
<b>Appurtenances</b>	Main Route	00000	<b>Segment:</b>	
<b>Inventory County:</b>	049 LAKE		<b>Linked:</b>	Y
<b>Township/Road Dist</b>	16 WAUKEGAN		<b>Natl. Hwy System:</b>	Not on NHS
<b>Municipality</b>	6075 WAUKEGAN		<b>Inventory Direction:</b>	
<b>Urban Area:</b>	1051 1051		<b>Curr AADT Yr/Count:</b>	2015 / 2500
<b>Functional Class:</b>	5 MAJOR COLLECTOR		<b>Est Truck Percentage:</b>	10
<b>** CLEARANCES **</b>	<b>South/East</b>	<b>North/West</b>	<b>Number Of Lanes:</b>	4
<b>Max Rdwy Width:</b>	54.0		<b>One Or Two Way:</b>	2 Two-Way
<b>Horizontal:</b>	64.0	0.0	<b>Bypass Length:</b>	2
			<b>Future AADT Yr/Cnt:</b>	2032 / 1836
			<b>Designated Truck Rte:</b>	NONE
<b>Lateral:</b>			<b>Special Systems:</b>	No

**Key Route Under Data**

<b>Key Route Nbr:</b>	FEDERAL-AID PRIMARY	0352	<b>Station:</b>	9.9200
<b>Appurtenances</b>	Main Route	00000	<b>Segment:</b>	
<b>Inventory County:</b>	049		<b>Linked:</b>	Y
<b>Township/Road Dist</b>	16 WAUKEGAN		<b>Natl. Hwy System:</b>	On NHS
<b>Municipality</b>	6075 WAUKEGAN		<b>Inventory Direction:</b>	
<b>Urban Area:</b>	1051 1051		<b>Curr AADT Yr/Count:</b>	2015 / 14400
<b>Functional Class:</b>	2 FREEWAY AND EXPRESSWAY		<b>Est Truck Percentage:</b>	4
<b>** CLEARANCES **</b>	<b>South/East</b>	<b>North/West</b>	<b>Number Of Lanes:</b>	4
<b>Max Rdwy Width:</b>	35.5		<b>One Or Two Way:</b>	2 Two-Way
<b>Horizontal:</b>	36.0	36.0	<b>Bypass Length:</b>	0
			<b>Future AADT Yr/Cnt:</b>	2032 / 13356
			<b>Designated Truck Rte:</b>	NONE
<b>Lateral:</b>			<b>Special Systems:</b>	Yes

**\*\*\* Marked Route On Data \*\*\***

	Designation	Kind	Number
<b>Route #1:</b>	1 Mainline	8 Other	
<b>Route #2:</b>	1 Mainline		
<b>Route #3:</b>	1 Mainline		

**\*\*\* Marked Route Under Data \*\*\***

	Designation	Kind	Number
	1 Mainline	3 State Highway	137
	1 Mainline		
	1 Mainline		

**Illinois Department of Transportation  
Structures Information Management System  
Structure Summary Report**

Date: 11/07/2017

Page: 2

Structure Number: 049-0150

District: 1

**Data Related to Inspection Information**

\*\*\* Inspection Intervals \*\*\*

\*\*\* Maximum Allowable Posting Limits \*\*\*

Bridge Posting Level:

Routine NBIS:	24 MOS	Underwater:	0 MOS	One Truck At A Time:	0	Combination Type 3S-1:	Tons	5	No Posting Required
		Special:	N	Single Unit Vehicles:	Tons	Combination Type 3S-2:	Tons		

**Inspection/Appraisal Information**

\*\*\* Actual Posted Limits \*\*\*

Inspection Date:	10/03/2017	Inspection Temperature:	75Deg. F						
Deck:	4	POOR CONDITION - ADVANCED DETERIORATION				Single Unit Vehicles:	Tons		
Superstructure:	6	SATISFACTORY CONDITION - MINOR DETERIORATION				Combination Type 3S-1:	Tons		
Substructure:	6	SATISFACTORY CONDITION - MINOR DETERIORATION				Combination Type 3S-2:	Tons		
Culvert:	N	NOT APPLICABLE				One Truck At A Time:	0		
Channel and Protection:	N	NOT APPLICABLE				Deck Wearing Surf:	A BARE DECK NO OVRLAY	Last Paint Type:	BD
Structural Evaluation:	6	EQUAL TO PRESENT MINIMUM CRITERIA				Deck Membrane:	F NONE	LD SHP PRM AL FNL	
Deck Geometry:	4	MINIMUM ADEQUACY TO BE LEFT IN PLACE				Deck Protection:	J NONE		
Underclearance-Vert/Lat.:	3	INTOLERABLE - HIGH PRIORITY FOR CORRECTION				Total Deck Thick:	7.0	LD FLD PRM GRN FNL	
Waterway Adequacy:	N	NOT APPLICABLE				Last Paint Date:	06/1966		
Approach Roadway Align:	6	EQUAL TO PRESENT MINIMUM CRITERIA							
Bridge Railing Appraisal:	2	Doesn't Meet Standards							
Approach Guardrail:	23N	Not Acceptable	Acceptable	N/A					
Pier Navig Protection:	N	N/A							

**Underwater Inspection/Appraisal Information**

Inspection Date: \_\_\_\_\_  
 Temperature: \_\_\_\_\_ Inspection Method: \_\_\_\_\_  
 Appraisal Rating: \_\_\_\_\_

**Scour Critical Information**

**Miscellaneous**

Rating: \_\_\_\_\_ Evaluation Method: \_\_\_\_\_  
 Analysis Date: \_\_\_\_\_ Microfilm Data Recorded: Yes

**Construction Information**

Year: 1966 Original Reconstructed  
 Route: FAP-130 Sta: 158+09.44 Sta:  
 Section Nbr: 9VB  
 Contract Nbr:  
 Fed Aid Pr#:  
 Built By: 1 I.D.O.T.

**Illinois Department of Transportation  
Structures Information Management System  
Structure Summary Report**

Date: 11/07/2017

Page: 1

Structure Number: 049-0151

District: 1

**Inventory Data**

<b>Facility Carried:</b> MARKET ST-IL 120RMP5	<b>Bridge Name:</b> BELVIDERE ST BRIDGE	<b>Sufficiency Rating:</b> 77.3	<b>Structure Length:</b> 832.0
<b>Feature Crossed:</b> UNUSED LAND	<b>Location:</b> 200 FT E SHERIDAN RD	<b>HBP Eligible:</b> Yes	<b>AASHTO Bridge Length:</b> 63.8
<b>Bridge Remarks:</b>		<b>Replaced By:</b> -	<b>Length of Long Span:</b> 63.8
<b>Bridge Status:</b> 1 OPEN - NO RESTRICT	<b>Status Date:</b> 04/1988	<b>Replaces:</b> -	<b>Bridge Roadway Width:</b> 28.0
<b>Status Remarks:</b>		<b>Last Update Date:</b> 07/05/2012	<b>Appr Roadway Width:</b> 28.0
<b>Maint County:</b> 049 LAKE	<b>Maint Township:</b> 16 WAUKEGAN	<b>Parallel Structure:</b> None	<b>Deck Width:</b> 37.0
<b>Maint Responsibility:</b> 04 MUNICIPALITY		<b>Multi-Level Structure Nbr:</b>	<b>Sidewalk Width Right:</b> 5.0
<b>Service On/Under:</b> 1 HIGHWAY	9 / OTHER	<b>Skew Direction:</b> N	<b>Sidewalk Width Left:</b> 2.0
<b>Reporting Agency:</b> 4 MUNICIPALITY		<b>Skew Angle:</b> 0 D	<b>Navigation Control:</b> N N/A
<b>Main Span Matl/Type:</b> 4 STEEL CONTINUOUS	/ 02 STRINGER/MULTI-BEAM/GIRDER	<b>Structure Flared:</b> No	<b>Navigation Horiz Clear:</b> 0
<b>Nbr Of Main Spans:</b> 13	<b>Nbr Of Approach Spans:</b> 0	<b>Historical Significance:</b> No	<b>Navigation Vert Clear:</b> 0
<b>***Approaches***</b>		<b>Border Bridge State:</b>	<b>Culvert Fill Depth:</b> 0.0
<b>Near #1 Matl/Type:</b> /		<b>Bdr State SN:</b>	<b>Number Culvert Cells:</b> 0
<b>Near #2 Matl/Type:</b> /		<b>Bdr State % Responsibility:</b> 0	<b>Culvert Opening Area:</b> 0.0
<b>Far #1 Matl/Type:</b> /		<b>Structural Steel Wt</b> 0	<b>Culvert Cell Height:</b> 0.00
<b>Far #2 Matl/Type:</b> /		<b>Substructure Material:</b>	<b>Culvert Cell Width:</b> 0.00
<b>Median Width/Type:</b> 0 Ft. / 0 None		<b>Rated By:</b> 2 IDOT	<b>Rate Method:</b> 7 ALLOWABLE STRESS (AS) REPORTED BY RATING FACTOR (RF)
<b>Guardrail Type L/R:</b> 0None / 0 None	<b>Inventory Rating:</b> 1.895(68)	<b>Load Rating Date:</b> 06/06/2000	<b>Railroad Crossing Info</b>
<b>Toll Facility Indicator:</b> 0 No Toll	<b>Operating Rating:</b> 2.750(99)		<b>Crossing 1 Nbr:</b>
<b>Latitude:</b> 42.35508196	<b>S Longitude:</b> 87.82869483	<b>S Design Load:</b> 02 HS20	<b>Crossing 1 Nbr:</b>
<b>Deck Structure Type:</b>	<b>Deck Structure Thickness:</b> 0	<b>SD:</b> Y <b>FO:</b> N	<b>RR Lateral Underclear:</b> 0.0
<b>Sidewalks Under Structure:</b> 0 None			<b>RR Vertical Underclear:</b> 0 Ft 0 In

**Key Route On Data**

<b>Key Route Nbr:</b> FEDERAL-AID URBAN 1225	<b>Station:</b> 3.2000
<b>Appurtenances</b> Main Route 00000	<b>Segment:</b>
<b>Inventory County:</b> 049 LAKE	<b>Linked:</b> Y
<b>Township/Road Dist</b> 16 WAUKEGAN	<b>Natl. Hwy System:</b> Not on NHS
<b>Municipality</b> 6075 WAUKEGAN	<b>Inventory Direction:</b>
<b>Urban Area:</b> 1051 1051	<b>Curr AADT Yr/Count:</b> 2015 / 1250
<b>Functional Class:</b> 5 MAJOR COLLECTOR	<b>Est Truck Percentage:</b> 10
<b>** CLEARANCES **</b> South/East North/West	<b>Number Of Lanes:</b> 2
<b>Max Rdwy Width:</b> 28.0	<b>One Or Two Way:</b> 2 Two-Way
<b>Horizontal:</b> 35.0 0.0	<b>Bypass Length:</b> 2
	<b>Future AADT Yr/Cnt:</b> 2032 / 918
	<b>Designated Truck Rte:</b> NONE
<b>Lateral:</b>	<b>Special Systems:</b> No

**Key Route Under Data**

<b>Station:</b>
<b>Segment:</b>
<b>Linked:</b>
<b>Natl. Hwy System:</b>
<b>Inventory Direction:</b>
<b>Curr AADT Yr/Count:</b> /
<b>Est Truck Percentage:</b>
<b>Number Of Lanes:</b>
<b>One Or Two Way:</b>
<b>Bypass Length:</b>
<b>Future AADT Yr/Cnt:</b> /
<b>Designated Truck Rte:</b>
<b>Special Systems:</b>

**\*\*\* Marked Route On Data \*\*\***

Designation	Kind	Number
Route #1: 1 Mainline	8 Other	
Route #2: 1 Mainline		
Route #3: 1 Mainline		

**\*\*\* Marked Route Under Data \*\*\***

Designation	Kind	Number
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Structures Information Management System  
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Structure Number: 049-0542

District: 1

**Inventory Data**

<b>Facility Carried:</b>	BELVIDERE ST.	<b>Bridge Name:</b>		<b>Sufficiency Rating:</b>	71.0	<b>Structure Length:</b>	20.0
<b>Feature Crossed:</b>	CREEK	<b>Location:</b>	.45M W OF IL137	<b>HBP Eligible:</b>	No	<b>AASHTO Bridge Length:</b>	10.0
<b>Bridge Remarks:</b>		<b>Status Date:</b>	10/2011	<b>Replaced By:</b>	-	<b>Length of Long Span:</b>	7.0
<b>Bridge Status:</b>	1 OPEN - NO RESTRICT			<b>Replaces:</b>	-	<b>Bridge Roadway Width:</b>	48.0
<b>Status Remarks:</b>		<b>Maint County:</b>	049 LAKE	<b>Last Update Date:</b>	09/15/2014	<b>Appr Roadway Width:</b>	48.0
<b>Maint Responsibility:</b>	01 I.D.O.T.	<b>Maint Township:</b>	16 WAUKEGAN	<b>Parallel Structure:</b>		<b>Deck Width:</b>	0.0
<b>Service On/Under:</b>	1 HIGHWAY			<b>Multi-Level Structure Nbr:</b>		<b>Sidewalk Width Right:</b>	0.0
<b>Reporting Agency:</b>	1 I.D.O.T. - BUREAU OF MAINTENANCE			<b>Skew Direction:</b>		<b>Sidewalk Width Left:</b>	0.0
<b>Main Span Matl/Type:</b>	3 STEEL		/ 19 CULVERT	<b>Skew Angle:</b>	0 D	<b>Navigation Control:</b>	0 No
<b>Nbr Of Main Spans:</b>	1	<b>Nbr Of Approach Spans:</b>	0	<b>Structure Flared:</b>		<b>Navigation Horiz Clear:</b>	0
<b>***Approaches***</b>				<b>Historical Significance:</b>	No	<b>Navigation Vert Clear:</b>	0
<b>Near #1 Matl/Type:</b>	/			<b>Border Bridge State:</b>		<b>Culvert Fill Depth:</b>	20.0
<b>Near #2 Matl/Type:</b>	/			<b>Bdr State SN:</b>		<b>Number Culvert Cells:</b>	1
<b>Far #1 Matl/Type:</b>	/			<b>Bdr State % Responsibility:</b>	0	<b>Culvert Opening Area:</b>	56.0
<b>Far #2 Matl/Type:</b>	/			<b>Structural Steel Wt</b>	0	<b>Culvert Cell Height:</b>	8.00
<b>Median Width/Type:</b>	0 Ft. / 0 None			<b>Substructure Material:</b>		<b>Culvert Cell Width:</b>	7.00
<b>Guardrail Type L/R:</b>	0None / 0 None			<b>Rated By:</b>		<b>Rate Method:</b>	
<b>Toll Facility Indicator:</b>	0 No Toll			<b>Inventory Rating:</b>	()	<b>Load Rating Date:</b>	
<b>Latitude:</b>	42.35374398	<b>S Longitude:</b>	87.83734626	<b>Operating Rating:</b>	()	<b>Railroad Crossing Info</b>	
<b>Deck Structure Type:</b>	N N/A			<b>Design Load:</b>		<b>Crossing 1 Nbr:</b>	
<b>Sidewalks Under Structure:</b>	0 None			<b>Deck Structure Thickness:</b>	0 SD: N FO: Y	<b>Crossing 1 Nbr:</b>	
						<b>RR Lateral Underclear:</b>	0.0
						<b>RR Vertical Underclear:</b>	0 Ft 0 In

**Key Route On Data**

**Key Route Nbr:** FEDERAL-AID URBAN 1225 **Station:** 2.7400  
**Appurtenances** Main Route 00000 **Segment:**  
**Inventory County:** 049 LAKE **Linked:** Y  
**Township/Road Dist** 16 WAUKEGAN **Natl. Hwy System:** Not on NHS  
**Municipality** 6075 WAUKEGAN **Inventory Direction:**  
**Urban Area:** 1051 1051 **Curr AADT Yr/Count:** 2015 / 18800  
**Functional Class:** 4 MINOR ARTERIAL **Est Truck Percentage:** 8  
**\*\* CLEARANCES \*\*** **South/East** **North/West** **Number Of Lanes:** 4  
**Max Rdwy Width:** 48.0 **One Or Two Way:** 2 Two-Way  
**Horizontal:** 50.0 0.0 **Bypass Length:** 0  
**Future AADT Yr/Cnt:** 0 / 0  
**Designated Truck Rte:** NONE  
**Special Systems:** No

**Key Route Under Data**

**Station:**  
**Segment:**  
**Linked:**  
**Natl. Hwy System:**  
**Inventory Direction:**  
**Curr AADT Yr/Count:** /  
**Est Truck Percentage:**  
**Number Of Lanes:**  
**One Or Two Way:**  
**Bypass Length:**  
**Future AADT Yr/Cnt:** /  
**Designated Truck Rte:**  
**Special Systems:**

**\*\*\* Marked Route On Data \*\*\***

Designation	Kind	Number
Route #1: 1 Mainline	8 Other	
Route #2: 1 Mainline		
Route #3: 1 Mainline		

**\*\*\* Marked Route Under Data \*\*\***

Designation	Kind	Number
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Structure Number: 049-0543

District: 1

**Inventory Data**

<b>Facility Carried:</b> GRAND AVE	<b>Bridge Name:</b>	<b>Sufficiency Rating:</b> 81.0	<b>Structure Length:</b> 19.0
<b>Feature Crossed:</b> WAUKEGAN CREEK	<b>Location:</b> .24M E OF LEWIS AV	<b>HBP Eligible:</b> No	<b>AASHTO Bridge Length:</b> 17.0
<b>Bridge Remarks:</b>		<b>Replaced By:</b> -	<b>Length of Long Span:</b> 8.0
<b>Bridge Status:</b> 1 OPEN - NO RESTRICT	<b>Status Date:</b> 10/2011	<b>Replaces:</b> -	<b>Bridge Roadway Width:</b> 24.0
<b>Status Remarks:</b>		<b>Last Update Date:</b> 09/15/2014	<b>Appr Roadway Width:</b> 24.0
<b>Maint County:</b> 049 LAKE	<b>Maint Township:</b> 16 WAUKEGAN	<b>Parallel Structure:</b>	<b>Deck Width:</b> 0.0
<b>Maint Responsibility:</b> 01 I.D.O.T.		<b>Multi-Level Structure Nbr:</b>	<b>Sidewalk Width Right:</b> 0.0
<b>Service On/Under:</b> 1 HIGHWAY 5 / WATERWAY		<b>Skew Direction:</b>	<b>Sidewalk Width Left:</b> 0.0
<b>Reporting Agency:</b> 1 I.D.O.T. - BUREAU OF MAINTENANCE		<b>Skew Angle:</b> 0 D	<b>Navigation Control:</b> 0 No
<b>Main Span Matl/Type:</b> A PRECAST CONCRETE/NOT PRESTRESS / 19 CULVERT		<b>Structure Flared:</b>	<b>Navigation Horiz Clear:</b> 0
<b>Nbr Of Main Spans:</b> 2	<b>Nbr Of Approach Spans:</b> 0	<b>Historical Significance:</b> No	<b>Navigation Vert Clear:</b> 0
<b>***Approaches***</b>		<b>Border Bridge State:</b>	<b>Culvert Fill Depth:</b> 3.0
<b>Near #1 Matl/Type:</b> /		<b>Bdr State SN:</b>	<b>Number Culvert Cells:</b> 2
<b>Near #2 Matl/Type:</b> /		<b>Bdr State % Responsibility:</b> 0	<b>Culvert Opening Area:</b> 96.0
<b>Far #1 Matl/Type:</b> /		<b>Structural Steel Wt:</b> 0	<b>Culvert Cell Height:</b> 6.00
<b>Far #2 Matl/Type:</b> /		<b>Substructure Material:</b>	<b>Culvert Cell Width:</b> 8.00
<b>Median Width/Type:</b> 12 Ft. / 1 Open Median		<b>Rated By:</b>	<b>Rate Method:</b>
<b>Guardrail Type L/R:</b> 0None / 0 None	<b>Inventory Rating:</b> ( )	<b>Load Rating Date:</b>	<b>Railroad Crossing Info</b>
<b>Toll Facility Indicator:</b> 0 No Toll	<b>Operating Rating:</b> ( )		<b>Crossing 1 Nbr:</b>
<b>Latitude:</b> 42.37028856	<b>S Longitude:</b> 87.85084055	<b>Design Load:</b>	<b>Crossing 1 Nbr:</b>
<b>Deck Structure Type:</b> N N/A	<b>Deck Structure Thickness:</b> 0	<b>SD:</b> N <b>FO:</b> Y	<b>RR Lateral Underclear:</b> 0.0
<b>Sidewalks Under Structure:</b> 0 None			<b>RR Vertical Underclear:</b> 0 Ft 0 In

**Key Route On Data**

**Key Route Nbr:** FEDERAL-AID PRIMARY 0541 **Station:** 15.1600  
**Appurtenances** Main Route 00000 **Segment:**  
**Inventory County:** 049 LAKE **Linked:** Y  
**Township/Road Dist** 16 WAUKEGAN **Natl. Hwy System:** On NHS  
**Municipality** 6075 WAUKEGAN **Inventory Direction:**  
**Urban Area:** 1051 1051 **Curr AADT Yr/Count:** 2015 / 6350  
**Functional Class:** 3 OTHER PRINCIPAL ARTERIAL **Est Truck Percentage:** 18  
**\*\* CLEARANCES \*\*** **South/East** **North/West** **Number Of Lanes:** 2  
**Max Rdwy Width:** 44.0 **One Or Two Way:** 2 Two-Way  
**Horizontal:** 46.0 0.0 **Bypass Length:** 0  
**Future AADT Yr/Cnt:** 0 / 0  
**Designated Truck Rte:** NONE  
**Special Systems:** No

**Key Route Under Data**

**Station:**  
**Segment:**  
**Linked:**  
**Natl. Hwy System:**  
**Inventory Direction:**  
**Curr AADT Yr/Count:** /  
**Est Truck Percentage:**  
**Number Of Lanes:**  
**One Or Two Way:**  
**Bypass Length:**  
**Future AADT Yr/Cnt:** /  
**Designated Truck Rte:**  
**Special Systems:**

**\*\*\* Marked Route On Data \*\*\***

Designation	Kind	Number
Route #1: 1 Mainline	8 Other	
Route #2: 1 Mainline		
Route #3: 1 Mainline		

**\*\*\* Marked Route Under Data \*\*\***

Designation	Kind	Number
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Structure Number: 049-2050

District: 1

**Inventory Data**

<b>Facility Carried:</b> MATHON DR	<b>Bridge Name:</b>	<b>Sufficiency Rating:</b> 92.5	<b>Structure Length:</b> 342.2
<b>Feature Crossed:</b> UP RR	<b>Location:</b> 0.3 M E SHERIDAN	<b>HBP Eligible:</b> No	<b>AASHTO Bridge Length:</b> 99.9
<b>Bridge Remarks:</b> Superstructure replacement & substructure repairs completed June 2016		<b>Replaced By:</b> -	<b>Length of Long Span:</b> 127.4
<b>Bridge Status:</b> 1 OPEN - NO RESTRICT	<b>Status Date:</b> 06/2016	<b>Replaces:</b> -	<b>Bridge Roadway Width:</b> 58.0
<b>Status Remarks:</b> Superstructure replacement completed June 2016		<b>Last Update Date:</b> 07/13/2016	<b>Appr Roadway Width:</b> 64.0
<b>Maint County:</b> 049 LAKE	<b>Maint Township:</b> 16 WAUKEGAN	<b>Parallel Structure:</b> None	<b>Deck Width:</b> 70.8
<b>Maint Responsibility:</b> 04 MUNICIPALITY		<b>Multi-Level Structure Nbr:</b>	<b>Sidewalk Width Right:</b> 5.0
<b>Service On/Under:</b> 1 HIGHWAY	2 / RAILROAD	<b>Skew Direction:</b> L	<b>Sidewalk Width Left:</b> 5.0
<b>Reporting Agency:</b> 4 MUNICIPALITY		<b>Skew Angle:</b> 15 D	<b>Navigation Control:</b> N N/A
<b>Main Span Matl/Type:</b> 4 STEEL CONTINUOUS	/ 02 STRINGER/MULTI-BEAM/GIRDER	<b>Structure Flared:</b> Yes	<b>Navigation Horiz Clear:</b> 0
<b>Nbr Of Main Spans:</b> 4	<b>Nbr Of Approach Spans:</b> 0	<b>Historical Significance:</b> No	<b>Navigation Vert Clear:</b> 0
<b>***Approaches***</b>		<b>Border Bridge State:</b>	<b>Culvert Fill Depth:</b> 0.0
<b>Near #1 Matl/Type:</b> /		<b>Bdr State SN:</b>	<b>Number Culvert Cells:</b> 0
<b>Near #2 Matl/Type:</b> /		<b>Bdr State % Responsibility:</b> 0	<b>Culvert Opening Area:</b> 0.0
<b>Far #1 Matl/Type:</b> /		<b>Structural Steel Wt</b> 923680	<b>Culvert Cell Height:</b> 0.00
<b>Far #2 Matl/Type:</b> /		<b>Substructure Material:</b>	<b>Culvert Cell Width:</b> 0.00
<b>Median Width/Type:</b> 0 Ft. / 0 None		<b>Rated By:</b> 2 IDOT	<b>Rate Method:</b> F ASSIGNED RATING BASED ON LRFD REPORTED BY RATING FACTOR (RF)
<b>Guardrail Type L/R:</b> 0None / 0 None	<b>Inventory Rating:</b> 1.000(36)	<b>Load Rating Date:</b> 07/06/2016	<b>Railroad Crossing Info</b>
<b>Toll Facility Indicator:</b> 0 No Toll	<b>Operating Rating:</b> 1.300(46)		<b>Crossing 1 Nbr:</b>
<b>Latitude:</b> 42.36389122	<b>S Longitude:</b> 87.82768770	<b>S Design Load:</b> 93 HL93	<b>Crossing 1 Nbr:</b>
<b>Deck Structure Type:</b> A CIP CON NRMLLY FORM	<b>Deck Structure Thickness:</b> 8	<b>SD:</b> N <b>FO:</b> N	<b>RR Lateral Underclear:</b> 11.8
<b>Sidewalks Under Structure:</b> 0 None		<b>RR Vertical Underclear:</b> 23	<b>Ft</b> 04 <b>In</b>

**Key Route On Data**

**Key Route Nbr:** MUNICIPAL STREET 4116 **Station:** 0.0500  
**Appurtenances** Main Route 06075 **Segment:**  
**Inventory County:** 049 LAKE **Linked:** Y  
**Township/Road Dist** 16 WAUKEGAN **Natl. Hwy System:** Not on NHS  
**Municipality** 6075 WAUKEGAN **Inventory Direction:**  
**Urban Area:** 1051 1051 **Curr AADT Yr/Count:** 2015 / 3200  
**Functional Class:** 7 LOCAL **Est Truck Percentage:** 9  
**\*\* CLEARANCES \*\*** **South/East** **North/West** **Number Of Lanes:** 4  
**Max Rdwy Width:** 58.0 **One Or Two Way:** 2 Two-Way  
**Horizontal:** 68.0 0.0 **Bypass Length:** 2  
**Future AADT Yr/Cnt:** 2032 / 233  
**Designated Truck Rte:** NONE  
**Special Systems:** No

**Key Route Under Data**

**Station:**  
**Segment:**  
**Linked:**  
**Natl. Hwy System:**  
**Inventory Direction:**  
**Curr AADT Yr/Count:** /  
**Est Truck Percentage:**  
**Number Of Lanes:**  
**One Or Two Way:**  
**Bypass Length:**  
**Future AADT Yr/Cnt:** /  
**Designated Truck Rte:**  
**Special Systems:**

**\*\*\* Marked Route On Data \*\*\***

	Designation	Kind	Number
<b>Route #1:</b>	1 Mainline	5	Municipal Streets
<b>Route #2:</b>	1 Mainline		
<b>Route #3:</b>	1 Mainline		

**\*\*\* Marked Route Under Data \*\*\***

	Designation	Kind	Number
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**Inventory Data**

<b>Facility Carried:</b> pedestrian crossing	<b>Bridge Name:</b>	<b>Sufficiency Rating:</b>	<b>Structure Length:</b> 79.0
<b>Feature Crossed:</b> Sheridan Rd	<b>Location:</b> .2M N of Greenwood	<b>HBP Eligible:</b> No	<b>AASHTO Bridge Length:</b> 65.8
<b>Bridge Remarks:</b>		<b>Replaced By:</b> -	<b>Length of Long Span:</b> 65.9
<b>Bridge Status:</b> 1 OPEN - NO RESTRICT	<b>Status Date:</b> 12/2013	<b>Replaces:</b> -	<b>Bridge Roadway Width:</b> 48.0
<b>Status Remarks:</b>		<b>Last Update Date:</b> 12/16/2013	<b>Appr Roadway Width:</b> 48.0
<b>Maint County:</b> 049 LAKE	<b>Maint Township:</b> 16 WAUKEGAN	<b>Parallel Structure:</b> None	<b>Deck Width:</b>
<b>Maint Responsibility:</b> 04 MUNICIPALITY		<b>Multi-Level Structure Nbr:</b>	<b>Sidewalk Width Right:</b>
<b>Service On/Under:</b> 3 PEDESTRIAN	1 / HIGHWAY	<b>Skew Direction:</b> N	<b>Sidewalk Width Left:</b>
<b>Reporting Agency:</b> 4 MUNICIPALITY		<b>Skew Angle:</b> D	<b>Navigation Control:</b> N N/A
<b>Main Span Matl/Type:</b> 3 STEEL	/ 00 OTHER	<b>Structure Flared:</b> No	<b>Navigation Horiz Clear:</b>
<b>Nbr Of Main Spans:</b> 1	<b>Nbr Of Approach Spans:</b> 0	<b>Historical Significance:</b> No	<b>Navigation Vert Clear:</b>
<b>***Approaches***</b>		<b>Border Bridge State:</b>	<b>Culvert Fill Depth:</b>
<b>Near #1 Matl/Type:</b> /		<b>Bdr State SN:</b>	<b>Number Culvert Cells:</b>
<b>Near #2 Matl/Type:</b> /		<b>Bdr State % Responsibility:</b>	<b>Culvert Opening Area:</b>
<b>Far #1 Matl/Type:</b> /		<b>Structural Steel Wt</b>	<b>Culvert Cell Height:</b>
<b>Far #2 Matl/Type:</b> /		<b>Substructure Material:</b> 55	<b>Culvert Cell Width:</b>
<b>Median Width/Type:</b> Ft. / 0 None		<b>Rated By:</b>	<b>Rate Method:</b>
<b>Guardrail Type L/R:</b> 0None / 0 None		<b>Inventory Rating:</b> ( )	<b>Load Rating Date:</b>
<b>Toll Facility Indicator:</b> 0 No Toll		<b>Operating Rating:</b> ( )	<b>Railroad Crossing Info</b>
<b>Latitude:</b> 42.38770216	<b>S Longitude:</b> 87.83300806	<b>S</b>	<b>Crossing 1 Nbr:</b>
<b>Deck Structure Type:</b> G OPEN STEEL GRATING		<b>Design Load:</b> 99 UNKNOWN	<b>Crossing 1 Nbr:</b>
<b>Sidewalks Under Structure:</b> 0 None		<b>Deck Structure Thickness:</b>	<b>RR Lateral Underclear:</b>
		<b>SD:</b>	<b>RR Vertical Underclear:</b> Ft In
		<b>FO:</b>	

**Key Route On Data**

**Key Route Under Data**

<b>Key Route Nbr:</b>	<b>Station:</b>	FEDERAL-AID PRIMARY	0352	<b>Station:</b>	7.3700
<b>Appurtenances</b>	<b>Segment:</b>	Main Route	00000	<b>Segment:</b>	
<b>Inventory County:</b>	<b>Linked:</b>	049		<b>Linked:</b>	Y
<b>Township/Road Dist</b>	<b>Natl. Hwy System:</b>	16	WAUKEGAN	<b>Natl. Hwy System:</b>	On NHS
<b>Municipality</b>	<b>Inventory Direction:</b>	6075	WAUKEGAN	<b>Inventory Direction:</b>	
<b>Urban Area:</b>	<b>Curr AADT Yr/Count:</b> /	1051	1051	<b>Curr AADT Yr/Count:</b>	2015 / 17700
<b>Functional Class:</b>	<b>Est Truck Percentage:</b>	3	OTHER PRINCIPAL ARTERIAL	<b>Est Truck Percentage:</b>	7
<b>** CLEARANCES **</b> South/East North/West	<b>Number Of Lanes:</b>	<b>South/East</b>	<b>North/West</b>	<b>Number Of Lanes:</b>	4
<b>Max Rdwy Width:</b>	<b>One Or Two Way:</b>	48.0		<b>One Or Two Way:</b>	2 Two-Way
<b>Horizontal:</b>	<b>Bypass Length:</b>	59.8		<b>Bypass Length:</b>	0
	<b>Future AADT Yr/Cnt:</b> /			<b>Future AADT Yr/Cnt:</b>	2038 / 13500
	<b>Designated Truck Rte:</b>			<b>Designated Truck Rte:</b>	CLASS II
<b>Lateral:</b>	<b>Special Systems:</b>			<b>Special Systems:</b>	No

**\*\*\* Marked Route On Data \*\*\***

**\*\*\* Marked Route Under Data \*\*\***

Designation	Kind	Number	Designation	Kind	Number
Route #1:			1 Mainline	3 State Highway	137
Route #2:			1 Mainline		
Route #3:			1 Mainline		

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**Data Related to Inspection Information**

\*\*\* Inspection Intervals \*\*\*

\*\*\* Maximum Allowable Posting Limits \*\*\*

Bridge Posting Level:

Routine NBIS:	24 MOS	Underwater:	MOS	One Truck At A Time:	Combination Type 3S-1:	Tons
		Special:	N	Single Unit Vehicles:	Combination Type 3S-2:	Tons

**Inspection/Appraisal Information**

\*\* Actual Posted Limits \*\*

Inspection Date:	Inspection Temperature:	Deg. F	Single Unit Vehicles:	Tons
Deck:			Combination Type 3S-1:	Tons
Superstructure:			Combination Type 3S-2:	Tons
Substructure:			One Truck At A Time:	
Culvert:			Last Paint Type:	
Channel and Protection:		Deck Wearing Surf:		
Structural Evaluation:		Deck Membrane:		
Deck Geometry:		Deck Protection:		
Underclearance-Vert/Lat.:		Total Deck Thick:		
Waterway Adequacy:		Last Paint Date:		
Approach Roadway Align:				
Bridge Railing Appraisal:				
Approach Guardrail:				
Pier Navig Protection:				

**Underwater Inspection/Appraisal Information**

Inspection Date:		
Temperature:	Inspection Method:	Appraisal Rating:

**Scour Critical Information**

**Miscellaneous**

Rating:	Evaluation Method:	
Analysis Date:		Microfilm Data Recorded: No

**Construction Information**

Year:	Original	Reconstructed
Route:	Sta:	Sta:
Section Nbr:		
Contract Nbr:		
Fed Aid Pr#:		
Built By:		

**Illinois Department of Transportation  
Structures Information Management System  
Structure Summary Report**

Date: 11/07/2017

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Structure Number: 049-8000

District: 1

**Inventory Data**

<b>Facility Carried:</b> GENESEE ST	<b>Bridge Name:</b> GENESEE ST BRIDGE	<b>Sufficiency Rating:</b> 21.3	<b>Structure Length:</b> 370.0
<b>Feature Crossed:</b> WAUKEGAN RIVER	<b>Location:</b> ON GEN ST S OF WATER	<b>HBP Eligible:</b> Yes	<b>AASHTO Bridge Length:</b> 99.9
<b>Bridge Remarks:</b>		<b>Replaced By:</b> -	<b>Length of Long Span:</b> 110.0
<b>Bridge Status:</b> 2 OPEN - LOAD POSTED	<b>Status Date:</b> 12/2011	<b>Replaces:</b> -	<b>Bridge Roadway Width:</b> 44.0
<b>Status Remarks:</b> PER D-1 LOCAL ROADS 12-29-2011		<b>Last Update Date:</b> 07/05/2012	<b>Appr Roadway Width:</b> 53.0
<b>Maint County:</b> 049 LAKE	<b>Maint Township:</b> 16 WAUKEGAN	<b>Parallel Structure:</b> None	<b>Deck Width:</b> 64.0
<b>Maint Responsibility:</b> 04 MUNICIPALITY		<b>Multi-Level Structure Nbr:</b>	<b>Sidewalk Width Right:</b> 13.0
<b>Service On/Under:</b> 1 HIGHWAY	5 / WATERWAY	<b>Skew Direction:</b> N	<b>Sidewalk Width Left:</b> 13.0
<b>Reporting Agency:</b> 4 MUNICIPALITY		<b>Skew Angle:</b> 0 D	<b>Navigation Control:</b> 0 No
<b>Main Span Matl/Type:</b> 1 CONCRETE	/ 25 ARCH-DECK, OPEN SPANDREL	<b>Structure Flared:</b> No	<b>Navigation Horiz Clear:</b> 0
<b>Nbr Of Main Spans:</b> 3	<b>Nbr Of Approach Spans:</b> 2	<b>Historical Significance:</b> Yes	<b>Navigation Vert Clear:</b> 0
<b>***Approaches***</b>		<b>Border Bridge State:</b>	<b>Culvert Fill Depth:</b> 0.0
<b>Near #1 Matl/Type:</b> 1 CONCRETE	/ 12 ARCH - THRU	<b>Bdr State SN:</b>	<b>Number Culvert Cells:</b> 0
<b>Near #2 Matl/Type:</b>	/	<b>Bdr State % Responsibility:</b> 0	<b>Culvert Opening Area:</b> 0.0
<b>Far #1 Matl/Type:</b> 1 CONCRETE	/ 12 ARCH - THRU	<b>Structural Steel Wt</b> 0	<b>Culvert Cell Height:</b> 0.00
<b>Far #2 Matl/Type:</b>	/	<b>Substructure Material:</b>	<b>Culvert Cell Width:</b> 0.00
<b>Median Width/Type:</b> 0 Ft. / 0 None		<b>Rated By:</b> 2 IDOT	<b>Rate Method:</b> 0 FIELD EVALUATION AND DOCUMENTED ENGINEERING JUDGEMENT
<b>Guardrail Type L/R:</b> 0None / 0 None	<b>Inventory Rating:</b> 0.660(23)	<b>Load Rating Date:</b> 01/01/2010	<b>Railroad Crossing Info</b>
<b>Toll Facility Indicator:</b> 0 No Toll	<b>Operating Rating:</b> 0.900(32)		<b>Crossing 1 Nbr:</b>
<b>Latitude:</b> 42.35704528	<b>S Longitude:</b> 87.83138733	<b>S Design Load:</b> 99 UNKNOWN	<b>Crossing 1 Nbr:</b>
<b>Deck Structure Type:</b> A CIP CON NRMLLY FORM	<b>Deck Structure Thickness:</b> 25	<b>SD:</b> Y <b>FO:</b> Y	<b>RR Lateral Underclear:</b> 0.0
<b>Sidewalks Under Structure:</b> 0 None		<b>RR Vertical Underclear:</b> 0	<b>Ft</b> 0 <b>In</b>

**Key Route On Data**

<b>Key Route Nbr:</b> FEDERAL-AID URBAN	2703	<b>Station:</b> 0.4500
<b>Appurtenances</b> Main Route	00000	<b>Segment:</b>
<b>Inventory County:</b> 049 LAKE		<b>Linked:</b> Y
<b>Township/Road Dist</b> 16 WAUKEGAN		<b>Natl. Hwy System:</b> Not on NHS
<b>Municipality</b> 6075 WAUKEGAN		<b>Inventory Direction:</b>
<b>Urban Area:</b> 1051 1051		<b>Curr AADT Yr/Count:</b> 2015 / 2200
<b>Functional Class:</b> 5 MAJOR COLLECTOR		<b>Est Truck Percentage:</b> 12
<b>** CLEARANCES **</b> South/East	North/West	<b>Number Of Lanes:</b> 4
<b>Max Rdwy Width:</b> 53.4		<b>One Or Two Way:</b> 2 Two-Way
<b>Horizontal:</b> 55.4	0.0	<b>Bypass Length:</b> 1
		<b>Future AADT Yr/Cnt:</b> 2032 / 2783
		<b>Designated Truck Rte:</b> NONE
<b>Lateral:</b>		<b>Special Systems:</b> No

**Key Route Under Data**

<b>Station:</b>
<b>Segment:</b>
<b>Linked:</b>
<b>Natl. Hwy System:</b>
<b>Inventory Direction:</b>
<b>Curr AADT Yr/Count:</b> /
<b>Est Truck Percentage:</b>
<b>Number Of Lanes:</b>
<b>One Or Two Way:</b>
<b>Bypass Length:</b>
<b>Future AADT Yr/Cnt:</b> /
<b>Designated Truck Rte:</b>
<b>Special Systems:</b>

**\*\*\* Marked Route On Data \*\*\***

	Designation	Kind	Number
<b>Route #1:</b>	1 Mainline	8 Other	
<b>Route #2:</b>	1 Mainline		
<b>Route #3:</b>	1 Mainline		

**\*\*\* Marked Route Under Data \*\*\***

	Designation	Kind	Number
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**Illinois Department of Transportation  
Structures Information Management System  
Structure Summary Report**

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**Data Related to Inspection Information**

\*\*\* Inspection Intervals \*\*\*

\*\*\* Maximum Allowable Posting Limits \*\*\*

Bridge Posting Level:

<b>Routine NBIS:</b>	24 MOS	<b>Underwater:</b>	0 MOS	<b>One Truck At A Time:</b>	0	<b>Combination Type 3S-1:</b>	29 Tons	4	< 10% Below Legal Loads
		<b>Special:</b>	N	<b>Single Unit Vehicles:</b>	22 Tons	<b>Combination Type 3S-2:</b>	36 Tons		

**Inspection/Appraisal Information**

<b>Inspection Date:</b>	10/03/2017	<b>Inspection Temperature:</b>	70Deg. F	<b>** Actual Posted Limits **</b>	
<b>Deck:</b>	4	POOR CONDITION - ADVANCED DETERIORATION		<b>Single Unit Vehicles:</b>	22 Tons
<b>Superstructure:</b>	3	SERIOUS CONDITION - SIGNIFICANT SECTION LOSS		<b>Combination Type 3S-1:</b>	29 Tons
<b>Substructure:</b>	6	SATISFACTORY CONDITION - MINOR DETERIORATION		<b>Combination Type 3S-2:</b>	36 Tons
<b>Culvert:</b>	N	NOT APPLICABLE		<b>One Truck At A Time:</b>	0
<b>Channel and Protection:</b>	7	GOOD CONDITION - SOME MINOR PROBLEMS	<b>Deck Wearing Surf:</b>	A BARE DECK NO OVRLAY	<b>Last Paint Type:</b>
<b>Structural Evaluation:</b>	3	INTOLERABLE - HIGH PRIORITY FOR CORRECTION	<b>Deck Membrane:</b>	F NONE	
<b>Deck Geometry:</b>	2	INTOLERABLE - HIGH PRIORITY FOR REPLACEMENT	<b>Deck Protection:</b>	J NONE	
<b>Underclearance-Vert/Lat.:</b>	N	NOT APPLICABLE	<b>Total Deck Thick:</b>	25.0	
<b>Waterway Adequacy:</b>	9	SUPERIOR TO PRESENT DESIRABLE CRITERIA	<b>Last Paint Date:</b>		
<b>Approach Roadway Align:</b>	8	EQUAL TO PRESENT DESIRABLE CRITERIA			
<b>Bridge Railing Appraisal:</b>	2	Doesn't Meet Standards			
<b>Approach Guardrail:</b>	NNN	N/A	N/A	N/A	
<b>Pier Navig Protection:</b>	N	N/A			

**Underwater Inspection/Appraisal Information**

**Inspection Date:**  
**Temperature:**

**Inspection Method:**

**Appraisal Rating:**

**Scour Critical Information**

**Miscellaneous**

<b>Rating:</b>	8	CALCULATED SCOUR ABOVE FOOTING	<b>Evaluation Method:</b>	B	Rational Analysis	<b>Microfilm Data Recorded:</b>	No
<b>Analysis Date:</b>	11/20/1998						

**Construction Information**

<b>Year:</b>	1913	Original	1984	Reconstructed
<b>Route:</b>		<b>Sta:</b> 2+1500	FAU2703	<b>Sta:</b> 2+15.00
<b>Section Nbr:</b>	78-00138-01-RS		82-00154-01-BR	
<b>Contract Nbr:</b>			39784	
<b>Fed Aid Pr#:</b>	000000000000000		BH-M-5003(846)	
<b>Built By:</b>	4	CITY	0	UNKNOWN

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Structures Information Management System  
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District: 1

**Inventory Data**

<b>Facility Carried:</b> GREENWOOD AVE	<b>Bridge Name:</b>	<b>Sufficiency Rating:</b> 38.0	<b>Structure Length:</b> 160.0
<b>Feature Crossed:</b> UPRR	<b>Location:</b> 0.5 M E SHERIDAN RD	<b>HBP Eligible:</b> Yes	<b>AASHTO Bridge Length:</b> 99.9
<b>Bridge Remarks:</b>		<b>Replaced By:</b> -	<b>Length of Long Span:</b> 70.0
<b>Bridge Status:</b> 5 OPEN-TEMP SHORING	<b>Status Date:</b> 12/2016	<b>Replaces:</b> -	<b>Bridge Roadway Width:</b> 68.0
<b>Status Remarks:</b>		<b>Last Update Date:</b> 12/08/2016	<b>Appr Roadway Width:</b> 68.0
<b>Maint County:</b> 049 LAKE	<b>Maint Township:</b> 16 WAUKEGAN	<b>Parallel Structure:</b> None	<b>Deck Width:</b> 80.0
<b>Maint Responsibility:</b> 04 MUNICIPALITY		<b>Multi-Level Structure Nbr:</b>	<b>Sidewalk Width Right:</b> 5.0
<b>Service On/Under:</b> 1 HIGHWAY	2 / RAILROAD	<b>Skew Direction:</b> N	<b>Sidewalk Width Left:</b> 5.0
<b>Reporting Agency:</b> 4 MUNICIPALITY		<b>Skew Angle:</b> 0 D	<b>Navigation Control:</b> N N/A
<b>Main Span Matl/Type:</b> 3 STEEL	/ 02 STRINGER/MULTI-BEAM/GIRDER	<b>Structure Flared:</b> Yes	<b>Navigation Horiz Clear:</b> 0
<b>Nbr Of Main Spans:</b> 3	<b>Nbr Of Approach Spans:</b> 2	<b>Historical Significance:</b> No	<b>Navigation Vert Clear:</b> 0
<b>***Approaches***</b>		<b>Border Bridge State:</b>	<b>Culvert Fill Depth:</b> 0.0
<b>Near #1 Matl/Type:</b> 4 STEEL CONTINUOUS	/ 02 STRINGER/MULTI-BEAM/GIRDER	<b>Bdr State SN:</b>	<b>Number Culvert Cells:</b> 0
<b>Near #2 Matl/Type:</b>	/	<b>Bdr State % Responsibility:</b> 0	<b>Culvert Opening Area:</b> 0.0
<b>Far #1 Matl/Type:</b> 4 STEEL CONTINUOUS	/ 02 STRINGER/MULTI-BEAM/GIRDER	<b>Structural Steel Wt</b> 0	<b>Culvert Cell Height:</b> 0.00
<b>Far #2 Matl/Type:</b>	/	<b>Substructure Material:</b>	<b>Culvert Cell Width:</b> 0.00
<b>Median Width/Type:</b> 4 Ft. / 3 Curb		<b>Rated By:</b> 2 IDOT	<b>Rate Method:</b> 6 LOAD FACTOR (LF) REPORTED BY RATING FACTOR (RF)
<b>Guardrail Type L/R:</b> 0None / 0 None	<b>Inventory Rating:</b> 0.000(0)	<b>Load Rating Date:</b> 10/18/2017	<b>Railroad Crossing Info</b>
<b>Toll Facility Indicator:</b> 0 No Toll	<b>Operating Rating:</b> 0.000(0)		<b>Crossing 1 Nbr:</b>
<b>Latitude:</b> 42.38468811	<b>S Longitude:</b> 87.82443966	<b>S Design Load:</b> 05 H15	<b>Crossing 1 Nbr:</b>
<b>Deck Structure Type:</b>	<b>Deck Structure Thickness:</b> 0	<b>SD:</b> Y <b>FO:</b> N	<b>RR Lateral Underclear:</b> 20.0
<b>Sidewalks Under Structure:</b> 0 None			<b>RR Vertical Underclear:</b> 0 Ft 0 In

**Key Route On Data**

**Key Route Nbr:** FEDERAL-AID URBAN 3719 **Station:** 0.0700  
**Appurtenances** Main Route 00000 **Segment:**  
**Inventory County:** 049 LAKE **Linked:** Y  
**Township/Road Dist** 16 WAUKEGAN **Natl. Hwy System:** Not on NHS  
**Municipality** 6075 WAUKEGAN **Inventory Direction:**  
**Urban Area:** 1051 1051 **Curr AADT Yr/Count:** 2015 / 525  
**Functional Class:** 5 MAJOR COLLECTOR **Est Truck Percentage:** 13  
**\*\* CLEARANCES \*\*** **South/East** **North/West** **Number Of Lanes:** 4  
**Max Rdwy Width:** 24.0 **One Or Two Way:** 2 Two-Way  
**Horizontal:** 36.0 26.0 **Bypass Length:** 0  
**Future AADT Yr/Cnt:** 2032 / 870  
**Designated Truck Rte:** NONE  
**Lateral:** **Special Systems:** No

**Key Route Under Data**

**Station:**  
**Segment:**  
**Linked:**  
**Natl. Hwy System:**  
**Inventory Direction:**  
**Curr AADT Yr/Count:** /  
**Est Truck Percentage:**  
**Number Of Lanes:**  
**One Or Two Way:**  
**Bypass Length:**  
**Future AADT Yr/Cnt:** /  
**Designated Truck Rte:**  
**Special Systems:**

**\*\*\* Marked Route On Data \*\*\***

Designation	Kind	Number
Route #1: 1 Mainline	8 Other	
Route #2: 1 Mainline		
Route #3: 1 Mainline		

**\*\*\* Marked Route Under Data \*\*\***

Designation	Kind	Number
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# EXHIBIT C

TIMELINE, COST AND FINANCIAL DATA



EXHIBIT C Timeline, Cost and Financial Data

	Ciorba Group	Calc by: SSM	Date: 12/10/2017
	5507 N. Cumberland Ave	Chk'd by: SCD	Date: 12/14/2017
	Suite 402	Job No: 20729.01	
	Chicago, IL 60656	Client: City of Waukegan	

10 Year Plan Timeline																											
Year	Cummings Avenue Culvert	Lincoln Avenue Culvert	George Avenue Culvert	Jackson Street Culvert/Tunnel 0.09 mi South of Belvidere Road	Belvidere Street Culvert	Pershing Road Culvert	Sheridan Road Culvert, 0.15 mi North of Belvidere Road	County Street Culvert	Martin Luther King Drive Culvert	Water Street Culvert	Washington Street Culvert	Jackson Street Culvert, north of Jackson Ct	McClory Bike Path Culvert	Butrick Street Culvert	Grand Avenue Culvert	New York Street Culvert/Tunnel	Sheridan Road Culvert, E of Golf Course	Lewis Avenue Culvert	Market Street S of Belvidere	Market Street N of Belvidere	Belvidere Road Bridge	Genesee Street Bridge	Grand Avenue Bridge	Pedestrian Bridge	Greenwood Avenue Bridge		
2018	Des+Rehab	Des	In-D Insp	In-D Insp	IDOT MAINTENANCE RESPONSIBILITY	Des+Rehab	Des	In-D Insp	Des	In-D Insp		Des+Rehab	Des+Rehab		IDOT MAINTENANCE RESPONSIBILITY	In-D Insp			Phase I	Phase I	Phase I		Inspection		Inspection		
2019		Recon					Recon		Rehab		In-D Insp					In-D Insp		In-D Insp			Phase II + Insp	Phase II + Insp	Phase II + Insp		Inspection		Inspection
2020																					Phase III - Demo	Phase III	Phase III + JT		Inspection		Inspection
2021																									Inspection		Phase II + Insp
2022	Inspection		Des+Rehab	Des+Rehab			Inspection		Des+Rehab		Des+Rehab		Inspection	Inspection											Phase II	Inspection	Inspection
2023		Inspection					Inspection			Inspection		Des+Rehab													Phase II + Insp	Inspection	Inspection
2024																									Phase III	Inspection	Inspection
2025																									Phase III	Inspection	Inspection
2026	Inspection		Inspection	Inspection			Inspection		Inspection		Inspection		Inspection	Inspection		Inspection									Des+Recon	Inspection	Inspection
2027		Inspection					Inspection		Inspection		Inspection		Inspection	Inspection		Inspection			Des+Rehab	Des+Recon						Inspection	Inspection

COSTS																									
Item	Cummings	Lincoln	George	Jackson South	Belvidere	Pershing	Sheridan North	County	MLK	Water	Washington	Jackson	McClory	Butrick	Grand	New York	Sheridan East	Lewis	Market St N	Market St S	Belvidere	Genesee	Grand	Pedestrian Bridge	Greenwood
INSPECTION GROUP	A	B	A	A	None	A	B	A	B	A	B	A	A	B	None	A	B	B							
In-Depth Inspection	\$2,000	\$5,000	\$5,000	\$5,000	\$0	\$2,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$0	\$5,000	\$5,000	\$5,000							
Routine Inspection	\$500	\$1,000	\$1,000	\$1,000	\$0	\$500	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$0	\$1,000	\$1,000	\$1,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
<b>ENGINEERING AND CONSTRUCTION COSTS</b>																									
Construction Cost	\$172,000	\$170,000	\$45,000	\$244,000	\$0	\$30,000	\$74,000	\$72,000	\$104,000	\$245,000	\$152,000	\$46,000	\$119,000	\$410,000	\$0	\$594,000	\$16,000	\$288,000	\$2,000,000	\$1,415,000	\$1,978,000	\$9,513,000	\$2,300	\$49,000	\$3,273,000
Design Engineering	\$21,000	\$21,000	\$6,000	\$30,000	\$0	\$4,000	\$9,000	\$9,000	\$13,000	\$30,000	\$19,000	\$6,000	\$15,000	\$50,000	\$0	\$72,000	\$2,000	\$35,000	\$50,000	\$50,000	\$50,000	\$50,000		\$3,430	\$229,110
Construction Engineer	\$16,000	\$16,000	\$5,000	\$22,000	\$0	\$3,000	\$7,000	\$7,000	\$10,000	\$23,000	\$14,000	\$5,000	\$11,000	\$37,000	\$0	\$54,000	\$2,000	\$26,000	\$140,000	\$56,600	\$138,460	\$951,300	\$0	\$4,900	\$327,300

10 Year Plan Timeline																													
Year	Cummings	Lincoln	George	Jackson South	Belvidere*	Pershing	Sheridan North	County	MLK	Water	Washington	Jackson	McClory	Butrick	Grand*	New York	Sheridan East	Lewis	Market St N	Market St S	Belvidere	Genesee	Grand	Pedestrian Bridge	Greenwood	Culverts	Bridges	Total	
2018	\$209,000	\$21,000	\$5,000	\$5,000		\$37,000	\$9,000	\$5,000	\$13,000	\$5,000		\$57,000	\$145,000			\$5,000			\$ 50,000	\$ 50,000	\$ 50,000	\$ -	\$ 2,000	\$ -	\$ -	\$ 2,000	\$ 516,000	\$ 154,000	\$ 670,000
2019		\$186,000					\$81,000		\$114,000		\$5,000			\$5,000			\$5,000		\$ 142,000	\$ 58,600	\$ 140,460	\$ 2,000	\$ -	\$ 2,000	\$ 2,000	\$ 229,110	\$ 401,000	\$ 574,170	\$ 975,170
2020																			\$ 2,180,000	\$ -	\$ 2,156,020	\$ -	\$ 2,000	\$ -	\$ -	\$ 329,300	\$ -	\$ 4,667,320	\$ 4,667,320
2021																			\$ -	\$ 1,542,350	\$ -	\$ 2,000	\$ -	\$ -	\$ 2,000	\$ 3,567,570	\$ -	\$ 5,113,920	\$ 5,113,920
2022	\$500		\$56,000	\$296,000		\$500		\$88,000	\$1,000	\$298,000		\$1,000	\$1,000			\$1,000			\$ 2,000	\$ 2,000	\$ 2,000	\$ 525,650	\$ 4,300	\$ -	\$ -	\$ 742,000	\$ 535,950	\$ 1,277,950	
2023		\$1,000					\$1,000		\$1,000		\$185,000			\$497,000			\$1,000	\$1,000	\$ -	\$ -	\$ -	\$ 477,650	\$ -	\$ 2,000	\$ 2,000	\$ 687,000	\$ 481,650	\$ 1,168,650	
2024																			\$ 2,000	\$ 2,000	\$ 2,000	\$ 5,184,585	\$ 2,000	\$ -	\$ -	\$ -	\$ 5,192,585	\$ 5,192,585	
2025																			\$ -	\$ -	\$ -	\$ 5,184,585	\$ -	\$ 2,000	\$ 2,000	\$ -	\$ 5,188,585	\$ 5,188,585	
2026	\$500		\$1,000	\$1,000		\$500		\$1,000		\$1,000		\$1,000	\$1,000			\$72,000		\$349,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ -	\$ 2,000	\$ -	\$ -	\$ 428,000	\$ 8,000	\$ 436,000	
2027		\$1,000					\$1,000		\$1,000		\$1,000		\$1,000			\$648,000	\$20,000		\$ -	\$ -	\$ -	\$ 2,000	\$ -	\$ -	\$ 2,000	\$ 673,000	\$ 6,000	\$ 679,000	

\* Under IDOT Jurisdiction

Annual Cost Projections (Federal Share)																												
Year	Cummings	Lincoln	George	Jackson South	Belvidere	Pershing	Sheridan North	County	MLK	Water	Washington	Jackson	McClory	Butrick	Grand	New York	Sheridan East	Lewis	Market St N	Market St S	Belvidere	Genesee	Grand	Pedestrian Bridge	Greenwood	Culverts	Bridges	Total
2018																			\$ 40,000	\$ 40,000	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 120,000	\$ 120,000	
2019																			\$ 112,000	\$ 45,280	\$ 110,768	\$ -	\$ -	\$ -	\$ -	\$ 183,288	\$ 451,336	
2020																			\$ 1,744,000	\$ -	\$ 1,724,816	\$ -	\$ -	\$ -	\$ -	\$ 261,840	\$ 3,730,656	
2021																			\$ -	\$ 1,233,880	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,854,056	\$ 4,087,936	
2022																			\$ -	\$ -	\$ -	\$ 420,520	\$ -	\$ -	\$ -	\$ 420,520	\$ 420,520	
2023																			\$ -	\$ -	\$ -	\$ 380,520	\$ -	\$ -	\$ -	\$ 380,520	\$ 380,520	
2024																			\$ -	\$ -	\$ -	\$ 4,147,668	\$ -	\$ -	\$ -	\$ 4,147,668	\$ 4,147,668	
2025																			\$ -	\$ -	\$ -	\$ 4,147,668	\$ -	\$ -	\$ -	\$ 4,147,668	\$ 4,147,668	
2026																			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
2027																			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,896,000	\$ 1,319,160	\$ 1,875,584	\$ 9,096,376	\$ -	\$ -	\$ 3,299,184	\$ -	\$ 17,486,304	



EXHIBIT C Timeline, Cost and Financial Data

	Clorba Group	Calc by: SSM	Date: 12/10/2017
	5507 N. Cumberland Ave	Chk'd by: SCD	Date: 12/14/2017
	Suite 402	Job No: 20729.01	
	Chicago, IL 60656	Client: City of Waukegan	

10 Year Plan Timeline																											
Year	Cummings Avenue Culvert	Lincoln Avenue Culvert	George Avenue Culvert	Jackson Street Culvert/Tunnel 0.09 mi South of Belvidere Road	Belvidere Street Culvert	Pershing Road Culvert	Sheridan Road Culvert, 0.15 mi North of Belvidere Road	County Street Culvert	Martin Luther King Drive Culvert	Water Street Culvert	Washington Street Culvert	Jackson Street Culvert, north of Jackson Ct	McClory Bike Path Culvert	Butrick Street Culvert	Grand Avenue Culvert	New York Street Culvert/Tunnel	Sheridan Road Culvert, E of Golf Course	Lewis Avenue Culvert	Market Street S of Belvidere	Market Street N of Belvidere	Belvidere Road Bridge	Genesee Street Bridge	Grand Avenue Bridge	Pedestrian Bridge	Greenwood Avenue Bridge		
2018	Des+Rehab	Des	In-D Insp	In-D Insp	IDOT MAINTENANCE RESPONSIBILITY	Des+Rehab	Des	In-D Insp	Des	In-D Insp	Des+Rehab	Des+Rehab			IDOT MAINTENANCE RESPONSIBILITY	In-D Insp			Phase I	Phase I	Phase I		Inspection		Inspection		
2019		Recon					Recon		Rehab		In-D Insp			In-D Insp				In-D Insp			Phase II + Insp	Phase II + Insp	Phase II + Insp		Inspection		Inspection
2020																					Phase III - Demo	Phase III	Phase III + JT		Inspection		Inspection
2021																									Inspection		Inspection
2022	Inspection		Des+Rehab	Des+Rehab			Inspection		Des+Rehab		Des+Rehab		Inspection	Inspection											Phase II	Inspection	Inspection
2023		Inspection					Inspection		Inspection			Des+Rehab													Phase II + Insp		Inspection
2024																									Phase III	Inspection	
2025																									Phase III		Inspection
2026	Inspection		Inspection	Inspection			Inspection		Inspection		Inspection		Inspection	Inspection								Inspection			Des+Recon		Inspection
2027		Inspection					Inspection		Inspection		Inspection		Inspection	Inspection											Des+Rehab	Des+Recon	

COSTS																									
Item	Cummings	Lincoln	George	Jackson South	Belvidere	Pershing	Sheridan North	County	MLK	Water	Washington	Jackson	McClory	Butrick	Grand	New York	Sheridan East	Lewis	Market St N	Market St S	Belvidere	Genesee	Grand	Pedestrian Bridge	Greenwood
INSPECTION GROUP	A	B	A	A	None	A	B	A	B	A	B	A	A	B	None	A	B	B							
In-Depth Inspection	\$2,000	\$5,000	\$5,000	\$5,000	\$0	\$2,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$0	\$5,000	\$5,000	\$5,000							
Routine Inspection	\$500	\$1,000	\$1,000	\$1,000	\$0	\$500	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$0	\$1,000	\$1,000	\$1,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
ENGINEERING AND CONSTRUCTION COSTS																									
Construction Cost	\$172,000	\$170,000	\$45,000	\$244,000	\$0	\$30,000	\$74,000	\$72,000	\$104,000	\$245,000	\$152,000	\$46,000	\$119,000	\$410,000	\$0	\$594,000	\$16,000	\$288,000	\$2,000,000	\$1,415,000	\$1,978,000	\$9,513,000	\$2,300	\$49,000	\$3,273,000
Design Engineering	\$21,000	\$21,000	\$6,000	\$30,000	\$0	\$4,000	\$9,000	\$9,000	\$13,000	\$30,000	\$19,000	\$6,000	\$15,000	\$50,000	\$0	\$72,000	\$2,000	\$35,000	\$50,000	\$50,000	\$50,000	\$50,000		\$3,430	\$229,110
Construction Engineer	\$16,000	\$16,000	\$5,000	\$22,000	\$0	\$3,000	\$7,000	\$7,000	\$10,000	\$23,000	\$14,000	\$5,000	\$11,000	\$37,000	\$0	\$54,000	\$2,000	\$26,000	\$180,000	\$56,600	\$138,460	\$951,300	\$0	\$4,900	\$327,300

Annual Cost Projections (City of Waukegan Share)																													
Year	Cummings	Lincoln	George	Jackson South	Belvidere	Pershing	Sheridan North	County	MLK	Water	Washington	Jackson	McClory	Butrick	Grand	New York	Sheridan East	Lewis	Market St N	Market St S	Belvidere	Genesee	Grand	Bowen Park Ped Bridge	Greenwood	Culverts	Bridges	Total	
2018	\$ 209,000	\$ 21,000	\$ 5,000	\$ 5,000	\$ -	\$ 37,000	\$ 9,000	\$ 5,000	\$ 13,000	\$ 5,000	\$ -	\$ 57,000	\$ 145,000	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ 2,000	\$ 516,000	\$ 34,000	\$ 550,000
2019	\$ -	\$ 186,000	\$ -	\$ -	\$ -	\$ -	\$ 81,000	\$ -	\$ 114,000	\$ -	\$ 5,000	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ 5,000	\$ 5,000	\$ 30,000	\$ 13,320	\$ 29,692	\$ 2,000	\$ -	\$ 2,000	\$ -	\$ 45,822	\$ 401,000	\$ 122,834	\$ 523,834
2020	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 436,000	\$ -	\$ 431,204	\$ -	\$ 2,000	\$ -	\$ -	\$ 67,460	\$ -	\$ 936,664	\$ 936,664
2021	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 308,470	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ -	\$ 713,514	\$ -	\$ 1,025,984	\$ 1,025,984
2022	\$ 500	\$ -	\$ 56,000	\$ 296,000	\$ -	\$ 500	\$ -	\$ 88,000	\$ -	\$ 298,000	\$ -	\$ 1,000	\$ 1,000	\$ -	\$ -	\$ 1,000	\$ -	\$ -	\$ 2,000	\$ 2,000	\$ 2,000	\$ 105,130	\$ 4,300	\$ -	\$ -	\$ 742,000	\$ 115,430	\$ 857,430	
2023	\$ -	\$ 1,000	\$ -	\$ -	\$ -	\$ -	\$ 1,000	\$ -	\$ 1,000	\$ -	\$ 185,000	\$ -	\$ -	\$ 497,000	\$ -	\$ -	\$ 1,000	\$ 1,000	\$ -	\$ -	\$ -	\$ 97,130	\$ -	\$ 2,000	\$ 2,000	\$ 687,000	\$ 101,130	\$ 788,130	
2024	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,000	\$ 2,000	\$ 2,000	\$ 1,036,917	\$ 2,000	\$ -	\$ -	\$ 1,044,917	\$ 1,044,917		
2025	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,036,917	\$ -	\$ 2,000	\$ 2,000	\$ -	\$ 1,040,917	\$ 1,040,917	
2026	\$ 500	\$ -	\$ 1,000	\$ 1,000	\$ -	\$ 500	\$ -	\$ 1,000	\$ -	\$ 1,000	\$ -	\$ 1,000	\$ 1,000	\$ -	\$ -	\$ 72,000	\$ -	\$ 349,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ -	\$ 2,000	\$ -	\$ -	\$ 428,000	\$ 8,000	\$ 436,000	
2027	\$ -	\$ 1,000	\$ -	\$ -	\$ -	\$ -	\$ 1,000	\$ -	\$ 1,000	\$ -	\$ 1,000	\$ -	\$ -	\$ 1,000	\$ -	\$ 648,000	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ 2,000	\$ 673,000	\$ 6,000	\$ 679,000	
<b>Total</b>	\$ 210,000	\$ 209,000	\$ 62,000	\$ 302,000	\$ -	\$ 38,000	\$ 92,000	\$ 94,000	\$ 129,000	\$ 304,000	\$ 191,000	\$ 59,000	\$ 147,000	\$ 503,000	\$ -	\$ 726,000	\$ 26,000	\$ 355,000	\$ 482,000	\$ 337,790	\$ 476,896	\$ 2,282,094	\$ 12,300	\$ 10,000	\$ 834,796	\$ 3,447,000	\$ 4,435,876	\$ 7,882,876	

Annual Cost Projections City of Waukegan Share (With 3% Yearly Inflation)																													
Year	Cummings	Lincoln	George	Jackson South	Belvidere	Pershing	Sheridan North	County	MLK	Water	Washington	Jackson	McClory	Butrick	Grand	New York	Sheridan East	Lewis	Market St N	Market St S	Belvidere	Genesee	Grand	Pedestrian Bridge	Greenwood	Culverts	Bridges	Total	
2018	\$ 215,270	\$ 21,630	\$ 5,150	\$ 5,150	\$ -	\$ 38,110	\$ 9,270	\$ 5,150	\$ 13,390	\$ 5,150	\$ -	\$ 58,710	\$ 149,350	\$ -	\$ -	\$ 5,150	\$ -	\$ -	\$ 10,300	\$ 10,300	\$ 10,300	\$ -	\$ 2,060	\$ -	\$ 2,060	\$ 2,060	\$ 531,480	\$ 35,020	\$ 566,500
2019	\$ -	\$ 197,327	\$ -	\$ -	\$ -	\$ -	\$ 85,933	\$ -	\$ 120,943	\$ -	\$ 5,305	\$ -	\$ -	\$ 5,305	\$ -	\$ -	\$ 5,305	\$ 5,305	\$ 31,827	\$ 14,131	\$ 31,500	\$ 2,122	\$ -	\$ 2,122	\$ -	\$ 48,613	\$ 425,421	\$ 130,315	\$ 555,735
2020	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 476,429	\$ -	\$ 471,188	\$ -	\$ 2,185	\$ -	\$ -	\$ 73,715	\$ -	\$ 1,023,518	\$ 1,023,518
2021	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 347,186	\$ -	\$ 2,251	\$ -	\$ 2,251	\$ -	\$ 803,066	\$ -	\$ 1,154,754	\$ 1,154,754
2022	\$ 580	\$ -	\$ 64,919	\$ 343,145	\$ -	\$ 580	\$ -	\$ 102,016	\$ -	\$ 345,464	\$ -	\$ 1,159	\$ 1,159	\$ -	\$ -	\$ 1,159	\$ -	\$ -	\$ 2,319	\$ 2,319	\$ 2,319	\$ 121,874	\$ 4,985	\$ -	\$ -	\$ 860,181	\$ 133,815	\$ 993,996	
2023	\$ -	\$ 1,194	\$ -	\$ -	\$ -	\$ -	\$ 1,194	\$ -	\$ 1,194	\$ -	\$ 220,900	\$ -	\$ -	\$ 593,444	\$ -	\$ -	\$ 1,194	\$ 1,194	\$ -	\$ -	\$ -	\$ 115,978	\$ -	\$ 2,388	\$ 2,388	\$ 820,314	\$ 120,755	\$ 941,068	
2024	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,460	\$ 2,460	\$ 2,460	\$ 1,275,277	\$ 2,460	\$ -	\$ -	\$ -	\$ 1,285,116	\$ 1,285,116	
2025	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,313,535	\$ -	\$ 2,534	\$ 2,534	\$ -	\$ 1,318,603	\$ 1,318,603	
2026	\$ 652	\$ -	\$ 1,305	\$ 1,305	\$ -	\$ 652	\$ -	\$ 1,305	\$ -	\$ 1,305	\$ -	\$ 1,305	\$ 1,305	\$ -	\$ -	\$ 93,944	\$ -	\$ 455,366	\$ 2,610	\$ 2,610	\$ 2,610	\$ -	\$ 2,610	\$ -	\$ -	\$ 558,443	\$ 10,438	\$ 568,881	
2027	\$ -	\$ 1,344	\$ -	\$ -	\$ -	\$ -	\$ 1,344	\$ -	\$ 1,344	\$ -	\$ 1,344	\$ -	\$ -	\$ 1,344	\$ -	\$ 870,858	\$ 26,878	\$ -	\$ -	\$ -	\$ -	\$ 2,688	\$ -	\$ 2,688	\$ 2,688	\$ 904,456	\$ 8,063	\$ 912,519	
<b>Total</b>	\$ 216,502	\$ 221,495	\$ 71,374	\$ 349,600	\$ -	\$ 39,342	\$ 97,741	\$ 108,471	\$ 136,871	\$ 351,918	\$ 227,548	\$ 61,174	\$ 151,814	\$ 600,092	\$ -	\$ 971,111	\$ 33,377	\$ 461,864	\$ 525,944	\$ 379,005	\$ 520,376	\$ 2,833,726	\$ 14,300	\$ 11,982	\$ 935,064	\$ 4,100,295	\$ 5,220,396	\$ 9,320,691	



# EXHIBIT D

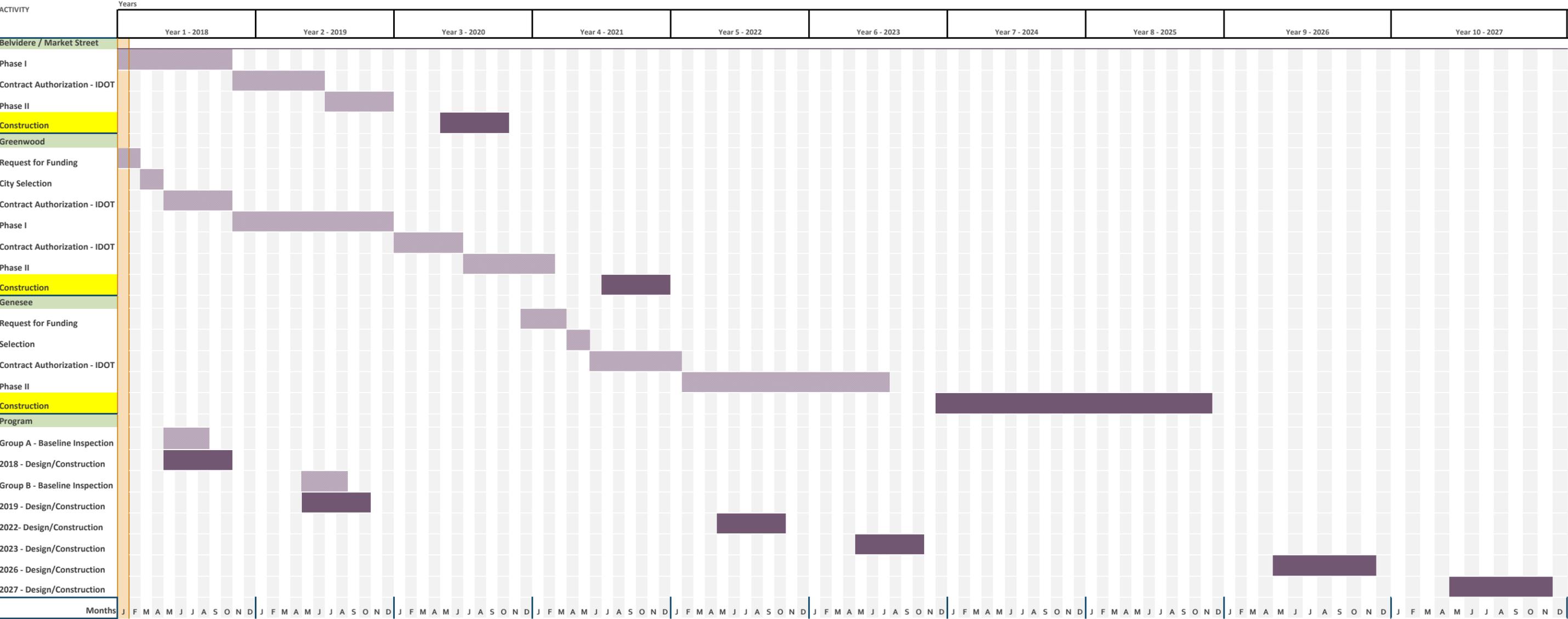
BRIDGE AND CULVERT 10 YEAR PROGRAM



# Exhibit D - Bridge and Culvert 10 Year Program

Select a period to highlight at right. 1

Design Constructor



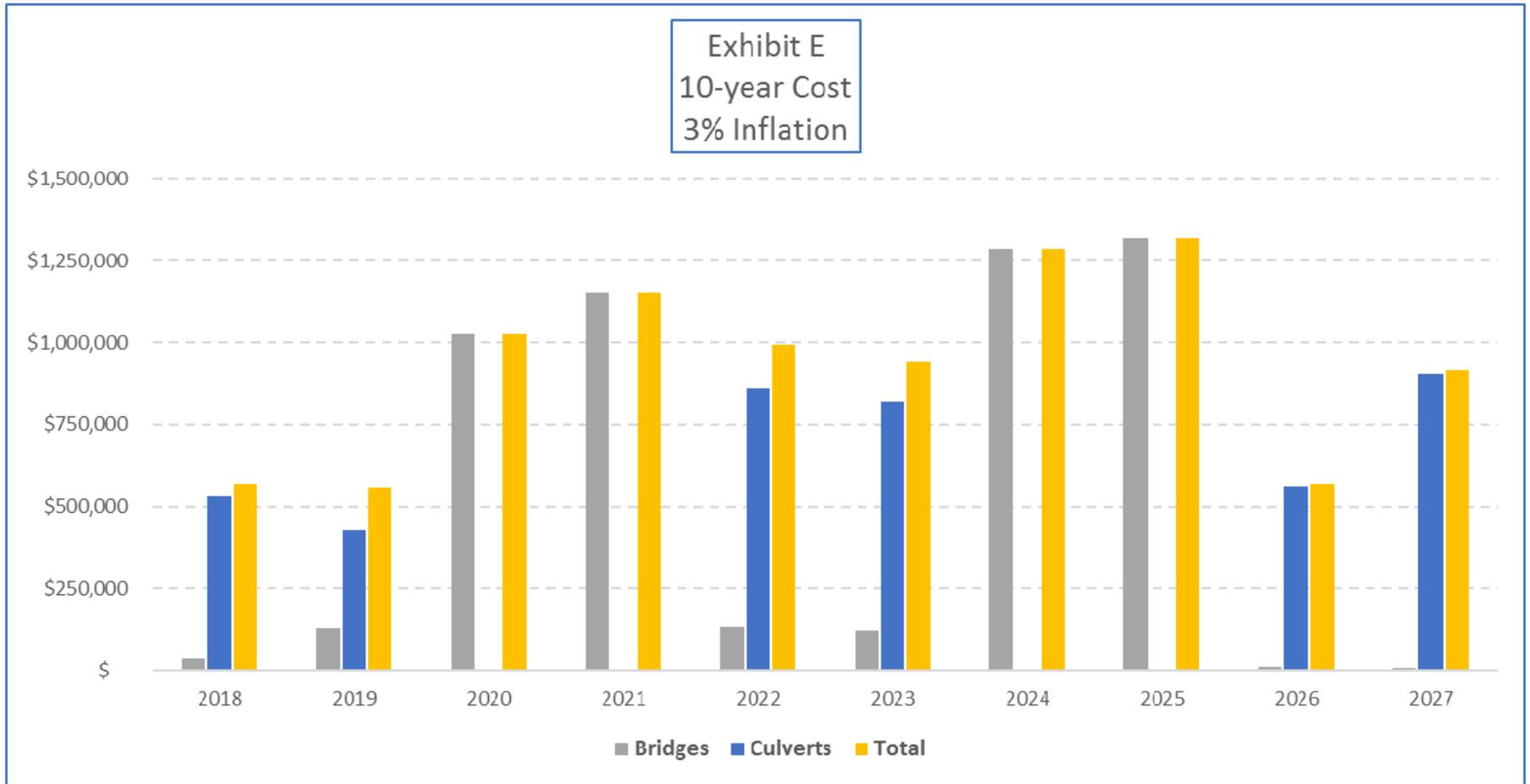


# EXHIBIT E

BAR CHART – 10-YEAR COST



E – Bar Chart – 10 Year Cost





# EXHIBIT F

FEDERAL AND CITY SHARE



F – Federal and City Share

