2020 “State of the Streets”
Final Report

Prepared for:

Village of Elwood, Illinois &
Chicago Metropolitan Agency for Planning

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ACRONYMS

Acronym	Definition
AC	Asphalt concrete pavement
APC	Asphalt concrete overlay on Portland cement concrete pavement
ASTM	American Society for Testing and Materials
BR	Brick pavement
CIP	Capital Improvement Plan
CMAP	Chicago Metropolitan Agency for Planning
CSU	Colorado State University
FT	Foot
G&AI	Gorrondona and Associates, Inc.
GIS	Geographic information system
GR	Gravel pavement
IRI	International Roughness Index
K	Thousand
L&T	Longitudinal and transverse cracking
LCD	Last construction date
M	Million
M&R	Maintenance and rehabilitation
P	Primary rank pavement
PAVER	PAVER Pavement Management System
PCC	Portland cement concrete pavement
PCI	Pavement Condition Index
PMP	Pavement management program
PMS	Pavement management system
S	Secondary rank pavement section
SF	Square feet
SU	Sample unit
SY	Square yard
T	Tertiary rank pavement section

1 EXECUTIVE SUMMARY

1.1 History

In October of 2020, the Chicago Metropolitan Agency for Planning (CMAP) retained the services of Gorrondona and Associates, Inc. (G&AI) to implement a pavement management system for the Village of Elwood that will enable the Village to manage its roadway network in a more proactive, cost-effective, and sustainable way. To accomplish this objective, G&AI: 1) assessed the condition of the Village's roadways, 2) implemented and customized a pavement management system for the Village, and 3) developed near- and long-term pavement maintenance and rehabilitation (M&R) recommendations for the Village's roadways.

During the fall of 2019 and the spring of 2020, G&AI's state-of-the-art PathRunner pavement condition data collection system (shown in Figure 1) was deployed to capture continuous, high-resolution pavement cracking, rutting, and roughness data of the Village's roads. Collected data were entered into the PAVER Pavement Management System (PAVER), and baseline pavement condition scores were determined for each roadway.

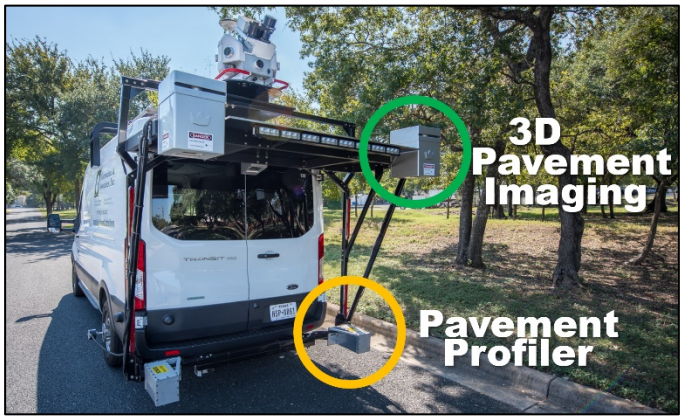


Figure 1. PathRunner pavement condition data collection system.

In July of 2020, preliminary results of the condition survey were presented to the Village. G&AI has since worked with the Village to collect additional pavement M&R records and M&R unit cost data with which to calibrate PAVER so that it is specific to the Village.

The collected pavement condition data along with both the historical M&R data and unit prices provided by the Village were used to develop network-level M&R recommendations presented herein for the Village's consideration.

1.2 PAVER Pavement Management System

PAVER stores two primary "measures" of pavement condition. The most obvious measure of pavement condition is the **International Roughness Index (IRI)**, which describes the rideability (i.e., smoothness) of the roadway as experienced by the driver.

The second measure of pavement condition is the **Pavement Condition Index (PCI)**, which provides an indication of both the structural integrity and surface operational condition of the roadway. PAVER uses PCI values to determine the most cost-effective level of M&R likely needed. PAVER prioritizes funding for life-extending, lower-cost preventive maintenance activities (e.g., crack sealing, slurry seals, and localized patching) above more costly funding of last resort major M&R activities, such as resurfacing and reconstruction. This prioritization in the PAVER algorithm seeks a proactive and cost-effective approach to pavement management with the avoidance of – unless necessary – more costly reactive practices.

In addition to routinely collected IRI and PCI data, PAVER stores pavement inventory information, historical M&R records, and M&R unit cost data. The system uses this information to predict future

pavement conditions and identify network-level deterioration trends and M&R needs over time. It will also allow the Village to evaluate if present M&R methods are performing as expected.

1.3 Purpose and scope

The purpose of this project is to implement a comprehensive pavement management system for the Village's roadways. The scope of this project includes all roadways managed by the Village, which total approximately 33.1 centerline miles. This pavement management system will serve as a primary tool to assist the Village in more efficiently allocating its pavement M&R funding.

To this end, G&AI:

1. Developed an inventory of the Village's roadways in PAVER. The PAVER inventory contains pavement surface type, functional classification, M&R unit costs, and historical M&R data. *Note: Inventory development is a one-time effort that can be used by the Village if PAVER is retained, only requiring updates to address changes to the Village's roadway network and changes in M&R unit costs.*
2. Performed a pavement condition survey of the Village's roadways. This survey was used to determine PCI and IRI values for analysis purposes and will serve as an initial baseline of roadway conditions.
3. Used the condition survey with the developed PAVER inventory to determine the impact of different funding levels on the Village's roadways and identify potential network-level pavement M&R needs.

1.4 Results

Pavement Condition Index (PCI) and **International Roughness Index (IRI)** values were determined for each roadway. PCI values provide an indication of both the structural integrity and surface operational condition of a pavement. PCI values range from 0 (a failed pavement) to 100 (a pavement in excellent condition). Table 1 shows the categories chosen to represent the Village's PCI assessment criteria, which includes typical pavement distresses and levels of M&R needed within each category.

Table 1. Village's pavement condition categories.

Category	Typical Distresses and Typical Level of M&R Needed	PCI Range
Good	Longitudinal and transverse cracking and weathering of surface **Preventive maintenance:** *Crack sealing and surface treatments*	86-100
Satisfactory	More extensive longitudinal and transverse cracking and weathering of surface **Preventive maintenance:** *Crack sealing and surface treatments*	71-85
Fair	Extensive longitudinal and transverse cracking, early stage alligator (fatigue) cracking, early stage rutting, and weathering of surface **Global preventive maintenance and localized repairs:** *Localized surface and/or full-depth patching, surface treatments, and thin overlays*	56-70
Poor	More extensive and severe longitudinal and transverse cracking, alligator (fatigue) cracking, rutting, and weathering of surface **Major rehabilitation:** *Localized full-depth patching, mill and overlays, and traditional overlays*	41-55
Very Poor	More extensive and more severe longitudinal and transverse cracking, alligator (fatigue) cracking, rutting, weathering of surface, potholes **Major rehabilitation:** *Full-depth patching, mill and overlays, traditional overlays, and reconstruction*	26-40
Serious	Extensive and severe failure of pavement surface **Major rehabilitation:** *Reconstruction*	11-25
Failed	Complete failure of pavement surface **Major rehabilitation:** *Reconstruction*	0-10

At the time of G&AI's inspection, the Village's pavements were found to have an average PCI of 75, indicating that the Village's roadways are in overall "satisfactory" condition.

IRI values measure the roughness (vertical displacement over a fixed interval reported in inches per mile) of a roadway pavement:

- IRI values less than 200 inches/mile indicate "smooth" pavement.
- IRI values between 200 and 400 inches/mile indicate a "marginally rough" pavement.
- IRI values greater than 400 inches/mile indicate "rough" pavement.

The Village's roadways were found to have an average IRI value of 188 inches/mile, which indicates overall "smooth" pavement.

Following this executive summary, Map 1 shows PCI categories for each roadway. Roadways that were planned for resurfacing or reconstruction in 2020 (i.e., after the field inspection was performed) were assigned an assumed PCI value of 100. All other PCI values shown on Map 1 reflect the conditions of the

roadways at the time of the field inspection. Map 2 shows IRI categories for each roadway at the time of inspection. IRI values reflect a physical measurement of roughness. Consequently, IRI values were not adjusted for roadways that were planned for resurfacing or reconstruction in 2020.

The causes of pavement deterioration as quantified by the PCI may be divided into three general categories:

- Vehicle load related.
- Climate/durability related.
- Other (construction defects and material issues).

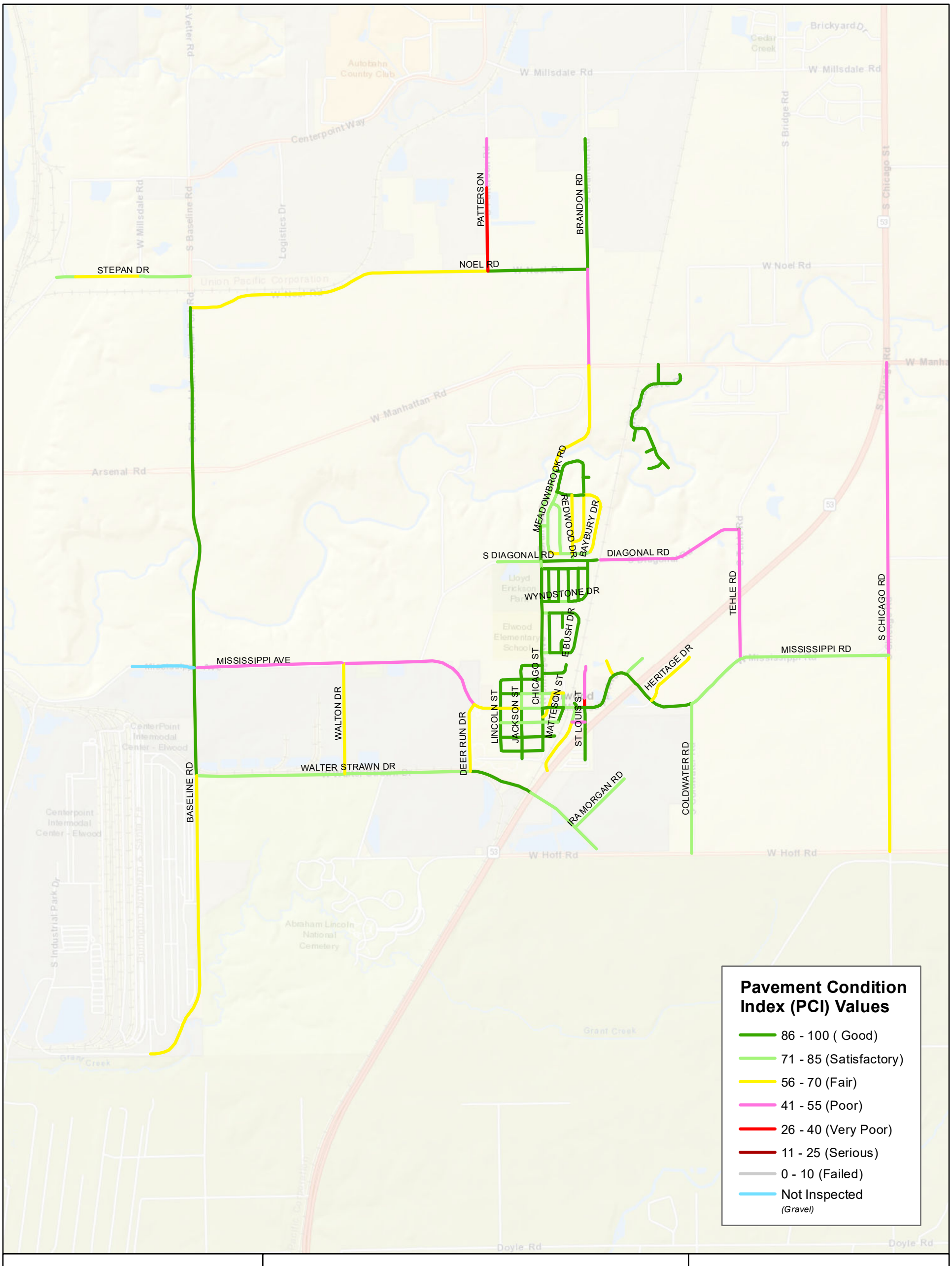
The deterioration observed on the Village's pavements at the time of inspection was caused by a mixture of vehicle load- and climate-related distresses. Vehicle load-related distresses, including alligator cracking and rutting, were pronounced on many of the Village's roadways and contributed most to lower PCI values. Significant climate-related distresses, including block cracking and weathering, were also observed on the Village's roadways.

1.5 Recommendations

For the Village to get the most return on their investment from PAVER, the system must be considered a living entity. The Village should:

1. Implement pavement preservation techniques to cost-effectively extend the life of its roadways.
2. Determine when resurfacing is no longer a cost-effective option and reconstruction is needed.
3. Annually update M&R activities performed on Village roadways in the PAVER database.
4. Annually update M&R unit costs (or whenever economic conditions cause changes in unit prices).
5. Commit future funding to the routine collection of pavement condition data (all roadways should be inspected on a two- to three-year cycle).
6. Use collected pavement condition data to assess the performance of the roadways and applied M&R activities.

With such attention, PAVER will become a repository of accurate, up-to-date data and the primary tool that the Village uses for more cost-effectively programming M&R funding.



N

0 2,250 4,500 Feet

Map 1:
Pavement Condition Index (PCI) Values

Elwood, Illinois

Pavement Management Program

Gorrondona & Associates, Inc.

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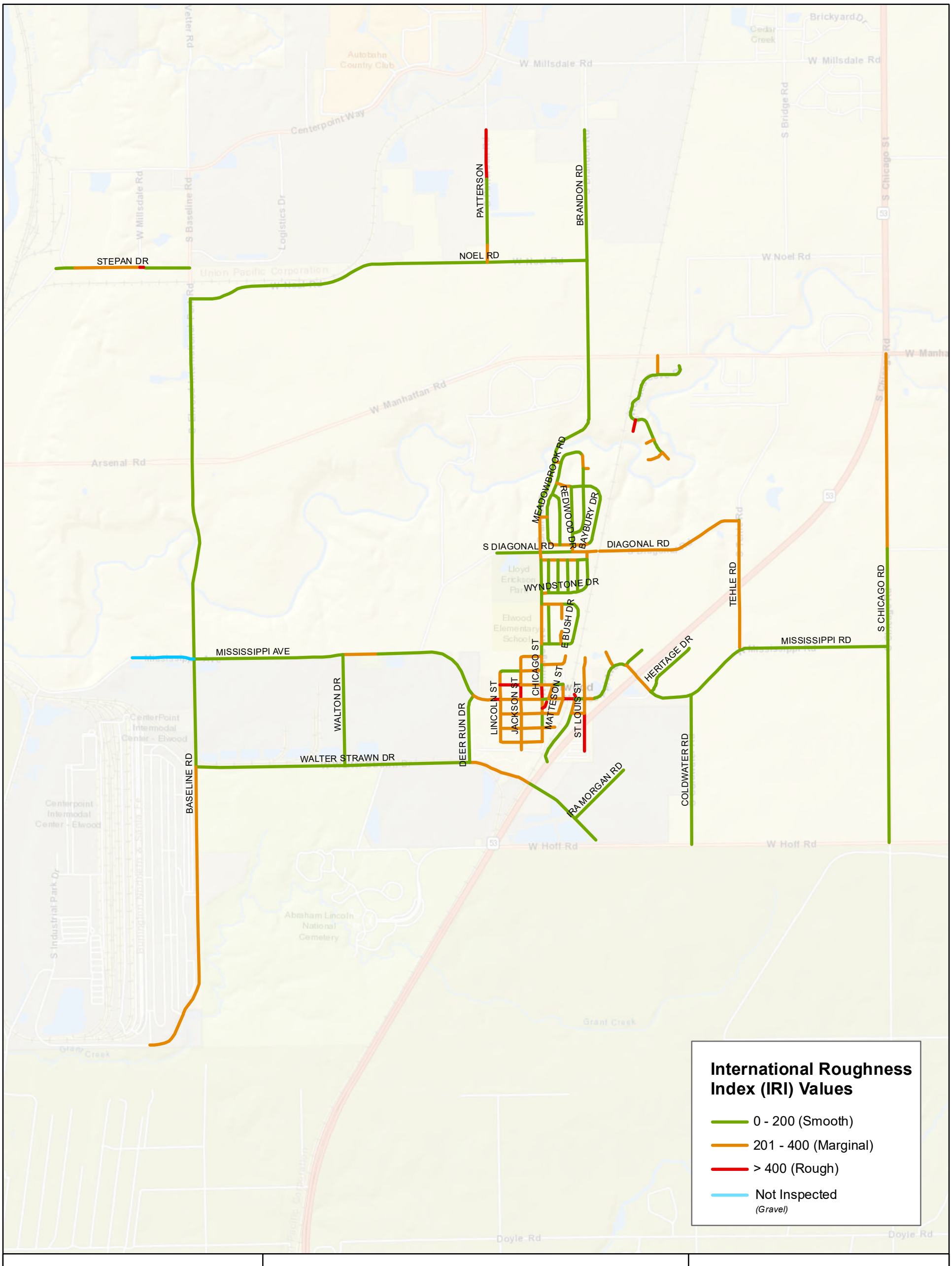

N

0 2,250 4,500 Feet

Map 2:
International Roughness Index (IRI) Values

Elwood, Illinois

Pavement Management Program

Gorrondona & Associates, Inc.

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2 INTRODUCTION

2.1 Foreword

This section of the report expands on the Executive Summary and provides the reader with information pertaining to the creation and implementation of this pavement management system for the Village.

At the core of a modern pavement management system is a geocentric database that contains pavement inventory and condition information. Combined with up-to-date M&R unit cost data, calibrated deterioration models, and owner-specific M&R practices, this information is used by analysis tools in the pavement management system to predict future pavement conditions, develop multi-year M&R plans, and forecast anticipated funding needs.

This section provides a conceptual overview of pavement management and follows with the benefits and costs of implementing a pavement management system. Implementation of the Village's pavement management system is detailed in Sections 3, 4 and 5. This section closes with an overview of effective preventive maintenance strategies that should be considered by the Village.

2.2 Background, scope, and objectives

The Chicago Metropolitan Agency for Planning (CMAP) retained the services of Gorrondona and Associates, Inc. (G&AI) to assess the existing condition of the roadways maintained by the Village. The primary objectives of this project are to implement a comprehensive and Village-wide pavement management system, perform a network-level pavement condition survey, and identify future pavement M&R needs.

The project will provide the Village with a better understanding of the current condition of its roadways and network-level recommendations for future M&R based on the results of the pavement condition survey. Moving forward, the pavement management system will continue to serve as a repository for pavement condition data, historical M&R records, and pavement condition deterioration trends.

PAVER was implemented for the Village, and a state-of-the-art PathRunner pavement condition data collection system was deployed to capture continuous, high-resolution pavement cracking, rutting, and roughness data of the Village's roadways.

G&AI has since developed the PAVER inventory database and worked with the Village to collect additional pavement M&R records and M&R unit cost data with which to calibrate the PAVER database so that it is Village specific. These M&R records and M&R unit costs, along with the collected pavement condition data, have been used to identify present network-level M&R needs.

2.3 Project tasks

To successfully accomplish the objectives of this project, G&AI performed the following tasks, which are covered in greater detail in Sections 3, 4, and 5 of this report, respectively:

1. Pavement management system implementation
   G&AI developed an inventory of the Village's roadway pavements and implemented PAVER.
2. Pavement condition survey
   G&AI performed a network-level pavement condition survey on the roadway pavements using a state-of-the-art pavement imaging and profiling data collection system. The pavement condition survey was performed in the fall of 2019 and spring of 2020.
3. M&R analyses
   G&AI reviewed the collected condition data and determined the impact of several funding scenarios on the Village's roadways and identified potential pavement M&R needs using PAVER.

The 3D pavement imaging and profiling technology used to assess the condition of the Village's roadway pavements is the most comprehensive available. This technology has evolved rapidly over the past several years, and it is now used across the United States by more than half of the state DOTs. Unlike the inherently subjective windshield pavement condition surveys of years past, high resolution cracking, rutting, and roughness condition data were captured continuously for each of the Village's roadways surveyed.

The collected data were then analyzed using a hybrid methodology that incorporates both automated crack detection and classification along with manual quality control. This approach yields a complete set of pavement condition data that may be used for both network-level (high-level budgeting) multi-year M&R planning as well as project-level (estimating M&R quantities) analyses. The collected data were then entered into and analyzed using PAVER. Continuously developed by the US Army Corps of Engineers, PAVER is a sophisticated, non-proprietary system widely used by municipal agencies across the United States and around the world.

2.4 Conceptual overview of pavement management

The use of a pavement management system is intended to provide municipal agencies with a systematic process for cost-effectively managing their pavement network, which may include roadways, parking lots, and alleys. The American Public Works Association (APWA) defines pavement management in the following way:

> *Pavement management is a systematic method for routinely collecting, storing, and retrieving the kind of decision-making information needed to make maximum use of limited maintenance (and construction) dollars.*

Combined with local knowledge and practical judgment, the recommendations from a pavement management system may be used to help make better pavement M&R decisions.

At the core of a pavement management system is the method for assessing pavement condition. The most widely used method for assessing pavement condition is the Pavement Condition Index (PCI), which is industry standard practice and defined in ASTM D6433. The PCI method outlines a process for more objectively assessing the condition of a pavement based on visual observations and measurements that take place during a field inspection. These observations and measurements are then distilled into a PCI

value that ranges between 0 and 100. A PCI value of 0 indicates a failed pavement, and a PCI value of 100 indicates a pavement in good condition.

PCI values help determine the level of M&R needed to cost-effectively maintain or rehabilitate the pavement. These values may also be used to prioritize roadway improvements for the purpose of developing strategic capital improvements programs. When a pavement is in good condition, preventive maintenance can be applied to extend the life of the pavement. However, once a pavement falls below critical condition, preventive maintenance may no longer be cost effective, and more significant and perhaps more costly rehabilitation strategies should be considered.

The "Critical PCI" value for a pavement is the PCI value below which cost-effective preventive maintenance is no longer a viable option, and more significant rehabilitation and sometimes reconstruction may be necessary. As shown in Figure 2, the primary objective of pavement management is to preserve pavements in good condition above the Critical PCI with less costly preventive M&R rather than allow them to deteriorate below the Critical PCI, resulting in the need for more costly major M&R (rehabilitation or reconstruction).

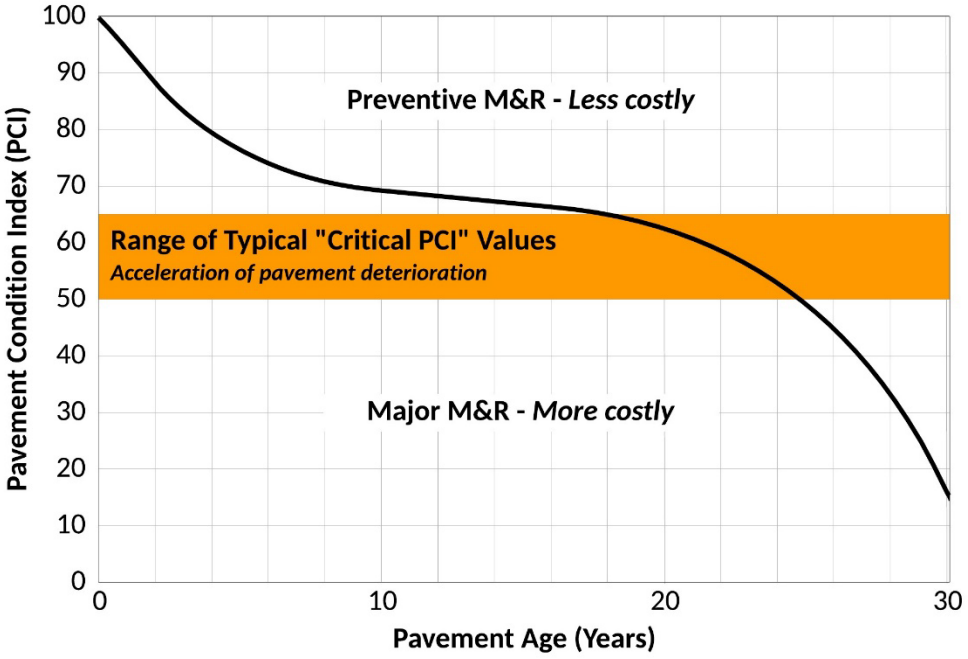


Figure 2. Example of the correct timing of preventive and major M&R relative to the Critical PCI.

The Critical PCI value is determined based on the repeated measurement of pavement condition over time as well as agency-specific M&R policies. Critical PCI values typically range between 50 and 65 (as shown in Figure 2) because the acceleration of pavement deterioration, and subsequent need for more costly M&R, typically occurs then. Setting a higher Critical PCI value simply results in pavements being recommended for major M&R earlier. Some agencies set higher Critical PCI values for their arterial roadways than for their local roadways to ensure that the roadways most heavily traveled (and often at higher speeds) are maintained to a higher standard.

PAVER's default Critical PCI value of 55 has been used for the Village's roadways. The Village may change this value as more condition data and historical M&R data are captured and the deterioration rates

of the Village's roadways are better understood. Typically, two to three PCI inspections are needed to converge on acceptable Critical PCI values. The Village may choose to set Critical PCI values for each functional classification of roadway based on desired policy goals.

When the appropriate preventive maintenance treatments (e.g., crack sealing, seal coats, and patching) are undertaken at the correct times during a pavement's service life, these relatively inexpensive preventive M&R treatments can extend the service life of the pavement, as shown in Figure 3.

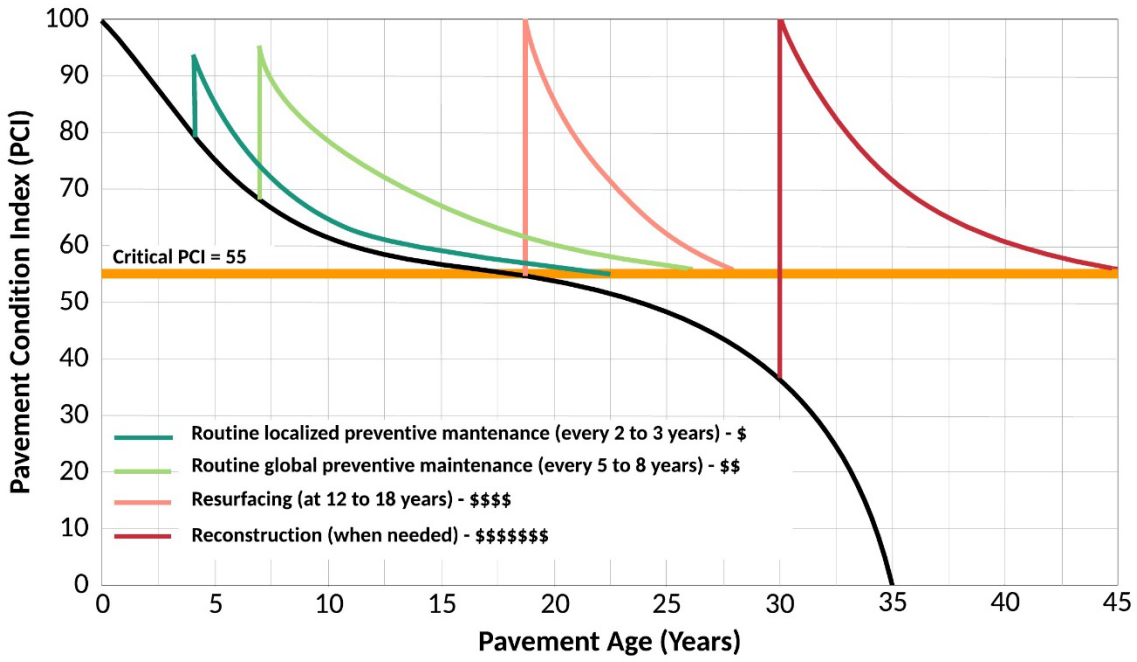


Figure 3. Example of the increasing prices and decreasing benefits of M&R.

It is important to note that the IRI, which provides a useful measure of pavement smoothness, does not correlate well to the level of M&R needed to correct smoothness issues. Consequently, IRI values are not considered when forecasting future M&R needs. Instead, IRI values are used in pavement management systems to identify pavements requiring a special inspection, or they may be used in conjunction with PCI values when prioritizing M&R projects.

As pavement management concepts have gained traction, computer-based pavement management systems have been developed to assist agencies in more optimally managing their pavements. Pavement management systems currently rely on a detailed pavement inventory, routine pavement condition assessments, pavement performance modeling, and sophisticated analysis tools that can forecast future pavement condition and estimate future M&R needs and costs.

2.5 Benefits and costs of implementing a pavement management system

Pavement management systems provide:

- A centralized location for storing pavement condition and inventory data, including construction, maintenance, and rehabilitation records.
- Decision-making support tools for:
  - ✓ Evaluating maintenance and rehabilitation alternatives.
  - ✓ Analyzing the consequences of alternative funding levels on pavement conditions.

  - ✓ Improved scheduling and coordination of pavement M&R projects and other infrastructure projects.
- Analysis tools for evaluating the effectiveness of historical methods of rehabilitation.
- Reporting tools for distilling complex data and justifying funding needs to elected officials.

The benefits of implementing and maintaining a pavement management system improve over time as more data are entered into the system. The costs associated with maintaining a pavement management system include:

- Pavement inventory data collection and routine updates (typically performed annually following the end of the paving season).
- Routine pavement condition data collection (arterials and collectors are typically surveyed every other year and local roadways are surveyed on a three-year cycle).
- Evaluating pavement performance and developing M&R plans (typically performed annually following the end of the paving season – or following a condition survey – to determine candidate roadways for the next paving season).
- Software acquisition, installation, system maintenance, and updates.
- Staff training, as needed.

To ensure the success of a pavement management system, agencies should develop a plan for staffing, maintaining, and funding the system appropriately.

2.6 Incorporating pavement preservation strategies

The implementation of a pavement management system has the added benefit of assisting agencies in determining which pavements may be candidates for preventive maintenance. The use of preventive maintenance early in the life of a pavement, before any significant deterioration, has been demonstrated to be a cost-effective way to extend a pavement's service life.

In the Federal Highway Administration (FHWA) publication, Pavement Preservation, A Road Map to the Future, preventive maintenance is defined as:

> *"…the planned strategy of cost-effective treatments to an existing roadway system and its appurtenances that preserves the system, retards future deterioration, and maintains or improves the functional condition of the system (without significantly increasing the structural capacity)."*

The FHWA adds that preventive maintenance:

> *"…is typically applied to pavements in good condition having significant remaining service life. As a major component of pavement preservation, preventive maintenance is a strategy of extending the service life by applying cost-effective treatments to the surface or near-surface of structurally sound pavements."*

The following preventive maintenance treatments have been demonstrated to be effective when applied at the right time during a pavement's service life:

- Crack sealing, crack filling, and joint sealing of flexible and rigid pavements
- Patching and edge repairs
- Chip seals, fog seals, and slurry seals
- Micro-surfacing
- Thin "functional" and "maintenance" overlay projects

Too frequently these activities are incorrectly applied as "stop-gap" or "cosmetic" treatments for pavements in poor condition rather than as true preservation activities. Preventive maintenance strategies should be applied to pavements that are in relatively good condition, and the activities should be planned and applied systematically following either the resurfacing or reconstruction of a pavement. The following FHWA website provides additional information for pavement preservation: https://www.fhwa.dot.gov/pavement/preservation/.

2.7 Summary

This section provided the reader with background information pertaining to the creation and implementation of the non-proprietary PAVER system for the Village. The section provided a conceptual overview of pavement management and discussed:

1. The benefits the Village will see from the implementation of the pavement management system.
2. The costs expected to be incurred with the maintenance of the system.
3. The additional functionality beyond the obvious support the system can provide by objectively assisting the Village in optimizing the allocation of its M&R funding.

Implementation of the Village's pavement management system is detailed in Sections 3, 4, and 5. This section closed with an overview of effective preventive maintenance strategies that should be considered by the Village moving forward.

3 PAVEMENT MANAGEMENT SYSTEM IMPLEMENTATION

3.1 Foreword

This section discusses the first task of this project: Implementing a pavement management system. One of the CMAP's primary desires was to have a non-proprietary pavement management system for participating agencies. This section provides an overview of the PAVER, a brief description of the modules available to the Village in PAVER, and insight into the PAVER database development. *(Note: The information presented in the section may be supplemented by the PAVER User Manual, which is available as a navigable PDF file in the PAVER software.)*

3.2 Objective

The objective of this task was to implement a pavement management system for the Village's roadway pavements. G&AI implemented PAVER, which is developed and continually updated by the US Army Corps of Engineers. This task required developing an inventory of the Village's roadway pavements and collecting current pavement condition data and entering it in PAVER.

3.3 PAVER Pavement Management System overview

PAVER assists agencies in determining when, where, and what level of pavement M&R is required and approximately how much it will cost. The system provides a suite of pavement management tools, or "modules", that will help the Village with the following tasks:

- Developing and organizing their pavement inventory.
- Assessing the current condition of their pavements.
- Developing models to predict future pavement conditions.
- Reporting on past and future pavement performance.
- Developing scenarios for M&R based on either funding or pavement condition goals.
- Planning M&R projects.

PAVER modules include:

- Inventory
- M&R history
- Inspection
- Prediction modeling
- Condition analysis
- M&R planning
- Project planning
- Reporting

A brief description of these modules is presented in the following sub-sections.

Note: Upon request by the municipality, a one-year PAVER license shall be purchased by CMAP for the municipality from Colorado State University (CSU). The PAVER license does not expire. However, after the first year, the municipality will be responsible for purchasing software updates and technical support, if desired. Current pricing for PAVER may be found at: www.paver.colostate.edu.

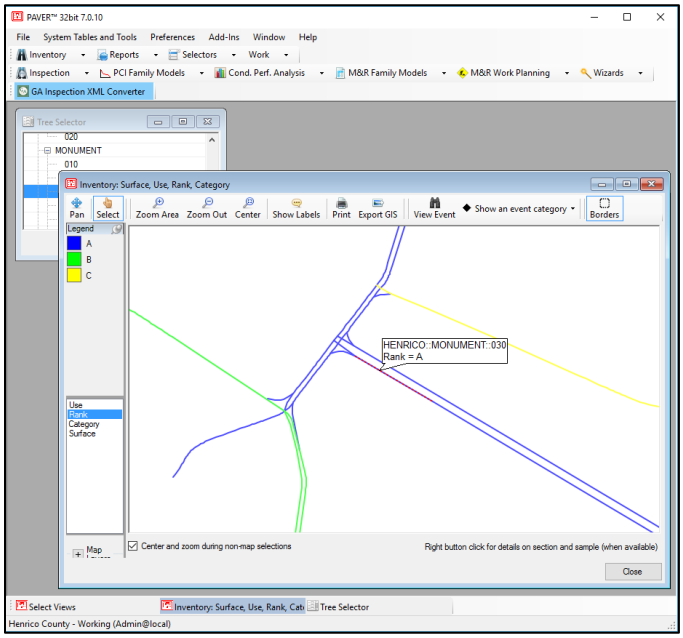


Figure 4. Example roadway functional classifications (ranks) stored in the Inventory module.

3.3.1 Inventory and maintenance and rehabilitation (M&R) history modules

The PAVER **Inventory** and **M&R History** modules, shown in Figure 4 and Figure 5, are based on a hierarchical structure composed of networks (groups of roadways managed with one source of funding), branches (specific roadways), and sections. Sections are the smallest area for which conditions are reported and M&R activities recommended. Sections typically conform to existing GIS segmentation and are commonly defined from intersection to intersection by default.

One network is defined for the Village and each roadway is a branch. Pavement sections are defined within each branch following the Village's existing GIS segmentation in the Illinois Roadway Information System (IRIS). This structure allows the Village to easily organize their inventory and historical M&R data and provides a simple and efficient way for rolling-up data to higher levels of the pavement hierarchy. The Village provided G&AI with historical M&R records, and this information was entered in PAVER.

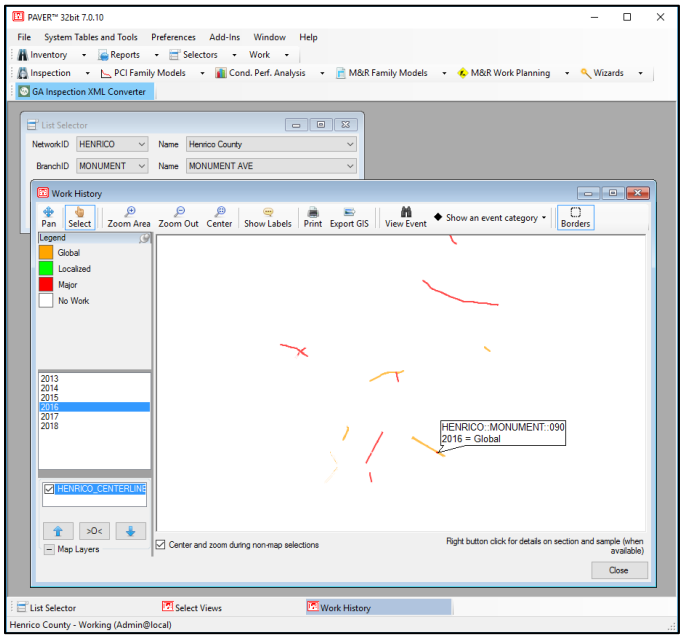


Figure 5. Example historical M&R records stored in the M&R History module.

3.3.2 Inspection module

PAVER uses the PCI as the primary measure of pavement condition. The **Inspection** module, shown in Figure 6, enables agencies to store raw pavement condition survey data and then calculate PCI values. IRI values are also stored in the **Inspection** module.

3.3.3 Prediction modeling module

The **Prediction Modeling** module in PAVER enables the user to group pavements of similar construction that are subjected to similar traffic, weather, and any other factors affecting pavement performance into "families." Historical pavement condition

data are used to build models that can be used to predict future pavement performance. The **Prediction Modeling** module is a hands-on module and prediction models should be updated by the Village following each condition survey. If historical pavement condition data are not available, PAVER provides default pavement prediction curves (shown in Figure 7) and allows the user to develop site specific prediction models.

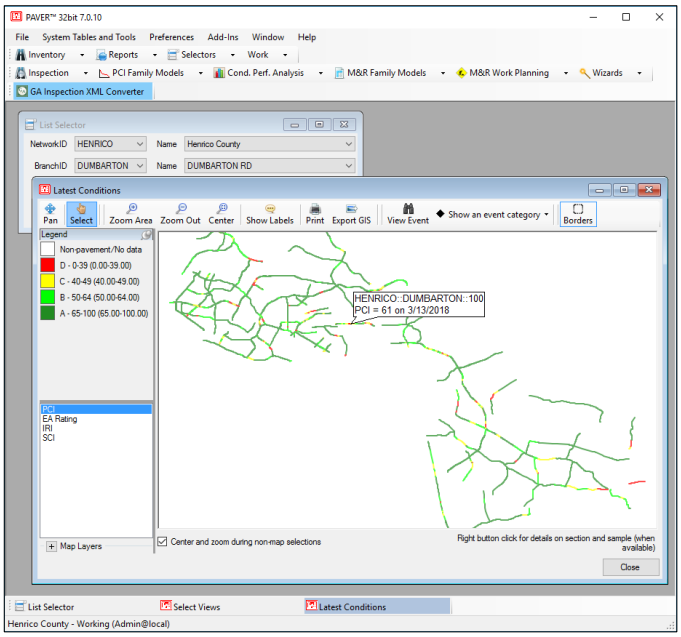


Figure 6. Example PCI values in the Inspection module.

3.3.4 Condition analysis module

The Condition Analysis module allows the Village to view the condition of the entire pavement network or any subset of the network over time. The module reports past conditions based on interpolated values between historical condition data, and it reports projected conditions based on the application of prediction models developed using the **Prediction Modeling** module.

3.3.5 M&R planning module

The **M&R Planning** module can determine the consequence of a predetermined funding level on pavement conditions and estimate the resulting backlog of major work. This information assists in determining funding requirements to meet specific Village pavement condition goals. These capabilities will enable the Village to develop more optimal M&R programs based on available resources and to justify M&R needs.

3.3.6 Reporting module

Each previously described module of PAVER can generate various reports that will assist the Village in analyzing, interpreting, and presenting pavement data. In addition to module-specific reports, PAVER also comes equipped with several "canned" reports, which include:

- GIS reports – *Internal/external reporting of inventory and condition data*
- Summary Charts – *Simple graphs and data tables of inventory and inspection data*
- Inspection Reports – *Summary of collected pavement condition data*
- Work History – *Summary of historical maintenance, repair, and rehabilitation data*
- Branch Listing – *Summary of overall pavement inventory data*

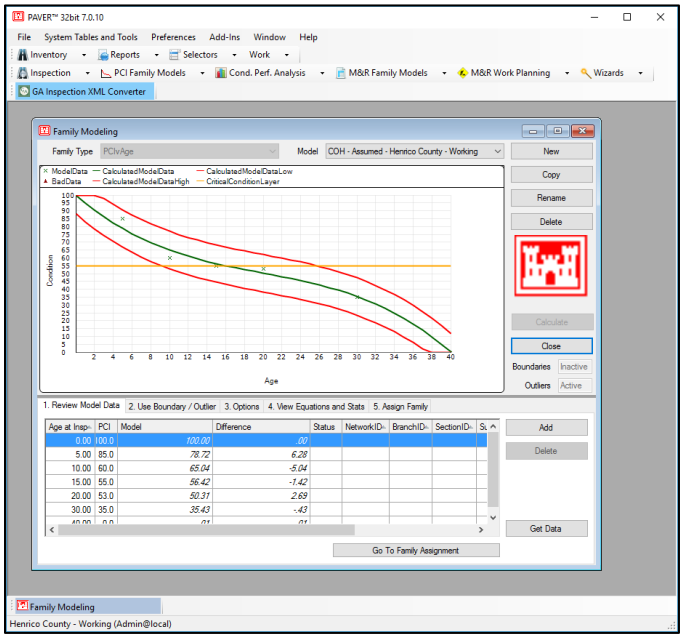


Figure 7. Example deterioration trend developed using the Prediction Modeling module.

- Branch Condition – *Summary of overall pavement condition data*
- Section Condition – *Summary of individual section data*

PAVER can generate on-the-fly "user-defined" reports, which can be tailored to meet the Village's specific reporting needs. PAVER's user-defined reporting capability enables the user to extract any data stored in the system and export it to a GIS shapefile, spreadsheet, or text file.

3.4 Summary

This section discussed the first task of this project: Implementing a pavement management system. This section provided an overview of the non-proprietary PAVER system, a brief description of the modules available to the Village in PAVER, and insight into the PAVER database development. The Village's PAVER database has been developed to include specific and relevant data pertaining to the Village's roadway pavement network. PAVER's suite of analysis and planning tools will enable the Village to more effectively manage its roadway pavement network.

4 PAVEMENT INVENTORY

4.1 Foreword

This section describes the Village's roadway pavement inventory as it exists in PAVER. The data sources used in developing the inventory are discussed in this section, and summary data are presented.

4.2 Objective

The objective of this task was to develop a comprehensive inventory of the Village's roadway pavements for inclusion in PAVER. The roadway pavement inventory provides the underlying data on which analysis and reporting is performed with PAVER. In addition, the inventory provides the framework in which all routinely collected pavement condition data and historical work data are stored.

Moving forward, the Village should update the pavement inventory in PAVER to reflect the addition, realignment, widening, and/or removal of roadways managed by the Village. Typically, these types of changes are infrequent and may be done annually or prior to performing any analysis or reporting tasks with PAVER.

4.3 PAVER inventory development

The Village's PAVER inventory was based on the IRIS GIS provided by CMAP. Relevant pavement data available in the IRIS GIS were supplemented with aerial imagery and field observations and entered in the Village's PAVER database. These data included: number of lanes, pavement surface type, approximate roadway width, and from/to intersections for each pavement section.

Roadways were also assigned "ranks" (i.e., priorities) of primary (P), secondary (S), and tertiary (T). Federal aid eligible roads were assigned the rank of primary, since these tend to be the more heavily trafficked roadways. Residential roads were assigned the rank of secondary, and unpaved roadways and roadways in industrial zones were assigned the rank of tertiary.

A shapefile generated from the Village's GIS was linked to the PAVER database. This enables the Village to conveniently navigate the roadways within PAVER and generate a variety of map-based inventory and condition reports in PAVER. Historical M&R records provided by the Village were entered in the PAVER database as well as unit cost data.

4.4 Inventory summary

The Village's roadway network consists of approximately 33.1 centerline miles of predominantly asphalt surfaced, two-lane roadways. Table 2 shows the distribution of the Village's roadway network in mileage and area by pavement rank, and Table 3 shows the distribution by pavement surface type.

Table 2. Roadway summary data by pavement rank.

Rank	Centerline Miles	Lane Miles	Area (SY)
Primary, P	3.7	9.5	84,498
Secondary, S	29.0	63.2	486,011
Tertiary, T	0.3	0.6	2,789
Total	**33.1**	**73.3**	**573,299**

Table 3. Roadway summary data by pavement surface type.

Surface Type	Centerline Miles	Lane Miles	Area (SY)
Asphalt, AC	30.6	64.6	509,668
Concrete, PCC	2.2	8.0	60,842
Gravel, GR	0.3	0.6	2,789
Total	**33.1**	**73.3**	**573,299**

Appendix A maps A-1 and A-2 present pavement rank and surface type data graphically.

5 PAVEMENT CONDITION INSPECTION

5.1 Foreword

This section discusses the second task of this project: Performing a comprehensive pavement condition survey of the Village's roadways. The condition survey included the collection of high-resolution pavement imagery and profile measurements using a state-of-the-art PathRunner pavement condition survey system. The collected data were analyzed and PCI and IRI values were calculated for each of the Village's roadways surveyed. This section describes the pavement condition survey system, the data collection methodology, how the collected data were analyzed, and a discussion of field observations. It concludes with several examples of pavement conditions from the Village's roadways.

5.2 Objective

The objective of the pavement condition survey is to assess the existing structural integrity and surface operational condition of the Village's roadways. The survey provides a comprehensive snapshot of pavement conditions at the time of data collection.

Moving forward, the Village should perform pavement condition surveys on a routine basis to objectively monitor pavement performance, determine near-term M&R needs, evaluate the effectiveness of M&R activities, develop pavement deterioration trends, and forecast near- and long-term pavement M&R needs.

5.3 Pavement condition data acquisition

G&AI deployed a state-of-the-art PathRunner pavement data collection system to capture high-resolution pavement imagery and surface data necessary to assess the condition of the Village's roadways. The PathRunner system is shown in Figure 8.

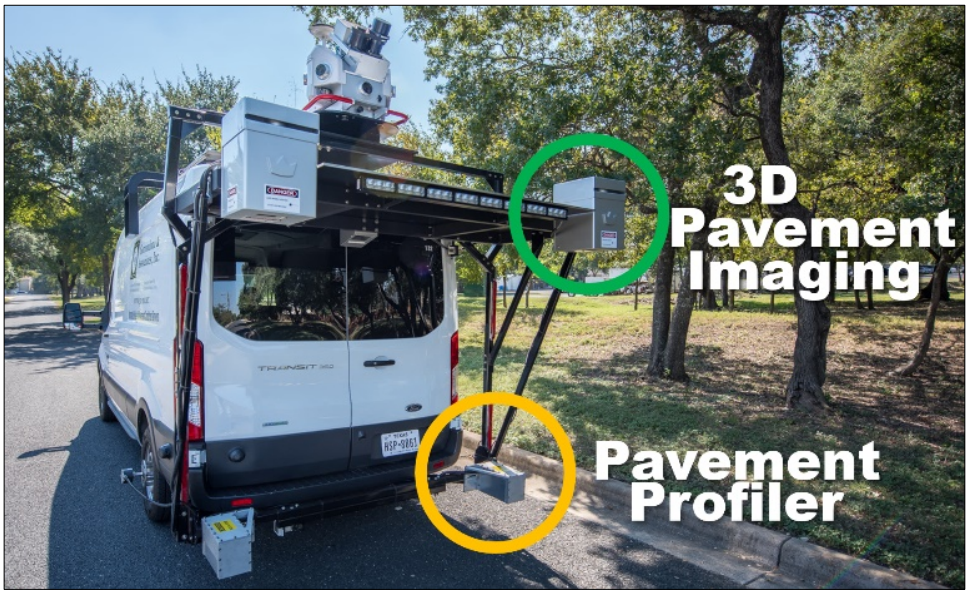


Figure 8. PathRunner pavement condition data collection system.

The PathRunner was driven on all roadways within the Village. By agreement with CMAP, only a single lane of two-lane roadways was collected and the outermost lanes in both directions of four-lane and greater roadways were collected. Based on G&AI's experience, contiguous lanes are usually of similar

character, and this inspection approach was deemed to be cost effective for the Village while still providing sufficiently detailed information to assess existing pavement conditions. The PathRunner system continuously collected the following data for each roadway:

- High-resolution 2D and 3D pavement images for evaluating pavement distresses and determining Pavement Condition Index (PCI) values.
- Transverse profiles to measure rutting.
- Longitudinal profiles to calculate International Roughness Index (IRI) values.
- High-resolution, forward-facing, right-of-way images for manual review of all data.

These data were processed using automated tools verified by manual review to assess pavement conditions, and the results were entered in the Village's PAVER database.

5.4 Pavement Condition Index (PCI) method

The pavement condition survey was performed following the PCI method. The PCI method is based on a set of definitions and procedures for measuring pavement distress types, severities, and quantities during a field inspection. This information is then distilled into a PCI value, which provides an indication of the structural integrity and surface operational condition (roughness) for a pavement section. The PCI method is widely used and provides a significantly more objective and repeatable method for assessing pavement condition than inherently subjective windshield surveys commonly used in the past.

The Village's roadway network consists primarily of asphalt pavements with only a few concrete and gravel roadways. During a PCI inspection, several distress types are identified and evaluated for asphalt pavements, as shown in Table 4. The severity and quantity of each observed distress is recorded, and these data are then input into the PCI algorithm to calculate a PCI value, as shown in Figure 9.

Table 4. Asphalt and concrete pavement distress types.

Asphalt Pavement Distresses	
Distress	**Cause**
Alligator Cracking	Load
Bleeding	Other
Block Cracking	Climate/Durability
Bumps and Sags	Other
Corrugation	Other
Depression	Other
Edge Cracking	Load
Joint Reflection Cracking	Climate/Durability
Lane/Shoulder Drop-Off	Other
Longitudinal and Transverse Cracking	Climate/Durability
Patching and Utility Cut Patching	Other
Polished Aggregate	Other
Pothole	Load
Railroad Crossing	Other
Rutting	Load
Shoving	Other
Slippage Cracking	Other
Swell	Other
Raveling	Climate/Durability
Weathering	Climate/Durability

Concrete Pavement Distresses	
Distress	**Cause**
Blowup/Buckling	Climate/Durability
Corner Break	Load
Divided Slab	Load
Durability ("D") Cracking	Climate/Durability
Faulting	Other
Joint Seal Damage	Climate/Durability
Lane/Shoulder Drop-Off	Other
Linear Cracking	Load
Patching, Large and Utility Cuts	Other
Patching, Small	Other
Polished Aggregate	Other
Popouts	Other
Pumping	Other
Punchout	Load
Railroad Crossing	Other
Scaling, Map Cracking, and Crazing	Other
Shrinkage Cracks	Climate/Durability
Spalling, Corner	Climate/Durability
Spalling, Joint	Climate/Durability

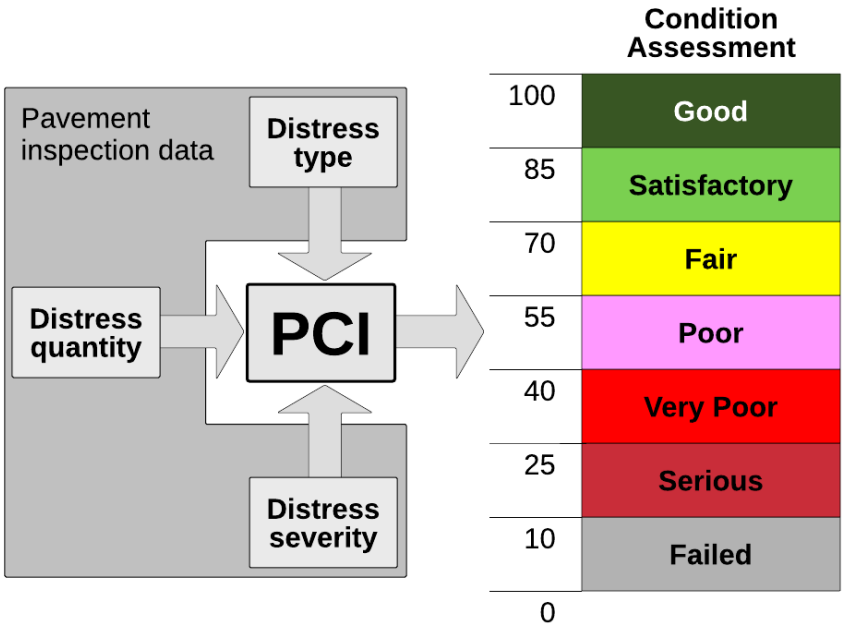


Figure 9. PCI inputs and the Village's assessment scale.

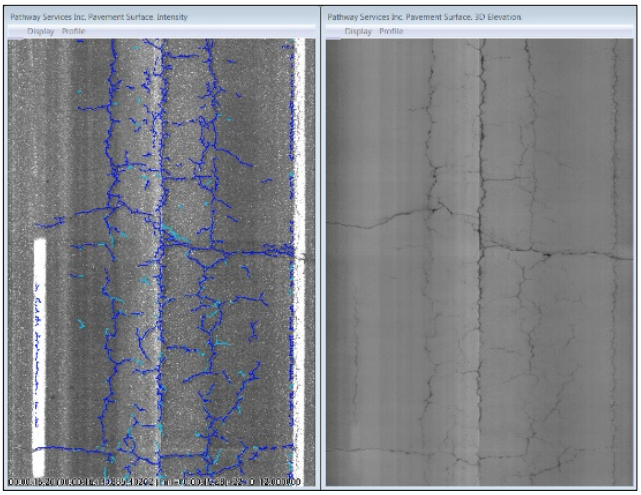
If properly designed and constructed, a new pavement begins its service life with a PCI of 100. Because of distress caused by vehicle loads, environmental factors, and aging, a pavement deteriorates over time. For each combination of distress type, severity level, and quantity observed during the inspection, points

are deducted from the initial value of 100, thereby decreasing the PCI. When multiple distresses are present, the "deduct values" are modified such that the impact of multiple distresses is not unnecessarily compounded. Due to the complexity of the PCI algorithm, PCI values are typically computed using a pavement management software package, such as PAVER. It is important to note that the PCI method does not directly measure the load carrying capacity or the rideability of a pavement. Structural testing combined with coring is needed to determine permissible pavement loadings.

5.5 Pavement Condition Index (PCI) data interpretation

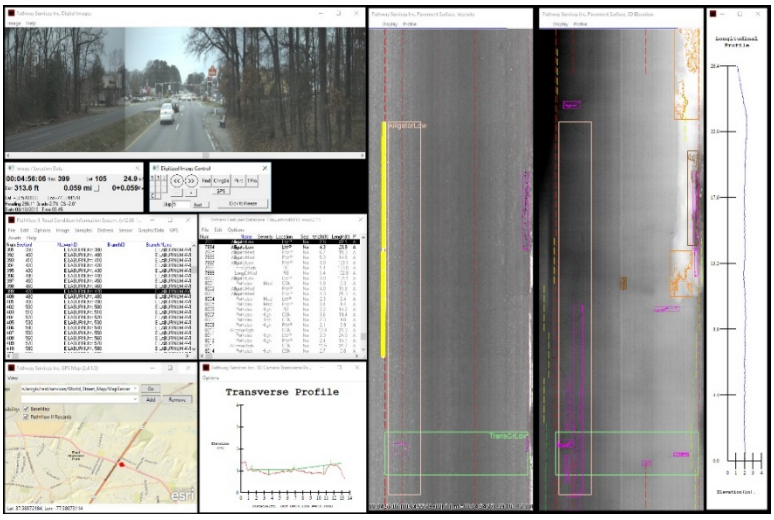
The PathRunner system captures 2D and 3D images of the roadway surface from which pavement surface distresses are evaluated. During the data collection effort, G&AI extracted pavement distress data from georeferenced digital images and rutting measurements from transverse profile measurement to determine PCI values. This process involves four distinct steps:

1. **AutoCrack Software** – This software detects cracking in the pavement imagery.
2. **AutoClass Software** – This software classifies the type of cracking detected.
3. **Manual image rating** – G&AI's team of trained and experienced raters review the imagery and identify any distress types that the automated crack detection and classification software did not observe or incorrectly identified. Performing this manual image rating is considered the Quality Control (QC) review assuring detailed accuracy and completeness of the ratings.
4. **Quality Assurance (QA) rating** – An independent team of G&AI's raters and project engineers perform a systematic QA review of the rated data to ensure proper evaluation of the collected imagery prior to import into PAVER.



Steps 1 and 2: ***Initial Automated Crack Detection and Rutting Analyses***

The QC and QA ratings are the most important steps in the project. G&AI uses the PathView software for evaluating distresses using both automated algorithms and manual supplemental rating. All QC/QA is performed by highly trained and experienced engineers and technicians using PathView. The same software system has been used for more than 25 state DOTs and several municipal agency pavement condition survey projects and is a well proven review tool.



Steps 3 and 4: ***Manual Rating and QC/QA of Pavements using PathView***

In addition to capturing 2D and 3D imagery from which pavement surface

distresses are evaluated, the PathRunner system also captures high-resolution longitudinal and transverse profiles of the roadway surface at 2mm intervals. The longitudinal profile data are analyzed to determine the IRI values, or the "roughness" of the roadway, and the transverse profiles are used to measure rutting.

5.6 Existing pavement conditions and field observations

The collected pavement survey data were used to calculate a PCI value for each pavement section in the Village. Table 5 shows the pavement condition assessment criteria used to analyze the pavement network.

Table 5. Village's pavement condition categories.

Category	Typical Distresses and Typical Level of M&R Needed	PCI Range
Good	Longitudinal and transverse cracking and weathering of surface **Preventive maintenance:** *Crack sealing and surface treatments*	86-100
Satisfactory	More extensive longitudinal and transverse cracking and weathering of surface **Preventive maintenance:** *Crack sealing and surface treatments*	71-85
Fair	Extensive longitudinal and transverse cracking, early stage alligator (fatigue) cracking, early stage rutting, and weathering of surface **Global preventive maintenance and localized repairs:** *Localized surface and/or full-depth patching, surface treatments, and thin overlays*	56-70
Poor	More extensive and severe longitudinal and transverse cracking, alligator (fatigue) cracking, rutting, and weathering of surface **Major rehabilitation:** *Localized full-depth patching, mill and overlays, and traditional overlays*	41-55
Very Poor	More extensive and more severe longitudinal and transverse cracking, alligator (fatigue) cracking, rutting, weathering of surface, potholes **Major rehabilitation:** *Full-depth patching, mill and overlays, traditional overlays, and reconstruction*	26-40
Serious	Extensive and severe failure of pavement surface **Major rehabilitation:** *Reconstruction*	11-25
Failed	Complete failure of pavement surface **Major rehabilitation:** *Reconstruction*	0-10

At the time of G&AI's inspection, the Village's pavements were found to be in overall "satisfactory" condition and have an average PCI of 75. The condition distribution of the Village's pavements at the time of inspection is shown in Figure 10, and detailed condition maps can be found in Appendix A.

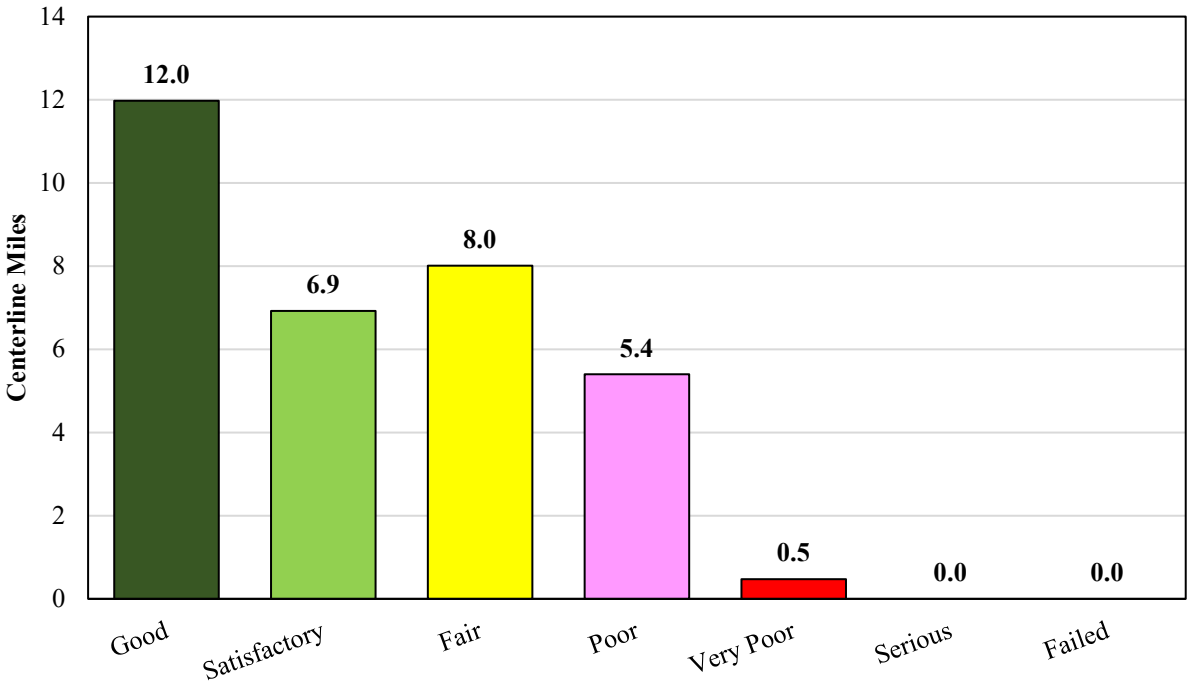


Figure 10. Village's roadway pavement condition distribution by PCI category.
(Note: Excludes gravel roadways.)

Pavement condition data summarized by pavement ranks and surface types are presented in the following two tables, respectively.

Table 6. Roadway summary condition data by pavement rank.

Rank	Centerline Miles	Lane Miles	Area (SY)	PCI	IRI
Primary, P	3.7	9.5	84,498	90	158
Secondary, S	29.0	63.2	486,011	73	193
Tertiary, T	0.3	0.6	2,789	--*	--*
Total	**33.1**	**73.3**	**573,299**	**75**	**188**

**Note: Tertiary roads were gravel and PCI values are not applicable.*

Table 7. Roadway summary condition data by pavement surface type.

Surface Type	Centerline Miles	Lane Miles	Area (SY)	PCI	IRI
Asphalt, AC	30.6	64.6	509,668	73	196
Concrete, PCC	2.2	8.0	60,842	96	123
Gravel, GR	0.3	0.6	2,789	--*	--*
Total	**33.1**	**73.3**	**573,299**	**75**	**188**

**Note: PCI values are not applicable to gravel roads.*

The causes of pavement deterioration as quantified by the PCI may be divided into three general categories:

- Vehicle load related.
- Climate/durability related.
- Other (construction defects and material issues).

Pavement deterioration and ultimate failure is a complex process that often involves a combination of several deterioration mechanisms working together. The deterioration observed on the Village's pavements was caused primarily by a mixture of load- and climate-related distresses. Vehicle load-related distresses, including alligator cracking and rutting, were pronounced on many of the Village's roadways and accounted for most of the distress negatively impacting overall roadway conditions. In addition, climate-related distresses, including longitudinal and transverse cracking and block cracking, were found across the Village's pavement inventory.

In practice, visually observed pavement distresses collected during a network-level condition survey are used to determine the likely mechanism(s) contributing to the deterioration of a roadway. However, prior to developing a specific M&R strategy, the root cause of pavement deterioration should be determined. Determining the root cause of pavement deterioration may be accomplished through an appropriate combination of traffic load analyses, drainage investigations, structural testing, coring, and material testing.

For example, vehicle load-related distresses such as alligator cracking may be addressed through load analyses and material testing. Contributing root causes may range from the roadway consistently exposed to loads in excess of its design loading to the pavement section having simply reached the end of its design life. Climate/durability-related distresses, such as transverse cracking, may result from a combination of freeze/thaw cycling and oxidation (embrittlement) of the asphalt layer. The cause(s) of "other" distresses may be determined through a combination of coring, boring, and material testing.

In addition to PCI values, IRI values were determined for each of the Village's roadways. IRI values, reported in inches per mile, describe the amount of roughness in both wheel paths over a given length of pavement. The IRI is a standard measure of roughness used worldwide. The Village's IRI assessment scale is shown in Table 8.

Table 8: Village's IRI assessment criteria.

Category	IRI Value
Smooth	0-200
Marginal	201-400
Rough	>401

At the time of G&AI's inspection, the Village's pavements were found to be in overall "smooth" condition, with an average IRI of 188. Detailed condition maps can be found in Appendix A.

It is worth noting that IRI and PCI values do not necessarily correlate with one another. A roadway can ride well yet still be structurally deficient and in need of major M&R, and vice versa. For example, asphalt-surfaced roadways supported by structurally adequate base (e.g., crushed rock) and subgrade (e.g., existing soil) layers may exhibit extensive cracking in the asphalt surface layer due to fatigue failure of the asphalt. In situations such as these, removal of the existing asphalt layer and replacement with a thicker layer may be enough to rehabilitate the pavement. Conversely, a roadway that rides poorly may be structurally adequate and may only require minimal rehabilitation. Poor construction practices may unfortunately lead to roughness being "built into" an otherwise structurally adequate roadway at the time

of construction. Roadways exhibiting this type of roughness may require grinding and/or an additional surface course to remedy the issue.

5.7 Example pavement conditions through the Village

Figure 11 illustrates a variety of pavement conditions observed throughout the Village during the pavement condition survey. The figure includes PCI and IRI values for each pavement section along with observed distress types and recommended M&R.

	Location + History	PCI *(IRI)*	Recommended M&R Activity (Typical)
	Chicago St. *(Section 90)* *Last resurfacing date 2013*	86 *(150)*	Preventive maintenance *Seal joints between pavement and curb and gutter.*
	Walter Strawn Dr. *(Section 30)* *Last resurfacing date 2016*	79 *(176)*	Preventive maintenance *Seal cracks as well as paving lane joint and joints between pavement and curb and gutter + surface treatment.*
	Deer Run Dr. *(Section 10)* *Last resurfacing date unknown*	67 *(180)*	Preventive maintenance *Seal cracks as well as paving lane joint and joints between pavement and curb and gutter + edge patching + surface treatment.*
	Mississippi Ave. *(Section 80)* *Last resurfacing date unknown*	51 *(138)*	Major M&R *Localized structural patching + cold mill and overlay or reconstruction*

	Patterson *(Section 10)* *Last resurfacing date unknown*	32 *(625)*	Major M&R *Reconstruction*

Figure 11. Pavement conditions observed during PCI inspection.

A distress observed on some of the Village's pavements was unsealed paving lane seams (cracks), as shown in several of the photos above. If left unsealed, paving lane seams can deteriorate rapidly and significantly reduce the life of the pavement. By sealing paving lane seams immediately following paving and routinely resealing them, this type of deterioration may be minimized or prevented.

5.8 Summary

This section presented an overview of the methodology used to perform the 2019/2020 pavement condition survey and the results of the survey. A state-of-the-art PathRunner pavement condition survey system was deployed to collect pavement imagery and profile data on the Village's roadways. The collected data were analyzed, and PCI values and IRI values were determined for each of the roadways surveyed. The Village's roadways were found to be in overall "satisfactory" condition with an average PCI of 75. Furthermore, the Village's roadways were found to be in overall "smooth" condition, with an average IRI of 188 inches/mile.

6 MAINTENANCE AND REHABILITATION FUNDING ANALYSES

6.1 Foreword

This section discusses the third task of this project: M&R needs analyses. This section discusses the results of the analyses performed for the Village's consideration, assumptions which shaped the analyses, and results of the analyses. The recommendations of these analyses are provided in this section and in Appendixes A through D.

6.2 Objective

The M&R Planning module in PAVER provides *raw recommendations* of when and where pavement M&R activities are needed and approximately how much they will cost. The Village should use these raw recommendations to develop programmatic M&R plans for the Village's roadway network. These programmatic plans may be generated based on anticipated annual funding or with the goal of maintaining or achieving a desired pavement condition.

For the Village's roadways, two preliminary M&R analyses were performed:

- A series of **five-year analyses** was performed to determine the impact of several funding levels on overall roadway conditions. The analyses included:
    - Assessing the impact of the Village's existing funding level.
    - Determining the annual funding level needed to maintain the Village's existing overall average roadway condition.
    - Determining the annual funding level needed to modestly increase the Village's overall average roadway condition to approximately 80.
    - Determining the annual funding level needed to eliminate the Village's major M&R backlog over a five-year period.
- A **one-year analysis** was performed to identify pavements that may benefit from preventive maintenance activities, such as crack sealing or localized patching. Only pavements with a PCI of 65 or better were considered in this analysis.

The purpose of these analyses is to determine the appropriate funding level needed to manage the Village's roadways and provide general recommendations that will assist the Village in developing and evolving its M&R program. Additional analyses may be performed to assess either the impact of anticipated funding levels or to determine the funding levels needed to achieve a desired overall, network-average condition.

6.3 Assumptions

The M&R analyses were based on the results of the fall of 2019 and spring of 2020 Pavement Condition Index (PCI) survey and the pavement inventory and historical work records provided by the Village and stored in the Village's PAVER database. The following assumptions were made in our analyses.

- Pavements considered candidates for preventive maintenance were determined based on their overall PCI values and the distresses observed on the pavement at the time of inspection. Pavements with PCI values of 65 or better were considered candidates for preventive maintenance.
- Recommended preventive maintenance policies for asphalt and concrete pavements are shown in Appendix D Tables D-1 and D-2, respectively. The policy tables show what type of repair activity should be applied to each distress type and severity combination. Table D-3

presents estimated unit costs for the maintenance activities recommended in tables D-1 and D-2.

- A pavement deterioration rate of roughly three points per year was used based on the performance of the Village's resurfaced roads, which equates to a pavement life between resurfacings of approximately fifteen years. This deterioration rate will be refined as more historical work records are entered in PAVER and more PCI inspection data become available over time.
- A Critical PCI value (the PCI value below which a pavement is considered a candidate for major M&R) of 55 was assumed for all pavement sections. Pavements at or below the Critical PCI during the five-year analysis period triggered major M&R recommendations. *(Note: A PCI value of 55 has been initially chosen for all the Village's roadways as this numerical value straddles the "Fair" to "Poor" condition categories in the Village's PCI scale. Performing major M&R on pavements that are closer to a PCI of 55, rather than waiting for these pavements to deteriorate further is generally more cost effective.)*
- Unit costs used in these analyses were based on bid tabs provided by the Village and by costs reported by nearby municipalities.
  - ✓ Asphalt resurfacing ranged from approximately $1.50 to more than $5.00 a square foot depending roadway condition (i.e., lower PCI values may result in more patching and thicker resurfacing). Reconstruction was set at $6.50 a square foot.
  - ✓ Concrete slab replacement costs ranged from $5.00 to $15.00 a square foot depending on roadway condition (i.e., lower PCI values result in more slab replacement). Reconstruction was set at $20.00 a square foot.
- All analyses began in the fall of 2020 (November 1 start date), and an inflation rate of 3% was assumed.

6.4 Results

The results of the PAVER M&R analyses are shown in the following two figures. Figure 12 illustrates the estimated five-year change in pavement condition resulting from the analyzed funding scenarios, and Figure 13 depicts the estimated change in the Village's major M&R backlog for each funding scenario.

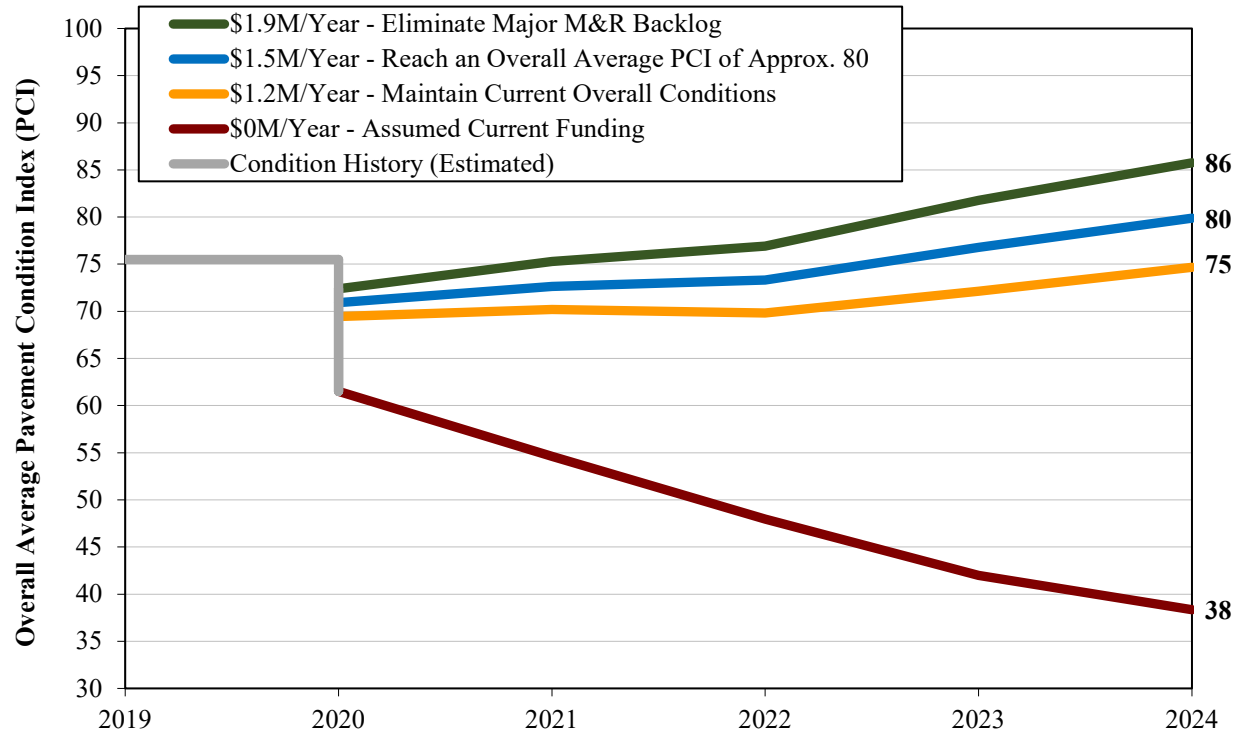


Figure 12: Impact of funding levels on overall pavement conditions by year.

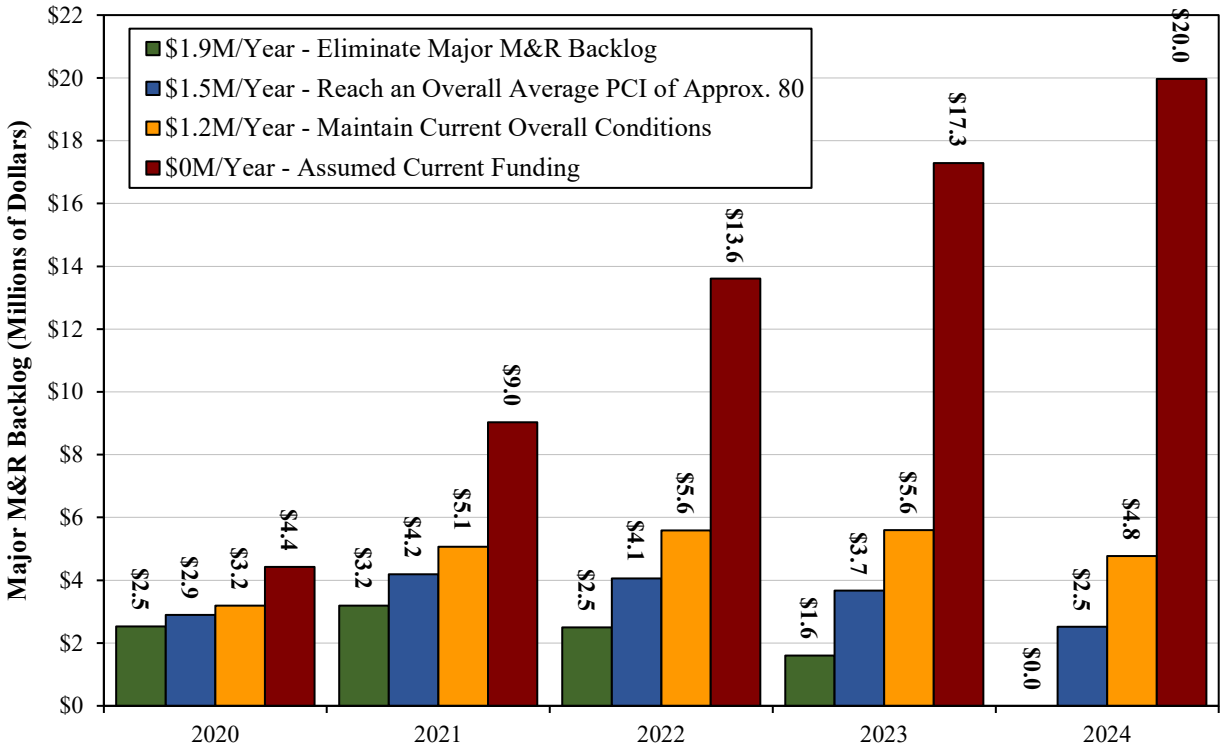


Figure 13: Impact of funding levels on major M&R backlog by year.

The consequences of the annual funding scenarios are shown in Table 9. This table illustrates the concept of "total cost." By treating both the total annual M&R expenditures and the remaining major M&R backlog at the end of the five-year period as costs to the Village, the benefit of increasing annual funding – which results in a smaller major M&R backlog – is clearly illustrated. Consequently, eliminating the major M&R backlog over a five-year period results in the lowest total cost to the Village.

Table 9. Estimated Five-Year Pavement M&R Costs

Funding Scenario	Total Five-Year M&R Costs (2020-2024)	Remaining M&R Backlog[1)] (2024)	Total Five-Year Cost[2)]	Projected PCI (2024)
$0/YR (Assumed Current Funding)	$0	$20.0M	$20.0M	38
Maintain Existing Overall Average Conditions ($1.2M/YR)	$6.1M	$4.8M	$10.9M	75
Increase Overall Average PCI to Approximately 80 ($1.5M/YR)	$7.6M	$2.5M	$10.1M	80
Backlog Elimination ($1.9M/YR)	$9.4M	$0	$9.4M	86

1) "M&R Backlog" equals the lump-sum cost to resurface/reconstruct all pavements at or below their critical PCI value.
2) "Total five-year cost" equals the sum of the five-year major M&R expenditures plus the remaining major M&R backlog at the end of the five-year analysis period.

Appendix A map A-5 presents major M&R recommendations. Map A-5 shows all roadways recommended for major M&R over the upcoming five years based on an unlimited budget. The map shows which roadways are recommended each year by PAVER. These recommendations do not consider geographic proximity. Consequently, these recommendations should be grouped into practical projects during the Village's planning process.

Map A-6 shows all roads that are candidates for preventive maintenance, such as crack sealing and localized patching. While crack sealing can be an effective treatment for preserving roadways in good condition, its utility diminishes when applied to roadways that are already in poor condition or are exhibiting signs of structural failure.

Appendix B presents tabular data showing the estimated cost to repair each of the roads recommended for major M&R over the next five years based on the Village's existing funding level. Appendix C presents similar data assuming unlimited funding. *The costs presented in Appendixes B and C should be considered rough estimates only and should not be considered engineering estimates.* These costs are based on a simple relationship between predicted PCI value and typical level of major M&R. Unit costs used in developing these relationships were based on bid tabs provided by the Village and by costs reported by neighboring municipalities.

Appendix E presents tabular data showing one-year estimated costs to apply preventive maintenance to each of the candidate roadways (i.e., roadways with PCI values of 65 or better). The total one-year preventive maintenance cost is estimated to be approximately $277,000, as shown in Table 10. *The estimated costs presented in Appendix E should be considered rough estimates based on the assumed unit costs only and should not be considered engineering estimates.*

Table 10. Preventive Maintenance Summary

Maintenance Type	Quantity	Units	Est. Cost
Crack Sealing - AC	170,373	FT	$170,371
Patching - AC Shallow	1,087	SF	$5,980
Patching - AC Deep	2,875	SF	$31,630
Crack Sealing - PCC	304	FT	$457
Joint Seal (Localized)	45,482	FT	$68,223
		Total:	**$276,661**

7 SUMMARY AND RECOMMENDATIONS

7.1 Summary

A pavement condition survey was performed in the fall of 2019 and spring of 2020 on the Village's roadways. The results of the survey provide a snapshot of roadway conditions at the time of the survey. PAVER was implemented for the Village's roadways and was populated with collected pavement condition data and available M&R history data provided by the Village.

For the Village to get the most return on investment out of PAVER, the system must be considered a living entity and be updated regularly with M&R activities as they are performed, M&R unit cost data, and routinely collected pavement condition data. With such attention, PAVER becomes a repository of accurate, up-to-date data and can aid the Village in more cost-effectively programming M&R funding and objectively analyzing the true cost-effectiveness of presently employed M&R activities.

Five-year M&R funding analyses were performed on the Village's roadways using PAVER to: 1) evaluate the adequacy of the Village's existing funding level, 2) estimate the funding level needed to maintain the Village's existing roadway conditions, 3) estimate the funding level needed to modestly raise the overall condition of the Village's roadways, and 4) estimate the funding level needed to eliminate the Village's backlog of major M&R.

It was determined that the Village's existing funding level for major M&R is inadequate to maintain the current condition of the Village's roadway pavements. To maintain existing conditions, an increase in funding will likely be needed.

Based on this initial set of PCI data collection and analysis on the Village's roadways, G&AI respectfully offers the following broad recommendations.

7.2 Recommendations

7.2.1 Implement pavement preservation techniques

As discussed in Section 2.6, preventive maintenance activities, such as crack sealing, localized patching, and surface treatments, can cost-effectively extend the life of a pavement. The Village should incorporate these strategies into its M&R planning.

The Village does not appear to have an active crack sealing program for its roadways. Moisture penetrates unsealed cracks and compromises the base structure of the pavement. Freeze/thaw cycling exacerbates the damage. Sealing cracks on roadways that are in relatively good condition is a simple, cost-effective method for pavement preservation. Crack sealing is a preventive maintenance activity and should not be applied on roadways that require major M&R.

Furthermore, the Village should focus on applying routine preventive maintenance to newly resurfaced or reconstructed roadways. It was observed that some paving lane seams throughout the Village had not been sealed. Like crack sealing, sealing the paving lane seams is a simple method for pavement preservation, and it may be included in construction specifications.

7.2.2 Determine when pavements should be reconstructed rather than resurfaced

As the Village's asphalt-surfaced pavements age and are resurfaced multiple times, the performance of successive resurfacing projects will diminish. These "diminishing returns" occur because the sublayers of

the pavement (the pavement structure below the asphalt surface) continue to deteriorate due to moisture infiltration, freeze-thaw damage, and damage due to vehicular loading. The M&R history and performance of resurfaced roadways should be closely tracked to determine the optimal number of resurfacing projects that may be performed prior to reconstructing the pavement.

7.2.3 Perform regular pavement condition inspections – every three years

To capitalize on the pavement condition survey and better track the condition of its pavements, the Village should continue to perform PCI surveys on a regular, three-year cycle. Doing so will enable the Village to:

1. Better track the deterioration of its pavements over time,
2. Identify pavement deterioration trends and use these trends to better predict future pavement conditions and then strategically apply M&R funding, and
3. Assess and track the effectiveness of its pavement preservation and major M&R activities.

The deterioration trends developed for this project were based on only one set of inspection data. Additional inspection data will help validate these trends and will improve forecasts, which may impact forecasted pavement conditions and recommended future M&R funding needs.

7.2.4 Routinely update PAVER

PAVER should be updated annually following the paving season to capture major M&R activities, routine maintenance activities, and pavement inventory changes (new roadways, jurisdictional changes, realignments). PAVER relies on updated inventory and work history data in order to generate meaningful recommendations.

7.2.5 Increase funding for pavement M&R

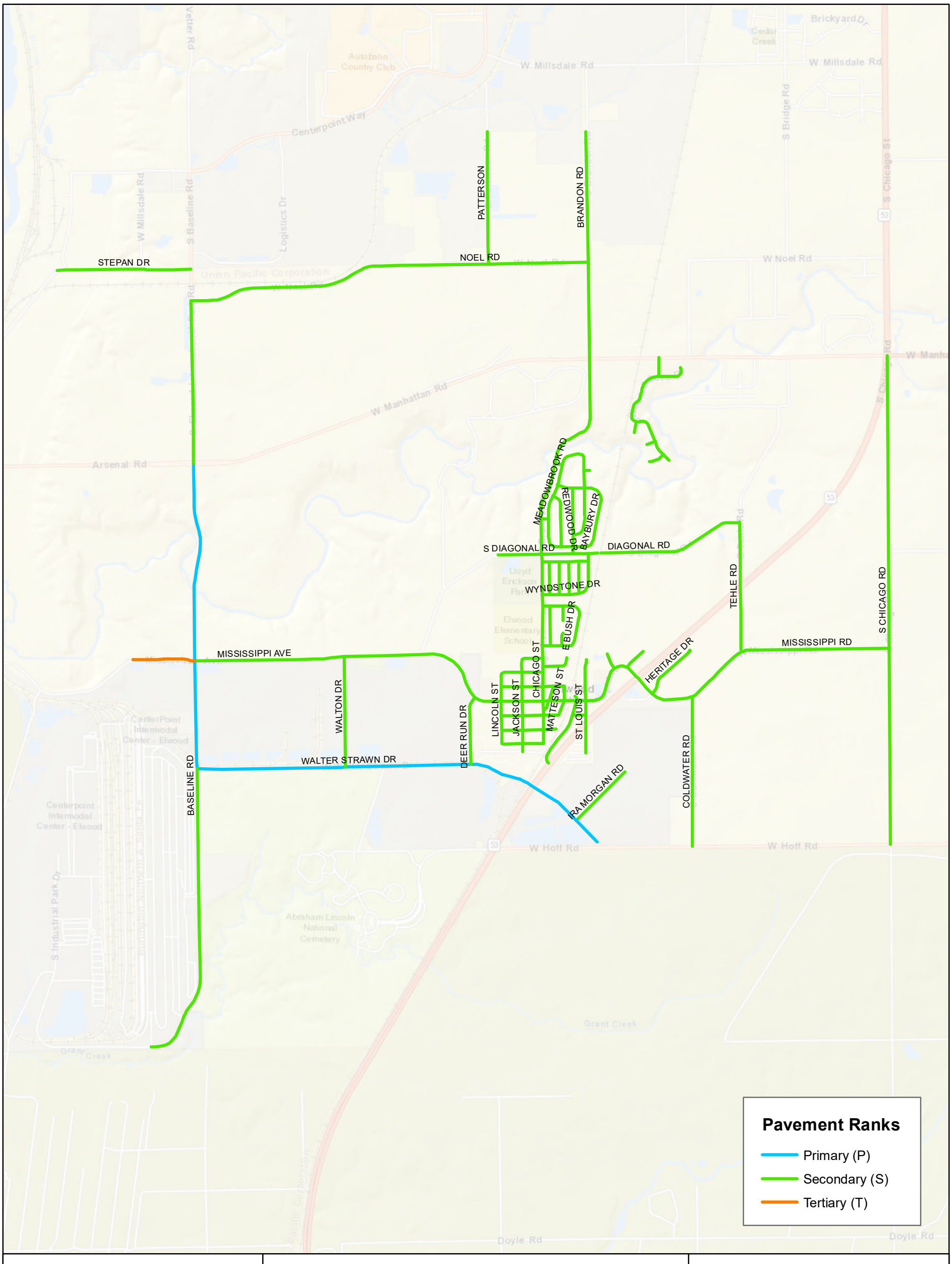
Based on the results of the pavement condition survey and forecasts of future pavement condition, the Village's current level of funding is likely inadequate to maintain the overall current condition of the Village's roadways. Managing a pavement network at an overall average PCI between 70 and 80 is more cost effective since funding is spent on less costly preventive maintenance and preservation activities rather than more expensive major M&R. As the Village moves forward, it is recommended that additional funding be allocated for M&R to improve the overall condition of the roadways so that they may be managed more cost-effectively.

7.2.6 Prioritize existing M&R funding to maximize shared benefit

Currently, the Village's roadway M&R funding needs exceed available funding. The Village should focus major M&R activities on its most trafficked roadways. Doing so will maximize the overall shared benefit of the funds spent.

APPENDIX A – PAVEMENT INVENTORY, CONDITION, AND RECOMMENDED M&R MAPS

Map A-1: Pavement Ranks
Map A-2: Pavement Surface Types
Map A-3: Pavement Condition Index (PCI) values
Map A-4: International Roughness Index (IRI) values
Map A-5: Five-year major M&R recommendations – *Recommendations assuming unlimited funding*
Map A-6: Pavement preservation candidates – *Current recommendations*



N

0 2,250 4,500 Feet

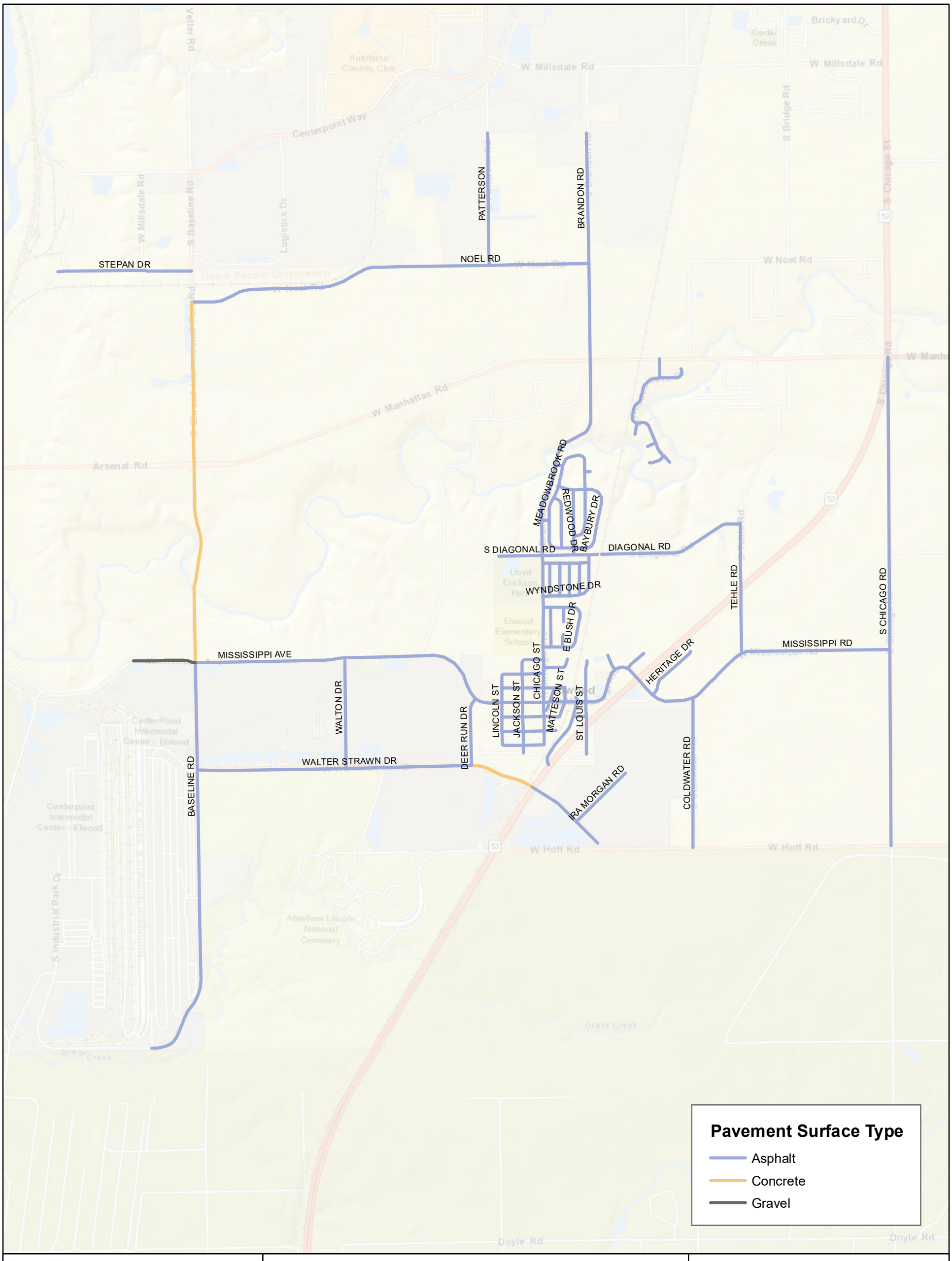
Map A-1:
Pavement Ranks

Elwood, Illinois

Pavement Management Program

Gorrondona & Associates, Inc.

Urban GIS
your world, your way



Feet
0 2,250 4,500

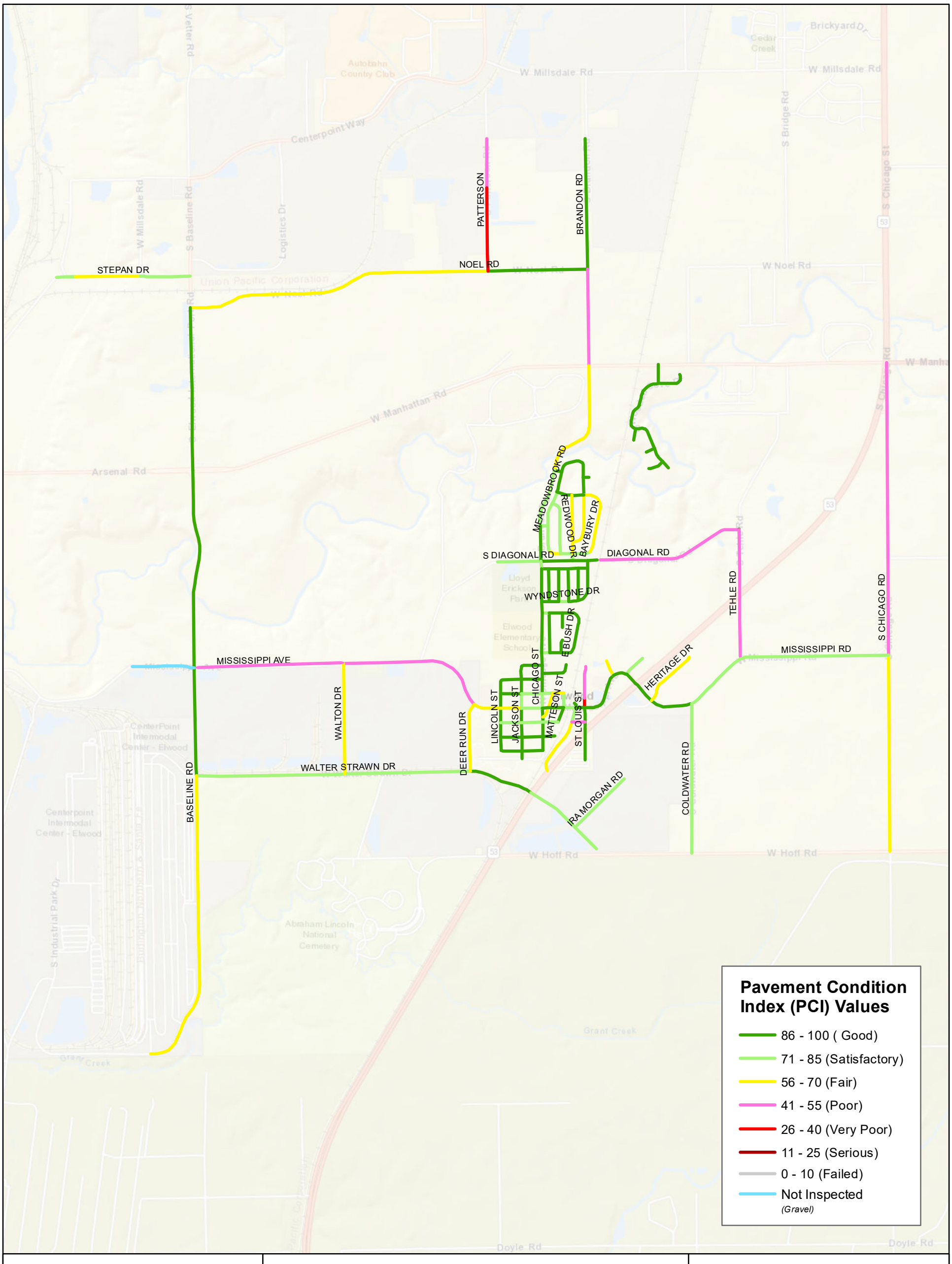
Map A-2:
Pavement Surface Types

Elwood, Illinois

Pavement Management Program

Gorrondona & Associates, Inc.

Urban GIS
your world, your way



N

0 2,250 4,500 Feet

Map A-3:
Pavement Condition Index (PCI) Values

Elwood, Illinois

Pavement Management Program

Gorrondona & Associates, Inc.

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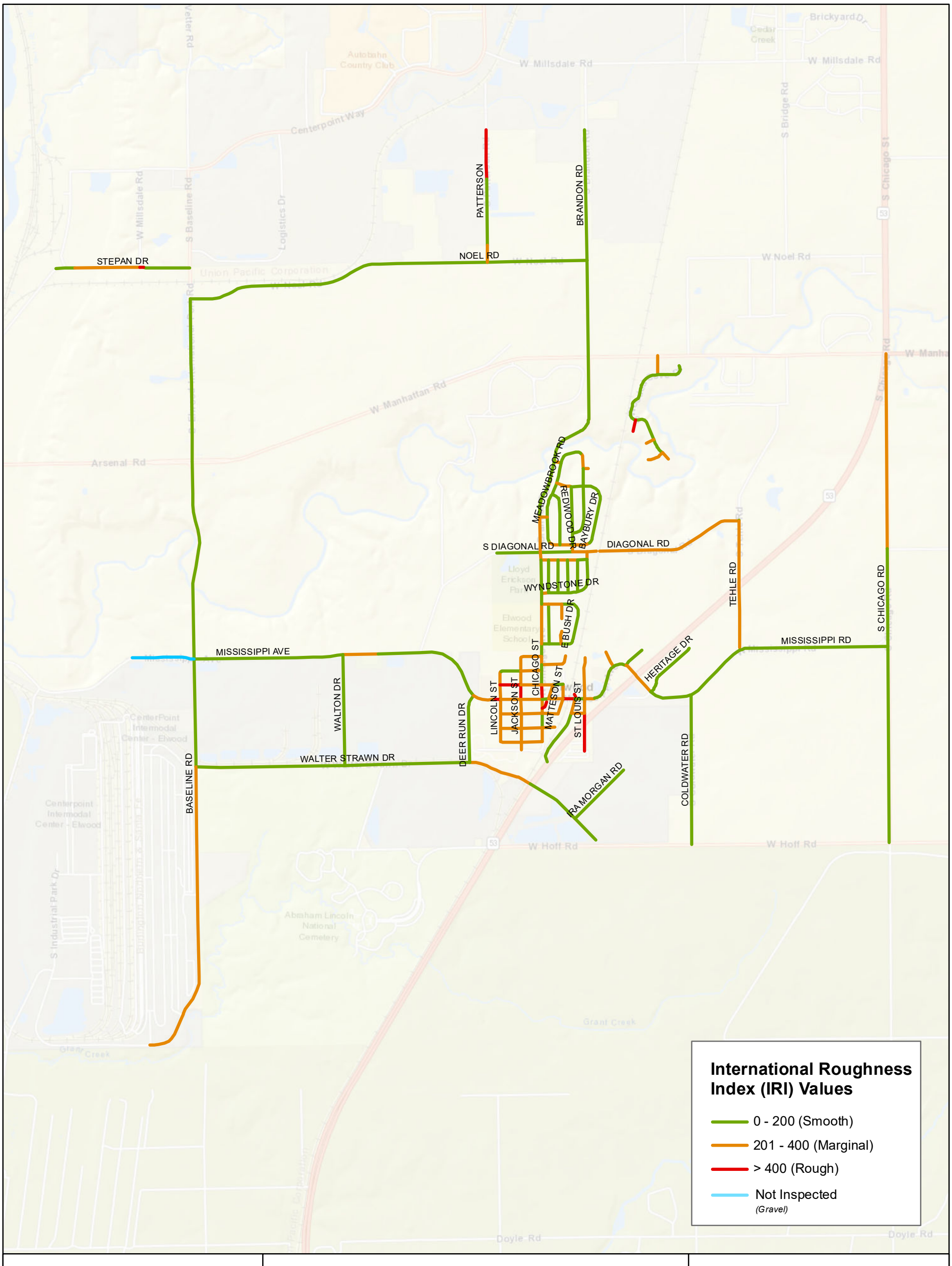

N

0 2,250 4,500 Feet

Map A-4:
International Roughness Index (IRI) Values

Elwood, Illinois

Pavement Management Program

Gorrondona & Associates, Inc.

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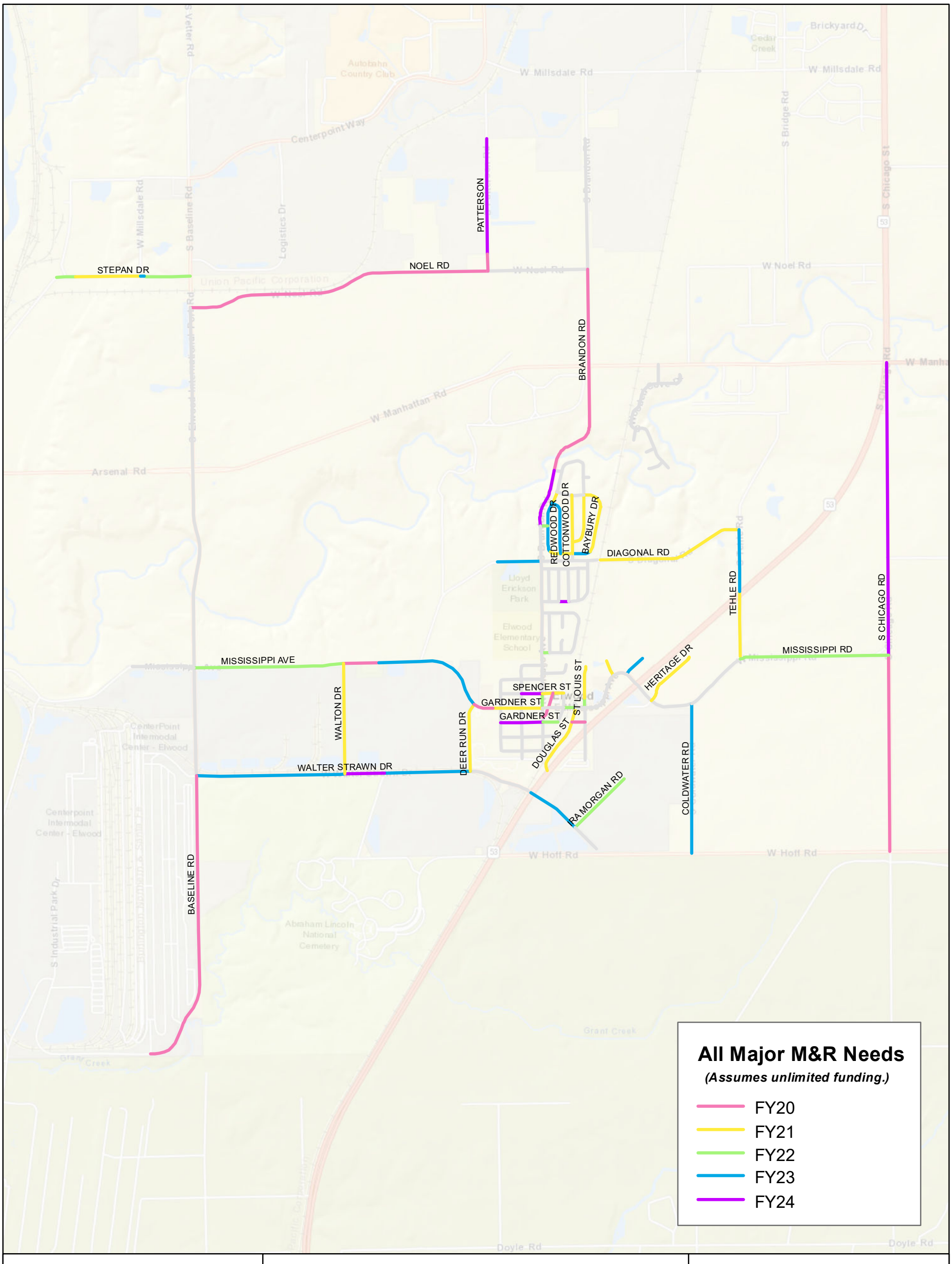

Map A-5:
All Major M&R Needs
(Assumes unlimited funding.)

Elwood, Illinois

Pavement Management Program

Gorrondona & Associates, Inc.

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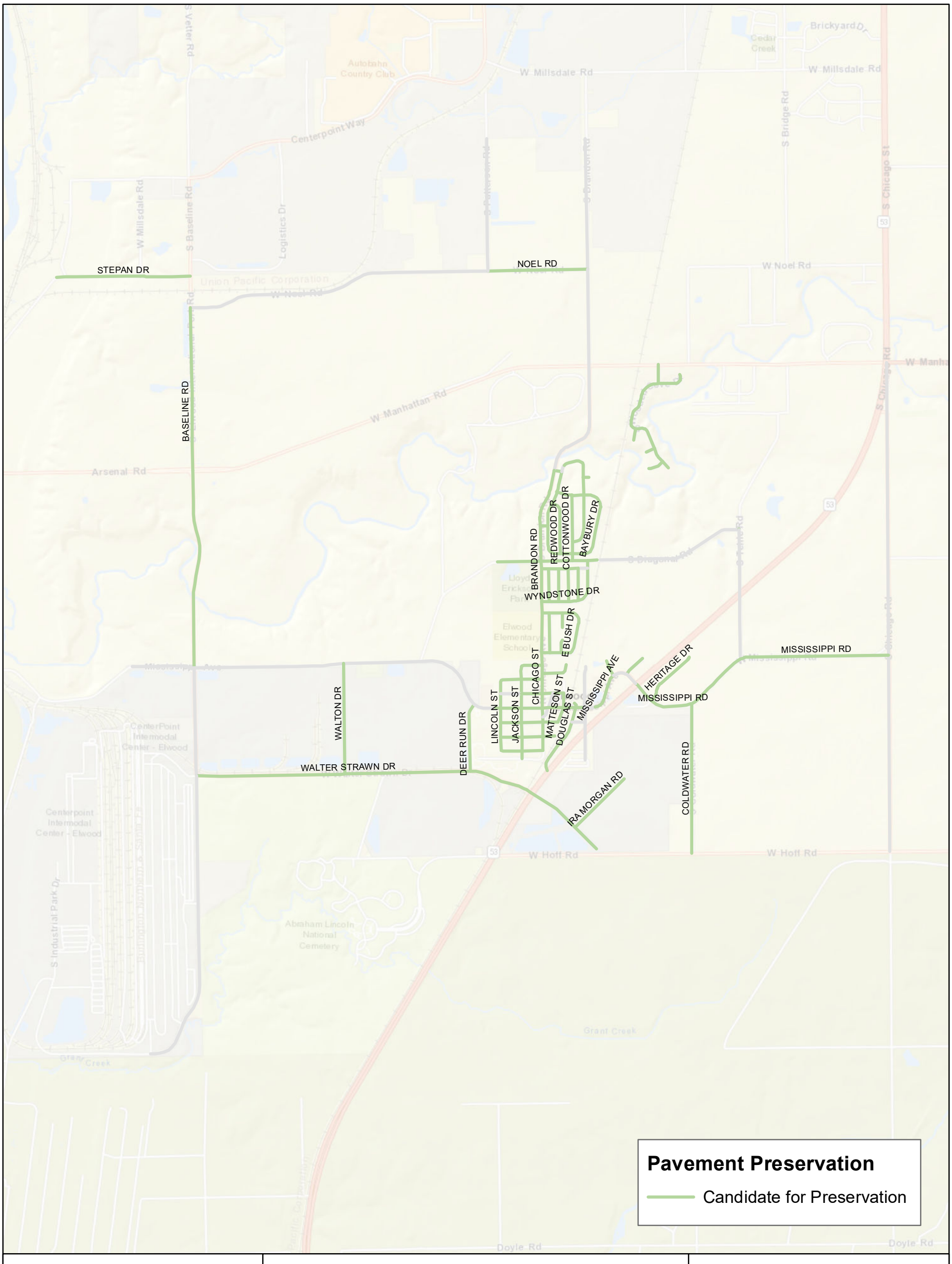

N

0 2,250 4,500 Feet

Map A-6:
Pavement Preservation
Candidates

Elwood, Illinois

Pavement Management Program

Gorrondona & Associates, Inc.

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APPENDIX B – TABULATED FIVE-YEAR MAJOR M&R RECOMMENDATIONS AND ESTIMATED COSTS – *ASSUMING UNLIMITED FUNDING*

Pavement ID	Road Name	From	To	Area	PCI	Year	Cost
ELWD::BRNDN RD::05	BRANDON ROAD	PIN OAK DRIVE	MANHATTAN ROAD	71,507	49	2020	$114,900
ELWD::BRNDN RD::06	BRANDON ROAD	MANHATTAN ROAD	NOEL ROAD	57,098	42	2020	$156,473
ELWD::BSLN RD::10	BASELINE ROAD	INTERNATIONAL PORT RD	WALTER STRAWN DRIVE	323,746	44	2020	$765,356
ELWD::GRDNR ST::40	GARDNER STREET	DOUGLAS STREET	ST LOUIS STREET	9,162	42	2020	$25,107
ELWD::MSSP AVE::70	MISSISSIPPI AVENUE	WALTON DRIVE	MISSISSIPPI AVENUE	47,656	39	2020	$149,252
ELWD::MSSP AVE::90	MISSISSIPPI AVENUE	DEER RUN DRIVE	MISSISSIPPI AVENUE	18,571	54	2020	$21,716
ELWD::NL RD::10	NOEL ROAD	BASELINE ROAD	PATTERSON	286,388	53	2020	$362,617
ELWD::PTTRSN::10	PATTERSON	NOEL ROAD	PATTERSON	10,081	22	2020	$62,312
ELWD::S CHGO RD::10	S CHICAGO ROAD	HOFF ROAD	MISSISSIPPI ROAD	105,695	47	2020	$209,932
ELWD::WD ST::10	WOOD STREET	CHICAGO STREET	END	6,012	52	2020	$8,191
ELWD::WD ST::20	WOOD STREET	MISSISSIPPI AVENUE	SPENCER STREET	10,462	53	2020	$13,246
ELWD::BSHTRN DR::10	BUSHTHORN DRIVE	REDWOOD DRIVE	MEADOWBROOK ROAD	7,604	51	2021	$11,076
ELWD::BSHTRN DR::20	BUSHTHORN DRIVE	COTTONWOOD DRIVE	REDWOOD DRIVE	8,440	53	2021	$11,163
ELWD::BYBRY DR::30	BAYBURY DRIVE	BUSHTHORN DRIVE	ARROWHEAD DRIVE	49,022	44	2021	$118,383
ELWD::CTTNWD DR::20	COTTONWOOD DRIVE	BUSHTHORN DRIVE	ARROWHEAD DRIVE	8,459	49	2021	$13,818
ELWD::CTTNWD DR::30	COTTONWOOD DRIVE	ARROWHEAD DRIVE	BAYBURY DRIVE	32,282	51	2021	$47,018
ELWD::DGLS ST::10	DOUGLAS STREET	ROUTE 53	GARDNER STREET	39,369	48	2021	$74,642
ELWD::DGLS ST::20	DOUGLAS STREET	GARDNER STREET	MISSISSIPPI AVENUE	10,422	53	2021	$13,786
ELWD::DGNL RD::10	DIAGONAL ROAD	S DIAGONAL ROAD	TEHLE ROAD	102,808	29	2021	$537,570
ELWD::DR RN DR::10	DEER RUN DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	58,492	46	2021	$126,167
ELWD::HRTG DR::10	HERITAGE DRIVE	MISSISSIPPI ROAD	END	55,702	48	2021	$105,610
ELWD::MDWBR RD::30	MEADOWBROOK ROAD	REDWOOD DRIVE	BAYBURY DRIVE	8,191	55	2021	$9,720
ELWD::MSSP AVE::100	MISSISSIPPI AVENUE	MISSISSIPPI AVENUE	LINCOLN STREET	7,246	51	2021	$10,553
ELWD::MSSP AVE::110	MISSISSIPPI AVENUE	LINCOLN STREET	JACKSON STREET	19,582	44	2021	$47,288
ELWD::MSSP AVE::120	MISSISSIPPI AVENUE	JACKSON STREET	CHICAGO STREET	19,721	55	2021	$23,401
ELWD::RRWHD DR::10	ARROWHEAD DRIVE	COTTONWOOD DRIVE	BAYBURY DRIVE	37,300	48	2021	$70,720
ELWD::SPNCR ST::30	SPENCER STREET	CHICAGO STREET	WOOD STREET	7,609	53	2021	$10,065
ELWD::SPNCR ST::40	SPENCER STREET	WOOD STREET	MATTESON STREET	7,288	46	2021	$15,720
ELWD::ST LS ST::50	ST LOUIS STREET	ST LOUIS STREET	END	25,290	28	2021	$139,001
ELWD::STPN DR::20	STEPAN DRIVE	STEPAN DRIVE	MILLSDALE ROAD	45,600	43	2021	$121,812
ELWD::THL RD::10	TEHLE ROAD	MISSISSIPPI ROAD	ROUTE 53	26,177	28	2021	$143,875
ELWD::VHLL CT 1::10	VILLAGE HALL CT 1	MISSISSIPPI ROAD	END	15,128	48	2021	$28,682
ELWD::WLTN DR::10	WALTON DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	116,077	48	2021	$220,080
ELWD::CDRWD DR::10	CEDARWOOD DRIVE	BRANDON ROAD	MEADOWBROOK ROAD	5,317	46	2022	$11,880
ELWD::CHCG ST::50	CHICAGO STREET	MISSISSIPPI AVENUE	SPENCER STREET	13,539	48	2022	$25,147
ELWD::E BSH DR::10	E BUSH DRIVE	CHICAGO STREET	BEATTIE STREET	5,837	53	2022	$7,776
ELWD::GRDNR ST::30	GARDNER STREET	CHICAGO STREET	MATTESON STREET	10,826	46	2022	$24,191
ELWD::MSSP AVE::150	MISSISSIPPI AVENUE	MATTESON STREET	DOUGLAS STREET	7,762	46	2022	$17,343
ELWD::MSSP AVE::60	MISSISSIPPI AVENUE	BASELINE ROAD	WALTON DRIVE	200,735	22	2022	$1,336,083
ELWD::MSSP RD::50	MISSISSIPPI ROAD	TEHLE ROAD	S CHICAGO ROAD	79,938	51	2022	$122,404
ELWD::R MRG RD::20	IRA MORGAN ROAD	IRA MORGAN ROAD	END	55,663	44	2022	$144,919
ELWD::ST LS ST::40	ST LOUIS STREET	MISSISSIPPI AVENUE	ST LOUIS STREET	7,903	0	2022	$54,503
ELWD::STPN DR::10	STEPAN DRIVE	START	STEPAN DRIVE	13,089	53	2022	$17,436
ELWD::STPN DR::30	STEPAN DRIVE	STEPAN DRIVE	BASELINE ROAD	32,208	53	2022	$42,906
ELWD::BSHTRN DR::30	BUSHTHORN DRIVE	COTTONWOOD DRIVE	BAYBURY DRIVE	12,430	46	2023	$27,875
ELWD::CLDWTR RD::10	COLDWATER ROAD	HOFF ROAD	MISSISSIPPI ROAD	64,265	46	2023	$144,114
ELWD::MDWBR RD::10	MEADOWBROOK ROAD	BUSHTHORN DRIVE	CEDARWOOD DRIVE	18,370	50	2023	$30,298
ELWD::MDWBR RD::20	MEADOWBROOK ROAD	CEDARWOOD DRIVE	REDWOOD DRIVE	16,652	46	2023	$37,341
ELWD::MSSP AVE::80	MISSISSIPPI AVENUE	MISSISSIPPI AVENUE	DEER RUN DRIVE	111,193	6	2023	$789,822
ELWD::R MRG RD::10	IRA MORGAN ROAD	ROUTE 53	IRA MORGAN ROAD	61,284	43	2023	$171,969
ELWD::RDWD DR::10	REDWOOD DRIVE	BUSHTHORN DRIVE	MEADOWBROOK ROAD	38,072	54	2023	$50,490
ELWD::S DGNL RD::15	S DIAGONAL ROAD	START	BRANDON ROAD	30,584	43	2023	$85,823
ELWD::STPN DR::25	STEPAN DRIVE	MILLSDALE ROAD	STEPAN DRIVE	2,513	46	2023	$5,636
ELWD::THL RD::20	TEHLE ROAD	ROUTE 53	DIAGONAL ROAD	25,097	0	2023	$178,266
ELWD::VHLL CT 2::10	VILLAGE HALL CT 2	MISSISSIPPI ROAD	END	21,055	43	2023	$59,084
ELWD::WLT STN DR::10	WALTER STRAWN DRIVE	BASELINE ROAD	WALTON DRIVE	104,049	54	2023	$137,987
ELWD::WLT STN DR::30	WALTER STRAWN DRIVE	WALTER STRAWN DRIVE	DEER RUN DRIVE	80,785	46	2023	$181,158
ELWD::BRNDN RD::04	BRANDON ROAD	CEDARWOOD DRIVE	PIN OAK DRIVE	34,320	46	2024	$82,862
ELWD::GRDNR ST::10	GARDNER STREET	LINCOLN STREET	JACKSON STREET	14,622	46	2024	$35,302
ELWD::GRDNR ST::20	GARDNER STREET	JACKSON STREET	CHICAGO STREET	14,631	52	2024	$22,285
ELWD::PTTRSN::20	PATTERSON	PATTERSON	PATTERSON	39,035	0	2024	$285,590

Pavement ID	Road Name	From	To	Area	PCI	Year	Cost
ELWD::PTTRSN::30	PATTERSON	PATTERSON	END	29,236	0	2024	$213,899
ELWD::S CHGO RD::20	S CHICAGO ROAD	MISSISSIPPI ROAD	BROWN ROAD	52,500	0	2024	$384,106
ELWD::S CHGO RD::30	S CHICAGO ROAD	BROWN ROAD	MANHATTAN ROAD	105,000	0	2024	$768,213
ELWD::SPNCR ST::20	SPENCER STREET	JACKSON STREET	CHICAGO STREET	14,667	46	2024	$35,413
ELWD::WLT STN DR::20	WALTER STRAWN DRIVE	WALTON DRIVE	WALTER STRAWN DRIVE	36,978	52	2024	$56,322
ELWD::WYNSTN DR::30	WYNDSTONE DRIVE	EAGLE CREEK ROAD	DEER PATH LANE	7,316	46	2024	$17,663

APPENDIX C – PAVEMENT MAINTENANCE POLICIES AND UNIT COSTS

Table C-1. Recommended Asphalt Pavement Maintenance Policy.

Pavement Distress	Severity	Recommended Maintenance Type	Units
Alligator Cracking	Low	Crack Sealing	FT
Alligator Cracking	Medium	Patching - AC Deep	SF
Alligator Cracking	High	Patching - AC Deep	SF
Block Cracking	Low	Crack Sealing - AC	FT
Block Cracking	Medium	Crack Sealing - AC	FT
Block Cracking	High	Patching - AC Shallow	SF
Bumps and Sags	Medium	Patching - AC Shallow	SF
Bumps and Sags	High	Patching - AC Deep	SF
Corrugation	Medium	Patching - AC Shallow	SF
Corrugation	High	Patching - AC Deep	SF
Depressions	Medium	Patching - AC Deep	SF
Depressions	High	Patching - AC Deep	SF
Edge Cracking	Low	Crack Sealing - AC	FT
Edge Cracking	Medium	Crack Sealing - AC	FT
Edge Cracking	High	Patching - AC Shallow	SF
Joint Reflection Cracking	Low	Crack Sealing - AC	FT
Joint Reflection Cracking	Medium	Crack Sealing - AC	FT
Joint Reflection Cracking	High	Patching - AC Shallow	SF
Lane/Shoulder Dropoff	Medium	Shoulder leveling	FT
Lane/Shoulder Dropoff	High	Shoulder leveling	FT
Long. and Trans. Cracking	Low	Crack Sealing - AC	FT
Long. and Trans. Cracking	Medium	Crack Sealing - AC	FT
Long. and Trans. Cracking	High	Patching - AC Shallow	SF
Patching and Utility Cuts	High	Patching - AC Deep	SF
Potholes	Low	Patching - AC Deep	SF
Potholes	Medium	Patching - AC Deep	SF
Potholes	High	Patching - AC Deep	SF
Rutting	Medium	Patching - AC Shallow	SF
Rutting	High	Patching - AC Deep	SF
Shoving	Medium	Grinding (Localized)	FT
Shoving	High	Grinding (Localized)	FT
Slippage Cracking	Low	Crack Sealing - AC	FT
Slippage Cracking	Medium	Patching - AC Shallow	SF
Slippage Cracking	High	Patching - AC Shallow	SF

Table C-2. Recommended Concrete Pavement Maintenance Policy.

Pavement Distress	Severity	Recommended Maintenance Type	Units
Blow ups	Medium	Patching - PCC Full Depth	SF
Blow ups	High	Patching - PCC Full Depth	SF
Corner Breaks	Low	Crack Sealing - PCC	FT
Corner Breaks	Medium	Patching - PCC Full Depth	FT
Corner Breaks	High	Patching - PCC Full Depth	SF
Divided (Shattered) Slabs	Low	Crack Sealing - PCC	FT
Divided (Shattered) Slabs	Medium	Slab Replacement - PCC	SF
Divided (Shattered) Slabs	High	Slab Replacement - PCC	SF
Durability (D) Cracking	Medium	Patching - PCC Full Depth	SF
Durability (D) Cracking	High	Slab Replacement - PCC	SF
Faulting	Medium	Grinding (Localized)	FT
Faulting	High	Grinding (Localized)	FT
Joint Seal Damage	Medium	Joint Seal (Localized)	FT
Joint Seal Damage	High	Joint Seal (Localized)	FT
Lane/Shoulder Dropoff	Medium	Shoulder leveling	FT
Lane/Shoulder Dropoff	High	Shoulder leveling	FT
Linear Cracking	Low	Crack Sealing - PCC	FT
Linear Cracking	Medium	Crack Sealing - PCC	FT
Linear Cracking	High	Patching - PCC Partial Depth	SF
Patches, Large	High	Patching - PCC Full Depth	SF
Patches, Small	High	Patching - PCC Partial Depth	SF
Punchouts	Medium	Patching - PCC Full Depth	SF
Punchouts	High	Slab Replacement - PCC	SF
Scaling	High	Slab Replacement - PCC	SF
Corner Spalls	Medium	Patching - PCC Partial Depth	SF
Corner Spalls	High	Patching - PCC Partial Depth	SF
Joint Spalls	Medium	Patching - PCC Partial Depth	SF
Joint Spalls	High	Patching - PCC Partial Depth	SF

Table C-3. Estimate Unit Cost for Maintenance Activities.

Maintenance Type	Est. Unit Cost	Units
Crack Sealing - AC	$1.00	FT
Joint Seal - Silicon	$2.75	FT
Crack Sealing - PCC	$1.50	FT
Grinding (Localized)	$4.00	FT
Joint Seal (Localized)	$1.50	FT
Patching - AC Deep	$11.00	SF
Patching - AC Leveling	$1.20	SF
Patching - AC Shallow	$5.50	SF
Patching - PCC Full Depth	$30.00	SF
Patching - PCC Partial Depth	$7.00	SF
Shoulder leveling	$1.20	FT
Slab Replacement - PCC	$20.00	SF

APPENDIX D – TABULATED PREVENTIVE MAINTENANCE RECOMMENDATIONS

Pavement ID	Road Name	From	To	Area	Distress Type	Density	Maint. Activity	Cost
ELWD::RCHR LN::10	ARCHER LANE	WYNDSTONE DRIVE	FOX RUN DRIVE	24,196	L & T CR	0.7%	Crack Sealing - AC	$168
ELWD::RCHR LN::10	ARCHER LANE	WYNDSTONE DRIVE	FOX RUN DRIVE	24,196	L & T CR	0.7%	Crack Sealing - AC	$163
ELWD::RRWHD DR::10	ARROWHEAD DRIVE	COTTONWOOD DRIVE	BAYBURY DRIVE	37,300	L & T CR	0.1%	Crack Sealing - AC	$36
ELWD::RRWHD DR::10	ARROWHEAD DRIVE	COTTONWOOD DRIVE	BAYBURY DRIVE	37,300	L & T CR	0.1%	Crack Sealing - AC	$18
ELWD::RRWHD DR::10	ARROWHEAD DRIVE	COTTONWOOD DRIVE	BAYBURY DRIVE	37,300	BLOCK CR	92.9%	Crack Sealing - AC	$10,563
ELWD::RRWHD DR::10	ARROWHEAD DRIVE	COTTONWOOD DRIVE	BAYBURY DRIVE	37,300	RUTTING	0.1%	Patching - AC Shallow	$126
ELWD::RRWHD DR::10	ARROWHEAD DRIVE	COTTONWOOD DRIVE	BAYBURY DRIVE	37,300	SLIPPAGE CR	0.2%	Patching - AC Shallow	$561
ELWD::RRWHD DR::20	ARROWHEAD DRIVE	MAPLE DRIVE	BAYBURY DRIVE	12,451	L & T CR	0.1%	Crack Sealing - AC	$18
ELWD::RRWHD DR::30	ARROWHEAD DRIVE	MEADOWBROOK ROAD	MAPLE DRIVE	11,181	L & T CR	0.3%	Crack Sealing - AC	$38
ELWD::RRWHD DR::30	ARROWHEAD DRIVE	MEADOWBROOK ROAD	MAPLE DRIVE	11,181	L & T CR	0.5%	Crack Sealing - AC	$58
ELWD::BSLN RD::30	BASELINE ROAD	MISSISSIPPI AVENUE	ARSENAL ROAD	267,876	CORNER BREAK	0.2%	Crack Sealing - PCC	$35
ELWD::BSLN RD::30	BASELINE ROAD	MISSISSIPPI AVENUE	ARSENAL ROAD	267,876	LINEAR CR	0.7%	Crack Sealing - PCC	$211
ELWD::BSLN RD::30	BASELINE ROAD	MISSISSIPPI AVENUE	ARSENAL ROAD	267,876	JT SEAL DMG	100.0%	Joint Seal (Localized)	$56,179
ELWD::BSLN RD::40	BASELINE ROAD	ARSENAL ROAD	NOEL ROAD	218,339	CORNER BREAK	0.8%	Crack Sealing - PCC	$131
ELWD::BYBRY DR::10	BAYBURY DRIVE	MEADOWBROOK ROAD	COTTONWOOD DRIVE	10,663	L & T CR	0.4%	Crack Sealing - AC	$37
ELWD::BYBRY DR::20	BAYBURY DRIVE	COTTONWOOD DRIVE	ARROWHEAD DRIVE	8,324	L & T CR	0.4%	Crack Sealing - AC	$35
ELWD::BYBRY DR::30	BAYBURY DRIVE	BUSHTHORN DRIVE	ARROWHEAD DRIVE	49,022	BLOCK CR	9.1%	Crack Sealing - AC	$1,365
ELWD::BYBRY DR::30	BAYBURY DRIVE	BUSHTHORN DRIVE	ARROWHEAD DRIVE	49,022	L & T CR	0.3%	Crack Sealing - AC	$140
ELWD::BYBRY DR::30	BAYBURY DRIVE	BUSHTHORN DRIVE	ARROWHEAD DRIVE	49,022	L & T CR	0.1%	Crack Sealing - AC	$36
ELWD::BYBRY DR::30	BAYBURY DRIVE	BUSHTHORN DRIVE	ARROWHEAD DRIVE	49,022	BLOCK CR	83.0%	Crack Sealing - AC	$12,398
ELWD::BYBRY DR::30	BAYBURY DRIVE	BUSHTHORN DRIVE	ARROWHEAD DRIVE	49,022	ALLIGATOR CR	0.2%	Patching - AC Deep	$1,301
ELWD::BYBRY DR::30	BAYBURY DRIVE	BUSHTHORN DRIVE	ARROWHEAD DRIVE	49,022	RUTTING	0.1%	Patching - AC Shallow	$123
ELWD::BTT ST::10	BEATTIE STREET	E BUSH DRIVE	WOODBINE DRIVE	29,965	L & T CR	0.3%	Crack Sealing - AC	$83
ELWD::BTT ST::10	BEATTIE STREET	E BUSH DRIVE	WOODBINE DRIVE	29,965	L & T CR	0.3%	Crack Sealing - AC	$81
ELWD::BRNDN RD::01	BRANDON ROAD	WYNDSTONE DRIVE	FOX RUN DRIVE	31,164	L & T CR	0.1%	Crack Sealing - AC	$24
ELWD::BRNDN RD::01	BRANDON ROAD	WYNDSTONE DRIVE	FOX RUN DRIVE	31,164	L & T CR	0.5%	Crack Sealing - AC	$170
ELWD::BRNDN RD::02	BRANDON ROAD	FOX RUN DRIVE	S DIAGONAL ROAD	6,960	L & T CR	1.0%	Crack Sealing - AC	$72
ELWD::BRNDN RD::02	BRANDON ROAD	FOX RUN DRIVE	S DIAGONAL ROAD	6,960	ALLIGATOR CR	0.6%	Crack Sealing - AC	$21
ELWD::BRNDN RD::02	BRANDON ROAD	FOX RUN DRIVE	S DIAGONAL ROAD	6,960	L & T CR	0.7%	Crack Sealing - AC	$48
ELWD::BRNDN RD::03	BRANDON ROAD	S DIAGONAL ROAD	CEDARWOOD DRIVE	21,073	L & T CR	0.1%	Crack Sealing - AC	$30
ELWD::BRNDN RD::03	BRANDON ROAD	S DIAGONAL ROAD	CEDARWOOD DRIVE	21,073	L & T CR	0.1%	Crack Sealing - AC	$15
ELWD::BRNDN RD::04	BRANDON ROAD	CEDARWOOD DRIVE	PIN OAK DRIVE	34,320	L & T CR	0.2%	Crack Sealing - AC	$61
ELWD::BRNDN RD::04	BRANDON ROAD	CEDARWOOD DRIVE	PIN OAK DRIVE	34,320	L & T CR	2.4%	Crack Sealing - AC	$807
ELWD::BRNDN RD::04	BRANDON ROAD	CEDARWOOD DRIVE	PIN OAK DRIVE	34,320	EDGE CR	0.1%	Crack Sealing - AC	$45
ELWD::BRRWD CT::10	BRIARWOOD COURT	WOODBINE DRIVE	END	11,038	L & T CR	0.9%	Crack Sealing - AC	$102
ELWD::BRRWD CT::10	BRIARWOOD COURT	WOODBINE DRIVE	END	11,038	L & T CR	1.8%	Crack Sealing - AC	$198
ELWD::BSHTRN DR::10	BUSHTHORN DRIVE	REDWOOD DRIVE	MEADOWBROOK ROAD	7,604	BLOCK CR	98.0%	Crack Sealing - AC	$2,270
ELWD::BSHTRN DR::20	BUSHTHORN DRIVE	COTTONWOOD DRIVE	REDWOOD DRIVE	8,440	BLOCK CR	91.7%	Crack Sealing - AC	$2,359
ELWD::BSHTRN DR::30	BUSHTHORN DRIVE	COTTONWOOD DRIVE	BAYBURY DRIVE	12,430	L & T CR	5.1%	Crack Sealing - AC	$629
ELWD::BSHTRN DR::30	BUSHTHORN DRIVE	COTTONWOOD DRIVE	BAYBURY DRIVE	12,430	L & T CR	2.0%	Crack Sealing - AC	$251
ELWD::CDRWD DR::10	CEDARWOOD DRIVE	BRANDON ROAD	MEADOWBROOK ROAD	5,317	BLOCK CR	75.2%	Crack Sealing - AC	$1,219

Pavement ID	Road Name	From	To	Area	Distress Type	Density	Maint. Activity	Cost
ELWD::CHCG ST::10	CHICAGO STREET	SOUTH STREET	MORRIS STREET	13,190	L & T CR	0.7%	Crack Sealing - AC	$94
ELWD::CHCG ST::10	CHICAGO STREET	SOUTH STREET	MORRIS STREET	13,190	L & T CR	1.5%	Crack Sealing - AC	$193
ELWD::CHCG ST::100	CHICAGO STREET	WOODBINE DRIVE	WYNDSTONE DRIVE	10,571	L & T CR	0.7%	Crack Sealing - AC	$73
ELWD::CHCG ST::20	CHICAGO STREET	MORRIS STREET	GARDNER STREET	13,393	L & T CR	0.5%	Crack Sealing - AC	$73
ELWD::CHCG ST::30	CHICAGO STREET	GARDNER STREET	WOOD STREET	5,073	L & T CR	0.7%	Crack Sealing - AC	$35
ELWD::CHCG ST::40	CHICAGO STREET	WOOD STREET	MISSISSIPPI AVENUE	8,415	L & T CR	0.7%	Crack Sealing - AC	$58
ELWD::CHCG ST::50	CHICAGO STREET	MISSISSIPPI AVENUE	SPENCER STREET	13,539	L & T CR	0.4%	Crack Sealing - AC	$47
ELWD::CHCG ST::50	CHICAGO STREET	MISSISSIPPI AVENUE	SPENCER STREET	13,539	L & T CR	1.8%	Crack Sealing - AC	$239
ELWD::CHCG ST::50	CHICAGO STREET	MISSISSIPPI AVENUE	SPENCER STREET	13,539	ALLIGATOR CR	0.7%	Patching - AC Deep	$1,510
ELWD::CHCG ST::50	CHICAGO STREET	MISSISSIPPI AVENUE	SPENCER STREET	13,539	ALLIGATOR CR	0.1%	Patching - AC Deep	$421
ELWD::CHCG ST::60	CHICAGO STREET	SPENCER STREET	PARKS STREET	13,539	L & T CR	0.4%	Crack Sealing - AC	$48
ELWD::CHCG ST::60	CHICAGO STREET	SPENCER STREET	PARKS STREET	13,539	RUTTING	0.0%	Patching - AC Shallow	$21
ELWD::CHCG ST::70	CHICAGO STREET	PARKS STREET	JAY STREET	5,175	L & T CR	0.4%	Crack Sealing - AC	$18
ELWD::CHCG ST::75	CHICAGO STREET	JAY STREET	NORTH STREET	7,954	L & T CR	0.7%	Crack Sealing - AC	$55
ELWD::CHCG ST::80	CHICAGO STREET	NORTH STREET	E BUSH DRIVE	11,745	L & T CR	0.2%	Crack Sealing - AC	$24
ELWD::CHCG ST::90	CHICAGO STREET	E BUSH DRIVE	WOODBINE DRIVE	37,328	L & T CR	1.0%	Crack Sealing - AC	$388
ELWD::CHCG ST::90	CHICAGO STREET	E BUSH DRIVE	WOODBINE DRIVE	37,328	ALLIGATOR CR	0.2%	Crack Sealing - AC	$28
ELWD::CHCG ST::90	CHICAGO STREET	E BUSH DRIVE	WOODBINE DRIVE	37,328	L & T CR	0.7%	Crack Sealing - AC	$258
ELWD::CBBLSTN LN::10	COBBLESTONE LANE	WYNDSTONE DRIVE	FOX RUN DRIVE	24,878	L & T CR	1.0%	Crack Sealing - AC	$258
ELWD::CLDWTR RD::10	COLDWATER ROAD	HOFF ROAD	MISSISSIPPI ROAD	64,265	EDGE CR	0.0%	Crack Sealing - AC	$10
ELWD::CLDWTR RD::10	COLDWATER ROAD	HOFF ROAD	MISSISSIPPI ROAD	64,265	ALLIGATOR CR	0.1%	Crack Sealing - AC	$36
ELWD::CLDWTR RD::10	COLDWATER ROAD	HOFF ROAD	MISSISSIPPI ROAD	64,265	ALLIGATOR CR	1.0%	Patching - AC Deep	$8,432
ELWD::CLDWTR RD::10	COLDWATER ROAD	HOFF ROAD	MISSISSIPPI ROAD	64,265	RUTTING	0.3%	Patching - AC Shallow	$870
ELWD::CTTNWD DR::10	COTTONWOOD DRIVE	S DIAGONAL ROAD	BUSHTHORN DRIVE	5,003	L & T CR	1.4%	Crack Sealing - AC	$69
ELWD::CTTNWD DR::10	COTTONWOOD DRIVE	S DIAGONAL ROAD	BUSHTHORN DRIVE	5,003	L & T CR	2.0%	Crack Sealing - AC	$101
ELWD::CTTNWD DR::20	COTTONWOOD DRIVE	BUSHTHORN DRIVE	ARROWHEAD DRIVE	8,459	BLOCK CR	93.1%	Crack Sealing - AC	$2,401
ELWD::CTTNWD DR::20	COTTONWOOD DRIVE	BUSHTHORN DRIVE	ARROWHEAD DRIVE	8,459	L & T CR	0.2%	Crack Sealing - AC	$18
ELWD::CTTNWD DR::20	COTTONWOOD DRIVE	BUSHTHORN DRIVE	ARROWHEAD DRIVE	8,459	L & T CR	0.4%	Crack Sealing - AC	$35
ELWD::CTTNWD DR::30	COTTONWOOD DRIVE	ARROWHEAD DRIVE	BAYBURY DRIVE	32,282	L & T CR	0.7%	Crack Sealing - AC	$217
ELWD::CTTNWD DR::30	COTTONWOOD DRIVE	ARROWHEAD DRIVE	BAYBURY DRIVE	32,282	BLOCK CR	85.9%	Crack Sealing - AC	$8,450
ELWD::CTTNWD DR::30	COTTONWOOD DRIVE	ARROWHEAD DRIVE	BAYBURY DRIVE	32,282	L & T CR	0.1%	Crack Sealing - AC	$19
ELWD::CRKSD DR::10	CREEKSIDE DRIVE	MEADOWBROOK ROAD	MEADOWBROOK ROAD	12,645	L & T CR	0.7%	Crack Sealing - AC	$88
ELWD::CRKSD DR::10	CREEKSIDE DRIVE	MEADOWBROOK ROAD	MEADOWBROOK ROAD	12,645	L & T CR	3.0%	Crack Sealing - AC	$383
ELWD::DR PTH LN::10	DEER PATH LANE	WYNDSTONE DRIVE	FOX RUN DRIVE	24,727	L & T CR	0.3%	Crack Sealing - AC	$83
ELWD::DR PTH LN::10	DEER PATH LANE	WYNDSTONE DRIVE	FOX RUN DRIVE	24,727	L & T CR	1.1%	Crack Sealing - AC	$278
ELWD::DR RN DR::10	DEER RUN DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	58,492	BLOCK CR	0.6%	Crack Sealing - AC	$111
ELWD::DR RN DR::10	DEER RUN DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	58,492	L & T CR	0.8%	Crack Sealing - AC	$438
ELWD::DR RN DR::10	DEER RUN DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	58,492	L & T CR	2.5%	Crack Sealing - AC	$1,448
ELWD::DR RN DR::10	DEER RUN DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	58,492	BLOCK CR	49.9%	Crack Sealing - AC	$8,901
ELWD::DR RN DR::10	DEER RUN DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	58,492	ALLIGATOR CR	0.5%	Patching - AC Deep	$4,293
ELWD::DR RN DR::10	DEER RUN DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	58,492	L & T CR	0.2%	Patching - AC Shallow	$2,008

Pavement ID	Road Name	From	To	Area	Distress Type	Density	Maint. Activity	Cost
ELWD::DGLS ST::10	DOUGLAS STREET	ROUTE 53	GARDNER STREET	39,369	BLOCK CR	96.4%	Crack Sealing - AC	$11,567
ELWD::DGLS ST::10	DOUGLAS STREET	ROUTE 53	GARDNER STREET	39,369	ALLIGATOR CR	0.7%	Patching - AC Deep	$3,799
ELWD::DGLS ST::20	DOUGLAS STREET	GARDNER STREET	MISSISSIPPI AVENUE	10,422	BLOCK CR	84.1%	Crack Sealing - AC	$2,671
ELWD::DGLS ST::30	DOUGLAS STREET	MISSISSIPPI AVENUE	END	3,454	L & T CR	0.7%	Crack Sealing - AC	$23
ELWD::DGLS ST::30	DOUGLAS STREET	MISSISSIPPI AVENUE	END	3,454	L & T CR	0.4%	Crack Sealing - AC	$12
ELWD::E BSH DR::10	E BUSH DRIVE	CHICAGO STREET	BEATTIE STREET	5,837	L & T CR	0.4%	Crack Sealing - AC	$20
ELWD::E BSH DR::10	E BUSH DRIVE	CHICAGO STREET	BEATTIE STREET	5,837	L & T CR	5.4%	Crack Sealing - AC	$314
ELWD::E BSH DR::20	E BUSH DRIVE	BEATTIE STREET	LINEBARGER COURT	8,822	L & T CR	3.4%	Crack Sealing - AC	$301
ELWD::E BSH DR::20	E BUSH DRIVE	BEATTIE STREET	LINEBARGER COURT	8,822	L & T CR	0.4%	Crack Sealing - AC	$39
ELWD::E BSH DR::30	E BUSH DRIVE	WOODBINE DRIVE	LINEBARGER COURT	36,520	L & T CR	0.7%	Crack Sealing - AC	$271
ELWD::E BSH DR::30	E BUSH DRIVE	WOODBINE DRIVE	LINEBARGER COURT	36,520	L & T CR	1.9%	Crack Sealing - AC	$677
ELWD::EGL CRK RD::10	EAGLE CREEK ROAD	WYNDSTONE DRIVE	FOX RUN DRIVE	24,802	L & T CR	0.6%	Crack Sealing - AC	$150
ELWD::FX RN DR::10	FOX RUN DRIVE	BRANDON ROAD	COBBLESTONE LANE	5,432	L & T CR	0.7%	Crack Sealing - AC	$38
ELWD::FX RN DR::20	FOX RUN DRIVE	COBBLESTONE LANE	EAGLE CREEK ROAD	7,421	L & T CR	0.4%	Crack Sealing - AC	$26
ELWD::FX RN DR::30	FOX RUN DRIVE	EAGLE CREEK ROAD	DEER PATH LANE	7,214	L & T CR	0.7%	Crack Sealing - AC	$50
ELWD::FX RN DR::40	FOX RUN DRIVE	DEER PATH LANE	ARCHER LANE	7,374	L & T CR	1.0%	Crack Sealing - AC	$77
ELWD::GRDNR ST::10	GARDNER STREET	LINCOLN STREET	JACKSON STREET	14,622	L & T CR	1.5%	Crack Sealing - AC	$217
ELWD::GRDNR ST::10	GARDNER STREET	LINCOLN STREET	JACKSON STREET	14,622	L & T CR	3.4%	Crack Sealing - AC	$491
ELWD::GRDNR ST::20	GARDNER STREET	JACKSON STREET	CHICAGO STREET	14,631	L & T CR	3.1%	Crack Sealing - AC	$454
ELWD::GRDNR ST::20	GARDNER STREET	JACKSON STREET	CHICAGO STREET	14,631	L & T CR	1.0%	Crack Sealing - AC	$144
ELWD::GRDNR ST::30	GARDNER STREET	CHICAGO STREET	MATTESON STREET	10,826	L & T CR	3.0%	Crack Sealing - AC	$328
ELWD::GRDNR ST::30	GARDNER STREET	CHICAGO STREET	MATTESON STREET	10,826	L & T CR	0.9%	Crack Sealing - AC	$92
ELWD::GRDNR ST::30	GARDNER STREET	CHICAGO STREET	MATTESON STREET	10,826	RUTTING	0.8%	Patching - AC Shallow	$479
ELWD::HRTG DR::10	HERITAGE DRIVE	MISSISSIPPI ROAD	END	55,702	L & T CR	3.1%	Crack Sealing - AC	$1,700
ELWD::HRTG DR::10	HERITAGE DRIVE	MISSISSIPPI ROAD	END	55,702	BLOCK CR	7.0%	Crack Sealing - AC	$1,189
ELWD::HRTG DR::10	HERITAGE DRIVE	MISSISSIPPI ROAD	END	55,702	ALLIGATOR CR	1.1%	Crack Sealing - AC	$219
ELWD::HRTG DR::10	HERITAGE DRIVE	MISSISSIPPI ROAD	END	55,702	L & T CR	4.1%	Crack Sealing - AC	$2,292
ELWD::HRTG DR::10	HERITAGE DRIVE	MISSISSIPPI ROAD	END	55,702	ALLIGATOR CR	0.7%	Patching - AC Deep	$5,229
ELWD::R MRG RD::10	IRA MORGAN ROAD	ROUTE 53	IRA MORGAN ROAD	61,284	L & T CR	1.8%	Crack Sealing - AC	$1,122
ELWD::R MRG RD::10	IRA MORGAN ROAD	ROUTE 53	IRA MORGAN ROAD	61,284	ALLIGATOR CR	2.1%	Crack Sealing - AC	$433
ELWD::R MRG RD::10	IRA MORGAN ROAD	ROUTE 53	IRA MORGAN ROAD	61,284	ALLIGATOR CR	0.2%	Patching - AC Deep	$1,753
ELWD::R MRG RD::10	IRA MORGAN ROAD	ROUTE 53	IRA MORGAN ROAD	61,284	RUTTING	0.1%	Patching - AC Shallow	$159
ELWD::R MRG RD::20	IRA MORGAN ROAD	IRA MORGAN ROAD	END	55,663	L & T CR	3.9%	Crack Sealing - AC	$2,167
ELWD::R MRG RD::20	IRA MORGAN ROAD	IRA MORGAN ROAD	END	55,663	ALLIGATOR CR	1.0%	Crack Sealing - AC	$198
ELWD::R MRG RD::20	IRA MORGAN ROAD	IRA MORGAN ROAD	END	55,663	EDGE CR	0.2%	Crack Sealing - AC	$132
ELWD::R MRG RD::20	IRA MORGAN ROAD	IRA MORGAN ROAD	END	55,663	L & T CR	0.9%	Crack Sealing - AC	$496
ELWD::R MRG RD::20	IRA MORGAN ROAD	IRA MORGAN ROAD	END	55,663	ALLIGATOR CR	0.0%	Patching - AC Deep	$462
ELWD::R MRG RD::30	IRA MORGAN ROAD	IRA MORGAN ROAD	END	32,175	L & T CR	0.1%	Crack Sealing - AC	$41
ELWD::R MRG RD::30	IRA MORGAN ROAD	IRA MORGAN ROAD	END	32,175	ALLIGATOR CR	0.8%	Crack Sealing - AC	$94
ELWD::R MRG RD::30	IRA MORGAN ROAD	IRA MORGAN ROAD	END	32,175	L & T CR	2.8%	Crack Sealing - AC	$887
ELWD::R MRG RD::30	IRA MORGAN ROAD	IRA MORGAN ROAD	END	32,175	RUTTING	0.0%	Patching - AC Shallow	$36

Pavement ID	Road Name	From	To	Area	Distress Type	Density	Maint. Activity	Cost
ELWD::JCKSN ST::10	JACKSON STREET	START	SOUTH STREET	5,395	L & T CR	0.7%	Crack Sealing - AC	$36
ELWD::JCKSN ST::20	JACKSON STREET	SOUTH STREET	MORRIS STREET	9,589	L & T CR	1.1%	Crack Sealing - AC	$105
ELWD::JCKSN ST::20	JACKSON STREET	SOUTH STREET	MORRIS STREET	9,589	L & T CR	0.2%	Crack Sealing - AC	$18
ELWD::JCKSN ST::30	JACKSON STREET	MORRIS STREET	GARDNER STREET	10,101	L & T CR	2.4%	Crack Sealing - AC	$245
ELWD::JCKSN ST::30	JACKSON STREET	MORRIS STREET	GARDNER STREET	10,101	L & T CR	0.2%	Crack Sealing - AC	$18
ELWD::JCKSN ST::40	JACKSON STREET	GARDNER STREET	MISSISSIPPI AVENUE	10,201	L & T CR	2.1%	Crack Sealing - AC	$210
ELWD::JCKSN ST::40	JACKSON STREET	GARDNER STREET	MISSISSIPPI AVENUE	10,201	L & T CR	0.4%	Crack Sealing - AC	$36
ELWD::JCKSN ST::40	JACKSON STREET	GARDNER STREET	MISSISSIPPI AVENUE	10,201	RUTTING	0.0%	Patching - AC Shallow	$17
ELWD::JCKSN ST::50	JACKSON STREET	MISSISSIPPI AVENUE	SPENCER STREET	9,902	BLOCK CR	5.9%	Crack Sealing - AC	$177
ELWD::JCKSN ST::50	JACKSON STREET	MISSISSIPPI AVENUE	SPENCER STREET	9,902	L & T CR	1.8%	Crack Sealing - AC	$174
ELWD::JCKSN ST::50	JACKSON STREET	MISSISSIPPI AVENUE	SPENCER STREET	9,902	L & T CR	0.5%	Crack Sealing - AC	$54
ELWD::JCKSN ST::50	JACKSON STREET	MISSISSIPPI AVENUE	SPENCER STREET	9,902	BLOCK CR	3.1%	Crack Sealing - AC	$92
ELWD::JCKSN ST::60	JACKSON STREET	SPENCER STREET	PARKS STREET	10,086	L & T CR	1.0%	Crack Sealing - AC	$105
ELWD::JCKSN ST::60	JACKSON STREET	SPENCER STREET	PARKS STREET	10,086	RUTTING	0.1%	Patching - AC Shallow	$48
ELWD::JCKSN ST::70	JACKSON STREET	PARKS STREET	NORTH STREET	9,570	L & T CR	1.5%	Crack Sealing - AC	$140
ELWD::JY ST::10	JAY STREET	CHICAGO STREET	END	21,241	ALLIGATOR CR	0.2%	Crack Sealing - AC	$24
ELWD::JY ST::10	JAY STREET	CHICAGO STREET	END	21,241	L & T CR	0.9%	Crack Sealing - AC	$187
ELWD::JY ST::10	JAY STREET	CHICAGO STREET	END	21,241	L & T CR	0.9%	Crack Sealing - AC	$187
ELWD::LNCLN ST::10	LINCOLN STREET	SOUTH STREET	MORRIS STREET	9,464	L & T CR	2.2%	Crack Sealing - AC	$209
ELWD::LNCLN ST::10	LINCOLN STREET	SOUTH STREET	MORRIS STREET	9,464	RUTTING	0.0%	Patching - AC Shallow	$16
ELWD::LNCLN ST::20	LINCOLN STREET	MORRIS STREET	GARDNER STREET	9,897	L & T CR	2.1%	Crack Sealing - AC	$210
ELWD::LNCLN ST::30	LINCOLN STREET	GARDNER STREET	MISSISSIPPI AVENUE	10,140	BLOCK CR	4.0%	Crack Sealing - AC	$123
ELWD::LNCLN ST::30	LINCOLN STREET	GARDNER STREET	MISSISSIPPI AVENUE	10,140	L & T CR	0.3%	Crack Sealing - AC	$35
ELWD::LNCLN ST::30	LINCOLN STREET	GARDNER STREET	MISSISSIPPI AVENUE	10,140	BLOCK CR	13.2%	Crack Sealing - AC	$409
ELWD::LNCLN ST::40	LINCOLN STREET	MISSISSIPPI AVENUE	SPENCER STREET	10,134	L & T CR	0.3%	Crack Sealing - AC	$35
ELWD::LNCLN ST::40	LINCOLN STREET	MISSISSIPPI AVENUE	SPENCER STREET	10,134	L & T CR	0.2%	Crack Sealing - AC	$18
ELWD::LNCLN ST::50	LINCOLN STREET	SPENCER STREET	PARKS STREET	9,704	L & T CR	0.2%	Crack Sealing - AC	$18
ELWD::LNBRG CT::10	LINEBARGER COURT	E BUSH DRIVE	END	9,717	L & T CR	1.3%	Crack Sealing - AC	$125
ELWD::LNBRG CT::10	LINEBARGER COURT	E BUSH DRIVE	END	9,717	L & T CR	0.4%	Crack Sealing - AC	$41
ELWD::MGNL LN::10	MAGNOLIA LANE	WOODED COVE DRIVE	END	14,304	L & T CR	0.3%	Crack Sealing - AC	$41
ELWD::MGNL LN::10	MAGNOLIA LANE	WOODED COVE DRIVE	END	14,304	L & T CR	0.6%	Crack Sealing - AC	$79
ELWD::MGNL LN::10	MAGNOLIA LANE	WOODED COVE DRIVE	END	14,304	BLOCK CR	5.5%	Crack Sealing - AC	$239
ELWD::MPL DR::10	MAPLE DRIVE	ARROWHEAD DRIVE	END	3,774	L & T CR	0.4%	Crack Sealing - AC	$13
ELWD::MTTSN ST::10	MATTESON STREET	GARDNER STREET	MISSISSIPPI AVENUE	11,053	L & T CR	0.5%	Crack Sealing - AC	$50
ELWD::MTTSN ST::10	MATTESON STREET	GARDNER STREET	MISSISSIPPI AVENUE	11,053	L & T CR	0.7%	Crack Sealing - AC	$77
ELWD::MTTSN ST::20	MATTESON STREET	MISSISSIPPI AVENUE	SPENCER STREET	10,052	BLOCK CR	6.4%	Crack Sealing - AC	$197
ELWD::MTTSN ST::20	MATTESON STREET	MISSISSIPPI AVENUE	SPENCER STREET	10,052	L & T CR	0.7%	Crack Sealing - AC	$72
ELWD::MTTSN ST::20	MATTESON STREET	MISSISSIPPI AVENUE	SPENCER STREET	10,052	L & T CR	5.6%	Crack Sealing - AC	$558
ELWD::MDWBR RD::10	MEADOWBROOK ROAD	BUSHTHORN DRIVE	CEDARWOOD DRIVE	18,370	L & T CR	4.0%	Crack Sealing - AC	$733
ELWD::MDWBR RD::10	MEADOWBROOK ROAD	BUSHTHORN DRIVE	CEDARWOOD DRIVE	18,370	L & T CR	2.4%	Crack Sealing - AC	$431
ELWD::MDWBR RD::20	MEADOWBROOK ROAD	CEDARWOOD DRIVE	REDWOOD DRIVE	16,652	L & T CR	3.8%	Crack Sealing - AC	$635

Pavement ID	Road Name	From	To	Area	Distress Type	Density	Maint. Activity	Cost
ELWD::MDWBR RD::20	MEADOWBROOK ROAD	CEDARWOOD DRIVE	REDWOOD DRIVE	16,652	L & T CR	2.1%	Crack Sealing - AC	$346
ELWD::MDWBR RD::20	MEADOWBROOK ROAD	CEDARWOOD DRIVE	REDWOOD DRIVE	16,652	ALLIGATOR CR	0.1%	Patching - AC Deep	$514
ELWD::MDWBR RD::30	MEADOWBROOK ROAD	REDWOOD DRIVE	BAYBURY DRIVE	8,191	L & T CR	4.2%	Crack Sealing - AC	$341
ELWD::MDWBR RD::30	MEADOWBROOK ROAD	REDWOOD DRIVE	BAYBURY DRIVE	8,191	L & T CR	3.8%	Crack Sealing - AC	$314
ELWD::MDWBR RD::30	MEADOWBROOK ROAD	REDWOOD DRIVE	BAYBURY DRIVE	8,191	L & T CR	0.4%	Patching - AC Shallow	$648
ELWD::MDWBR RD::40	MEADOWBROOK ROAD	BAYBURY DRIVE	PIN OAK DRIVE	14,469	L & T CR	0.5%	Crack Sealing - AC	$70
ELWD::MDWBR RD::40	MEADOWBROOK ROAD	BAYBURY DRIVE	PIN OAK DRIVE	14,469	L & T CR	0.6%	Crack Sealing - AC	$90
ELWD::MSSP AVE::100	MISSISSIPPI AVENUE	MISSISSIPPI AVENUE	LINCOLN STREET	7,246	BLOCK CR	67.0%	Crack Sealing - AC	$1,480
ELWD::MSSP AVE::100	MISSISSIPPI AVENUE	MISSISSIPPI AVENUE	LINCOLN STREET	7,246	L & T CR	1.7%	Crack Sealing - AC	$125
ELWD::MSSP AVE::110	MISSISSIPPI AVENUE	LINCOLN STREET	JACKSON STREET	19,582	BLOCK CR	18.8%	Crack Sealing - AC	$1,120
ELWD::MSSP AVE::110	MISSISSIPPI AVENUE	LINCOLN STREET	JACKSON STREET	19,582	BLOCK CR	62.1%	Crack Sealing - AC	$3,704
ELWD::MSSP AVE::110	MISSISSIPPI AVENUE	LINCOLN STREET	JACKSON STREET	19,582	L & T CR	0.4%	Crack Sealing - AC	$71
ELWD::MSSP AVE::120	MISSISSIPPI AVENUE	JACKSON STREET	CHICAGO STREET	19,721	L & T CR	0.7%	Crack Sealing - AC	$145
ELWD::MSSP AVE::120	MISSISSIPPI AVENUE	JACKSON STREET	CHICAGO STREET	19,721	BLOCK CR	64.1%	Crack Sealing - AC	$3,852
ELWD::MSSP AVE::130	MISSISSIPPI AVENUE	CHICAGO STREET	WOOD STREET	5,983	L & T CR	0.4%	Crack Sealing - AC	$21
ELWD::MSSP AVE::140	MISSISSIPPI AVENUE	WOOD STREET	MATTESON STREET	10,323	L & T CR	0.4%	Crack Sealing - AC	$36
ELWD::MSSP AVE::140	MISSISSIPPI AVENUE	WOOD STREET	MATTESON STREET	10,323	PATCH/UT CUT	0.1%	Patching - AC Deep	$373
ELWD::MSSP AVE::140	MISSISSIPPI AVENUE	WOOD STREET	MATTESON STREET	10,323	RUTTING	0.0%	Patching - AC Shallow	$15
ELWD::MSSP AVE::150	MISSISSIPPI AVENUE	MATTESON STREET	DOUGLAS STREET	7,762	BLOCK CR	21.3%	Crack Sealing - AC	$504
ELWD::MSSP AVE::150	MISSISSIPPI AVENUE	MATTESON STREET	DOUGLAS STREET	7,762	L & T CR	0.4%	Crack Sealing - AC	$32
ELWD::MSSP AVE::150	MISSISSIPPI AVENUE	MATTESON STREET	DOUGLAS STREET	7,762	L & T CR	1.5%	Crack Sealing - AC	$116
ELWD::MSSP AVE::150	MISSISSIPPI AVENUE	MATTESON STREET	DOUGLAS STREET	7,762	RUTTING	0.0%	Patching - AC Shallow	$14
ELWD::MSSP AVE::160	MISSISSIPPI AVENUE	MATTESON STREET	ST LOUIS STREET	8,664	L & T CR	0.4%	Crack Sealing - AC	$30
ELWD::MSSP AVE::180	MISSISSIPPI AVENUE	MISSISSIPPI AVENUE	VILLAGE HALL CT 1	36,108	L & T CR	0.1%	Crack Sealing - AC	$50
ELWD::MSSP AVE::180	MISSISSIPPI AVENUE	MISSISSIPPI AVENUE	VILLAGE HALL CT 1	36,108	L & T CR	0.1%	Crack Sealing - AC	$25
ELWD::MSSP AVE::180	MISSISSIPPI AVENUE	MISSISSIPPI AVENUE	VILLAGE HALL CT 1	36,108	RUTTING	0.0%	Patching - AC Shallow	$21
ELWD::MSSP RD::10	MISSISSIPPI ROAD	ROUTE 53	HERITAGE DRIVE	21,860	L & T CR	0.4%	Crack Sealing - AC	$93
ELWD::MSSP RD::10	MISSISSIPPI ROAD	ROUTE 53	HERITAGE DRIVE	21,860	L & T CR	0.4%	Crack Sealing - AC	$93
ELWD::MSSP RD::10	MISSISSIPPI ROAD	ROUTE 53	HERITAGE DRIVE	21,860	ALLIGATOR CR	0.1%	Crack Sealing - AC	$9
ELWD::MSSP RD::20	MISSISSIPPI ROAD	HERITAGE DRIVE	MISSISSIPPI ROAD	38,884	L & T CR	0.3%	Crack Sealing - AC	$96
ELWD::MSSP RD::20	MISSISSIPPI ROAD	HERITAGE DRIVE	MISSISSIPPI ROAD	38,884	L & T CR	0.2%	Crack Sealing - AC	$73
ELWD::MSSP RD::20	MISSISSIPPI ROAD	HERITAGE DRIVE	MISSISSIPPI ROAD	38,884	ALLIGATOR CR	0.1%	Crack Sealing - AC	$23
ELWD::MSSP RD::40	MISSISSIPPI ROAD	COLDWATER ROAD	TEHLE ROAD	35,564	L & T CR	0.9%	Crack Sealing - AC	$318
ELWD::MSSP RD::40	MISSISSIPPI ROAD	COLDWATER ROAD	TEHLE ROAD	35,564	L & T CR	0.1%	Crack Sealing - AC	$28
ELWD::MSSP RD::40	MISSISSIPPI ROAD	COLDWATER ROAD	TEHLE ROAD	35,564	ALLIGATOR CR	1.3%	Crack Sealing - AC	$168
ELWD::MSSP RD::40	MISSISSIPPI ROAD	COLDWATER ROAD	TEHLE ROAD	35,564	EDGE CR	0.0%	Crack Sealing - AC	$10
ELWD::MSSP RD::50	MISSISSIPPI ROAD	TEHLE ROAD	S CHICAGO ROAD	79,938	L & T CR	0.9%	Crack Sealing - AC	$720
ELWD::MSSP RD::50	MISSISSIPPI ROAD	TEHLE ROAD	S CHICAGO ROAD	79,938	EDGE CR	0.2%	Crack Sealing - AC	$127
ELWD::MSSP RD::50	MISSISSIPPI ROAD	TEHLE ROAD	S CHICAGO ROAD	79,938	L & T CR	1.1%	Crack Sealing - AC	$844
ELWD::MSSP RD::50	MISSISSIPPI ROAD	TEHLE ROAD	S CHICAGO ROAD	79,938	ALLIGATOR CR	3.1%	Crack Sealing - AC	$817
ELWD::MRRS ST::10	MORRIS STREET	LINCOLN STREET	JACKSON STREET	14,697	L & T CR	0.5%	Crack Sealing - AC	$72

Pavement ID	Road Name	From	To	Area	Distress Type	Density	Maint. Activity	Cost
ELWD::MRRS ST::10	MORRIS STREET	LINCOLN STREET	JACKSON STREET	14,697	L & T CR	1.4%	Crack Sealing - AC	$210
ELWD::MRRS ST::20	MORRIS STREET	JACKSON STREET	CHICAGO STREET	14,615	L & T CR	0.5%	Crack Sealing - AC	$72
ELWD::MRRS ST::20	MORRIS STREET	JACKSON STREET	CHICAGO STREET	14,615	L & T CR	1.0%	Crack Sealing - AC	$140
ELWD::MRRS ST::30	MORRIS STREET	CHICAGO STREET	MATTESON STREET	8,647	L & T CR	2.4%	Crack Sealing - AC	$210
ELWD::MRRS ST::30	MORRIS STREET	CHICAGO STREET	MATTESON STREET	8,647	L & T CR	0.6%	Crack Sealing - AC	$54
ELWD::NL RD::20	NOEL ROAD	PATTERSON	BRANDON ROAD	50,927	RUTTING	0.2%	Patching - AC Shallow	$411
ELWD::NRTH ST::10	NORTH STREET	JACKSON STREET	CHICAGO STREET	14,175	L & T CR	0.8%	Crack Sealing - AC	$112
ELWD::OXBW CT::10	OXBOW COURT	WOODED COVE DRIVE	END	8,466	L & T CR	0.5%	Crack Sealing - AC	$40
ELWD::PRKS ST::10	PARKS STREET	LINCOLN STREET	JACKSON STREET	13,894	L & T CR	0.3%	Crack Sealing - AC	$36
ELWD::PRKS ST::20	PARKS STREET	JACKSON STREET	CHICAGO STREET	14,685	L & T CR	1.0%	Crack Sealing - AC	$140
ELWD::PRKS ST::20	PARKS STREET	JACKSON STREET	CHICAGO STREET	14,685	L & T CR	0.1%	Crack Sealing - AC	$18
ELWD::PN K DR::10	PIN OAK DRIVE	BRANDON ROAD	MEADOWBROOK ROAD	5,085	L & T CR	0.7%	Crack Sealing - AC	$35
ELWD::PCKY WAY::10	POCKEY WAY	WOODED COVE DRIVE	END	12,265	L & T CR	0.3%	Crack Sealing - AC	$41
ELWD::PCKY WAY::10	POCKEY WAY	WOODED COVE DRIVE	END	12,265	L & T CR	0.2%	Crack Sealing - AC	$21
ELWD::RDWD DR::10	REDWOOD DRIVE	BUSHTHORN DRIVE	MEADOWBROOK ROAD	38,072	L & T CR	3.6%	Crack Sealing - AC	$1,354
ELWD::RDWD DR::10	REDWOOD DRIVE	BUSHTHORN DRIVE	MEADOWBROOK ROAD	38,072	ALLIGATOR CR	0.1%	Crack Sealing - AC	$25
ELWD::RDWD DR::10	REDWOOD DRIVE	BUSHTHORN DRIVE	MEADOWBROOK ROAD	38,072	BLOCK CR	2.0%	Crack Sealing - AC	$231
ELWD::RDWD DR::10	REDWOOD DRIVE	BUSHTHORN DRIVE	MEADOWBROOK ROAD	38,072	L & T CR	2.0%	Crack Sealing - AC	$772
ELWD::S DGNL RD::15	S DIAGONAL ROAD	START	BRANDON ROAD	30,584	L & T CR	1.8%	Crack Sealing - AC	$541
ELWD::S DGNL RD::15	S DIAGONAL ROAD	START	BRANDON ROAD	30,584	ALLIGATOR CR	1.5%	Crack Sealing - AC	$166
ELWD::S DGNL RD::15	S DIAGONAL ROAD	START	BRANDON ROAD	30,584	L & T CR	0.8%	Crack Sealing - AC	$228
ELWD::S DGNL RD::15	S DIAGONAL ROAD	START	BRANDON ROAD	30,584	EDGE CR	0.1%	Crack Sealing - AC	$20
ELWD::S DGNL RD::20	S DIAGONAL ROAD	BRANDON ROAD	COTTONWOOD DRIVE	21,826	L & T CR	0.8%	Crack Sealing - AC	$184
ELWD::S DGNL RD::30	S DIAGONAL ROAD	COTTONWOOD DRIVE	WYNDSTONE DRIVE	10,517	L & T CR	2.7%	Crack Sealing - AC	$283
ELWD::S DGNL RD::30	S DIAGONAL ROAD	COTTONWOOD DRIVE	WYNDSTONE DRIVE	10,517	L & T CR	0.5%	Crack Sealing - AC	$55
ELWD::S DGNL RD::40	S DIAGONAL ROAD	WYNDSTONE DRIVE	DIAGONAL ROAD	6,367	L & T CR	0.4%	Crack Sealing - AC	$22
ELWD::S DGNL RD::40	S DIAGONAL ROAD	WYNDSTONE DRIVE	DIAGONAL ROAD	6,367	L & T CR	2.0%	Crack Sealing - AC	$129
ELWD::STH ST::10	SOUTH STREET	LINCOLN STREET	JACKSON STREET	14,553	L & T CR	2.4%	Crack Sealing - AC	$349
ELWD::STH ST::10	SOUTH STREET	LINCOLN STREET	JACKSON STREET	14,553	L & T CR	0.3%	Crack Sealing - AC	$36
ELWD::STH ST::20	SOUTH STREET	JACKSON STREET	CHICAGO STREET	14,683	L & T CR	1.0%	Crack Sealing - AC	$148
ELWD::STH ST::20	SOUTH STREET	JACKSON STREET	CHICAGO STREET	14,683	L & T CR	0.4%	Crack Sealing - AC	$57
ELWD::STH ST::20	SOUTH STREET	JACKSON STREET	CHICAGO STREET	14,683	RUTTING	0.0%	Patching - AC Shallow	$16
ELWD::SPNCR ST::20	SPENCER STREET	JACKSON STREET	CHICAGO STREET	14,667	L & T CR	2.6%	Crack Sealing - AC	$384
ELWD::SPNCR ST::20	SPENCER STREET	JACKSON STREET	CHICAGO STREET	14,667	L & T CR	2.1%	Crack Sealing - AC	$306
ELWD::SPNCR ST::30	SPENCER STREET	CHICAGO STREET	WOOD STREET	7,609	L & T CR	0.5%	Crack Sealing - AC	$36
ELWD::SPNCR ST::30	SPENCER STREET	CHICAGO STREET	WOOD STREET	7,609	L & T CR	0.9%	Crack Sealing - AC	$70
ELWD::SPNCR ST::30	SPENCER STREET	CHICAGO STREET	WOOD STREET	7,609	BLOCK CR	75.3%	Crack Sealing - AC	$1,747
ELWD::SPNCR ST::40	SPENCER STREET	WOOD STREET	MATTESON STREET	7,288	BLOCK CR	90.2%	Crack Sealing - AC	$2,003
ELWD::SPNCR ST::40	SPENCER STREET	WOOD STREET	MATTESON STREET	7,288	RUTTING	0.1%	Patching - AC Shallow	$31
ELWD::STPN DR::10	STEPAN DRIVE	START	STEPAN DRIVE	13,089	BLOCK CR	4.9%	Crack Sealing - AC	$197
ELWD::STPN DR::10	STEPAN DRIVE	START	STEPAN DRIVE	13,089	L & T CR	1.9%	Crack Sealing - AC	$244

Pavement ID	Road Name	From	To	Area	Distress Type	Density	Maint. Activity	Cost
ELWD::STPN DR::10	STEPAN DRIVE	START	STEPAN DRIVE	13,089	L & T CR	1.0%	Crack Sealing - AC	$126
ELWD::STPN DR::10	STEPAN DRIVE	START	STEPAN DRIVE	13,089	BLOCK CR	15.9%	Crack Sealing - AC	$636
ELWD::STPN DR::20	STEPAN DRIVE	STEPAN DRIVE	MILLSDALE ROAD	45,600	ALLIGATOR CR	1.1%	Crack Sealing - AC	$174
ELWD::STPN DR::20	STEPAN DRIVE	STEPAN DRIVE	MILLSDALE ROAD	45,600	L & T CR	3.7%	Crack Sealing - AC	$1,667
ELWD::STPN DR::20	STEPAN DRIVE	STEPAN DRIVE	MILLSDALE ROAD	45,600	L & T CR	2.0%	Crack Sealing - AC	$923
ELWD::STPN DR::20	STEPAN DRIVE	STEPAN DRIVE	MILLSDALE ROAD	45,600	ALLIGATOR CR	0.3%	Patching - AC Deep	$2,250
ELWD::STPN DR::20	STEPAN DRIVE	STEPAN DRIVE	MILLSDALE ROAD	45,600	RUTTING	0.0%	Patching - AC Shallow	$29
ELWD::STPN DR::25	STEPAN DRIVE	MILLSDALE ROAD	STEPAN DRIVE	2,513	ALLIGATOR CR	0.1%	Crack Sealing - AC	$4
ELWD::STPN DR::25	STEPAN DRIVE	MILLSDALE ROAD	STEPAN DRIVE	2,513	L & T CR	2.0%	Crack Sealing - AC	$51
ELWD::STPN DR::25	STEPAN DRIVE	MILLSDALE ROAD	STEPAN DRIVE	2,513	L & T CR	0.7%	Crack Sealing - AC	$17
ELWD::STPN DR::25	STEPAN DRIVE	MILLSDALE ROAD	STEPAN DRIVE	2,513	EDGE CR	0.4%	Crack Sealing - AC	$11
ELWD::STPN DR::30	STEPAN DRIVE	STEPAN DRIVE	BASELINE ROAD	32,208	L & T CR	1.4%	Crack Sealing - AC	$464
ELWD::STPN DR::30	STEPAN DRIVE	STEPAN DRIVE	BASELINE ROAD	32,208	BLOCK CR	12.7%	Crack Sealing - AC	$1,246
ELWD::STPN DR::30	STEPAN DRIVE	STEPAN DRIVE	BASELINE ROAD	32,208	L & T CR	1.0%	Crack Sealing - AC	$325
ELWD::THL RD::30	TEHLE ROAD	DIAGONAL ROAD	END	226	BLOCK CR	2.8%	Crack Sealing - AC	$2
ELWD::VHLL CT 1::10	VILLAGE HALL CT 1	MISSISSIPPI ROAD	END	15,128	ALLIGATOR CR	3.9%	Crack Sealing - AC	$212
ELWD::VHLL CT 1::10	VILLAGE HALL CT 1	MISSISSIPPI ROAD	END	15,128	L & T CR	4.9%	Crack Sealing - AC	$742
ELWD::VHLL CT 1::10	VILLAGE HALL CT 1	MISSISSIPPI ROAD	END	15,128	L & T CR	3.1%	Crack Sealing - AC	$462
ELWD::VHLL CT 2::10	VILLAGE HALL CT 2	MISSISSIPPI ROAD	END	21,055	L & T CR	2.4%	Crack Sealing - AC	$508
ELWD::VHLL CT 2::10	VILLAGE HALL CT 2	MISSISSIPPI ROAD	END	21,055	ALLIGATOR CR	2.4%	Crack Sealing - AC	$184
ELWD::VHLL CT 2::10	VILLAGE HALL CT 2	MISSISSIPPI ROAD	END	21,055	L & T CR	1.2%	Crack Sealing - AC	$241
ELWD::WLT STN DR::10	WALTER STRAWN DRIVE	BASELINE ROAD	WALTON DRIVE	104,049	L & T CR	0.9%	Crack Sealing - AC	$921
ELWD::WLT STN DR::10	WALTER STRAWN DRIVE	BASELINE ROAD	WALTON DRIVE	104,049	L & T CR	2.4%	Crack Sealing - AC	$2,502
ELWD::WLT STN DR::20	WALTER STRAWN DRIVE	WALTON DRIVE	WALTER STRAWN DRIVE	36,978	L & T CR	1.6%	Crack Sealing - AC	$589
ELWD::WLT STN DR::20	WALTER STRAWN DRIVE	WALTON DRIVE	WALTER STRAWN DRIVE	36,978	L & T CR	0.4%	Crack Sealing - AC	$149
ELWD::WLT STN DR::30	WALTER STRAWN DRIVE	WALTER STRAWN DRIVE	DEER RUN DRIVE	80,785	L & T CR	1.9%	Crack Sealing - AC	$1,524
ELWD::WLT STN DR::30	WALTER STRAWN DRIVE	WALTER STRAWN DRIVE	DEER RUN DRIVE	80,785	L & T CR	0.8%	Crack Sealing - AC	$659
ELWD::WLT STN DR::30	WALTER STRAWN DRIVE	WALTER STRAWN DRIVE	DEER RUN DRIVE	80,785	BLOCK CR	8.4%	Crack Sealing - AC	$2,077
ELWD::WLT STN DR::30	WALTER STRAWN DRIVE	WALTER STRAWN DRIVE	DEER RUN DRIVE	80,785	RUTTING	0.0%	Patching - AC Deep	$174
ELWD::WLT STN DR::30	WALTER STRAWN DRIVE	WALTER STRAWN DRIVE	DEER RUN DRIVE	80,785	RUTTING	0.0%	Patching - AC Shallow	$59
ELWD::WLT STN DR::40	WALTER STRAWN DRIVE	DEER RUN DRIVE	ROUTE 53	61,359	LINEAR CR	1.1%	Crack Sealing - PCC	$80
ELWD::WLT STN DR::40	WALTER STRAWN DRIVE	DEER RUN DRIVE	ROUTE 53	61,359	JT SEAL DMG	100.0%	Joint Seal (Localized)	$12,044
ELWD::WLTN DR::10	WALTON DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	116,077	L & T CR	0.4%	Crack Sealing - AC	$434
ELWD::WLTN DR::10	WALTON DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	116,077	L & T CR	0.4%	Crack Sealing - AC	$422
ELWD::WLTN DR::10	WALTON DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	116,077	BLOCK CR	84.5%	Crack Sealing - AC	$29,901
ELWD::WLTN DR::10	WALTON DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	116,077	ALLIGATOR CR	0.1%	Patching - AC Deep	$1,118
ELWD::WHT TL CT::10	WHITE TAIL COURT	WOODED COVE DRIVE	END	6,389	L & T CR	0.7%	Crack Sealing - AC	$44
ELWD::WDBN DR::10	WOODBINE DRIVE	CHICAGO STREET	BEATTIE STREET	5,356	L & T CR	3.4%	Crack Sealing - AC	$180
ELWD::WDBN DR::10	WOODBINE DRIVE	CHICAGO STREET	BEATTIE STREET	5,356	L & T CR	1.4%	Crack Sealing - AC	$74
ELWD::WDBN DR::20	WOODBINE DRIVE	BEATTIE STREET	BRIARWOOD COURT	9,869	L & T CR	3.1%	Crack Sealing - AC	$301
ELWD::WDBN DR::20	WOODBINE DRIVE	BEATTIE STREET	BRIARWOOD COURT	9,869	L & T CR	0.6%	Crack Sealing - AC	$58

Pavement ID	Road Name	From	To	Area	Distress Type	Density	Maint. Activity	Cost
ELWD::WDBN DR::30	WOODBINE DRIVE	BRIARWOOD COURT	E BUSH DRIVE	11,730	L & T CR	1.8%	Crack Sealing - AC	$207
ELWD::WDBN DR::30	WOODBINE DRIVE	BRIARWOOD COURT	E BUSH DRIVE	11,730	L & T CR	0.7%	Crack Sealing - AC	$85
ELWD::WDD C DR::10	WOODED COVE DRIVE	POCKEY WAY	END	6,180	L & T CR	0.4%	Crack Sealing - AC	$21
ELWD::WDD C DR::20	WOODED COVE DRIVE	WHITE TAIL COURT	POCKEY WAY	12,029	L & T CR	0.3%	Crack Sealing - AC	$40
ELWD::WDD C DR::30	WOODED COVE DRIVE	OXBOW COURT	WHITE TAIL COURT	23,465	L & T CR	0.2%	Crack Sealing - AC	$39
ELWD::WDD C DR::40	WOODED COVE DRIVE	MAGNOLIA LANE	OXBOW COURT	46,180	L & T CR	0.3%	Crack Sealing - AC	$117
ELWD::WDD C DR::40	WOODED COVE DRIVE	MAGNOLIA LANE	OXBOW COURT	46,180	L & T CR	0.2%	Crack Sealing - AC	$80
ELWD::WDD C DR::40	WOODED COVE DRIVE	MAGNOLIA LANE	OXBOW COURT	46,180	RUTTING	0.1%	Patching - AC Shallow	$271
ELWD::WDD C DR::50	WOODED COVE DRIVE	MAGNOLIA LANE	END	21,986	L & T CR	0.3%	Crack Sealing - AC	$58
ELWD::WDD C DR::50	WOODED COVE DRIVE	MAGNOLIA LANE	END	21,986	L & T CR	0.3%	Crack Sealing - AC	$75
ELWD::WYNSTN DR::10	WYNDSTONE DRIVE	BRANDON ROAD	COBBLESTONE LANE	5,293	L & T CR	0.7%	Crack Sealing - AC	$37
ELWD::WYNSTN DR::20	WYNDSTONE DRIVE	COBBLESTONE LANE	EAGLE CREEK ROAD	7,403	L & T CR	1.4%	Crack Sealing - AC	$100
ELWD::WYNSTN DR::20	WYNDSTONE DRIVE	COBBLESTONE LANE	EAGLE CREEK ROAD	7,403	L & T CR	0.4%	Crack Sealing - AC	$26
ELWD::WYNSTN DR::30	WYNDSTONE DRIVE	EAGLE CREEK ROAD	DEER PATH LANE	7,316	L & T CR	1.4%	Crack Sealing - AC	$98
ELWD::WYNSTN DR::30	WYNDSTONE DRIVE	EAGLE CREEK ROAD	DEER PATH LANE	7,316	L & T CR	2.1%	Crack Sealing - AC	$152
ELWD::WYNSTN DR::40	WYNDSTONE DRIVE	DEER PATH LANE	ARCHER LANE	7,463	L & T CR	0.7%	Crack Sealing - AC	$52
ELWD::WYNSTN DR::40	WYNDSTONE DRIVE	DEER PATH LANE	ARCHER LANE	7,463	L & T CR	3.4%	Crack Sealing - AC	$251
ELWD::WYNSTN DR::50	WYNDSTONE DRIVE	ARCHER LANE	FOX RUN DRIVE	27,868	L & T CR	0.9%	Crack Sealing - AC	$252
ELWD::WYNSTN DR::50	WYNDSTONE DRIVE	ARCHER LANE	FOX RUN DRIVE	27,868	L & T CR	1.5%	Crack Sealing - AC	$414
ELWD::WYNSTN DR::60	WYNDSTONE DRIVE	FOX RUN DRIVE	S DIAGONAL ROAD	5,996	L & T CR	1.0%	Crack Sealing - AC	$62
ELWD::WYNSTN DR::60	WYNDSTONE DRIVE	FOX RUN DRIVE	S DIAGONAL ROAD	5,996	L & T CR	1.4%	Crack Sealing - AC	$81

APPENDIX E – PAVEMENT INVENTORY AND CONDITION TABULAR DATA

Pavement ID	Road Name	From	To	Surface	Rank	Length (FT)	Width (FT)	Area (SF)	PCI	IRI
ELWD::BRNDN RD::01	BRANDON ROAD	WYNDSTONE DRIVE	FOX RUN DRIVE	Asphalt	S	890	35	31,164	91	143
ELWD::BRNDN RD::02	BRANDON ROAD	FOX RUN DRIVE	S DIAGONAL ROAD	Asphalt	S	199	35	6,960	85	326
ELWD::BRNDN RD::03	BRANDON ROAD	S DIAGONAL ROAD	CEDARWOOD DRIVE	Asphalt	S	958	22	21,073	91	201
ELWD::BRNDN RD::04	BRANDON ROAD	CEDARWOOD DRIVE	PIN OAK DRIVE	Asphalt	S	1,560	22	34,320	82	115
ELWD::BRNDN RD::05	BRANDON ROAD	PIN OAK DRIVE	MANHATTAN ROAD	Asphalt	S	3,250	22	71,507	60	150
ELWD::BRNDN RD::06	BRANDON ROAD	MANHATTAN ROAD	NOEL ROAD	Asphalt	S	2,595	22	57,098	54	157
ELWD::BRNDN RD::10	BRANDON ROAD	NOEL ROAD	END	Asphalt	S	3,513	22	77,280	100	124
ELWD::BRRWD CT::10	BRIARWOOD COURT	WOODBINE DRIVE	END	Asphalt	S	394	28	11,038	88	215
ELWD::BSHTRN DR::10	BUSHTHORN DRIVE	REDWOOD DRIVE	MEADOWBROOK ROAD	Asphalt	S	292	26	7,604	70	270
ELWD::BSHTRN DR::20	BUSHTHORN DRIVE	COTTONWOOD DRIVE	REDWOOD DRIVE	Asphalt	S	325	26	8,440	71	228
ELWD::BSHTRN DR::30	BUSHTHORN DRIVE	COTTONWOOD DRIVE	BAYBURY DRIVE	Asphalt	S	478	26	12,430	79	237
ELWD::BSLN RD::10	BASELINE ROAD	INTERNATIONAL PORT RD	WALTER STRAWN DRIVE	Asphalt	S	8,094	40	323,746	56	202
ELWD::BSLN RD::20	BASELINE ROAD	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	Asphalt	P	2,899	40	115,980	100	189
ELWD::BSLN RD::30	BASELINE ROAD	MISSISSIPPI AVENUE	ARSENAL ROAD	Concrete	P	5,358	50	267,876	95	127
ELWD::BSLN RD::40	BASELINE ROAD	ARSENAL ROAD	NOEL ROAD	Concrete	S	4,367	50	218,339	97	86
ELWD::BTT ST::10	BEATTIE STREET	E BUSH DRIVE	WOODBINE DRIVE	Asphalt	S	1,070	28	29,965	93	143
ELWD::BYBRY DR::10	BAYBURY DRIVE	MEADOWBROOK ROAD	COTTONWOOD DRIVE	Asphalt	S	410	26	10,663	93	202
ELWD::BYBRY DR::20	BAYBURY DRIVE	COTTONWOOD DRIVE	ARROWHEAD DRIVE	Asphalt	S	320	26	8,324	94	165
ELWD::BYBRY DR::30	BAYBURY DRIVE	BUSHTHORN DRIVE	ARROWHEAD DRIVE	Asphalt	S	1,885	26	49,022	66	178
ELWD::CBBLSTN LN::10	COBBLESTONE LANE	WYNDSTONE DRIVE	FOX RUN DRIVE	Asphalt	S	888	28	24,878	89	153
ELWD::CDRWD DR::10	CEDARWOOD DRIVE	BRANDON ROAD	MEADOWBROOK ROAD	Asphalt	S	204	26	5,317	74	369
ELWD::CHCG ST::10	CHICAGO STREET	SOUTH STREET	MORRIS STREET	Asphalt	S	377	35	13,190	86	234
ELWD::CHCG ST::100	CHICAGO STREET	WOODBINE DRIVE	WYNDSTONE DRIVE	Asphalt	S	302	35	10,571	91	191
ELWD::CHCG ST::20	CHICAGO STREET	MORRIS STREET	GARDNER STREET	Asphalt	S	383	35	13,393	92	163
ELWD::CHCG ST::30	CHICAGO STREET	GARDNER STREET	WOOD STREET	Asphalt	S	145	35	5,073	91	210
ELWD::CHCG ST::40	CHICAGO STREET	WOOD STREET	MISSISSIPPI AVENUE	Asphalt	S	240	35	8,415	92	253
ELWD::CHCG ST::50	CHICAGO STREET	MISSISSIPPI AVENUE	SPENCER STREET	Asphalt	S	387	35	13,539	75	444
ELWD::CHCG ST::60	CHICAGO STREET	SPENCER STREET	PARKS STREET	Asphalt	S	387	35	13,539	91	169
ELWD::CHCG ST::70	CHICAGO STREET	PARKS STREET	JAY STREET	Asphalt	S	148	35	5,175	93	169
ELWD::CHCG ST::75	CHICAGO STREET	JAY STREET	NORTH STREET	Asphalt	S	227	35	7,954	91	259
ELWD::CHCG ST::80	CHICAGO STREET	NORTH STREET	E BUSH DRIVE	Asphalt	S	336	35	11,745	93	177
ELWD::CHCG ST::90	CHICAGO STREET	E BUSH DRIVE	WOODBINE DRIVE	Asphalt	S	1,067	35	37,328	86	251
ELWD::CLDWTR RD::10	COLDWATER ROAD	HOFF ROAD	MISSISSIPPI ROAD	Asphalt	S	4,017	16	64,265	79	157
ELWD::CRKSD DR::10	CREEKSIDE DRIVE	MEADOWBROOK ROAD	MEADOWBROOK ROAD	Asphalt	S	486	26	12,645	88	187
ELWD::CTTNWD DR::10	COTTONWOOD DRIVE	S DIAGONAL ROAD	BUSHTHORN DRIVE	Asphalt	S	192	26	5,003	85	250
ELWD::CTTNWD DR::20	COTTONWOOD DRIVE	BUSHTHORN DRIVE	ARROWHEAD DRIVE	Asphalt	S	325	26	8,459	69	170
ELWD::CTTNWD DR::30	COTTONWOOD DRIVE	ARROWHEAD DRIVE	BAYBURY DRIVE	Asphalt	S	1,242	26	32,282	70	165
ELWD::DGLS ST::10	DOUGLAS STREET	ROUTE 53	GARDNER STREET	Asphalt	S	1,514	26	39,369	68	196
ELWD::DGLS ST::20	DOUGLAS STREET	GARDNER STREET	MISSISSIPPI AVENUE	Asphalt	S	401	26	10,422	71	298
ELWD::DGLS ST::30	DOUGLAS STREET	MISSISSIPPI AVENUE	END	Asphalt	S	133	26	3,454	92	1,553
ELWD::DGNL RD::10	DIAGONAL ROAD	S DIAGONAL ROAD	TEHLE ROAD	Asphalt	S	3,954	26	102,808	53	292
ELWD::DR PTH LN::10	DEER PATH LANE	WYNDSTONE DRIVE	FOX RUN DRIVE	Asphalt	S	883	28	24,727	88	157
ELWD::DR RN DR::10	DEER RUN DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	Asphalt	S	1,828	32	58,492	67	180

Pavement ID	Road Name	From	To	Surface	Rank	Length (FT)	Width (FT)	Area (SF)	PCI	IRI
ELWD::E BSH DR::10	E BUSH DRIVE	CHICAGO STREET	BEATTIE STREET	Asphalt	S	208	28	5,837	77	165
ELWD::E BSH DR::20	E BUSH DRIVE	BEATTIE STREET	LINEBARGER COURT	Asphalt	S	315	28	8,822	87	136
ELWD::E BSH DR::30	E BUSH DRIVE	WOODBINE DRIVE	LINEBARGER COURT	Asphalt	S	1,304	28	36,520	88	167
ELWD::EGL CRK RD::10	EAGLE CREEK ROAD	WYNDSTONE DRIVE	FOX RUN DRIVE	Asphalt	S	886	28	24,802	91	156
ELWD::FX RN DR::10	FOX RUN DRIVE	BRANDON ROAD	COBBLESTONE LANE	Asphalt	S	194	28	5,432	92	284
ELWD::FX RN DR::20	FOX RUN DRIVE	COBBLESTONE LANE	EAGLE CREEK ROAD	Asphalt	S	265	28	7,421	93	259
ELWD::FX RN DR::30	FOX RUN DRIVE	EAGLE CREEK ROAD	DEER PATH LANE	Asphalt	S	258	28	7,214	92	203
ELWD::FX RN DR::40	FOX RUN DRIVE	DEER PATH LANE	ARCHER LANE	Asphalt	S	263	28	7,374	89	215
ELWD::FX RN DR::50	FOX RUN DRIVE	ARCHER LANE	WYNDSTONE DRIVE	Asphalt	S	263	28	7,375	95	180
ELWD::GRDNR ST::10	GARDNER STREET	LINCOLN STREET	JACKSON STREET	Asphalt	S	562	26	14,622	82	368
ELWD::GRDNR ST::20	GARDNER STREET	JACKSON STREET	CHICAGO STREET	Asphalt	S	563	26	14,631	83	384
ELWD::GRDNR ST::30	GARDNER STREET	CHICAGO STREET	MATTESON STREET	Asphalt	S	416	26	10,826	74	256
ELWD::GRDNR ST::40	GARDNER STREET	DOUGLAS STREET	ST LOUIS STREET	Asphalt	S	352	26	9,162	54	238
ELWD::HRTG DR::10	HERITAGE DRIVE	MISSISSIPPI ROAD	END	Asphalt	S	1,591	35	55,702	68	138
ELWD::JCKSN ST::10	JACKSON STREET	START	SOUTH STREET	Asphalt	S	207	26	5,395	94	391
ELWD::JCKSN ST::20	JACKSON STREET	SOUTH STREET	MORRIS STREET	Asphalt	S	369	26	9,589	93	310
ELWD::JCKSN ST::30	JACKSON STREET	MORRIS STREET	GARDNER STREET	Asphalt	S	389	26	10,101	91	259
ELWD::JCKSN ST::40	JACKSON STREET	GARDNER STREET	MISSISSIPPI AVENUE	Asphalt	S	392	26	10,201	89	357
ELWD::JCKSN ST::50	JACKSON STREET	MISSISSIPPI AVENUE	SPENCER STREET	Asphalt	S	381	26	9,902	85	439
ELWD::JCKSN ST::60	JACKSON STREET	SPENCER STREET	PARKS STREET	Asphalt	S	388	26	10,086	91	263
ELWD::JCKSN ST::70	JACKSON STREET	PARKS STREET	NORTH STREET	Asphalt	S	368	26	9,570	93	275
ELWD::JY ST::10	JAY STREET	CHICAGO STREET	END	Asphalt	S	817	26	21,241	88	215
ELWD::LNBRG CT::10	LINEBARGER COURT	E BUSH DRIVE	END	Asphalt	S	347	28	9,717	87	277
ELWD::LNCLN ST::10	LINCOLN STREET	SOUTH STREET	MORRIS STREET	Asphalt	S	364	26	9,464	91	231
ELWD::LNCLN ST::20	LINCOLN STREET	MORRIS STREET	GARDNER STREET	Asphalt	S	381	26	9,897	92	209
ELWD::LNCLN ST::30	LINCOLN STREET	GARDNER STREET	MISSISSIPPI AVENUE	Asphalt	S	390	26	10,140	86	310
ELWD::LNCLN ST::40	LINCOLN STREET	MISSISSIPPI AVENUE	SPENCER STREET	Asphalt	S	390	26	10,134	93	230
ELWD::LNCLN ST::50	LINCOLN STREET	SPENCER STREET	PARKS STREET	Asphalt	S	373	26	9,704	93	285
ELWD::MDWBR RD::10	MEADOWBROOK ROAD	BUSHTHORN DRIVE	CEDARWOOD DRIVE	Asphalt	S	707	26	18,370	80	163
ELWD::MDWBR RD::20	MEADOWBROOK ROAD	CEDARWOOD DRIVE	REDWOOD DRIVE	Asphalt	S	640	26	16,652	79	164
ELWD::MDWBR RD::30	MEADOWBROOK ROAD	REDWOOD DRIVE	BAYBURY DRIVE	Asphalt	S	315	26	8,191	72	168
ELWD::MDWBR RD::40	MEADOWBROOK ROAD	BAYBURY DRIVE	PIN OAK DRIVE	Asphalt	S	556	26	14,469	91	187
ELWD::MDWBR RD::50	MEADOWBROOK ROAD	PIN OAK DRIVE	MEADOWBROOK ROAD	Asphalt	S	199	26	5,179	95	155
ELWD::MGNL LN::10	MAGNOLIA LANE	WOODED COVE DRIVE	END	Asphalt	S	511	28	14,304	86	250
ELWD::MPL DR::10	MAPLE DRIVE	ARROWHEAD DRIVE	END	Asphalt	S	145	26	3,774	93	277
ELWD::MRRS ST::10	MORRIS STREET	LINCOLN STREET	JACKSON STREET	Asphalt	S	565	26	14,697	91	229
ELWD::MRRS ST::20	MORRIS STREET	JACKSON STREET	CHICAGO STREET	Asphalt	S	562	26	14,615	91	254
ELWD::MRRS ST::30	MORRIS STREET	CHICAGO STREET	MATTESON STREET	Asphalt	S	333	26	8,647	89	323
ELWD::MSSP AVE::100	MISSISSIPPI AVENUE	MISSISSIPPI AVENUE	LINCOLN STREET	Asphalt	S	207	35	7,246	70	412
ELWD::MSSP AVE::110	MISSISSIPPI AVENUE	LINCOLN STREET	JACKSON STREET	Asphalt	S	559	35	19,582	66	319
ELWD::MSSP AVE::120	MISSISSIPPI AVENUE	JACKSON STREET	CHICAGO STREET	Asphalt	S	563	35	19,721	72	259
ELWD::MSSP AVE::130	MISSISSIPPI AVENUE	CHICAGO STREET	WOOD STREET	Asphalt	S	171	35	5,983	92	144
ELWD::MSSP AVE::140	MISSISSIPPI AVENUE	WOOD STREET	MATTESON STREET	Asphalt	S	397	26	10,323	86	239

Pavement ID	Road Name	From	To	Surface	Rank	Length (FT)	Width (FT)	Area (SF)	PCI	IRI
ELWD::MSSP AVE::150	MISSISSIPPI AVENUE	MATTESON STREET	DOUGLAS STREET	Asphalt	S	323	24	7,762	74	424
ELWD::MSSP AVE::160	MISSISSIPPI AVENUE	MATTESON STREET	ST LOUIS STREET	Asphalt	S	248	35	8,664	93	165
ELWD::MSSP AVE::170	MISSISSIPPI AVENUE	ST LOUIS STREET	MISSISSIPPI AVENUE	Asphalt	S	283	35	9,893	92	208
ELWD::MSSP AVE::180	MISSISSIPPI AVENUE	MISSISSIPPI AVENUE	VILLAGE HALL CT 1	Asphalt	S	1,032	35	36,108	93	159
ELWD::MSSP AVE::190	MISSISSIPPI AVENUE	VILLAGE HALL CT 1	VILLAGE HALL CT 2	Asphalt	S	367	35	12,835	100	161
ELWD::MSSP AVE::200	MISSISSIPPI AVENUE	VILLAGE HALL CT 2	ROUTE 53	Asphalt	S	348	35	12,194	100	248
ELWD::MSSP AVE::50	MISSISSIPPI AVENUE	START	BASELINE ROAD	Gravel	T	1,673	15	25,101	Gravel	Gravel
ELWD::MSSP AVE::60	MISSISSIPPI AVENUE	BASELINE ROAD	WALTON DRIVE	Asphalt	S	4,015	50	200,735	54	158
ELWD::MSSP AVE::70	MISSISSIPPI AVENUE	WALTON DRIVE	MISSISSIPPI AVENUE	Asphalt	S	953	50	47,656	52	206
ELWD::MSSP AVE::80	MISSISSIPPI AVENUE	MISSISSIPPI AVENUE	DEER RUN DRIVE	Asphalt	S	3,177	35	111,193	51	138
ELWD::MSSP AVE::90	MISSISSIPPI AVENUE	DEER RUN DRIVE	MISSISSIPPI AVENUE	Asphalt	S	531	35	18,571	64	362
ELWD::MSSP RD::10	MISSISSIPPI ROAD	ROUTE 53	HERITAGE DRIVE	Asphalt	S	625	35	21,860	92	207
ELWD::MSSP RD::20	MISSISSIPPI ROAD	HERITAGE DRIVE	MISSISSIPPI ROAD	Asphalt	S	1,111	35	38,884	92	125
ELWD::MSSP RD::30	MISSISSIPPI ROAD	MISSISSIPPI ROAD	COLDWATER ROAD	Asphalt	S	26	26	669	95	123
ELWD::MSSP RD::40	MISSISSIPPI ROAD	COLDWATER ROAD	TEHLE ROAD	Asphalt	S	1,778	20	35,564	84	86
ELWD::MSSP RD::50	MISSISSIPPI ROAD	TEHLE ROAD	S CHICAGO ROAD	Asphalt	S	3,997	20	79,938	76	93
ELWD::MTTSN ST::10	MATTESON STREET	GARDNER STREET	MISSISSIPPI AVENUE	Asphalt	S	425	26	11,053	90	294
ELWD::MTTSN ST::20	MATTESON STREET	MISSISSIPPI AVENUE	SPENCER STREET	Asphalt	S	387	26	10,052	84	245
ELWD::NL RD::10	NOEL ROAD	BASELINE ROAD	PATTERSON	Asphalt	S	8,183	35	286,388	63	192
ELWD::NL RD::20	NOEL ROAD	PATTERSON	BRANDON ROAD	Asphalt	S	2,680	19	50,927	90	119
ELWD::NRTH ST::10	NORTH STREET	JACKSON STREET	CHICAGO STREET	Asphalt	S	545	26	14,175	94	337
ELWD::OXBW CT::10	OXBOW COURT	WOODED COVE DRIVE	END	Asphalt	S	302	28	8,466	92	416
ELWD::PCKY WAY::10	POCKEY WAY	WOODED COVE DRIVE	END	Asphalt	S	438	28	12,265	93	239
ELWD::PN K DR::10	PIN OAK DRIVE	BRANDON ROAD	MEADOWBROOK ROAD	Asphalt	S	196	26	5,085	92	395
ELWD::PRKS ST::10	PARKS STREET	LINCOLN STREET	JACKSON STREET	Asphalt	S	534	26	13,894	94	193
ELWD::PRKS ST::20	PARKS STREET	JACKSON STREET	CHICAGO STREET	Asphalt	S	565	26	14,685	92	203
ELWD::PTTRSN::10	PATTERSON	NOEL ROAD	PATTERSON	Asphalt	S	458	22	10,081	32	208
ELWD::PTTRSN::20	PATTERSON	PATTERSON	PATTERSON	Asphalt	S	1,774	22	39,035	29	157
ELWD::PTTRSN::30	PATTERSON	PATTERSON	END	Asphalt	S	1,329	22	29,236	48	412
ELWD::R MRG RD::10	IRA MORGAN ROAD	ROUTE 53	IRA MORGAN ROAD	Asphalt	P	1,532	40	61,284	78	188
ELWD::R MRG RD::20	IRA MORGAN ROAD	IRA MORGAN ROAD	END	Asphalt	S	1,855	30	55,663	73	123
ELWD::R MRG RD::30	IRA MORGAN ROAD	IRA MORGAN ROAD	END	Asphalt	P	804	40	32,175	85	190
ELWD::RCHR LN::10	ARCHER LANE	WYNDSTONE DRIVE	FOX RUN DRIVE	Asphalt	S	864	28	24,196	90	147
ELWD::RDWD DR::10	REDWOOD DRIVE	BUSHTHORN DRIVE	MEADOWBROOK ROAD	Asphalt	S	1,464	26	38,072	81	160
ELWD::RRWHD DR::10	ARROWHEAD DRIVE	COTTONWOOD DRIVE	BAYBURY DRIVE	Asphalt	S	1,435	26	37,300	68	169
ELWD::RRWHD DR::20	ARROWHEAD DRIVE	MAPLE DRIVE	BAYBURY DRIVE	Asphalt	S	479	26	12,451	94	200
ELWD::RRWHD DR::30	ARROWHEAD DRIVE	MEADOWBROOK ROAD	MAPLE DRIVE	Asphalt	S	430	26	11,181	92	227
ELWD::S CHGO RD::10	S CHICAGO ROAD	HOFF ROAD	MISSISSIPPI ROAD	Asphalt	S	5,285	20	105,695	58	149
ELWD::S CHGO RD::20	S CHICAGO ROAD	MISSISSIPPI ROAD	BROWN ROAD	Asphalt	S	2,625	20	52,500	46	182
ELWD::S CHGO RD::30	S CHICAGO ROAD	BROWN ROAD	MANHATTAN ROAD	Asphalt	S	5,250	20	105,000	44	206
ELWD::S DGNL RD::15	S DIAGONAL ROAD	START	BRANDON ROAD	Asphalt	S	1,176	26	30,584	78	155
ELWD::S DGNL RD::20	S DIAGONAL ROAD	BRANDON ROAD	COTTONWOOD DRIVE	Asphalt	S	839	26	21,826	94	157
ELWD::S DGNL RD::30	S DIAGONAL ROAD	COTTONWOOD DRIVE	WYNDSTONE DRIVE	Asphalt	S	405	26	10,517	90	219

Pavement ID	Road Name	From	To	Surface	Rank	Length (FT)	Width (FT)	Area (SF)	PCI	IRI
ELWD::S DGNL RD::40	S DIAGONAL ROAD	WYNDSTONE DRIVE	DIAGONAL ROAD	Asphalt	S	245	26	6,367	91	257
ELWD::SPNCR ST::10	SPENCER STREET	LINCOLN STREET	JACKSON STREET	Asphalt	S	556	26	14,465	95	439
ELWD::SPNCR ST::20	SPENCER STREET	JACKSON STREET	CHICAGO STREET	Asphalt	S	564	26	14,667	82	341
ELWD::SPNCR ST::30	SPENCER STREET	CHICAGO STREET	WOOD STREET	Asphalt	S	293	26	7,609	71	333
ELWD::SPNCR ST::40	SPENCER STREET	WOOD STREET	MATTESON STREET	Asphalt	S	280	26	7,288	67	193
ELWD::ST LS ST::10	ST LOUIS STREET	ALANA DRIVE	ROUTE 53	Asphalt	S	829	26	21,554	100	470
ELWD::ST LS ST::20	ST LOUIS STREET	ROUTE 53	GARDNER STREET	Asphalt	S	194	26	5,034	100	493
ELWD::ST LS ST::30	ST LOUIS STREET	GARDNER STREET	MISSISSIPPI AVENUE	Asphalt	S	385	26	10,013	100	384
ELWD::ST LS ST::40	ST LOUIS STREET	MISSISSIPPI AVENUE	ST LOUIS STREET	Asphalt	S	263	30	7,903	28	366
ELWD::ST LS ST::50	ST LOUIS STREET	ST LOUIS STREET	END	Asphalt	S	843	30	25,290	51	284
ELWD::STH ST::10	SOUTH STREET	LINCOLN STREET	JACKSON STREET	Asphalt	S	560	26	14,553	91	211
ELWD::STH ST::20	SOUTH STREET	JACKSON STREET	CHICAGO STREET	Asphalt	S	565	26	14,683	90	247
ELWD::STPN DR::10	STEPAN DRIVE	START	STEPAN DRIVE	Asphalt	S	503	26	13,089	77	156
ELWD::STPN DR::20	STEPAN DRIVE	STEPAN DRIVE	MILLSDALE ROAD	Asphalt	S	1,754	26	45,600	65	343
ELWD::STPN DR::25	STEPAN DRIVE	MILLSDALE ROAD	STEPAN DRIVE	Asphalt	S	97	26	2,513	79	418
ELWD::STPN DR::30	STEPAN DRIVE	STEPAN DRIVE	BASELINE ROAD	Asphalt	S	1,239	26	32,208	77	177
ELWD::THL RD::10	TEHLE ROAD	MISSISSIPPI ROAD	ROUTE 53	Asphalt	S	1,745	15	26,177	51	218
ELWD::THL RD::20	TEHLE ROAD	ROUTE 53	DIAGONAL ROAD	Asphalt	S	1,673	15	25,097	41	200
ELWD::THL RD::30	TEHLE ROAD	DIAGONAL ROAD	END	Asphalt	S	9	26	226	93	158
ELWD::VHLL CT 1::10	VILLAGE HALL CT 1	MISSISSIPPI ROAD	END	Asphalt	S	432	35	15,128	68	251
ELWD::VHLL CT 2::10	VILLAGE HALL CT 2	MISSISSIPPI ROAD	END	Asphalt	S	602	35	21,055	78	171
ELWD::WD ST::10	WOOD STREET	CHICAGO STREET	END	Asphalt	S	231	26	6,012	62	526
ELWD::WD ST::20	WOOD STREET	MISSISSIPPI AVENUE	SPENCER STREET	Asphalt	S	402	26	10,462	63	288
ELWD::WDBN DR::10	WOODBINE DRIVE	CHICAGO STREET	BEATTIE STREET	Asphalt	S	191	28	5,356	85	310
ELWD::WDBN DR::20	WOODBINE DRIVE	BEATTIE STREET	BRIARWOOD COURT	Asphalt	S	352	28	9,869	88	209
ELWD::WDBN DR::30	WOODBINE DRIVE	BRIARWOOD COURT	E BUSH DRIVE	Asphalt	S	419	28	11,730	89	198
ELWD::WDD C DR::10	WOODED COVE DRIVE	POCKEY WAY	END	Asphalt	S	221	28	6,180	93	262
ELWD::WDD C DR::20	WOODED COVE DRIVE	WHITE TAIL COURT	POCKEY WAY	Asphalt	S	430	28	12,029	94	129
ELWD::WDD C DR::30	WOODED COVE DRIVE	OXBOW COURT	WHITE TAIL COURT	Asphalt	S	838	28	23,465	94	138
ELWD::WDD C DR::40	WOODED COVE DRIVE	MAGNOLIA LANE	OXBOW COURT	Asphalt	S	1,649	28	46,180	92	138
ELWD::WDD C DR::50	WOODED COVE DRIVE	MAGNOLIA LANE	END	Asphalt	S	785	28	21,986	93	181
ELWD::WHT TL CT::10	WHITE TAIL COURT	WOODED COVE DRIVE	END	Asphalt	S	228	28	6,389	92	337
ELWD::WLT STN DR::10	WALTER STRAWN DRIVE	BASELINE ROAD	WALTON DRIVE	Asphalt	P	4,002	26	104,049	81	120
ELWD::WLT STN DR::20	WALTER STRAWN DRIVE	WALTON DRIVE	WALTER STRAWN DRIVE	Asphalt	P	1,057	35	36,978	83	139
ELWD::WLT STN DR::30	WALTER STRAWN DRIVE	WALTER STRAWN DRIVE	DEER RUN DRIVE	Asphalt	P	2,308	35	80,785	79	176
ELWD::WLT STN DR::40	WALTER STRAWN DRIVE	DEER RUN DRIVE	ROUTE 53	Concrete	P	1,753	35	61,359	96	237
ELWD::WLTN DR::10	WALTON DRIVE	WALTER STRAWN DRIVE	MISSISSIPPI AVENUE	Asphalt	S	2,976	39	116,077	68	157
ELWD::WYNSTN DR::10	WYNDSTONE DRIVE	BRANDON ROAD	COBBLESTONE LANE	Asphalt	S	189	28	5,293	92	270
ELWD::WYNSTN DR::20	WYNDSTONE DRIVE	COBBLESTONE LANE	EAGLE CREEK ROAD	Asphalt	S	264	28	7,403	91	179
ELWD::WYNSTN DR::30	WYNDSTONE DRIVE	EAGLE CREEK ROAD	DEER PATH LANE	Asphalt	S	261	28	7,316	82	137
ELWD::WYNSTN DR::40	WYNDSTONE DRIVE	DEER PATH LANE	ARCHER LANE	Asphalt	S	267	28	7,463	88	133
ELWD::WYNSTN DR::50	WYNDSTONE DRIVE	ARCHER LANE	FOX RUN DRIVE	Asphalt	S	995	28	27,868	88	124
ELWD::WYNSTN DR::60	WYNDSTONE DRIVE	FOX RUN DRIVE	S DIAGONAL ROAD	Asphalt	S	214	28	5,996	87	211