



Pavement Data Collection and Pavement Management System Implementation for City of Markham

Prepared for
City of Markham, Illinois
In Association with
Chicago Metropolitan Agency for Planning

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FINAL REPORT

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1. INTRODUCTION

1.1 Background

Chicago Metropolitan Agency for Planning (CMAP) selected the ARA team to develop pavement management plans for a selected number of local agencies from the CMAP region, including additional data collection for non-Federal Aid routes. The pavement management plans will provide participating local agencies with a document that describes the importance and types of pavement preservation, the current condition of pavement network, scenarios evaluating the cost to meet different network-level pavement conditions, and a recommended capital plan based on the selected pavement condition and spending scenario. The pavement management plan includes summary tables, charts, graphics, and maps depicting current pavement conditions and forecasted pavement conditions under different scenarios. CMAP staff managed the development of the pavement management plans in conjunction with City of Markham.

As part of this project, ARA has evaluated the current condition of City of Markham's roadway pavement network, implemented pavement management system (PMS) using PAVER™ software, forecasted condition, generated budget scenario, and recommended future maintenance and rehabilitation (M&R) plans.

1.2 Project Kick-off and Records Review

The ARA team met with the City of Markham and CMAP representatives for a project kick-off meeting on June 26, 2019. Based on the kick-off meeting and documents provided by the City and CMAP, pavement data completed by was collected on July 6, 2019. The GIS shapefile was provided by CMAP and was used as the base map for the field data collection. City of Markham provided roadway network segmentation which was the primary source of roadway inventory for the pavement management database. The City responded with valuable information to the questionnaire that ARA developed for an understanding of the PMS inputs available from the City and any specific project requirements. The City also provided other pavement related attributes such as length, width, and functional class. In addition, the City provided an annual M&R budget from 2020 through 2024 to plan future activities. The following documents were reviewed as part of this effort:

- GIS shapefile for the local agency (CMAP)
- Network Segmentation for collection (CMAP)
- Review of network segmentation for PMS implementation (City of Markham)

1.3 Network Segmentation

The City of Markham manages approximately 57.1 miles of roadway pavements, consisting primarily of asphalt pavements. The pavement network was divided into 534 sections based on the feedback provided by the City. Figure 1 shows the network segmentation that was approved by the City.

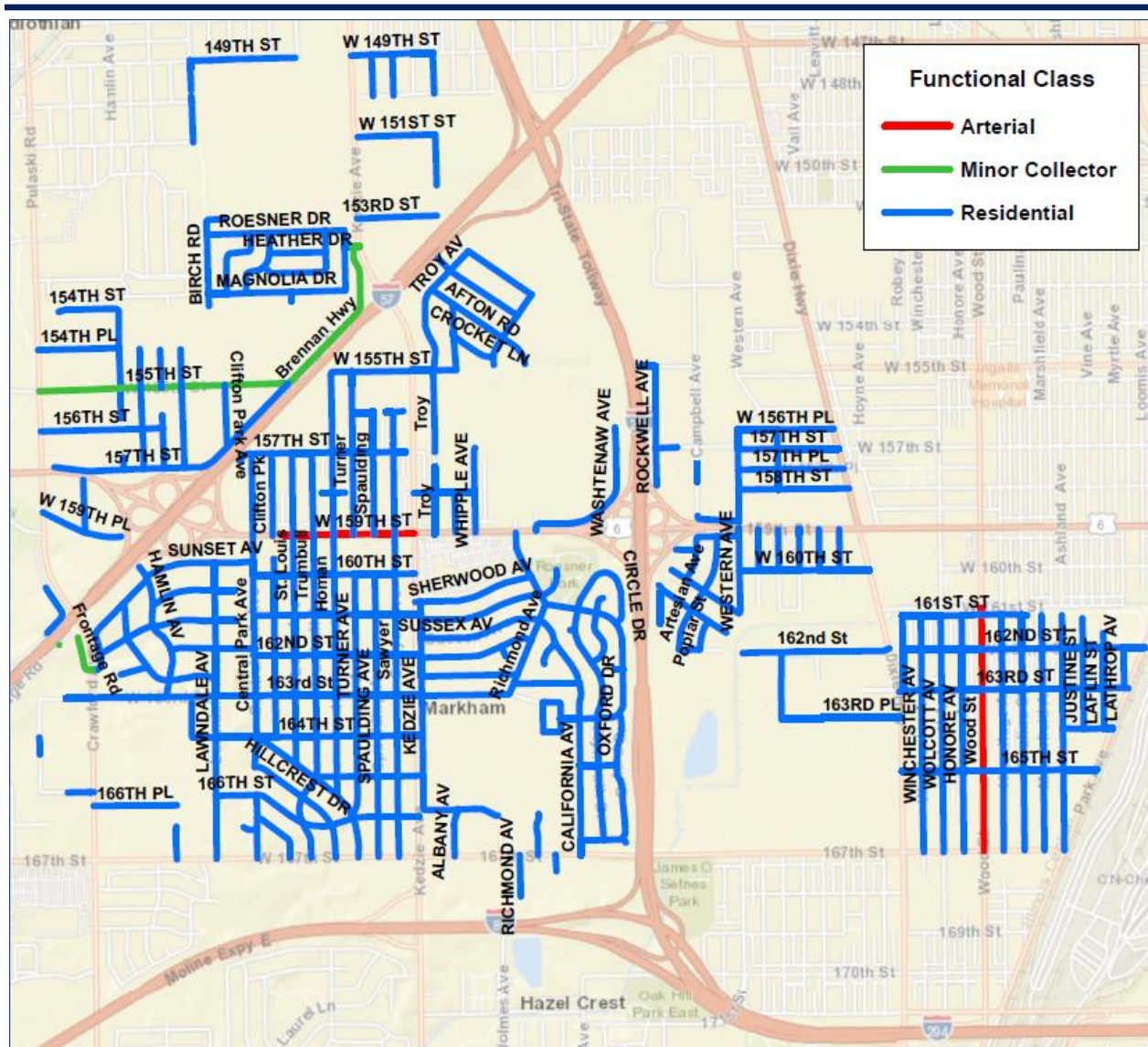


Figure 1. Pavement network segmentation of City of Markham.

1.4 Traffic Data

Average daily traffic (ADT) data for the City of Markham network was obtained from the Illinois Department of Transportation (IDOT) transportation management system (<http://www.gettingaroundillinois.com/gai.htm?mt=aadt>). Table 1 shows traffic data based on the functional classification of the streets. Figure 2 shows the annual average daily traffic (AADT) data for the individual pavement sections.

Table 1. Summary of City of Markham traffic data.

Functional Class	Length (mile)	Maximum AADT	Minimum AADT
Arterial	1.2	30,900	5,800
Minor Collector	1.4	625	N/A
Residential	54.5	2,950	N/A

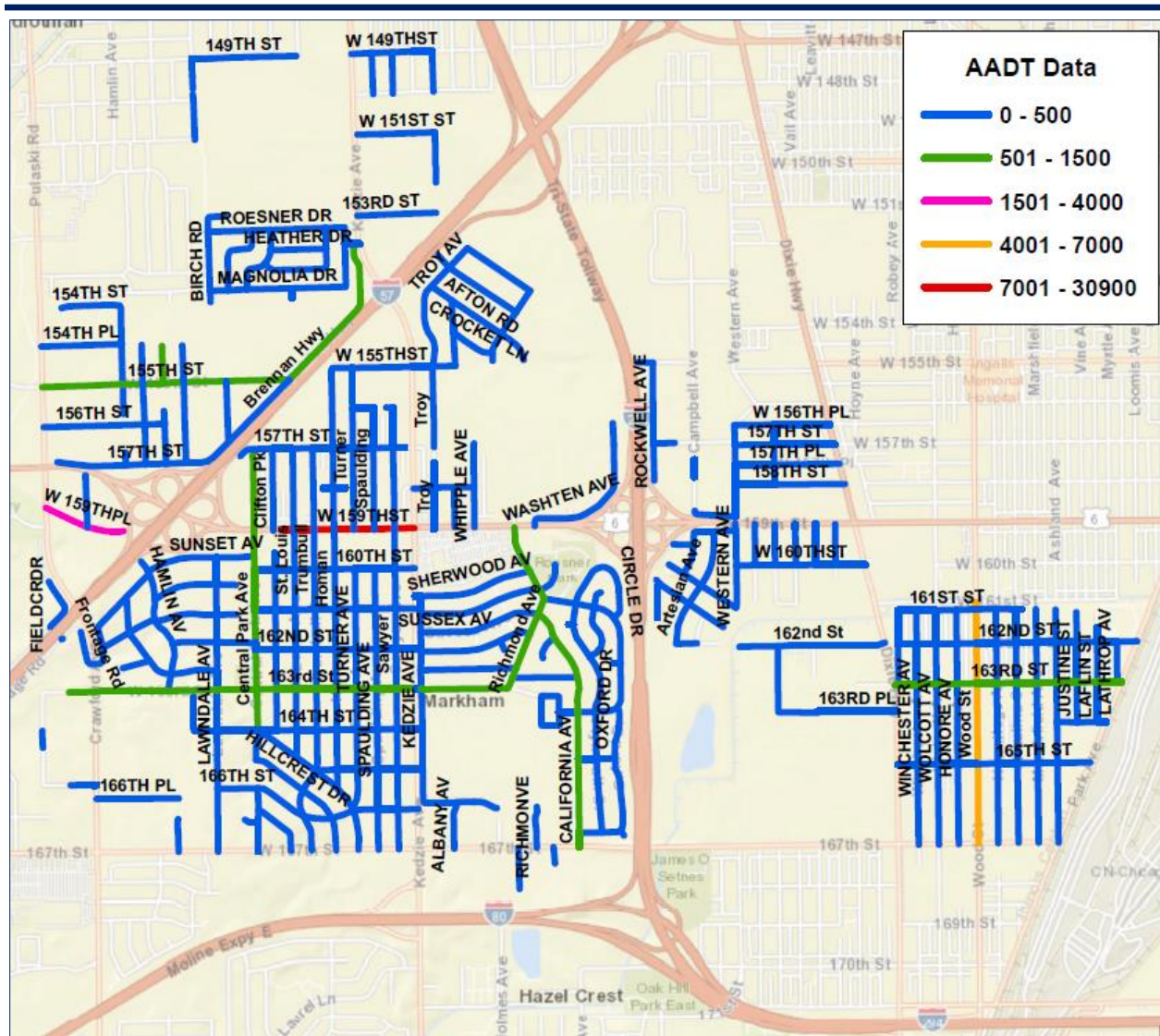


Figure 2. City of Markham’s annual average daily traffic (AADT) data.

2. FIELD DATA COLLECTION AND ASSESSMENT

2.1 Digital Survey Vehicle (DSV)

ARA collected geo-referenced images of the entire City of Markham roadway network using the DSV on July 2-6, 2019. ARA’s DSV equipped with the Laser Crack Measurement System (LCMS), shown in Figure 3, captures images at 20-ft intervals. Each image is linearly referenced with the DSV’s onboard distance measuring instrument (DMI) and associated global positioning system (GPS) coordinates. For two-lane City highways, ARA collected images in a single direction. In four-lane pavement sections, data was collected in the outermost lane in both directions.



Figure 3. ARA's laser crack measurement system.

The LCMS captures enhanced right-of-way images using a 360° camera system. The images were used to assess the surface condition of the pavement using the Pavement Condition Index (PCI) methodology in accordance with ASTM D6433. In addition to the images, sensor data was collected including the International Roughness Index (IRI) and rutting for all the segments. The weighted average IRI value of the City network is 298 inch/mile, which indicates the network is in 'unacceptable' condition in terms of pavement roughness (see Appendix A for full scale of IRI values). IRI is an index to express pavement roughness, which is an expression of the irregularities in a pavement surface that adversely affect the ride quality of a vehicle.

2.2 Pavement Condition Index Procedure

The pavement condition index (PCI) is a measurement of pavement condition which ranges from 0 to 100. This is an industry standard defined in ASTM D6433. The PCI value and corresponding pavement condition rating are shown in Figure 4. A newly constructed pavement will have a PCI of 100 whereas a failed pavement will have a PCI of 10 or less. After the construction of pavements, the condition of pavement starts deteriorating with time due to traffic loads and volumes, climate, construction materials, and age. Examples of common traffic load related distresses are fatigue cracking, corner break, etc. whereas block cracking, longitudinal and transverse cracking, etc. are climate related distresses.

PCI Value	Pavement Rating
100	Good
85	
70	Satisfactory
55	Fair
40	Poor
25	Very Poor
10	Serious
0	Failed

Figure 4. Pavement condition category based on PCI value.

A PCI survey allows users to compare all pavements on a common scale and provides an index for monitoring pavement deterioration and treatment selection during the PMS analysis. Typically, PCI surveys are conducted foot-on-ground in the field. The modified version allows the use of digital images to perform the survey in an office environment and still provides the highest detail of distress rating.

ARA’s LCMS system identifies the pavement distresses and reports the type, severity, and extent of key pavement distresses as shown in Figure 5. Some sample pavement surface images with representative PCI values are shown in Figure 6.

Ten percent of the surveyed sections were subjected to an internal quality assurance survey by an independent surveyor. After completion of the PCI calculation, visual checks were performed to ensure that the PCI values are representative of the surveyed images.

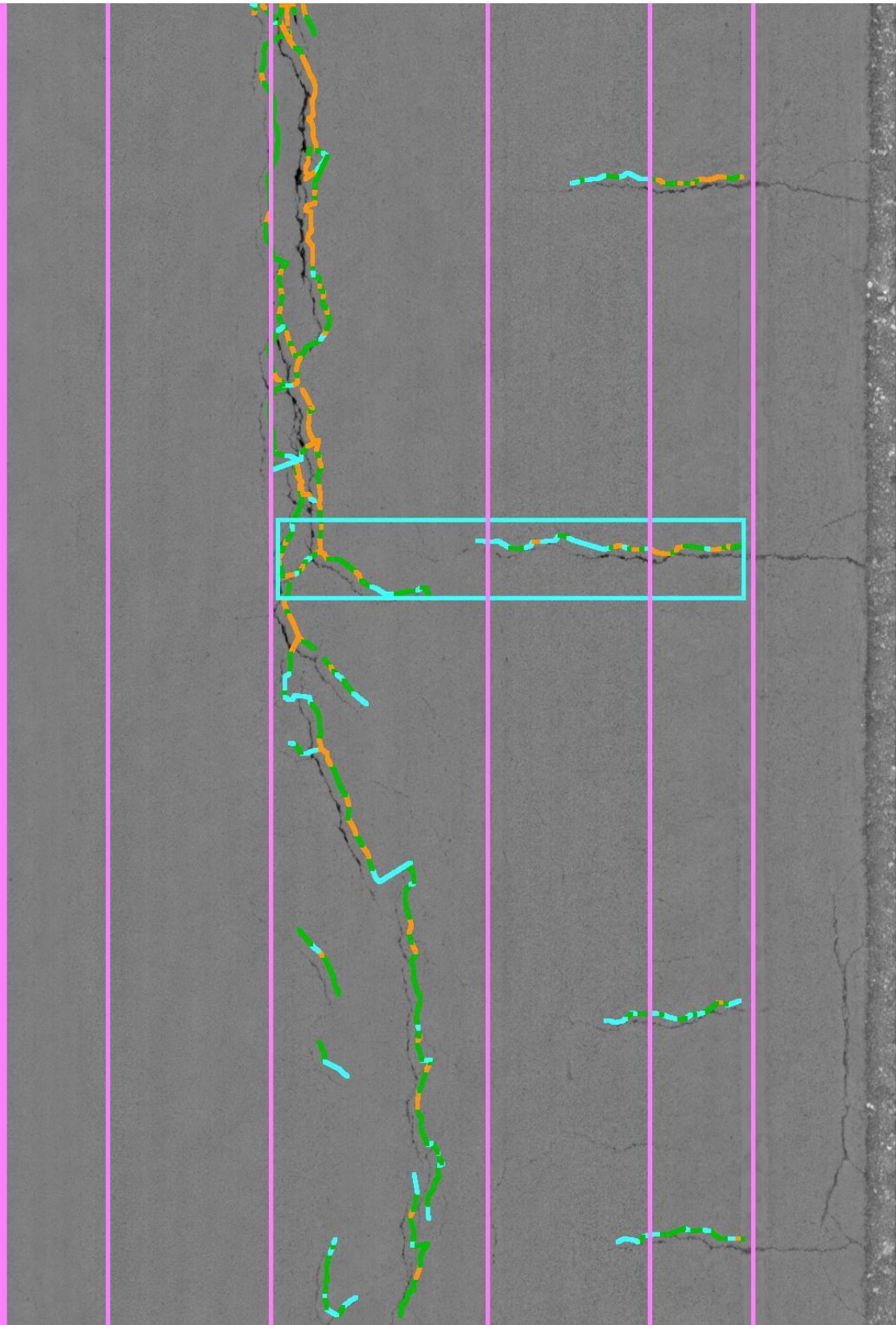


Figure 5. Pavement distress detection using LCMS system.



Figure 6. Sample pavement distress images with different PCI values.

2.3 Pavement Network and Current Condition

After performing an automated condition survey with the collected images, the inspection data was imported into the PAVER™ software. The ARA team presented the pavement condition results to the City and CMAP on October 22, 2019. ARA was not able to collect data from 47 sections because they were inaccessible; therefore, these sections were not included in the analysis. Based on the August 2019 pavement condition survey, the weighted average PCI of the network is 55.3 which represents the pavement network is in fair condition.

Table 2 shows the pavement condition, percent area, number of sections, and number of sections by pavement surface type. Figure 7 displays average pavement condition by pavement surface type. From Table 2, it can be seen that 99% of the pavement surface of City of Markham network is built with asphalt concrete (AC). However, there are four Portland cement concrete (PCC) sections in the City’s network.

Table 2. Pavement condition, percent area, and number of sections by pavement surface type.

Surface Type	Wt. Avg PCI	Pavement Area (SqFt)	% Area	Number of Sections
Asphalt Concrete (AC)	55.1	6,679,050	99	483
Portland Cement Concrete (PCC)	70.0	92,672	1	4

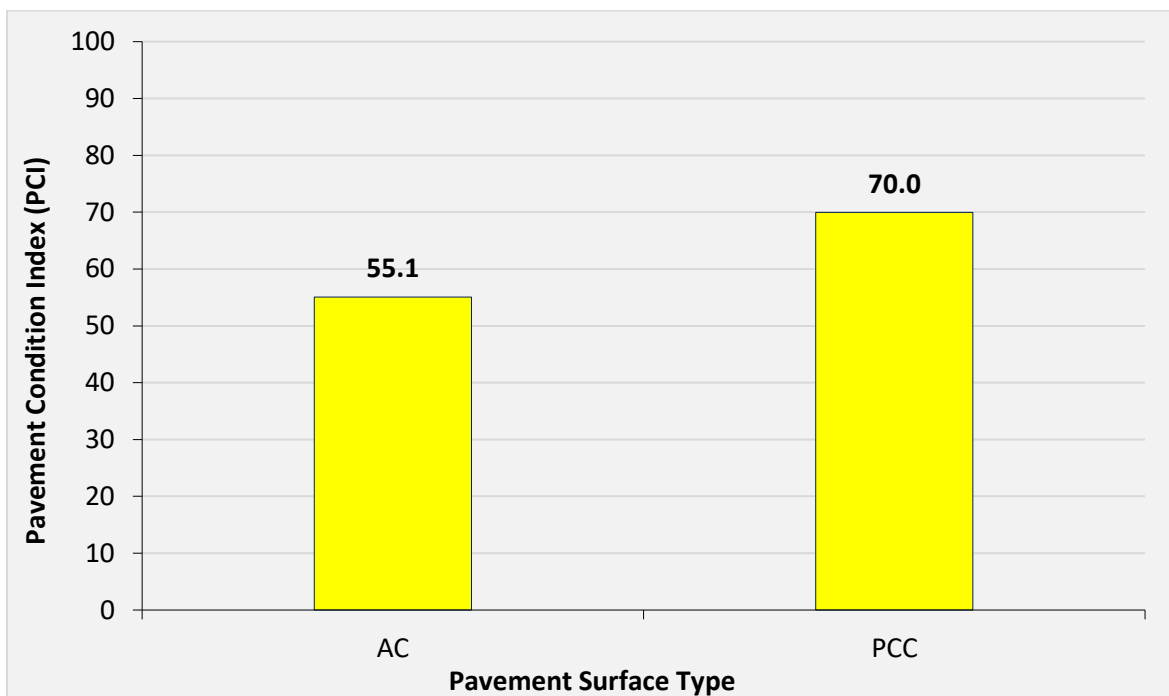


Figure 7. Average pavement condition by pavement surface type.

Figure 8 shows the distribution of network pavement areas based on pavement current conditions. It can be noticed that no pavement section is in failed condition as of August 2019.

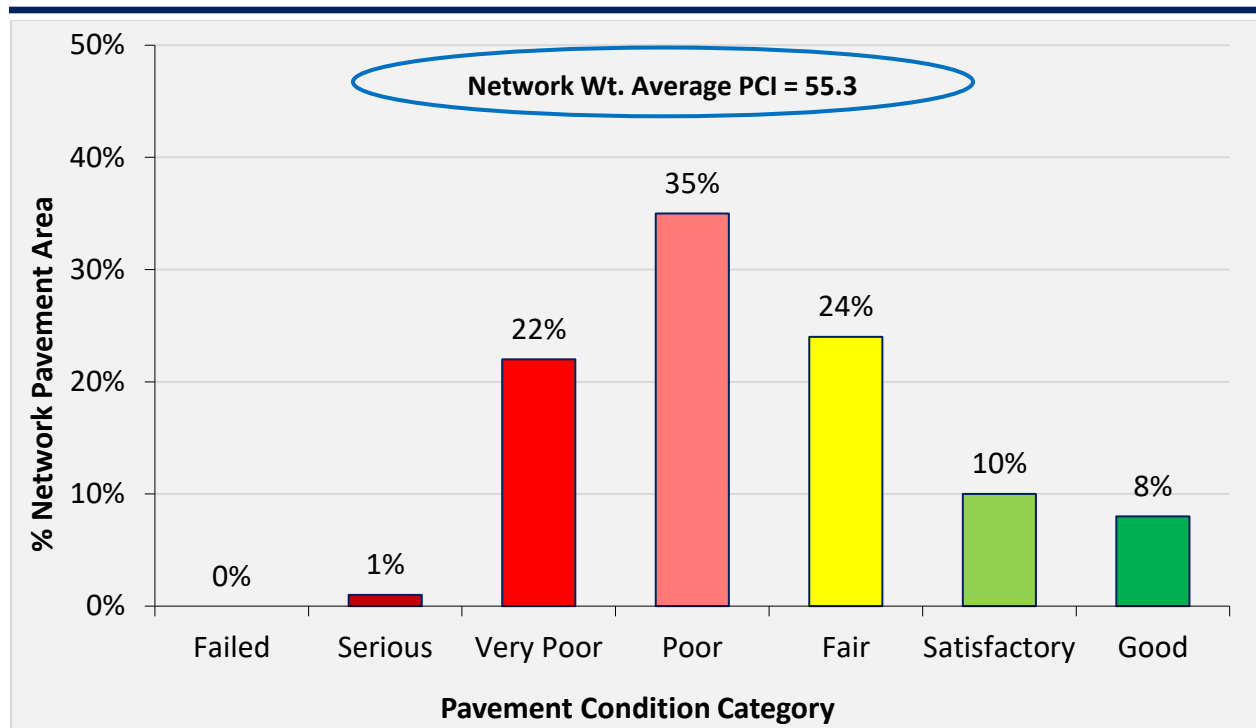


Figure 8. Distribution of network pavement area based on pavement condition.

In Figure 8, it can be observed that about 1% of the network pavement area is in ‘serious’ condition. About 22% of the pavement area is in ‘very poor’ condition. It can also be seen that about 35% of the network is in ‘poor’ condition whereas about 24% of the network is in ‘fair’ condition. Only 18% of the network pavement area is in ‘satisfactory’ and ‘good’ condition.

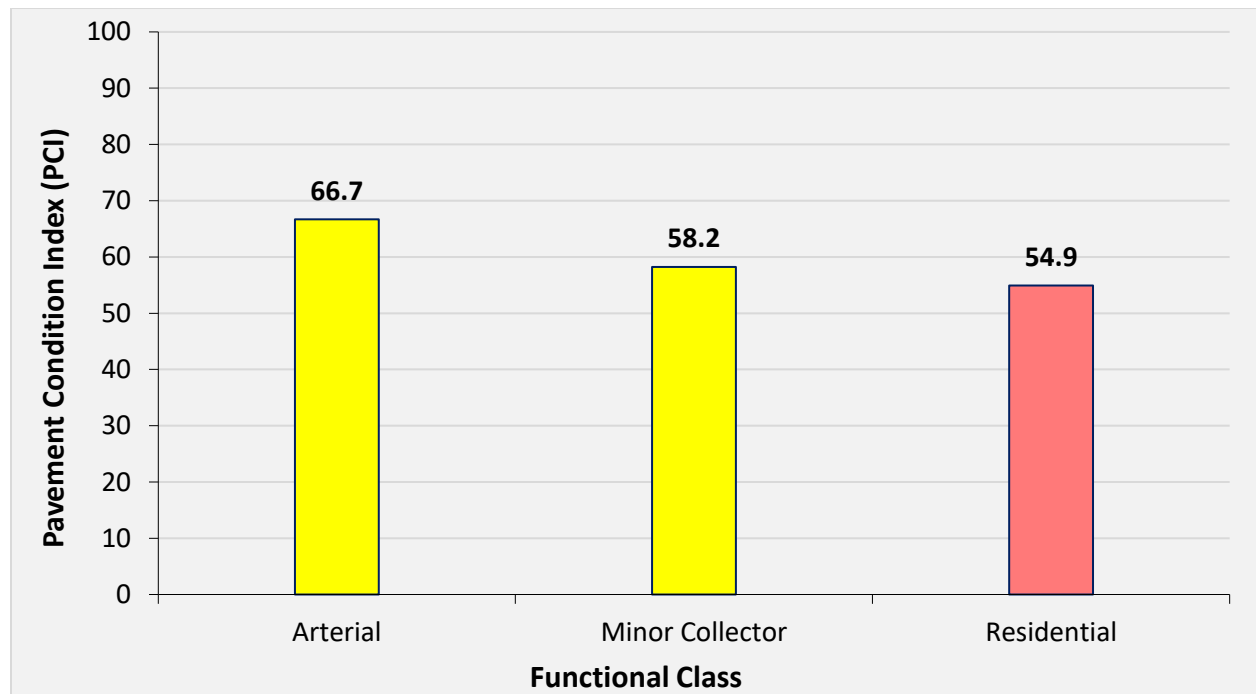


Figure 9. Weighted average pavement condition index (PCI) based on functional class.

Figure 9 displays the current pavement condition distributions based on the functional class. It can be seen that both arterial and minor collectors are in fair condition whereas residential pavements are in poor condition.

Figure 10 shows detail distribution of pavement condition based on the functional class. It can be noticed that 60% of the residential pavements are in poor, very poor, and serious conditions.

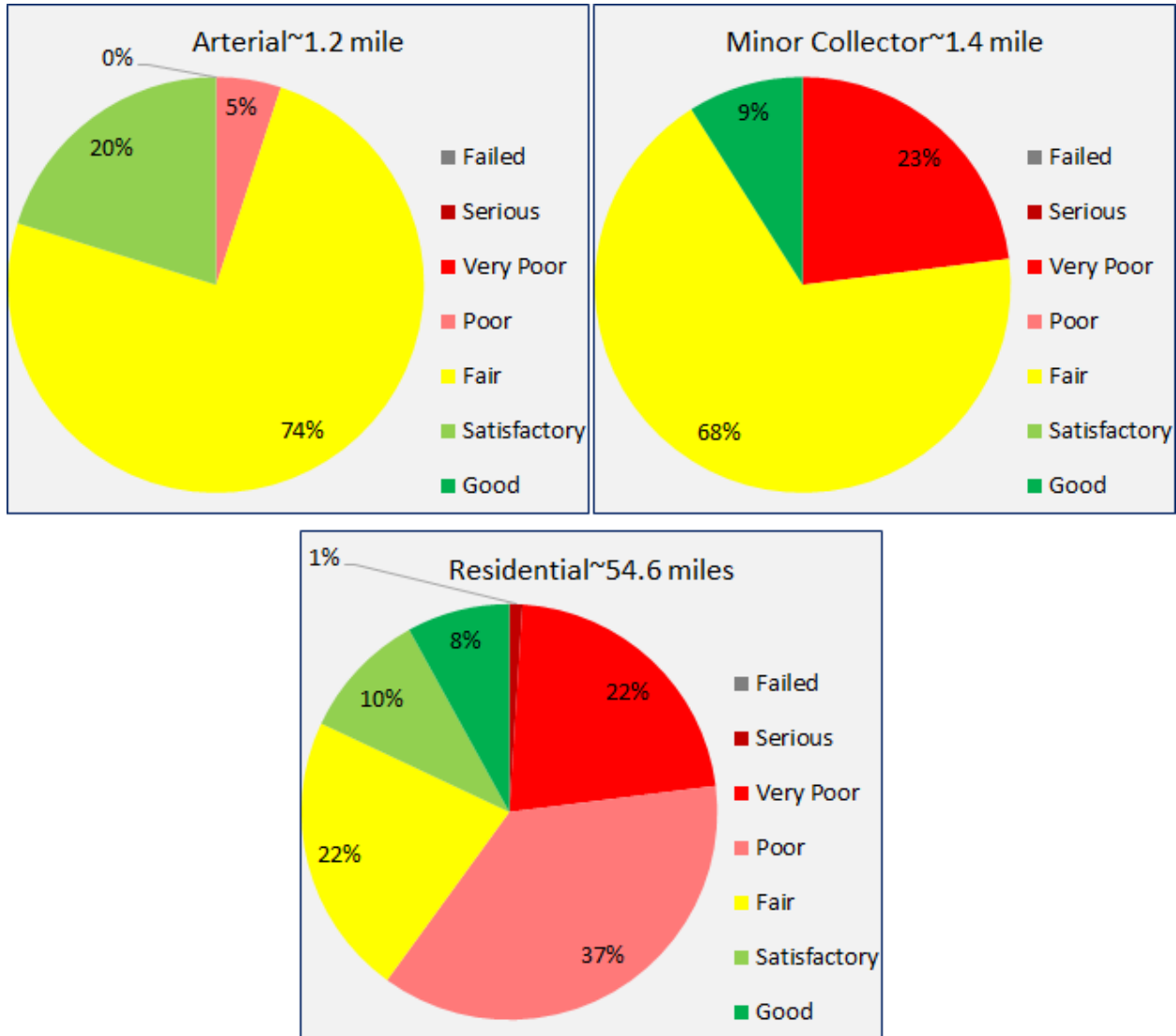


Figure 10. Details of the pavement condition distribution based on the functional class.

Figure 11 shows the pavement condition rating categories for the City’s pavement sections. From Figure 11, it can be seen that major roads such as West 159th Street is in ‘fair’ condition. City roads such as Wood Street is in ‘fair’ condition, whereas the W 159th Pl is in poor condition.

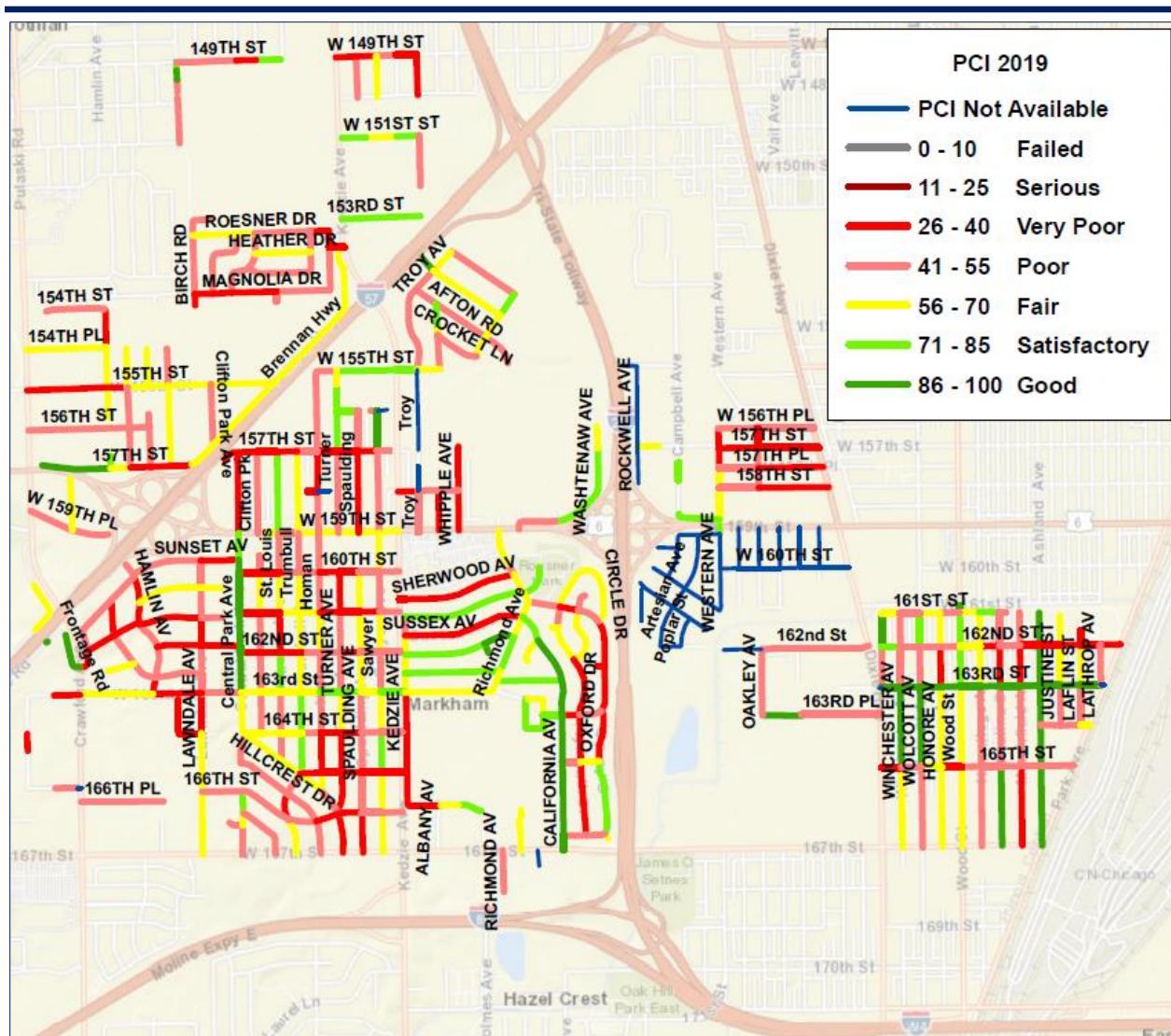


Figure 11. City of Markham’s current pavement condition ratings.

3. PAVEMENT MANAGEMENT SYSTEM IMPLEMENTATION

While presenting the pavement condition data to the City of Markham and CMAP, the ARA team discussed the scope of PMS analysis October 22, 2019. ARA team discussed pavement performance models, treatment matrix, unit costs, and consequences of several funding scenarios. Based on the City’s feedback on PMS analysis, the ARA team completed the PMS analysis and results are presented in this section.

ARA used PAVER™ pavement management software to implement a pavement management system (PMS) for City of Markham. PAVER™ provides pavement management capabilities to (a) develop and organize the pavement inventory, (b) assess the current condition of pavements, (c) develop models to predict future conditions, (d) report on past and future pavement performance, (e) develop scenarios for M&R based on budget or condition requirements, and (f) plan projects.

3.1 PAVER™ Pavement Management System Overview

Figure 12 shows the various modules of the PAVER™ software which includes:

- Inventory — The inventory module is designed based on a hierarchical structure including network, branch, and sections where a section is the smallest pavement unit managed by the agency. This structure allows users to easily organize their inventory while providing numerous fields and levels for storing pavement data.
- Work History — Similar to the inventory module, the work history module also follows the hierarchical structure. To updated a pavement section's attribute or work history, it is required to have the network, branch, and section information.
- Inspection — In the inspection module, pavement can be surveyed manually or the automated survey data can be imported and modified, and finally PCI is being calculated.
- PCI Family Model— The PCI family model module is used to create pavement performance models. Basically, it uses historical pavement condition and age data.
- Condition Analysis — The condition analysis module is used to analyze or predict the condition of the entire or part of the network. This feature reports past conditions based on prior interpolated values between previous inspections and projected conditions based on prediction models.
- M&R Family Models — M&R Family Models module is used to select treatment, treatment consequences, unit costs, and treatment matrix.
- M&R Working Plans — M&R working plans module allows creating multi-year network and project level M&R planning, scheduling, and budgeting. This module allows the users to create consequence of current funding level and generates funding scenarios for targeted PCI, backlog eliminations, etc.
- Reports — This module facilitates the generation of summary charts, latest condition maps, and user-defined reports. The users can pick and choose the attributes fields to create a report.

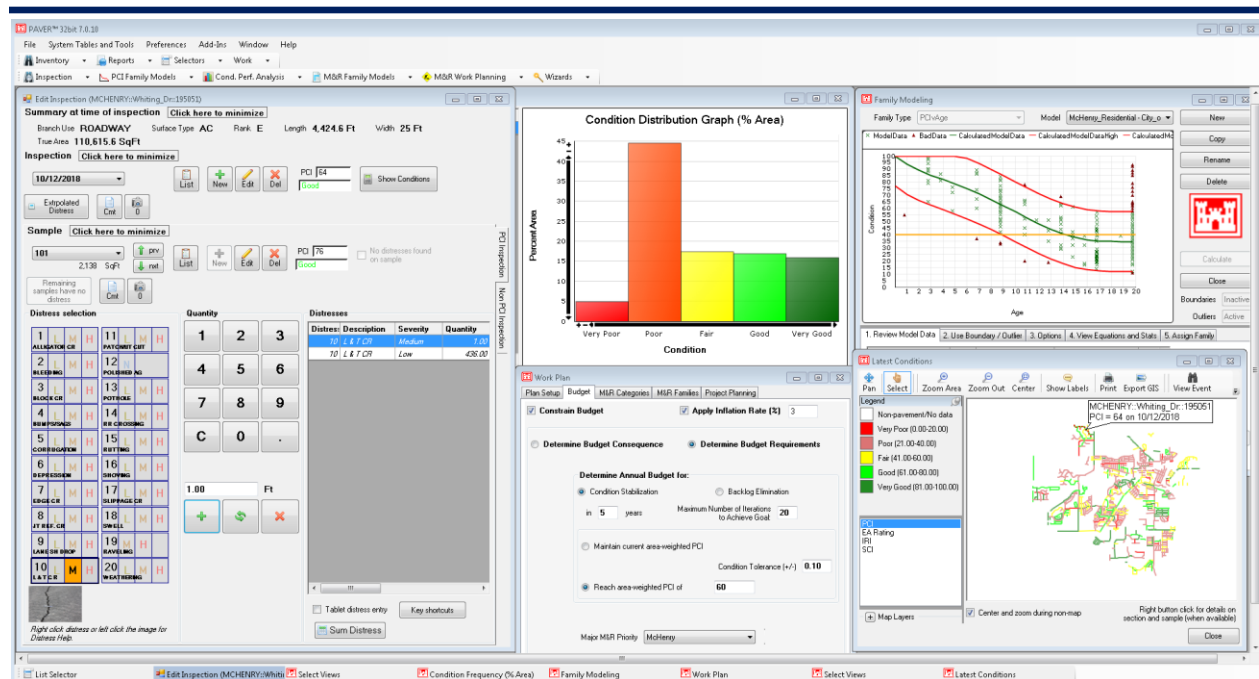


Figure 12. An overview of PAVER™.

3.2 Pavement Performance Model

A PMS is only useful for making decisions if performance models can be established, validated, and relied upon to accurately forecast pavement conditions into the future. A pavement performance model is developed based on the date of construction for new pavement and date of resurfacing for an overlay or mill and overlay, the types and thicknesses of pavement materials, the traffic level, and the pavement condition. The pavement performance model becomes more accurate with multiple pavement condition ratings, as the model gets calibrated and adjusted to match the conditions present at the time in a pavement’s life cycle.

The PCI Family Models module in PAVER™ helps to identify and group pavements of similar construction that are subjected to similar traffic, weather, and other factors affecting pavement performance. The pavement condition historical data are used to build a model that can accurately predict the future performance of a group of pavements with similar attributes.

Pavement age data was not available; therefore, the pavement performance model from a neighbor city with comparable condition has been used, as shown in Figure 13. All asphalt surfaced pavements were assigned to this model. There are only four pavement sections in the City of Markham network with a concrete surface. Therefore, a default pavement performance model from the PAVER™ has been used for the concrete pavement.

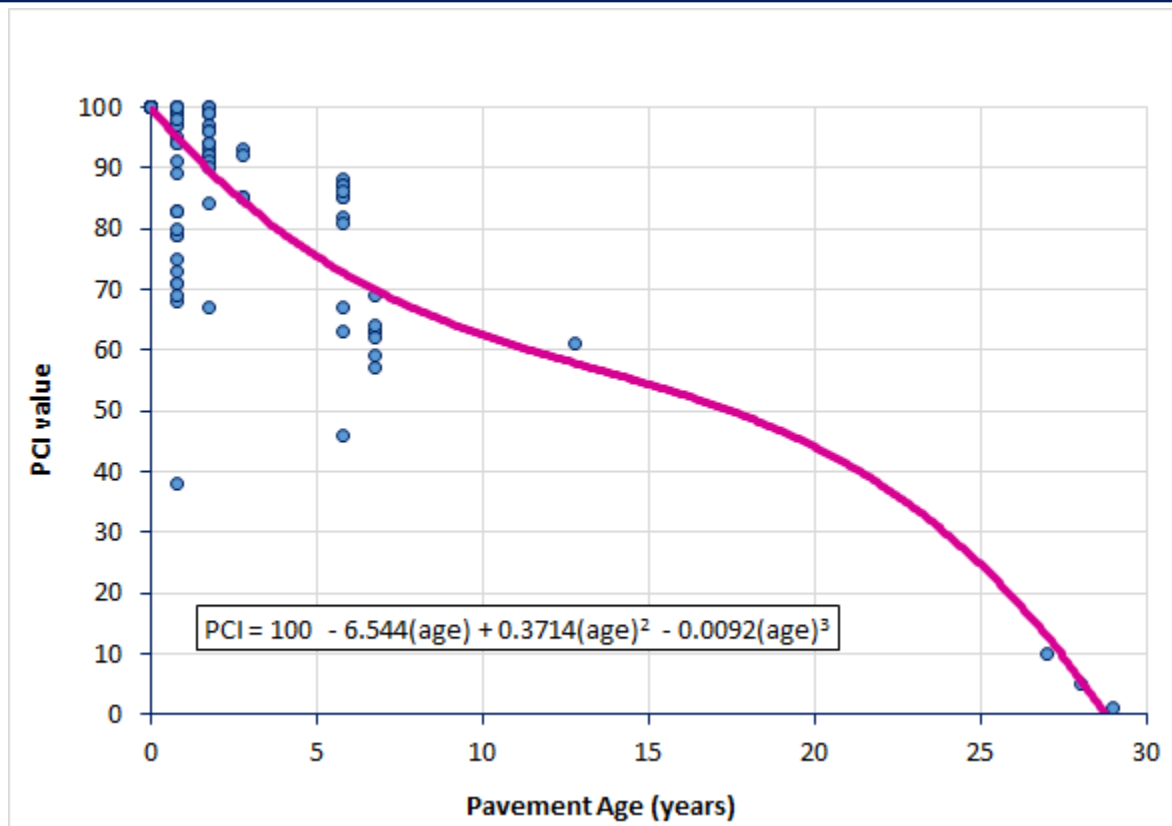


Figure 13. A pavement performance model for the asphalt pavements.

3.3 Treatment Matrix

Based on the pavement preservation and rehabilitation techniques currently used in the City of Markham, and discussion with the City, ARA developed a treatment matrix that defines when a treatment will be performed based on PCI values and traffic volume category. In PAVER™, critical PCI is defined as the PCI value at which the rate of PCI loss increases with time and the cost of applying localized preventive maintenance increases significantly. The M&R Family Assignment Tool is used to designate sections to receive specific M&R work, including:

- Localized Stopgap
- Localized Preventative, and
- Major M&R

The *Localized Stopgap* (PCI < Critical) option is used to indicate the use of Safety M&R policies, which allows PAVER™ to plan localized stopgap M&R work (pothole filling, etc.) on areas where the PCI is below the critical level. The *Localized Preventative* M&R (PCI ≥ Critical) option allows PAVER™ to plan M&R work in localized areas where the PCI is above critical. In this option, life-extending credit, in years, can be given to any localized preventative work. Application of any preventative work where the PCI is still above critical will save money and improve the pavements' life. The *Major M&R* option allows PAVER™ to plan any overlay or other major work where the resulting pavement has a PCI of 100.

Table 3. Treatment matrix for the City's streets.

PCI Value	PCI Rating	Asphalt Pavements		PCC Pavements
		Residential	Collectors	
85-100	Good	Crack Seal and Distress Repair		Crack Seal and Distress Repair
70-85	Satisfactory	Crack Seal and Distress Repair		Crack Seal and Distress Repair
55-70	Fair	Crack Seal and Distress Repair	Crack Seal and Distress Repair	Slab Replacement
40-55	Poor	Crack Seal and Distress Repair	2.0" Mill and Overlay	Slab Replacement
25-40	Very Poor	2.0" Mill and Overlay	2.0" Mill and Overlay	Reconstruction
10-25	Serious	2.5" Mill and Overlay	2.0" Mill and Overlay	Reconstruction
0-10	Failed	2.5" Mill and Overlay	Reconstruction	Reconstruction

As observed from Table 3, pavement sections with PCI greater than the critical PCI (55) are selected for localized preventive treatment such as crack sealing or patching. Sections with PCI values less than critical PCI are assigned to stopgap policies related M&R works such as patching and repair. For major M&R, 2.0-inch and 2.5-inch mill and overlay are considered for the residential pavements. However, 2-inch and reconstruction options were planned for the arterial and collector pavements.

3.4 Unit Costs

ARA determined the typical unit costs for each M&R item, listed in Table 4, based on ARA's experience with agencies in the Chicagoland area. These costs were discussed with the City during the meeting on October 22, 2019. Costs were determined based on a square foot or linear foot basis. The unit costs used for PAVER™ analysis for 2019, are shown in Table 4. To run the PMS analysis in the future, the unit costs can be updated based on the available unit price of materials and construction in the City of Markham area.

Table 4. Treatment unit costs for the City of Markham.

Code	Treatment Name	Cost	Units
NONE	No Localized M & R	\$0.00	SqFt
CS-AC	Crack Sealing - AC	\$1.50	Ft
CS-PC	Crack Sealing - PCC	\$1.50	Ft
PA-AD	Patching - AC Deep	\$9.00	SqFt
PA-AL	Patching - AC Leveling	\$1.50	SqFt
PA-AS	Patching - AC Shallow	\$9.00	SqFt
PA-PF	Patching - PCC Full Depth	\$15.00	SqFt
SL-PC	Slab Replacement - PCC	\$15.00	SqFt
CM-OL-2.0	2.0 in Cold Mill & Overlay	\$2.31	SqFt
CM-OL-2.5	2.5 in Cold Mill & Overlay	\$2.89	SqFt
CR-AC	Complete Reconstruction - AC	\$5.65	SqFt
CR-PC	Complete Reconstruction - PCC	\$15.00	SqFt

4. MAINTENANCE AND REHABILITATION ANALYSIS

Maintenance and rehabilitation (M&R) analysis can be performed in PAVER™ to generate an optimized work plan by assuming an annual funding level or specifying a target PCI. For the City of Markham, the M&R funding analyses were based on the roadway inventory approved by the City, unit costs discussed with the City and the City's existing Major M&R policies. An inflation rate of 3% was used for all analyses. PCI family curves were adopted from a neighbor city. The critical PCI value was assumed to 55 for both asphalt and concrete pavements. The critical PCI value represents the condition at or below which Major M&R is recommended. The following five-year M&R funding scenarios, in order of highest cost option to lowest cost option, were evaluated on the City's pavements:

- Eliminate backlogs (pavement is in fair (PCI \geq 55) or better condition)
- Funds to meet potential performance targets (PCI = 65)
- Maintain current condition (PCI = 55.3)
- Increase Funding Level (\$400K/year —\$300K for major M&R, \$100K for maintenance)
- Keep current funding level (\$300K/year—\$225K for major M&R, \$75K for maintenance)
- Do nothing (\$0/year)

4.1 Funding Scenario Results

Using the M&R Working Plans module and based on the recommendation, the funding level scenarios were generated for a five-year period for only major M&R activities. For the current funding level (\$300K/year), it was assumed that \$75K/year would be allocated for stopgap and localized preventive distress maintenance, whereas \$225K/year would be spent for major M&R activities. Table 5 and Figure 14 display the effect of different funding levels required for the different funding and network PCI value scenarios. From Figure 14, it can be seen that the current funding is insufficient to maintain the current condition over the next five years. Providing budget to eliminate backlogs results in an average PCI value

of 81.1 after five years, while not spending any funds on the M&R program will deteriorate the network to an average PCI of 39.9 after five years. In maintaining the current condition (PCI=55.3) plan, it is required to invest about \$782K/year over the next five years. In the 'Target PCI 65' plan, the network average PCI increases to 65.1 in 2024 and requires \$1.3M/year over the next five years. Table 6 shows the predicted number of mileages can be improved by the funding scenarios.

Table 5. Predicted PCI values based on the funding scenarios.

Year	Eliminate Backlogs	Target PCI 65	Maintain Current Condition	Increase Funding	Maintain Current Funding	Do Nothing
2020	60.7	58.2	56.5	55.9	53.8	52.9
2021	65.8	60.1	56.3	53.8	51.6	49.9
2022	71.8	62.5	56.7	52.0	49.7	46.7
2023	76.7	64.4	56.6	49.5	47.1	43.3
2024	81.1	65.1	55.2	46.5	43.9	39.9

Table 6. Predicted mileage improvement based on the funding scenarios.

Year	Eliminate Backlogs	Target PCI 65	Maintain Current Condition	Increase Funding	Maintain Current Funding	Do Nothing
2020	8.6	4.5	2.7	2.3	0.8	0
2021	8.7	4.6	2.9	1.1	0.9	0
2022	8.5	5.0	3.3	1.3	1.2	0
2023	6.9	4.4	3.2	1.0	0.8	0
2024	5.5	3.1	1.9	0.6	0.4	0

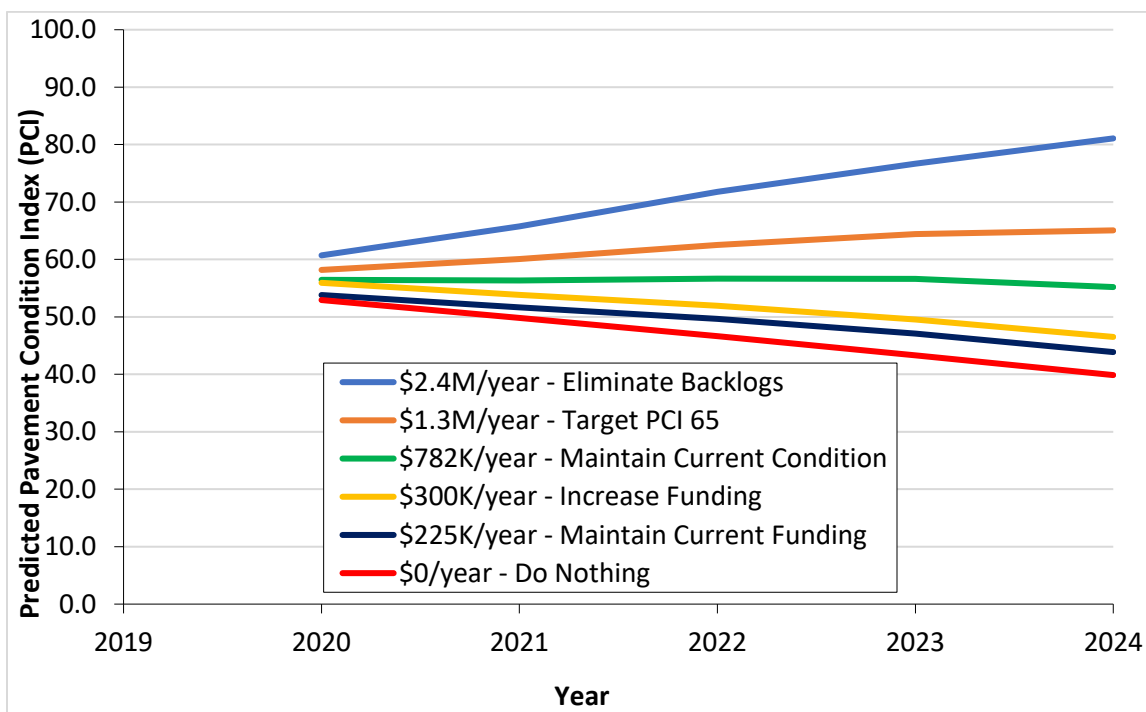


Figure 14. Effect of funding levels on the City's pavement condition.

Table 7 and Figure 15 show the amount of funding required to achieve target PCI values for the various funding scenarios. To eliminate backlogs, it is required to invest about \$2.4M/year for the major M&R over the next five years. To achieve an average network PCI of 65, the required investment is approximately \$1.3M/year for the major M&R over the next five years, whereas it requires about \$782K/year for the major M&R to maintain current conditions over the next five years.

Table 7. Required funding for the different funding scenarios.

Year	Eliminate Backlogs	Target PCI 65	Maintain Current Condition	Increase Funding	Maintain Current Funding	Do Nothing
2020	\$2,476,634	\$1,292,435	\$782,830	\$300,000	\$225,000	0
2021	\$2,476,847	\$1,292,261	\$782,779	\$300,000	\$225,000	0
2022	\$2,473,960	\$1,290,578	\$782,183	\$300,000	\$225,000	0
2023	\$2,476,293	\$1,290,832	\$782,939	\$300,000	\$225,000	0
2024	\$2,296,188	\$1,288,000	\$783,255	\$300,000	\$225,000	0

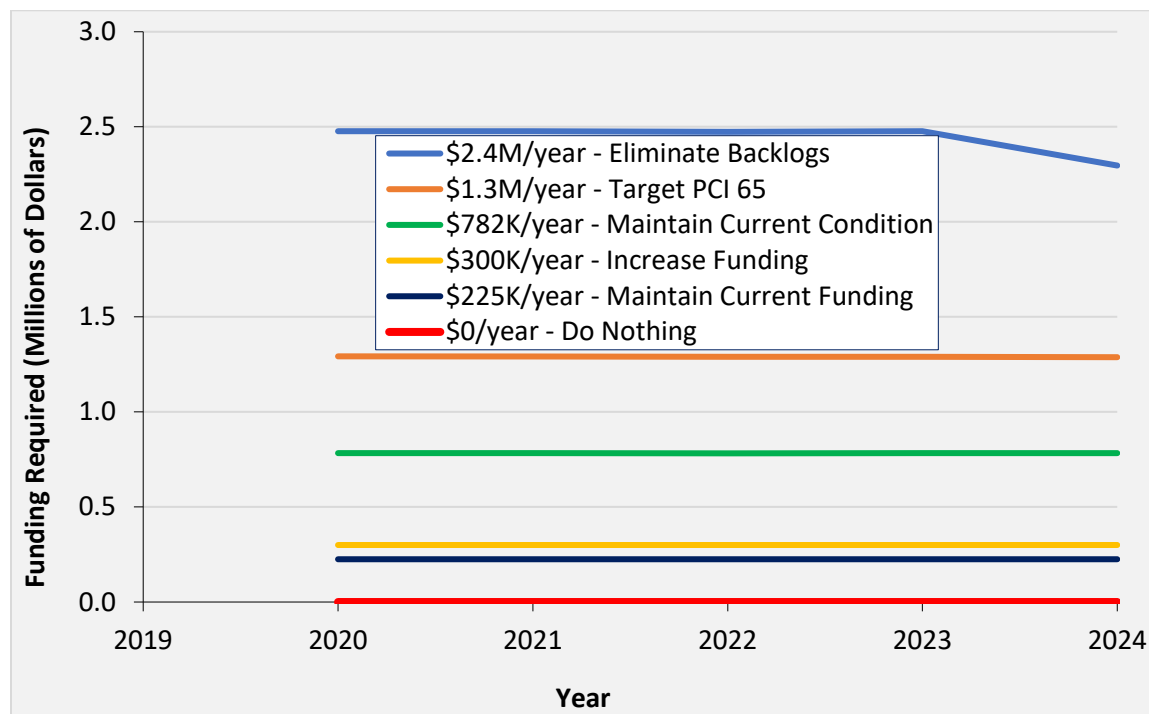


Figure 15. Required funding per year to achieve different condition targets.

Table 8 and Figure 16 show the unfunded budget based on the funding scenarios. It can be seen that it requires about \$6.8M in 2020 to eliminate the backlogs, while doing nothing will generate a backlog of \$10.2M by 2024. Current major M&R funding will sustain a backlog of \$3.6M-\$8.6M.

Table 8. Total unfunded budget for the different funding scenarios.

Year	Eliminate Backlogs	Target PCI 65	Maintain Current Condition	Increase Funding	Maintain Current Funding	Do Nothing
2020	\$6,847,727	\$2,947,319	\$3,478,251	\$3,591,710	\$3,642,122	\$4,239,755
2021	\$5,246,419	\$3,104,017	\$4,175,788	\$4,390,439	\$4,856,485	\$5,760,909
2022	\$3,536,656	\$3,217,942	\$4,846,018	\$5,873,068	\$6,387,409	\$7,352,440
2023	\$1,771,953	\$2,713,904	\$5,137,627	\$6,962,422	\$7,506,620	\$8,835,170
2024	-	\$2,041,686	\$5,143,535	\$7,733,087	\$8,584,065	\$10,176,261

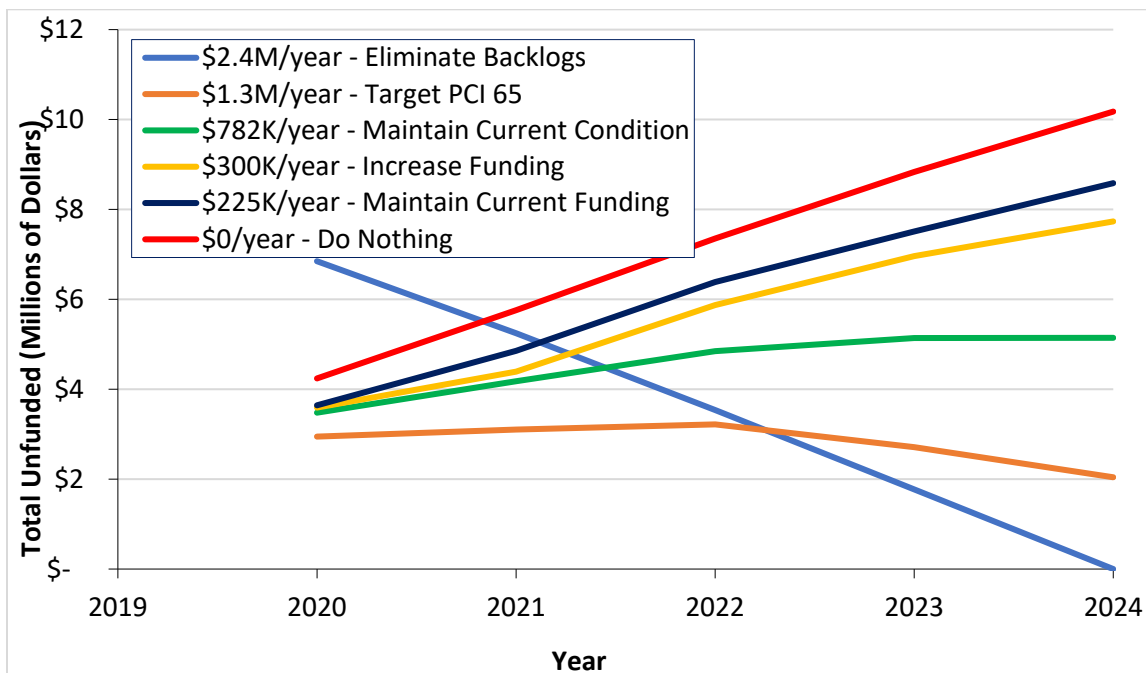


Figure 16. Total unfunded budget per year based on funding scenarios.

A 5-Year major M&R plan based on current funding and 2020 localized distress M&R plan are provided in Appendix A. Figure 17 shows the network condition distribution for the next five years with the current funding level. Figure 8 shows that currently about 23% of the pavement network is in ‘serious’ and ‘very poor’ condition, and this would keep increasing over the next five years. By 2024, about 42% network would be in ‘failed’, ‘serious’ and ‘very poor’ condition. However, the average PCI of the network is expected to be 43.9 in 2024 with the current funding level; a decrease of 11.4 PCI points from the 2019 average PCI.

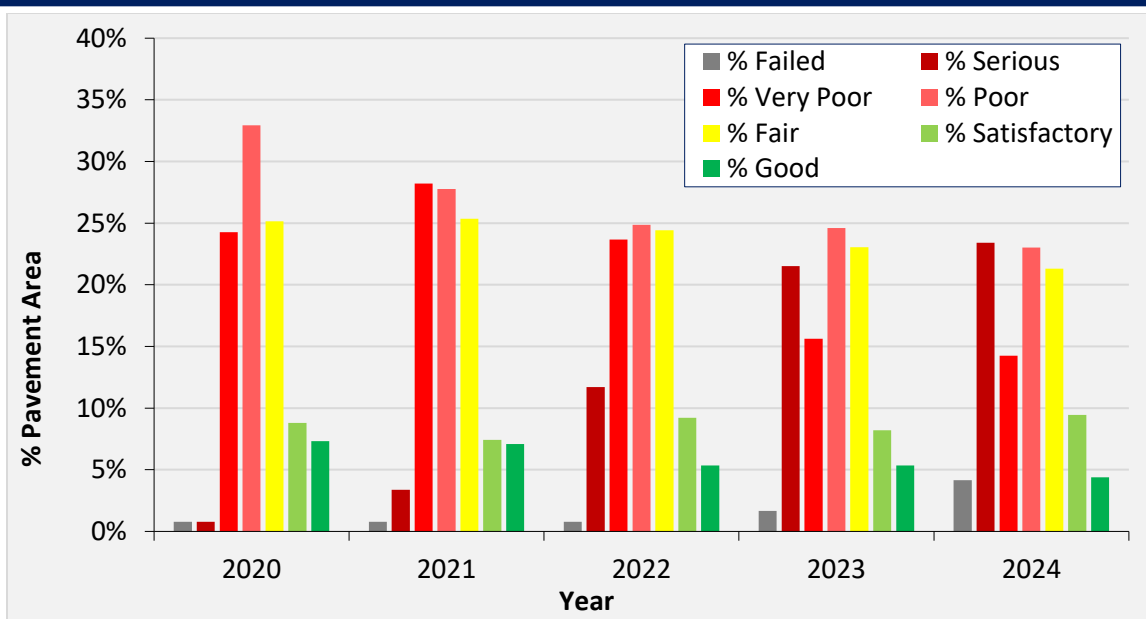


Figure 17. City’s pavement condition by year with the current major M&R funding (\$225K/Year).

4.2 Consequence of Local Distress Maintenance

The consequence of the Localized Distress Maintenance plan calculates the cost and resulting condition of the immediate implementation of local M&R, for the year of the most recent inspection. Table 9 shows the cost and pavement condition data of the consequence of the local distress maintenance plan. Based on the 2019 pavement condition survey, a preventive policy plan with preventive maintenances (crack seal, AC patching, and PCC patching) estimated that the PCI of 186 sections would increase by 5.5 points with an investment of about \$370K in 2020. Put another way, the local M&R plan adds approximately an additional 1.7 years of life (based on the performance models) to about 41% of the network area. Details of the localized distress maintenance plan based on the 2019 condition survey can be found in Appendix A. Table 10 shows the amount of maintenance work required in 2020 based on the 2019 pavement condition survey.

Table 9. Details of consequence of local distress maintenance plan.

Policy	Number Sections	Policy Cost	Avg of Start PCI	Avg of End PCI
Preventive	186	\$370,113	70.4	75.9

Table 10. Amount of maintenance work required in 2020.

Work Description	Work Quantity	Work Units	Work Cost
Patching - AC Deep	5,218.38	SqFt	\$46,965.43
Crack Sealing - AC	73,549.82	Ft	\$110,325.64
Patching - PCC Full Depth	14,073.60	SqFt	\$211,104.06
Crack Sealing - PCC	1,145.81	Ft	\$1,718.73
Total Cost			\$370,113.86

5. SUMMARY AND RECOMMENDATION

5.1 Summary

Pavement management can be defined as the systematic process of maintaining pavements cost-effectively. The investment in pavement management system is rational considering pavement management not only provides a consistent and rational management method to make decisions but also helps in optimal use of funds and reduces pavement rehabilitation, which results in extended pavement life and increased credibility with stakeholders.

In this effort to implement a pavement management system for the City of Markham, pavement data was collected with a state-of-the-art digital survey vehicle equipped with laser crack measurement system. Pavement images were used in an automated condition survey process to assess the type, severity, and extent of the distresses. The pavement inspection data was imported to the PAVER™ software to determine the pavement condition index (PCI) and analyze the pavement network. This PAVER database provides a comprehensive inventory of pavement sections with all attributes that are required for pavement management.

Based on the 2019 survey, the average pavement condition index (PCI) value for the City of Markham is about 55.3, which indicates the pavement network is in overall 'poor' condition. Based on the City's recommendation several five-year M&R funding analyses were performed using PAVER™ including: (a) do nothing (\$0/year), (b) keep current funding level of major M&R (\$225K/year), (c) maintain current condition (PCI =55.3), (d) increase major M&R funding level to \$300K/year, (e) funds to meet potential performance targets (PCI = 65), and (f) eliminate backlogs. It was found that about 41% of the pavement area will be in 'failed', 'serious', and 'very poor' condition in 2024 with the City's existing major M&R funding level.

5.2 Recommendations

5.2.1 Increase funding level

Currently, about 23% of network area is in 'serious' and 'very poor' condition which will increase to 41% by 2024. It is recommended to increase the funding level to maintain current condition and improve the condition. It is also recommended that the City should focus on applying routine preventive maintenance to pavement sections in 'satisfactory' and 'good' condition so that it would delay the transition to the 'fair' condition. Preventive maintenance activities, such as crack sealing and localized patching, can cost-effectively extend the life of a pavement.

5.2.2 Routine update of PAVER™ pavement management system

ARA recommends updating the PAVER pavement management system annually to record the major M&R, stopgap and localized preventive maintenance activities, and pavement inventory changes (i.e., section split, new roads, jurisdictional changes, etc.). Based on the yearly updates of M&R activities, the City can perform M&R analysis with an updated funding level (if available), accounting for previous years(s) actual projects.

5.2.3 Routine pavement condition survey

For City of Markham, it is an excellent initiative to establish a pavement management system with the cooperation of Chicago Metropolitan Agency for Planning (CMAP). To realize the greatest benefit from this holistic effort, it is recommended that City of Markham continue to perform pavement condition surveys on a three to four-year cycle. The benefits of performing routine PCI surveys are many fold, including:

- (a) A survey provides the current condition of the pavement network and helps to determine the effectiveness of completed M&R activities performed in last few years,
- (b) Pavement performance models would be more accurate to predict the future condition, and
- (c) Appropriate treatment and optimal funding allocation are possible to repair localized distresses based on the survey

6. PAVEMENT PRESERVATION

Pavement preservation is a proactive method to keep pavements in good condition with lower costs. This approach includes work that is planned and performed to improve or retain the condition of the pavement in a state of good repair. Preservation activities generally do not increase the structural strength but do restore pavements' overall condition. The intended purpose of a pavement preservation program is to maintain or restore the surface characteristics of pavements and to extend service life of the pavements being managed. However, the improvements are such that there is no increase in capacity or strength but they can have a positive impact on the structural capacity by slowing deterioration. The Federal Highway Administration (FHWA) Office of Asset Management provided the following guidance regarding pavement preservation definitions in a memorandum dated September 12, 2005:

Pavement preservation represents a proactive approach to maintain our existing highways. It enables State Transportation agencies (STAs) to reduce costly, time-consuming rehabilitation and reconstruction projects and the associated traffic disruptions. With timely preservation, we can provide the traveling public with improved safety and mobility, reduced congestion, and smoother, longer-lasting pavements. This is the true goal of pavement preservation, a goal in which the FHWA, through its partnership with the States, local agencies, industry organizations, and other interested stakeholders, is committed to achieving.

The main component of pavement preservation is preventive maintenance. As defined by FHWA, preventive maintenance is a 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 general philosophy of the use of preventive maintenance treatments is to “apply the right treatment, to the right pavement, at the right time.” These practices result in an outcome of “keeping good roads in good condition.”

When activities (e.g., crack sealing, filling, application of seal coats) are placed on the pavement at the right time they are examples of preventive maintenance treatments. Preventive maintenance should be applied to pavements in good condition having significant remaining service life (RSL). It applies cost-effective treatments to the surface or near-surface of structurally sound pavements. Examples include the following:

- Asphalt crack sealing
- Chip sealing
- Concrete joint sealing
- Diamond grinding
- Dowel-bar retrofit
- Isolated, partial and/or full-depth concrete repairs to restore the functionality of the slab

Based on the pavement condition assessment results the following treatment has been selected to describe in this section:

- Bituminous-Surfaced Pavements
 - Asphalt Rejuvenator i.e. reclamite
 - This treatment can be applied globally in the City of Markham network at the very early stage of newly constructed pavement or after placing a new surface.
 - Crack Filling/Crack Sealing
 - Sealing/filling cracks in asphalt pavement prevent the intrusion of water into the pavement structure and decrease the deterioration of pavement conditions.
 - Chip Seals
 - Chip seals can be applied on low volume roads across the network.
- Concrete-Surfaced Pavements
 - Joint/Crack Sealing
 - Cracking sealing in concrete pavement prevents the entry of water beneath the concrete slab and helps to prevent pumping.
 - Undersealing
 - Undersealing fills the voids under the concrete slabs, thereby reducing deflections and, consequently, deflection-related distresses such as pumping or faulting
 - Load Transfer Restoration
 - Poor load transfer can lead to pumping, joint faulting, and corner breaks

Asphalt Rejuvenator/Reclamite	Evaluation Factors			
	Climate	Traffic	Pavement Condition	Not Applicable To
According to the National Center for Pavement Preservation, “a true asphalt rejuvenator is a maltene-based petroleum product which has the ability to absorb or penetrate into an asphaltic concrete pavement and restore those reactive components (maltenes) that have been lost from the asphalt cement binder due to the natural process of oxidation. Reclamite is an asphalt pavement rejuvenator which is a maltene-based petroleum product.	<ul style="list-style-type: none"> • shall not be applied to a wet surface or when rain is occurring • shall not be applied when the temperature is less than 40° in the shade 	Traffic control shall continue until the area has been sanded and the resultant surface is not slippery or dangerous to vehicular travel	Newly constructed pavements (0-3 years)	On older pavements, it will reverse the effects of aging due to reverse the effects of aging due to environmental damage from sunlight and environmental damage from sunlight and water intrusion.
Construction Considerations	All manufactured sand used during the treatment must be removed no later than 24 hours after the treatment of a roadway.			
Expected Life	Add 5 to 10 years of extra service life to the treated pavement			
Typical Costs	\$0.79-0.84/Sq. Yd.			

Crack Filling and Evaluation Factors Crack Sealing	Evaluation Factors			
	Climate	Traffic	Pavement Condition	Not Applicable To
These treatments are intended primarily to prevent the intrusion of moisture through existing cracks. Crack sealing refers to a sealant operation that addresses “working” cracks, i.e., those that open and close with changes in temperature. It typically implies high-quality materials and good preparation. Crack filling is for cracks that undergo little movement. Sealants used are typically thermo-plastic (bituminous) materials that soften upon heating and harden upon cooling.	Treatment can perform well in all climatic conditions. However, sealants perform best in the dryer and warmer environments that do not undergo large daily temperature changes.	Performance is not significantly affected by varying ADT or truck levels.	Functional/Other: <ul style="list-style-type: none"> • Longitudinal cracking • Minor block cracking • Transverse cracking Structural: Adds no structural benefit, but does reduce moisture infiltration through cracks. Only practical if the extent of cracking is minimal and if there is little to no structural cracking.	<ul style="list-style-type: none"> • Structural failure (i.e., extensive fatigue cracking or high severity rutting) • Extensive pavement deterioration, little remaining life
Construction Considerations	Placement should be done during cool, dry weather conditions. Proper crack cleaning is essential to a good bond and maximum performance. Some agencies also use hot compressed air lance prior to sealing.			
Expected Life	2 to 6 years.			
Typical Costs	\$0.30 to \$1.50 per linear ft for crack sealing, including routing; \$0.30 per linear ft for crack filling. Costs are slightly higher for small jobs.			

Chip seal	Evaluation Factors			
	Climate	Traffic	Pavement Condition	Not Applicable To
Asphalt (commonly an emulsion) is applied directly to the pavement surface (0.35 to 0.50 gal/yd ²) followed by the application of aggregate chips (15 to 50 lb/yd ²), which are then immediately rolled to imbed chips (50 to 70 percent). Application rates depend upon aggregate gradation and maximum size. The treatment seals the pavement surface and improves friction.	Treatment performs well in all climatic conditions	With proper design and placement, chip seals can perform well on high-volume roads. However, use is primarily limited to lower-speed, lower volume Roads because of the propensity for loose chips to crack windshields.	Functional/Other <ul style="list-style-type: none"> • Longitudinal, transverse and block cracking • Raveling/weathering (loose surface material must be removed) • Friction loss, roughness (L) • Bleeding (L) • Moisture infiltration Structural Adds almost no structural capacity. However, effective at sealing fatigue cracks (M) in comparison with other treatments.	<ul style="list-style-type: none"> • Structural failure (extensive fatigue cracking and/or deep rutting) • Thermal cracking (H) • Extensive pavement deterioration, little or no remaining life • Can accelerate the development of stripping in susceptible HMA pavements
Site Restrictions	High-speed, high-volume roadways are often avoided, although a number of approaches are being used to extend the applicability of these treatments			
Construction Considerations	The surface must be clean. Treatment should be placed during warm weather with chip spreader immediately behind asphalt distributor and rollers close behind the spreader. Approximately 2 hours required before roadway may be re-opened to normal speed traffic. Brushing is usually required to remove loose chips.			
Expected Life	4 to 7 years when placed in a preventive maintenance mode.			
Typical Costs	\$0.75 to \$0.90 per yd ² for a single application and \$1.10 to \$1.25 per yd ² for a double application.			

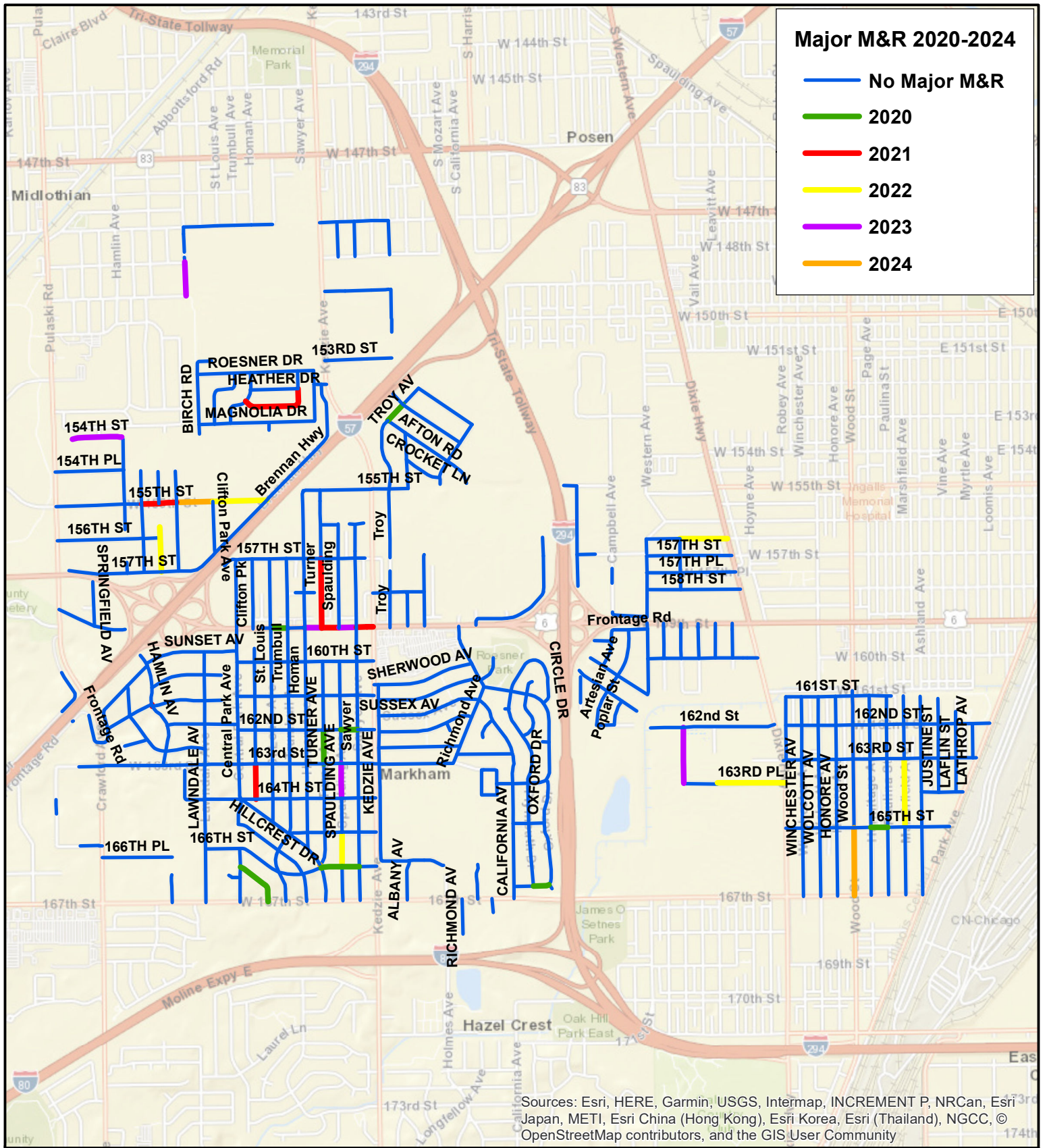
Joint Resealing and Crack Sealing	Evaluation Factors			
	Climate	Traffic	Pavement Condition	Not Applicable To
Resealing of transverse joints and sealing of cracks in PCC pavements is intended to minimize the infiltration of surface water into the underlying pavement structure and to prevent the intrusion of incompressibles into the joint. A range of materials including bituminous, silicone, and neoprene are used in designed configurations.	The sealing of PCC pavement joints and cracks performs well in all climatic conditions. Sealant performance is affected by environmental conditions and the performance of sealed and unsealed pavement structures probably varies within environmental regions.	<ul style="list-style-type: none"> • Performance is not affected by different ADT or percent trucks. • Silicone sealants that are not properly recessed are more likely to fail in the wheel path. 	<p>Functional/Other</p> <ul style="list-style-type: none"> • Longitudinal and transverse cracking (L) • Unsealed or partially sealed joints. <p>Structural</p> <p>No direct structural benefit, but may reduce the rate of structural deterioration. Crack sealing is not an effective method of repairing cracked slabs but may be useful in preventing further deterioration.</p>	Different materials can be expected to perform for different durations. Material selection should be based on the expected time until the next treatment.
Site Restrictions	The sealant reservoir should be clean and dry. Variable width reservoirs may cause a problem where backer rods are specified.			
Construction Considerations	Sealant performance is dependent on many construction factors, including material type and placement geometry, and application in a clean and dry environment.			
Expected Life	7 to 8 years.			
Typical Costs	\$0.75 to \$1.25 per linear ft for hot-pour rubberized materials and from about \$1.00 to \$2.00 per linear ft for silicone materials.			

Load Transfer Restoration	Evaluation Factors			
	Climate	Traffic	Pavement Condition	Not Applicable To
Load transfer restoration (LTR) is the placement of load transfer devices across joints or cracks in an existing jointed PCC pavement to restore load transfer at these locations. Poor load transfer can lead to pumping, joint faulting, and corner breaks.	LTR has been used in all climatic regions.	The need for LTR increases with an increased ADT and percent trucks. Low volume jointed concrete pavements that are not doweled may not need LTR.	<p>Functional/Other</p> <p>It can prevent the development of a rough ride caused by faulting.</p> <p>Structural</p> <p>Most effective on jointed concrete pavements that have poor load transfer at joints and/or transverse cracks but also have significant remaining structural life. The optimum time to apply this technique is when the pavement is just beginning to show signs of structural distress, such as pumping and the onset of faulting.</p>	Significant faulting, or other signs of structural failure (such as pumping, mid-panel cracking, or corner breaks). Pavements with little remaining life or materials-related distresses.
Construction Considerations	Two to four bars per wheel path is typical. Care must be given to the selection of the patch material and isolation of the joint.			
Expected Life	minimum expected life is 9 to 10 years			
Typical Costs	For production jobs, the typical costs are \$25 to \$35 per dowel.			

Undersealing	Evaluation Factors			
	Climate	Traffic	Pavement Condition	Not Applicable To
Undersealing is the pressure insertion of a flowable material beneath a PCC slab to fill voids between the slab and base, thereby reducing deflections and, consequently, deflection-related distresses such as pumping or faulting. It is most often performed in areas where pumping and loss of support occur, such as beneath transverse joints and deteriorated cracks. The voids being filled by this technique are generally less than 3 mm (0.12 in.) thick.	No studies are known to differentiate between the performance of undersealing in different environmental conditions.	Performance is not known to be affected by different levels of ADT or percent trucks.	<p>Functional/Other Anticipates the development of roughness from faulting.</p> <p>Structural Fills voids that, if left unfilled, will lead to faulting and other structural deterioration. Performs best before faulting starts to develop.</p>	<p>Significant faulting, or other signs of structural failure (such as pumping, mid-panel cracking, or corner breaks), suggest structural failure requiring more extensive rehabilitation.</p> <p>Additional strategies, such as dowel retrofitting, may be required for pavements without load transfer.</p>
Site Restrictions	Voids must be identifiable and contained for undersealing to work			
Construction Considerations	Overfilling voids can contribute to worse problems than leaving them unfilled.			
Expected Life	Performance has been extremely variable			
Typical Costs	Cost depends on the material used, the extent and size of the voids, and the size of the project. Cement-fly ash grout undersealing ranges from about \$0.90 to \$1.00 per yd ² , while asphalt undersealing ranges from about \$0.45 to \$0.50 per yd ² .			

Appendix — A

1. 2020-2024 Major M&R Plan Based on Current Funding
2. 2020 Local Distress Maintenance Plan Based on 2019 Condition Survey
3. Pavement Surface Type
4. 2019 International Roughness Index (IRI)
5. List of Sections Selected for 2020-2024 Major M&R Based on Current Funding
6. List of Pavement Sections with PCI and IRI values Based on 2019 Survey
7. Details of 2020 Local Distress Maintenance Plan



Major M&R 2020-2024

- No Major M&R
- 2020
- 2021
- 2022
- 2023
- 2024

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

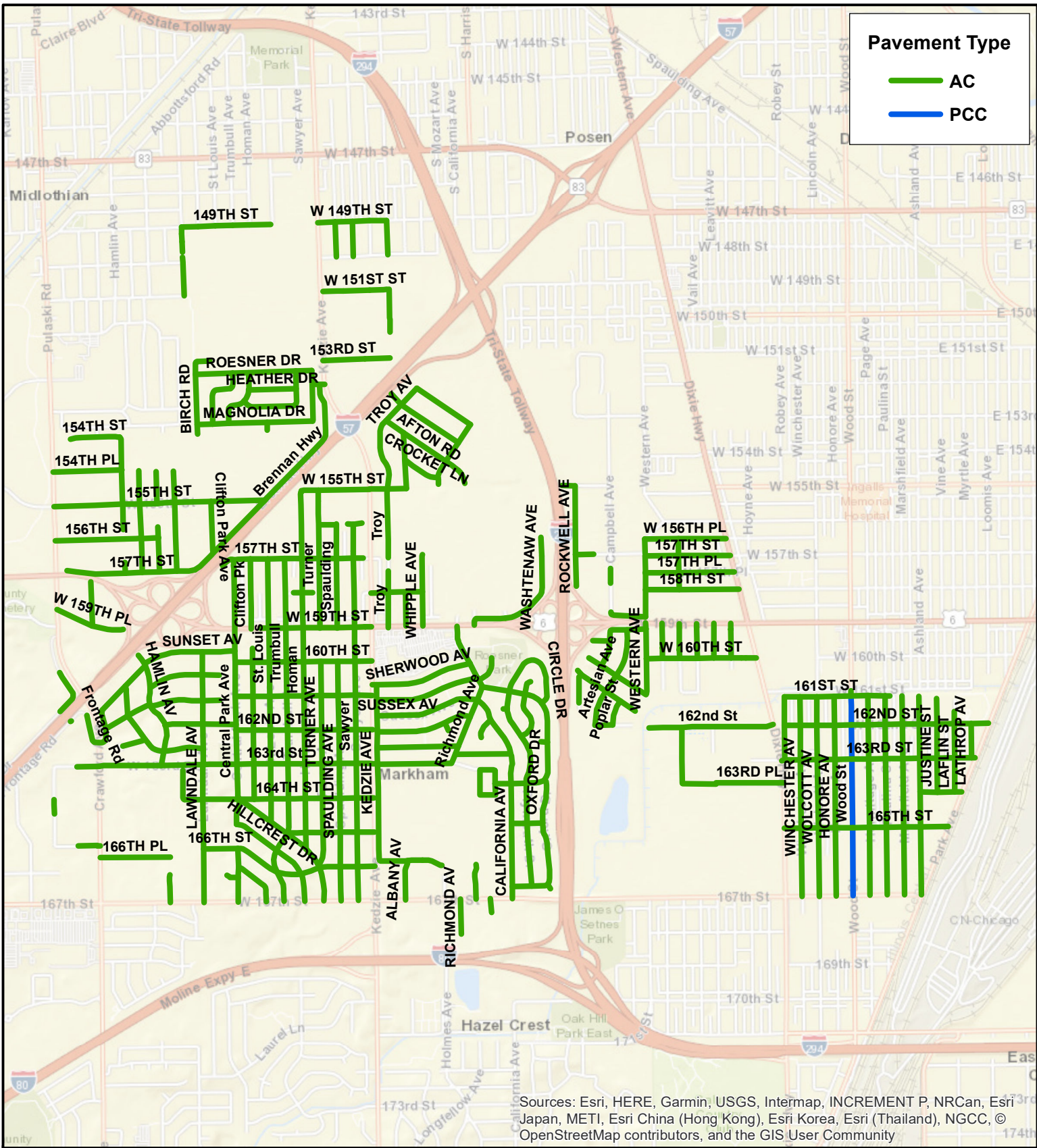
0 1,300 2,600 Feet

Major M&R Plan
2020 - 2024

City of Markham, Illinois

Map # 1

ARA



0 1,300 2,600 Feet

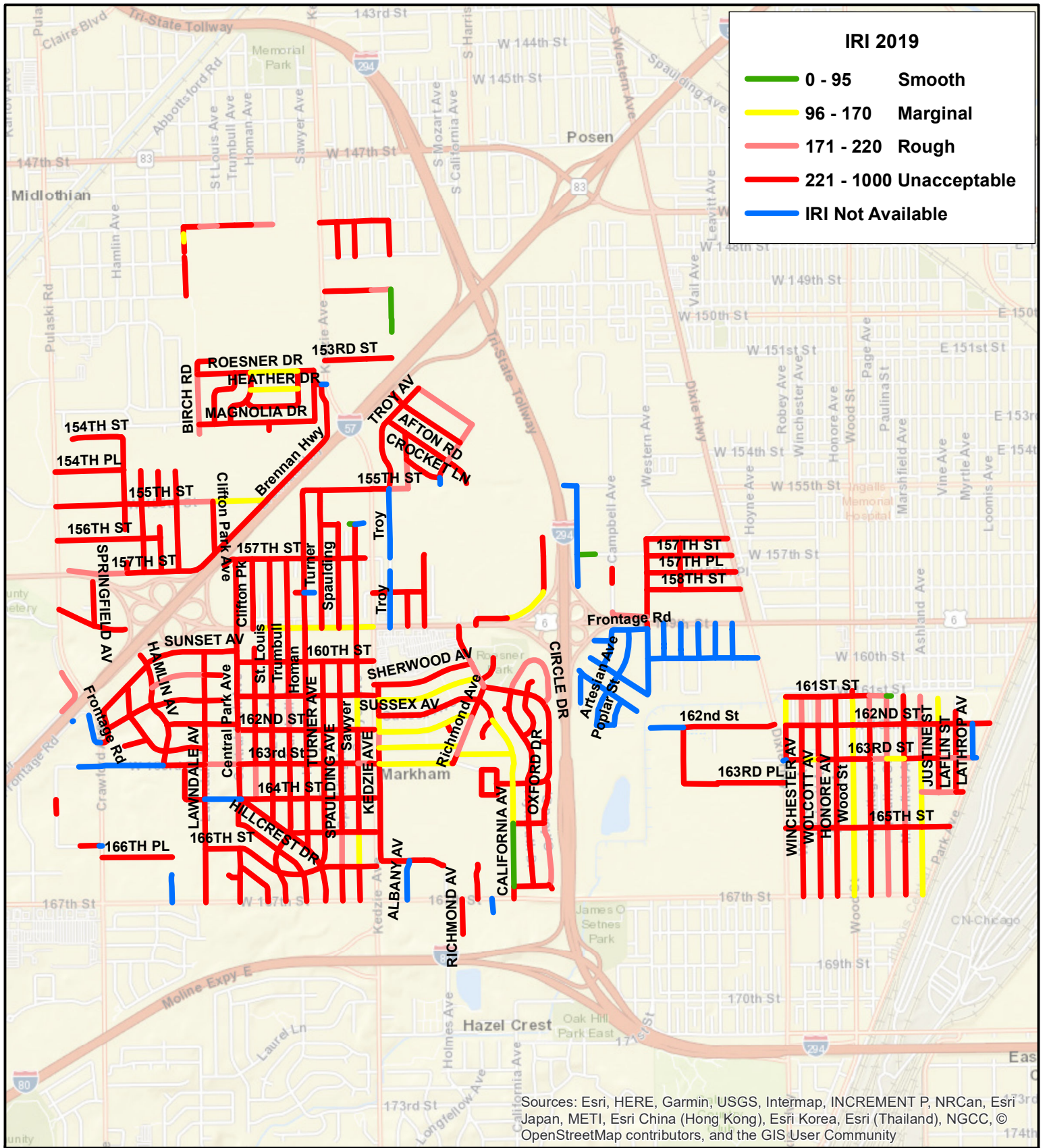


Pavement Type

City of Markham, Illinois



Map # 3



IRI 2019

- 0 - 95 Smooth
- 96 - 170 Marginal
- 171 - 220 Rough
- 221 - 1000 Unacceptable
- IRI Not Available

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

0 1,300 2,600 Feet

IRI 2019

City of Markham, Illinois

Map # 4

Table A-1: List of Pavement Sections Selected for Major M&R 2020-2024

Year	Branch ID	Section ID	Functional Class	Surface Type	Length (ft)	Width (ft)	Area (Sqft)	PCI Before	Condition Category	Cost	M&R Type
2020	162ND ST	411	Residential	AC	328	24	7,870	39.0	Very Poor	\$18,176	2-in Mill & Overlay
2020	165TH ST	475	Residential	AC	332	24	7,966	39.0	Very Poor	\$18,398	2-in Mill & Overlay
2020	166TH ST	485	Residential	AC	407	24	9,767	37.9	Very Poor	\$22,558	2-in Mill & Overlay
2020	166TH ST	487	Residential	AC	332	24	7,962	39.0	Very Poor	\$18,389	2-in Mill & Overlay
2020	OXFORD SO	492	Residential	AC	313	24	7,520	39.0	Very Poor	\$17,367	2-in Mill & Overlay
2020	TROY A AV	197	Residential	AC	431	24	10,335	39.0	Very Poor	\$23,869	2-in Mill & Overlay
2020	TURNERA VE	234	Residential	AC	652	24	15,652	39.0	Very Poor	\$36,150	2-in Mill & Overlay
2020	WEDGEW DR	490	Residential	AC	927	24	22,239	39.0	Very Poor	\$51,362	2-in Mill & Overlay
2020	W 159THST	2300	Arterial	AC	328	24	7,877	51.0	Poor	\$18,193	2-in Mill & Overlay
2021	155TH ST	100	Minor Collector	AC	671	24	16,108	54.7	Poor	\$13,028	2-in Mill & Overlay
2021	CLIFTO AV	273	Residential	AC	678	24	16,260	38.9	Very Poor	\$38,681	2-in Mill & Overlay
2021	HAMLIN AV	303	Residential	AC	36	24	862	33.8	Very Poor	\$2,051	2-in Mill & Overlay
2021	Turnerner	229	Residential	AC	1,347	24	32,337	38.9	Very Poor	\$76,924	2-in Mill & Overlay
2021	WILLOWANE	352	Residential	AC	1,354	24	32,485	38.9	Very Poor	\$77,277	2-in Mill & Overlay
2021	W 159THST	2320	Arterial	AC	334	24	8,009	54.7	Poor	\$6,477	2-in Mill & Overlay
2021	W 159THST	2360	Arterial	AC	326	24	7,812	54.7	Poor	\$6,319	2-in Mill & Overlay
2022	155TH ST	101	Minor Collector	AC	1,045	24	25,074	54.1	Very Poor	\$52,835	2-in Mill & Overlay
2022	163RD PL	442	Residential	AC	1,306	24	31,350	39.4	Very Poor	\$43,784	2-in Mill & Overlay
2022	LawndaAve	294	Residential	AC	865	24	20,761	39.4	Very Poor	\$28,995	2-in Mill & Overlay
2022	MARSHF AV	162	Residential	AC	1,328	24	31,870	39.4	Very Poor	\$44,510	2-in Mill & Overlay
2022	SPAULDAVE	223	Residential	AC	664	24	15,925	39.4	Very Poor	\$22,242	2-in Mill & Overlay
2022	W 156THPL	2317	Residential	AC	919	24	22,055	39.4	Very Poor	\$30,802	2-in Mill & Overlay
2023	154TH ST	105	Residential	AC	958	24	22,982	39.1	Very Poor	\$52,200	2-in Mill & Overlay
2023	CENTRA AV	278	Residential	AC	653	24	15,660	39.1	Very Poor	\$35,570	2-in Mill & Overlay
2023	OAKLEY AV	138	Residential	AC	1,074	24	25,778	39.1	Very Poor	\$58,551	2-in Mill & Overlay
2023	SPAULDAVE	224	Residential	AC	671	24	16,113	39.1	Very Poor	\$36,598	2-in Mill & Overlay
2023	W 159THST	2346	Arterial	AC	331	24	7,943	53.6	Poor	\$20,046	2-in Mill & Overlay
2023	W 159THST	2358	Arterial	AC	336	24	8,075	53.6	Poor	\$20,378	2-in Mill & Overlay
2024	155TH ST	99	Minor Collector	AC	704	24	16,889	54.6	Poor	\$18,000	2-in Mill & Overlay
2024	BELLEP DR	460	Residential	AC	62	24	1,488	39.3	Very Poor	\$2,746	2-in Mill & Overlay
2024	Wood S St	96	Arterial	PCC	1,315	24	31,556	54.8	Poor	\$201,342	Patching and Repair

Table A-2: List of Pavement Sections with PCI and IRI Values

BranchID	SectionID	Length (ft)	Width (ft)	Section Rank	Area (SqFt)	Surface Type	AADT	IRI (in./mi)	PCI	PCI Category
153RD ST	360	814	24	Residential	19,542	AC	N/A	400	73	Satisfactory
154TH ST	105	958	24	Residential	22,982	AC	N/A	400	49	Poor
155TH ST	98	1,658	24	Minor Collector	39,792	AC	625	247	38	Very Poor
155TH ST	99	704	24	Minor Collector	16,889	AC	625	201	62	Fair
155TH ST	100	671	24	Minor Collector	16,108	AC	625	337	57	Fair
155TH ST	101	1,045	24	Minor Collector	25,074	AC	625	150	58	Fair
155TH ST	102	52	24	Minor Collector	1,257	AC	N/A	400	70	Fair
155TH ST	342	346	24	Residential	8,298	AC	N/A	400	71	Satisfactory
155TH ST	343	368	24	Residential	8,829	AC	N/A	182	61	Fair
156TH ST	338	1,661	24	Residential	39,876	AC	N/A	304	53	Poor
157TH PL	339	651	24	Residential	15,634	AC	N/A	333	53	Poor
157TH PL	340	1,072	24	Residential	25,724	AC	N/A	400	28	Very Poor
157TH ST	320	1,136	24	Residential	27,269	AC	N/A	179	86	Good
157TH ST	321	354	24	Residential	8,504	AC	N/A	286	38	Very Poor
157TH ST	322	330	24	Residential	7,911	AC	N/A	240	38	Very Poor
157TH ST	323	326	24	Residential	7,816	AC	N/A	253	65	Fair
157TH ST	324	335	24	Residential	8,048	AC	N/A	382	34	Very Poor
157TH ST	325	279	24	Residential	6,702	AC	N/A	400	27	Very Poor
157TH ST	326	306	24	Residential	7,334	AC	N/A	377	34	Very Poor
157TH ST	327	338	24	Residential	8,122	AC	N/A	400	31	Very Poor
157TH ST	328	332	24	Residential	7,973	AC	N/A	400	33	Very Poor
157TH ST	329	332	24	Residential	7,975	AC	N/A	308	44	Poor
157TH ST	330	330	24	Residential	7,918	AC	N/A	300	36	Very Poor
157TH ST	331	332	24	Residential	7,969	AC	N/A	293	39	Very Poor
157TH ST	332	327	24	Residential	7,837	AC	N/A	277	37	Very Poor
157TH ST	333	187	24	Residential	4,491	AC	N/A	322	44	Poor
157TH ST	334	649	24	Residential	15,581	AC	N/A	390	40	Very Poor
157TH ST	335	996	24	Residential	23,897	AC	N/A	300	39	Very Poor
158TH ST	315	166	24	Residential	3,987	AC	N/A	348	39	Very Poor
158TH ST	316	199	24	Residential	4,773	AC	N/A	N/A	N/A	N/A
158TH ST	317	655	24	Residential	15,728	AC	N/A	378	44	Poor
158TH ST	318	654	24	Residential	15,687	AC	N/A	400	55	Poor
158TH ST	319	1,153	24	Residential	27,682	AC	N/A	276	38	Very Poor
160TH ST	367	340	24	Residential	8,158	AC	N/A	292	38	Very Poor
160TH ST	368	331	24	Residential	7,944	AC	N/A	400	49	Poor
160TH ST	369	329	24	Residential	7,904	AC	N/A	254	48	Poor
160TH ST	370	322	24	Residential	7,733	AC	N/A	400	40	Very Poor
160TH ST	371	337	24	Residential	8,078	AC	N/A	400	34	Very Poor
160TH ST	372	328	24	Residential	7,868	AC	N/A	400	33	Very Poor
160TH ST	373	328	24	Residential	7,869	AC	N/A	400	43	Poor
160TH ST	374	331	24	Residential	7,932	AC	N/A	400	49	Poor
161ST ST	381	339	24	Residential	8,136	AC	N/A	400	39	Very Poor

PCI - 'N/A' - Pavement data was not collected

BranchID	SectionID	Length (ft)	Width (ft)	Section Rank	Area (SqFt)	Surface Type	AADT	IRI (in./mi)	PCI	PCI Category
161ST ST	382	330	24	Residential	7,912	AC	N/A	400	30	Very Poor
161ST ST	383	330	24	Residential	7,929	AC	N/A	400	59	Fair
161ST ST	384	330	24	Residential	7,916	AC	N/A	400	61	Fair
161ST ST	385	327	24	Residential	7,838	AC	N/A	400	35	Very Poor
161ST ST	386	334	24	Residential	8,027	AC	N/A	400	39	Very Poor
161ST ST	387	329	24	Residential	7,901	AC	N/A	400	38	Very Poor
161ST ST	388	330	24	Residential	7,920	AC	N/A	400	55	Poor
161ST ST	421	302	24	Residential	7,248	AC	N/A	400	61	Fair
161ST ST	422	326	24	Residential	7,823	AC	N/A	257	58	Fair
161ST ST	423	330	24	Residential	7,908	AC	N/A	267	50	Poor
161ST ST	424	327	24	Residential	7,849	AC	N/A	217	73	Satisfactory
161ST ST	425	339	24	Residential	8,124	AC	N/A	337	56	Fair
161ST ST	426	324	24	Residential	7,764	AC	N/A	400	43	Poor
161ST ST	427	94	24	Residential	2,260	AC	N/A	60	47	Poor
162ND PL	416	772	24	Residential	18,517	AC	N/A	400	52	Poor
162ND ST	405	328	24	Residential	7,871	AC	N/A	400	38	Very Poor
162ND ST	406	332	24	Residential	7,958	AC	N/A	400	40	Very Poor
162ND ST	407	330	24	Residential	7,915	AC	N/A	400	53	Poor
162ND ST	408	333	24	Residential	7,986	AC	N/A	400	39	Very Poor
162ND ST	409	328	24	Residential	7,882	AC	N/A	392	38	Very Poor
162ND ST	410	332	24	Residential	7,976	AC	N/A	400	46	Poor
162ND ST	411	328	24	Residential	7,870	AC	N/A	400	41	Poor
162ND ST	412	329	24	Residential	7,902	AC	N/A	335	42	Poor
162ND ST	428	303	24	Residential	7,273	AC	N/A	241	74	Satisfactory
162ND ST	429	329	24	Residential	7,888	AC	N/A	400	38	Very Poor
162ND ST	430	328	24	Residential	7,870	AC	N/A	400	35	Very Poor
162ND ST	431	337	24	Residential	8,095	AC	N/A	342	54	Poor
162ND ST	432	325	24	Residential	7,802	AC	N/A	297	53	Poor
162ND ST	433	329	24	Residential	7,907	AC	N/A	400	47	Poor
162ND ST	434	338	24	Residential	8,113	AC	N/A	284	38	Very Poor
162ND ST	435	329	24	Residential	7,903	AC	N/A	319	39	Very Poor
162ND ST	436	326	24	Residential	7,821	AC	N/A	251	65	Fair
162ND ST	437	330	24	Residential	7,913	AC	N/A	387	49	Poor
162ND ST	438	338	24	Residential	8,116	AC	N/A	378	36	Very Poor
162ND ST	439	335	24	Residential	8,041	AC	N/A	308	38	Very Poor
162nd St	440	636	24	Residential	15,257	AC	N/A	N/A	N/A	N/A
162nd St	441	1,768	24	Residential	42,425	AC	N/A	400	45	Poor
163RD PL	442	1,306	24	Residential	31,350	AC	N/A	400	47	Poor
163rd St	417	1,203	24	Residential	28,862	AC	950	N/A	66	Fair
163rd St	418	657	24	Residential	15,766	AC	950	193	54	Poor
163rd St	419	812	24	Residential	19,485	AC	950	400	34	Very Poor
163rd St	420	427	18	Residential	10,253	AC	950	N/A	31	Very Poor
163rd St	499	321	24	Residential	7,696	AC	950	244	64	Fair
163rd St	500	333	24	Residential	8,002	AC	950	231	71	Satisfactory

PCI - 'N/A' - Pavement data was not collected

IRI - 'N/A' - IRI data was not collected

BranchID	SectionID	Length (ft)	Width (ft)	Section Rank	Area (SqFt)	Surface Type	AADT	IRI (in./mi)	PCI	PCI Category
163rd St	501	329	24	Residential	7,900	AC	950	248	66	Fair
163rd St	502	336	24	Residential	8,057	AC	950	221	60	Fair
163rd St	503	327	24	Residential	7,836	AC	950	283	61	Fair
163rd St	504	330	24	Residential	7,925	AC	950	225	76	Satisfactory
163rd St	505	327	24	Residential	7,839	AC	950	303	67	Fair
163rd St	506	221	24	Residential	5,305	AC	950	189	76	Satisfactory
163rd St	507	111	24	Residential	2,653	AC	950	400	76	Satisfactory
163rd St	508	83	24	Residential	1,991	AC	N/A	400	72	Satisfactory
163rd St	509	1,411	24	Residential	33,870	AC	950	101	70	Fair
163RD ST	526	63	24	Residential	1,510	AC	1150	N/A	N/A	N/A
163RD ST	527	327	24	Residential	7,860	AC	1150	350	100	Good
163RD ST	528	329	24	Residential	7,902	AC	1150	184	100	Good
163RD ST	529	327	24	Residential	7,847	AC	1150	164	100	Good
163RD ST	530	336	24	Residential	8,060	AC	1150	266	100	Good
163RD ST	531	329	24	Residential	7,906	AC	1150	327	96	Good
163RD ST	532	336	24	Residential	8,068	AC	1150	207	100	Good
163RD ST	533	328	24	Residential	7,879	AC	1150	190	100	Good
163RD ST	534	326	24	Residential	7,817	AC	1150	400	93	Good
163RD ST	535	330	24	Residential	7,917	AC	1150	155	100	Good
163RD ST	536	338	24	Residential	8,115	AC	1150	400	94	Good
163RD ST	537	304	24	Residential	7,306	AC	1150	310	93	Good
163RD ST	538	71	24	Residential	1,696	AC	1150	N/A	N/A	N/A
164TH ST	444	175	24	Residential	16,918	AC	N/A	N/A	13	Serious
164TH ST	445	286	24	Residential	6,865	AC	N/A	400	58	Fair
164TH ST	446	334	24	Residential	8,024	AC	N/A	400	36	Very Poor
164TH ST	447	329	24	Residential	7,890	AC	N/A	400	45	Poor
164TH ST	448	338	24	Residential	8,114	AC	N/A	373	59	Fair
164TH ST	449	328	24	Residential	7,883	AC	N/A	400	34	Very Poor
164TH ST	450	323	24	Residential	7,758	AC	N/A	385	65	Fair
164TH ST	451	326	24	Residential	7,832	AC	N/A	392	54	Poor
164TH ST	452	333	24	Residential	8,001	AC	N/A	400	42	Poor
164TH ST	453	338	24	Residential	8,116	AC	N/A	216	45	Poor
164TH ST	454	334	24	Residential	8,022	AC	N/A	193	52	Poor
164TH ST	455	130	24	Residential	3,130	AC	N/A	352	58	Fair
165TH ST	119	54	24	Residential	1,301	AC	N/A	N/A	N/A	N/A
165TH ST	462	364	24	Residential	8,726	AC	N/A	400	40	Very Poor
165TH ST	463	332	24	Residential	7,968	AC	N/A	400	36	Very Poor
165TH ST	464	329	24	Residential	7,901	AC	N/A	369	40	Very Poor
165TH ST	465	327	24	Residential	7,851	AC	N/A	400	35	Very Poor
165TH ST	466	333	24	Residential	7,985	AC	N/A	400	40	Very Poor
165TH ST	467	302	24	Residential	7,257	AC	N/A	281	47	Poor
165TH ST	468	297	24	Residential	7,130	AC	N/A	342	60	Fair
165TH ST	469	328	24	Residential	7,884	AC	N/A	324	35	Very Poor
165TH ST	470	326	24	Residential	7,812	AC	N/A	400	50	Poor

PCI - 'N/A' - Pavement data was not collected

IRI - 'N/A' - IRI data was not collected

BranchID	SectionID	Length (ft)	Width (ft)	Section Rank	Area (SqFt)	Surface Type	AADT	IRI (in./mi)	PCI	PCI Category
165TH ST	471	329	24	Residential	7,905	AC	N/A	400	32	Very Poor
165TH ST	472	538	24	Residential	12,909	AC	N/A	400	44	Poor
165TH ST	473	325	24	Residential	7,803	AC	N/A	319	53	Poor
165TH ST	474	330	24	Residential	7,925	AC	N/A	234	48	Poor
165TH ST	475	332	24	Residential	7,966	AC	N/A	380	41	Poor
165TH ST	476	333	24	Residential	7,990	AC	N/A	266	56	Fair
165TH ST	477	332	24	Residential	7,966	AC	N/A	277	54	Poor
166TH PL	112	1,356	24	Residential	32,535	AC	N/A	363	53	Poor
166TH ST	483	661	24	Residential	15,860	AC	N/A	400	55	Poor
166TH ST	484	380	24	Residential	9,130	AC	N/A	400	37	Very Poor
166TH ST	485	407	24	Residential	9,767	AC	N/A	400	40	Very Poor
166TH ST	486	331	24	Residential	7,941	AC	N/A	400	49	Poor
166TH ST	487	332	24	Residential	7,962	AC	N/A	400	41	Poor
166TH ST	488	554	24	Residential	13,296	AC	N/A	295	35	Very Poor
166TH ST	489	279	24	Residential	6,700	AC	N/A	399	56	Fair
AFTON DR	202	454	24	Residential	10,905	AC	N/A	246	79	Satisfactory
AFTON RD	107	411	24	Residential	9,864	AC	N/A	256	54	Poor
AFTON RD	108	586	24	Residential	14,071	AC	N/A	400	55	Poor
AFTON RD	109	991	24	Residential	23,792	AC	N/A	245	50	Poor
ALBANY AV	203	72	24	Residential	1,722	AC	N/A	282	64	Fair
ALBANY AV	204	556	24	Residential	13,344	AC	N/A	217	52	Poor
ALBANY AV	205	771	24	Residential	18,499	AC	N/A	N/A	16	Serious
ALTA R RD	246	145	24	Residential	3,485	AC	N/A	400	51	Poor
ArtesiAve	124	936	24	Residential	22,470	AC	N/A	N/A	N/A	N/A
ArtesiAve	125	364	24	Residential	8,734	AC	N/A	N/A	N/A	N/A
ArtesiAve	126	697	24	Residential	16,730	AC	N/A	N/A	N/A	N/A
ARTHURERR	413	732	24	Residential	17,580	AC	N/A	347	38	Very Poor
ARTHURERR	414	640	24	Residential	15,358	AC	N/A	285	35	Very Poor
ARTHURERR	415	457	24	Residential	10,958	AC	N/A	400	62	Fair
ASHLAN AV	165	537	24	Residential	12,896	AC	N/A	172	94	Good
ASHLAN AV	166	650	24	Residential	15,611	AC	N/A	157	96	Good
ASHLAN AV	167	662	24	Residential	15,885	AC	N/A	172	95	Good
ASHLAN AV	168	1,311	24	Residential	31,454	AC	N/A	116	97	Good
ASHLAN AV	169	678	24	Residential	16,276	AC	N/A	105	98	Good
BELLEP DR	456	759	24	Residential	18,211	AC	N/A	252	59	Fair
BELLEP DR	457	465	24	Residential	11,164	AC	N/A	364	64	Fair
BELLEP DR	458	651	24	Residential	15,620	AC	N/A	400	35	Very Poor
BELLEP DR	459	385	24	Residential	9,241	AC	N/A	400	61	Fair
BELLEP DR	460	62	24	Residential	1,488	AC	N/A	400	51	Poor
BELLEP DR	461	391	24	Residential	9,395	AC	N/A	290	49	Poor
BERKSHIRE	191	505	24	Residential	12,118	AC	N/A	400	66	Fair
BIRCH RD	261	512	24	Residential	12,298	AC	N/A	400	55	Poor
BIRCH RD	262	971	24	Residential	23,292	AC	N/A	173	55	Poor
BIRCH RD	263	188	24	Residential	4,501	AC	N/A	174	40	Very Poor

PCI - 'N/A' - Pavement data was not collected

IRI - 'N/A' - IRI data was not collected

BranchID	SectionID	Length (ft)	Width (ft)	Section Rank	Area (SqFt)	Surface Type	AADT	IRI (in./mi)	PCI	PCI Category
BLACKS AV	377	499	24	Residential	11,974	AC	N/A	314	35	Very Poor
BLACKS AV	378	476	24	Residential	11,430	AC	N/A	370	36	Very Poor
BLACKS AV	379	1,027	24	Residential	24,657	AC	N/A	268	39	Very Poor
BLACKS AV	380	324	24	Residential	7,764	AC	N/A	310	50	Poor
BrennaHwy	103	2,670	24	Minor Collector	64,091	AC	625	314	61	Fair
BrennaHwy	336	1,431	24	Residential	34,349	AC	N/A	383	66	Fair
BrennaHwy	337	482	24	Residential	11,572	AC	N/A	373	69	Fair
CALIFO AV	520	771	24	Residential	18,514	AC	1400	137	90	Good
CALIFO AV	521	230	24	Residential	5,516	AC	1400	350	100	Good
CALIFO AV	522	1,224	24	Residential	29,372	AC	1400	88	98	Good
CALITO DR	106	1,249	24	Residential	29,969	AC	N/A	191	53	Poor
CAMBRI CT	182	286	24	Residential	6,855	AC	N/A	400	46	Poor
CAMBRI DR	183	956	24	Residential	22,953	AC	N/A	277	56	Fair
CampbeAve	131	205	24	Residential	4,912	AC	N/A	N/A	N/A	N/A
CampbeAve	132	513	24	Residential	12,306	AC	N/A	N/A	N/A	N/A
CENTRA AV	277	95	24	Residential	2,278	AC	N/A	330	45	Poor
CENTRA AV	278	653	24	Residential	15,660	AC	N/A	231	49	Poor
CentraAve	279	1,313	24	Residential	31,513	AC	1200	326	31	Very Poor
CentraAve	281	364	24	Residential	8,726	AC	N/A	321	79	Satisfactory
CentraAve	282	473	24	Residential	11,355	AC	N/A	400	43	Poor
CentraAve	283	200	24	Residential	4,806	AC	N/A	400	57	Fair
CentraAve	284	684	24	Residential	16,420	AC	1200	223	56	Fair
CentraAve	285	504	24	Residential	12,100	AC	N/A	345	44	Poor
CentraAve	493	655	24	Residential	15,709	AC	1200	194	95	Good
CentraAve	494	420	24	Residential	10,083	AC	1200	291	76	Satisfactory
CentraAve	495	539	24	Residential	12,927	AC	1200	335	100	Good
CentraAve	496	116	24	Residential	2,774	AC	N/A	400	97	Good
CentraAve	497	660	24	Residential	15,852	AC	1200	261	95	Good
CentraAve	498	223	24	Residential	5,350	AC	1200	369	99	Good
CHERRYANE	260	1,292	24	Residential	31,016	AC	N/A	400	46	Poor
CIRCLE DR	181	1,795	24	Residential	43,089	AC	N/A	198	66	Fair
CLIFTO AV	272	265	24	Residential	6,369	AC	N/A	400	48	Poor
CLIFTO AV	273	678	24	Residential	16,260	AC	N/A	200	44	Poor
CLIFTO AV	274	656	24	Residential	15,746	AC	N/A	344	55	Poor
CLIFTO AV	275	654	24	Residential	15,696	AC	N/A	400	48	Poor
CLIFTO AV	276	660	24	Residential	15,834	AC	N/A	377	63	Fair
Clifto Pk	271	1,350	24	Residential	32,406	AC	N/A	282	42	Poor
CliftoAve	300	1,001	24	Residential	24,018	AC	N/A	400	46	Poor
COUNTR DR	104	100	24	Minor Collector	2,394	AC	N/A	N/A	29	Very Poor
COUNTR DR	355	145	24	Residential	3,472	AC	N/A	400	36	Very Poor
CROCKE LN	345	749	24	Residential	17,987	AC	N/A	276	46	Poor
CYPRES RD	217	274	24	Residential	6,566	AC	N/A	400	40	Very Poor
CYPRES RD	218	716	24	Residential	17,191	AC	N/A	283	43	Poor
DAMEN ST	139	551	24	Residential	13,216	AC	N/A	144	88	Good

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BranchID	SectionID	Length (ft)	Width (ft)	Section Rank	Area (SqFt)	Surface Type	AADT	IRI (in./mi)	PCI	PCI Category
DAMEN ST	140	667	24	Residential	16,016	AC	N/A	285	48	Poor
ElmdalAve	121	292	24	Residential	7,005	AC	N/A	N/A	N/A	N/A
ElmdalAve	122	680	24	Residential	16,315	AC	N/A	N/A	N/A	N/A
ElmdalAve	123	342	24	Residential	8,196	AC	N/A	N/A	N/A	N/A
Fronta Rd	97	657	24	Minor Collector	15,765	AC	N/A	N/A	99	Good
Fronta Rd	133	323	24	Residential	7,750	AC	N/A	N/A	N/A	N/A
Fronta Rd	134	361	24	Residential	8,668	AC	N/A	N/A	N/A	N/A
HAMLIN AV	301	196	24	Residential	4,702	AC	N/A	400	50	Poor
HAMLIN AV	302	276	24	Residential	6,623	AC	N/A	400	35	Very Poor
HAMLIN AV	303	36	24	Residential	862	AC	N/A	400	40	Very Poor
HAMLIN AV	304	472	24	Residential	11,318	AC	N/A	365	49	Poor
HAMLIN AV	305	43	24	Residential	1,039	AC	N/A	400	77	Satisfactory
HAMLIN AV	306	328	24	Residential	7,866	AC	N/A	391	35	Very Poor
HAMLIN AV	307	516	24	Residential	12,375	AC	N/A	301	44	Poor
HAMLIN AV	308	440	24	Residential	10,564	AC	N/A	399	40	Very Poor
HAMLINAVE	111	538	24	Residential	12,902	AC	N/A	N/A	10	Failed
HamlinAve	309	204	24	Residential	4,893	AC	N/A	400	78	Satisfactory
HEATHE DR	354	920	24	Residential	22,090	AC	N/A	129	69	Fair
HERMIT ST	153	564	24	Residential	13,545	AC	N/A	180	69	Fair
HERMIT ST	154	1,327	24	Residential	31,836	AC	N/A	280	45	Poor
HERMIT ST	155	661	24	Residential	15,858	AC	N/A	320	68	Fair
HERMIT ST	156	1,312	24	Residential	31,489	AC	N/A	400	48	Poor
HILLCR DR	478	930	24	Residential	22,319	AC	N/A	274	53	Poor
HILLCR DR	479	668	24	Residential	16,038	AC	N/A	400	45	Poor
HILLCR DR	480	540	24	Residential	12,967	AC	N/A	306	43	Poor
Homanman	236	1,317	24	Residential	31,603	AC	N/A	305	43	Poor
Homanman	237	653	24	Residential	15,664	AC	N/A	400	45	Poor
Homanman	238	312	24	Residential	7,478	AC	N/A	249	70	Fair
Homanman	239	674	24	Residential	16,177	AC	N/A	372	51	Poor
Homanman	240	659	24	Residential	15,816	AC	N/A	289	33	Very Poor
Homanman	241	659	24	Residential	15,825	AC	N/A	400	53	Poor
Homanman	242	662	24	Residential	15,887	AC	N/A	325	57	Fair
Homanman	243	645	24	Residential	15,482	AC	N/A	400	55	Poor
Homanman	244	690	24	Residential	16,565	AC	N/A	379	45	Poor
Homanman	245	659	24	Residential	15,813	AC	N/A	309	39	Very Poor
HONORE AV	149	556	24	Residential	13,342	AC	N/A	266	61	Fair
HONORE AV	150	1,324	24	Residential	31,772	AC	N/A	315	59	Fair
HONORE AV	151	661	24	Residential	15,857	AC	N/A	400	37	Very Poor
HONORE AV	152	1,322	24	Residential	31,734	AC	N/A	400	56	Fair
Huggin Dr	362	365	24	Residential	8,762	AC	N/A	400	31	Very Poor
JUSTIN ST	170	487	24	Residential	11,697	AC	N/A	160	67	Fair
JUSTIN ST	171	660	24	Residential	15,843	AC	N/A	229	54	Poor
JUSTIN ST	172	662	24	Residential	15,876	AC	N/A	311	60	Fair
KEDZIEAVE	113	289	24	Residential	6,928	AC	N/A	380	26	Very Poor

PCI - 'N/A' - Pavement data was not collected
 IRI - 'N/A' - IRI data was not collected

BranchID	SectionID	Length (ft)	Width (ft)	Section Rank	Area (SqFt)	Surface Type	AADT	IRI (in./mi)	PCI	PCI Category
KEDZIEAVE	114	1,865	24	Residential	44,768	AC	N/A	375	34	Very Poor
KEDZIEAVE	115	307	24	Residential	7,370	AC	N/A	208	58	Fair
KEDZIEAVE	116	312	24	Residential	7,485	AC	N/A	242	61	Fair
KEDZIEAVE	117	310	24	Residential	7,450	AC	N/A	241	42	Poor
KEDZIEAVE	118	314	24	Residential	7,539	AC	N/A	160	61	Fair
LAFLIN ST	173	236	24	Residential	5,668	AC	N/A	229	38	Very Poor
LAFLIN ST	174	661	24	Residential	15,869	AC	N/A	355	44	Poor
LAFLIN ST	175	661	24	Residential	15,868	AC	N/A	297	66	Fair
LANCAS DR	401	307	24	Residential	7,362	AC	N/A	400	72	Satisfactory
LANCAS DR	402	292	24	Residential	7,016	AC	N/A	356	40	Very Poor
LANCAS DR	403	362	24	Residential	8,691	AC	N/A	360	42	Poor
LATHRO AV	176	661	24	Residential	15,859	AC	N/A	N/A	41	Poor
LAWNDA AV	286	449	24	Residential	10,780	AC	N/A	323	43	Poor
LAWNDA AV	287	482	24	Residential	11,559	AC	N/A	400	53	Poor
LAWNDA AV	288	453	24	Residential	10,862	AC	N/A	400	35	Very Poor
LAWNDA AV	289	499	24	Residential	11,964	AC	N/A	279	44	Poor
LAWNDA AV	290	671	24	Residential	16,114	AC	N/A	400	38	Very Poor
LAWNDA AV	291	958	24	Residential	22,989	AC	N/A	400	62	Fair
LAWNDA AV	292	300	24	Residential	7,193	AC	N/A	228	42	Poor
LAWNDA AV	293	1,037	24	Residential	24,899	AC	N/A	306	70	Fair
LawndaAve	294	865	24	Residential	20,761	AC	N/A	298	47	Poor
LINCOL DR	192	417	24	Residential	10,019	AC	N/A	185	80	Satisfactory
LINCOL DR	193	353	24	Residential	8,476	AC	N/A	400	66	Fair
LINCOL DR	194	130	24	Residential	3,115	AC	N/A	N/A	3	Failed
LINCOL DR	195	436	24	Residential	10,473	AC	N/A	188	67	Fair
MAGNOL DR	348	300	24	Residential	7,202	AC	N/A	267	34	Very Poor
MAGNOL DR	349	874	24	Residential	20,982	AC	N/A	400	42	Poor
MAGNOL DR	350	741	24	Residential	17,795	AC	N/A	362	39	Very Poor
MAGNOL DR	351	313	24	Residential	7,511	AC	N/A	323	40	Very Poor
MAPLE ANE	257	338	24	Residential	8,105	AC	N/A	366	50	Poor
MAPLE ANE	258	631	24	Residential	15,153	AC	N/A	341	46	Poor
MAPLE ANE	259	235	24	Residential	5,641	AC	N/A	349	42	Poor
MARSHF AV	161	543	24	Residential	13,043	AC	N/A	354	46	Poor
MARSHF AV	162	1,328	24	Residential	31,870	AC	N/A	216	47	Poor
MARSHF AV	163	662	24	Residential	15,894	AC	N/A	400	40	Very Poor
MARSHF AV	164	1,310	24	Residential	31,436	AC	N/A	262	40	Very Poor
MILLAR AV	295	603	24	Residential	14,471	AC	N/A	321	48	Poor
MILLAR AV	296	1,328	24	Residential	31,881	AC	N/A	281	57	Fair
NO NAM ST	314	166	24	Residential	3,989	AC	N/A	278	97	Good
NO NAM ST	400	124	24	Residential	2,983	AC	N/A	400	36	Very Poor
NO NAM ST	404	73	24	Residential	1,745	AC	N/A	400	68	Fair
NOTTIN AV	391	2,022	24	Residential	48,519	AC	N/A	166	72	Satisfactory
OAKLEY AV	135	323	24	Residential	7,752	AC	N/A	395	34	Very Poor
OAKLEY AV	136	329	24	Residential	7,891	AC	N/A	400	54	Poor

IRI - 'N/A' - IRI data was not collected

BranchID	SectionID	Length (ft)	Width (ft)	Section Rank	Area (SqFt)	Surface Type	AADT	IRI (in./mi)	PCI	PCI Category
OAKLEY AV	137	329	24	Residential	7,903	AC	N/A	400	44	Poor
OAKLEY AV	138	1,074	24	Residential	25,778	AC	N/A	400	49	Poor
OXFORD DR	177	773	24	Residential	18,549	AC	N/A	273	34	Very Poor
OXFORD DR	178	855	24	Residential	20,518	AC	N/A	291	34	Very Poor
OXFORD DR	179	751	24	Residential	18,023	AC	N/A	289	32	Very Poor
OXFORD DR	180	1,217	24	Residential	29,204	AC	N/A	185	75	Satisfactory
OXFORD SO	491	377	24	Residential	9,037	AC	N/A	268	54	Poor
OXFORD SO	492	313	24	Residential	7,520	AC	N/A	238	41	Poor
OXFORDR N	393	538	24	Residential	12,921	AC	N/A	250	51	Poor
OXFORDR N	394	307	24	Residential	7,372	AC	N/A	296	36	Very Poor
OXFORDR N	395	380	24	Residential	9,123	AC	N/A	370	50	Poor
PARKSI DR	346	288	24	Residential	6,917	AC	N/A	400	89	Good
PARKSI DR	347	1,326	24	Residential	31,826	AC	N/A	245	65	Fair
PAULIN ST	157	550	24	Residential	13,190	AC	N/A	209	54	Poor
PAULIN ST	158	1,327	24	Residential	31,853	AC	N/A	234	52	Poor
PAULIN ST	159	663	24	Residential	15,902	AC	N/A	212	37	Very Poor
PAULIN ST	160	1,309	24	Residential	31,418	AC	N/A	198	90	Good
PLAINV DR	481	904	24	Residential	21,691	AC	N/A	302	52	Poor
PLAINV DR	482	464	24	Residential	11,141	AC	N/A	390	43	Poor
PLYMOU DR	184	350	24	Residential	8,392	AC	N/A	262	52	Poor
PLYMOU DR	185	777	24	Residential	18,647	AC	N/A	346	40	Very Poor
PLYMOU DR	186	1,218	24	Residential	29,220	AC	N/A	227	37	Very Poor
PLYMOU DR	187	600	24	Residential	14,394	AC	N/A	244	61	Fair
PLYMOU DR	188	962	24	Residential	23,083	AC	N/A	243	40	Very Poor
Poplar St	130	493	24	Residential	11,840	AC	N/A	N/A	N/A	N/A
RICHMO AV	190	678	24	Residential	16,264	AC	N/A	400	55	Poor
RichmoAve	510	209	24	Residential	5,018	AC	950	269	56	Fair
RichmoAve	511	272	24	Residential	6,535	AC	950	285	61	Fair
RichmoAve	512	197	24	Residential	4,732	AC	950	215	59	Fair
RichmoAve	513	205	24	Residential	4,919	AC	950	218	51	Poor
RichmoAve	514	359	24	Residential	8,622	AC	950	242	57	Fair
RichmoAve	515	607	24	Residential	14,574	AC	950	176	71	Satisfactory
RichmoAve	516	163	24	Residential	3,903	AC	950	211	64	Fair
RichmoAve	517	309	24	Residential	7,427	AC	950	203	59	Fair
RichmoAve	518	574	24	Residential	13,772	AC	950	278	62	Fair
RIDGEW AV	297	641	24	Residential	15,377	AC	N/A	253	68	Fair
RIDGEW AV	298	668	24	Residential	16,033	AC	N/A	253	44	Poor
RIDGEW AV	299	658	24	Residential	15,782	AC	N/A	269	46	Poor
ROESNE DR	356	720	24	Residential	17,275	AC	N/A	271	61	Fair
ROESNE DR	357	308	24	Residential	7,391	AC	N/A	275	38	Very Poor
ROESNE DR	358	304	24	Residential	7,293	AC	N/A	293	63	Fair
ROESNE DR	359	913	24	Residential	21,918	AC	N/A	167	55	Poor
ROSE MERR	375	1,070	24	Residential	25,691	AC	N/A	196	57	Fair
ROSE MERR	376	323	24	Residential	7,760	AC	N/A	400	65	Fair

PCI - 'N/A' - Pavement data was not collected

BranchID	SectionID	Length (ft)	Width (ft)	Section Rank	Area (SqFt)	Surface Type	AADT	IRI (in./mi)	PCI	PCI Category
SACRAMNTO	206	828	24	Residential	19,863	AC	N/A	60	55	Poor
Sawyerer	207	134	24	Residential	3,204	AC	N/A	400	88	Good
Sawyerer	208	668	24	Residential	16,027	AC	N/A	120	56	Fair
Sawyerer	209	651	24	Residential	15,631	AC	N/A	249	54	Poor
Sawyerer	210	663	24	Residential	15,904	AC	N/A	168	68	Fair
Sawyerer	211	670	24	Residential	16,082	AC	N/A	285	61	Fair
Sawyerer	212	660	24	Residential	15,849	AC	N/A	272	73	Satisfactory
Sawyerer	213	658	24	Residential	15,793	AC	N/A	221	54	Poor
Sawyerer	214	658	24	Residential	15,794	AC	N/A	400	66	Fair
Sawyerer	215	1,350	24	Residential	32,397	AC	N/A	400	51	Poor
Sawyerer	216	644	24	Residential	15,448	AC	N/A	400	65	Fair
SHERWO AV	389	83	24	Residential	1,985	AC	N/A	255	37	Very Poor
SHERWO AV	390	1,876	24	Residential	45,021	AC	N/A	224	37	Very Poor
SPAULDAVE	221	657	24	Residential	15,767	AC	N/A	272	57	Fair
SPAULDAVE	222	652	24	Residential	15,642	AC	N/A	298	68	Fair
SPAULDAVE	223	664	24	Residential	15,925	AC	N/A	219	47	Poor
SPAULDAVE	224	671	24	Residential	16,113	AC	N/A	358	49	Poor
SPAULDAVE	225	659	24	Residential	15,805	AC	N/A	238	50	Poor
SPAULDAVE	226	666	24	Residential	15,980	AC	N/A	260	58	Fair
SPAULDAVE	227	658	24	Residential	15,798	AC	N/A	381	38	Very Poor
Spaulding	219	667	24	Residential	16,014	AC	N/A	400	46	Poor
Spaulding	220	1,346	24	Residential	32,294	AC	N/A	400	33	Very Poor
SPRING AV	310	857	24	Residential	20,576	AC	N/A	400	58	Fair
SPRING AV	311	577	24	Residential	13,838	AC	N/A	400	35	Very Poor
SPRING AV	312	576	24	Residential	13,831	AC	N/A	385	46	Poor
SPRING AV	313	440	24	Residential	10,548	AC	N/A	275	46	Poor
St. Louis	264	1,351	24	Residential	32,434	AC	N/A	260	78	Satisfactory
St. Louis	265	664	24	Residential	15,927	AC	N/A	347	62	Fair
St. Louis	266	653	24	Residential	15,683	AC	N/A	400	34	Very Poor
St. Louis	267	654	24	Residential	15,685	AC	N/A	314	74	Satisfactory
St. Louis	268	676	24	Residential	16,234	AC	N/A	400	53	Poor
St. Louis	269	449	24	Residential	10,767	AC	N/A	315	46	Poor
St. Louis	270	645	24	Residential	15,478	AC	N/A	400	53	Poor
STAFFO AV	398	1,570	24	Residential	37,683	AC	N/A	142	80	Satisfactory
STAFFO AV	399	1,072	24	Residential	25,722	AC	N/A	109	75	Satisfactory
SUNSET AV	363	554	24	Residential	13,292	AC	N/A	400	46	Poor
SUNSET AV	364	1,020	24	Residential	24,479	AC	N/A	400	45	Poor
SUNSET AV	365	1,163	24	Residential	27,912	AC	N/A	290	42	Poor
SUNSET AV	366	633	24	Residential	15,193	AC	N/A	400	38	Very Poor
SUSSEX AV	392	1,999	24	Residential	47,970	AC	N/A	233	39	Very Poor
SUSSEX AV	523	490	24	Residential	11,755	AC	1400	235	81	Satisfactory
SUSSEX AV	524	585	24	Residential	14,034	AC	1400	134	91	Good
SUSSEX AV	525	760	24	Residential	18,248	AC	1400	111	95	Good
SUSSEX CT	189	399	24	Residential	9,577	AC	N/A	400	66	Fair

BranchID	SectionID	Length (ft)	Width (ft)	Section Rank	Area (SqFt)	Surface Type	AADT	IRI (in./mi)	PCI	PCI Category
ThorndAve	127	343	24	Residential	8,240	AC	N/A	N/A	N/A	N/A
ThorndAve	128	683	24	Residential	16,396	AC	N/A	N/A	N/A	N/A
ThorndAve	129	339	24	Residential	8,145	AC	N/A	N/A	N/A	N/A
TROY A AV	196	438	24	Residential	10,509	AC	N/A	261	57	Fair
TROY A AV	197	431	24	Residential	10,335	AC	N/A	271	41	Poor
TROY A AV	198	1,393	24	Residential	33,428	AC	N/A	295	42	Poor
Troyroy	199	408	24	Residential	9,793	AC	N/A	N/A	N/A	N/A
Troyroy	200	686	24	Residential	16,461	AC	N/A	N/A	43	Poor
Troyroy	201	1,332	24	Residential	31,958	AC	N/A	N/A	N/A	N/A
Trumbuull	247	1,351	24	Residential	32,420	AC	N/A	322	57	Fair
Trumbuull	248	375	24	Residential	9,010	AC	N/A	400	45	Poor
Trumbuull	249	658	24	Residential	15,801	AC	N/A	277	70	Fair
Trumbuull	250	595	24	Residential	14,278	AC	N/A	400	57	Fair
Trumbuull	251	686	24	Residential	16,467	AC	N/A	312	71	Satisfactory
Trumbuull	252	445	24	Residential	10,690	AC	N/A	386	37	Very Poor
Trumbuull	253	675	24	Residential	16,207	AC	N/A	244	71	Satisfactory
Trumbuull	254	660	24	Residential	15,840	AC	N/A	191	70	Fair
Trumbuull	255	653	24	Residential	15,675	AC	N/A	233	67	Fair
Trumbuull	256	646	24	Residential	15,500	AC	N/A	400	54	Poor
TURNERAVE	230	661	24	Residential	15,858	AC	N/A	299	38	Very Poor
TURNERAVE	231	651	24	Residential	15,615	AC	N/A	275	36	Very Poor
TURNERAVE	232	673	24	Residential	16,145	AC	N/A	309	59	Fair
TURNERAVE	233	658	24	Residential	15,796	AC	N/A	303	39	Very Poor
TURNERAVE	234	652	24	Residential	15,652	AC	N/A	400	41	Poor
TURNERAVE	235	664	24	Residential	15,933	AC	N/A	291	52	Poor
Turnerner	228	1,108	24	Residential	26,589	AC	N/A	400	74	Satisfactory
Turnerner	229	1,347	24	Residential	32,337	AC	N/A	285	44	Poor
Unmarkked	120	328	24	Residential	7,881	AC	N/A	N/A	N/A	N/A
WATKIN CT	110	229	24	Residential	5,498	AC	N/A	400	52	Poor
WEDGEW DR	490	927	24	Residential	22,239	AC	N/A	292	41	Poor
WILLOWANE	352	1,354	24	Residential	32,485	AC	N/A	356	44	Poor
WILLOWANE	353	345	24	Residential	8,276	AC	N/A	246	44	Poor
WILSHI AV	396	1,337	24	Residential	32,085	AC	N/A	116	83	Satisfactory
WILSHI AV	397	518	24	Residential	12,422	AC	N/A	121	88	Good
WINCHE AV	141	549	24	Residential	13,174	AC	N/A	217	45	Poor
WINCHE AV	142	1,320	24	Residential	31,676	AC	N/A	224	98	Good
WINCHE AV	143	668	24	Residential	16,020	AC	N/A	368	42	Poor
WINCHE AV	144	1,326	24	Residential	31,828	AC	N/A	223	66	Fair
WOLCOT AV	145	553	24	Residential	13,273	AC	N/A	210	75	Satisfactory
WOLCOT AV	146	1,322	24	Residential	31,724	AC	N/A	192	99	Good
WOLCOT AV	147	664	24	Residential	15,940	AC	N/A	276	46	Poor
WOLCOT AV	148	1,326	24	Residential	31,825	AC	N/A	379	51	Poor
Wood S St	92	100	24	Arterial	2,388	AC	5800	399	100	Good
Wood S St	93	1,326	24	Arterial	31,820	PCC	5800	153	70	Fair

PCI - 'N/A' - Pavement data was not collected

IRI - 'N/A' - IRI data was not collected

BranchID	SectionID	Length (ft)	Width (ft)	Section Rank	Area (SqFt)	Surface Type	AADT	IRI (in./mi)	PCI	PCI Category
Wood S St	94	657	24	Arterial	15,776	PCC	5800	121	73	Satisfactory
Wood S St	95	563	24	Arterial	13,521	PCC	5800	154	71	Satisfactory
Wood S St	96	1,315	24	Arterial	31,556	PCC	5800	131	68	Fair
149TH ST	2316	331	24	Residential	7,945	AC	N/A	285	46	Poor
149TH ST	2359	323	24	Residential	7,745	AC	N/A	262	49	Poor
149TH ST	2372	405	24	Residential	9,714	AC	N/A	195	74	Satisfactory
149TH ST	2374	334	24	Residential	8,006	AC	N/A	282	40	Very Poor
149TH ST	2384	331	24	Residential	7,945	AC	N/A	209	44	Poor
151ST ST	361	389	24	Residential	9,345	AC	N/A	226	78	Satisfactory
154TH PL	344	1,327	24	Residential	31,841	AC	N/A	369	66	Fair
155th_ST	2334	348	24	Residential	8,360	AC	N/A	400	55	Poor
156th_ST	2329	320	24	Residential	7,680	AC	N/A	400	82	Satisfactory
165TH SST	2378	368	24	Residential	8,822	AC	N/A	227	43	Poor
ALBANY VE	2331	665	24	Residential	15,958	AC	N/A	400	36	Very Poor
BERKSHDR	2303	1,038	24	Residential	24,923	AC	N/A	339	77	Satisfactory
CAMPBELVE	2353	710	24	Residential	17,048	AC	N/A	190	74	Satisfactory
CAMPBELVE	2377	283	24	Residential	6,789	AC	N/A	296	78	Satisfactory
CENTRALVE	2340	135	24	Residential	3,248	AC	N/A	400	73	Satisfactory
CENTRALVE	2344	200	24	Residential	4,800	AC	N/A	225	52	Poor
CENTRALVE	2383	150	24	Residential	3,600	AC	N/A	152	86	Good
CLAREMOVE	2323	674	24	Residential	16,181	AC	N/A	N/A	N/A	N/A
FIELDCRDR	2363	924	24	Residential	22,187	AC	N/A	172	60	Fair
HAMILTOVE	2364	667	24	Residential	16,005	AC	N/A	N/A	N/A	N/A
HAMLIN VE	2339	655	24	Residential	15,725	AC	N/A	337	35	Very Poor
HAMLIN VE	2341	481	24	Residential	11,545	AC	N/A	400	63	Fair
HAMLIN VE	2356	660	24	Residential	15,837	AC	N/A	294	64	Fair
HAMLIN VE	2371	583	24	Residential	13,981	AC	N/A	400	31	Very Poor
IRVING VE	2311	71	24	Residential	1,693	AC	N/A	N/A	N/A	N/A
IRVING VE	2362	600	24	Residential	14,400	AC	N/A	N/A	N/A	N/A
KEDVALEVE	2338	273	24	Residential	6,560	AC	N/A	222	33	Very Poor
LAWNDALVE	2385	612	24	Residential	14,696	AC	625	400	70	Fair
LEAVITTV	2373	670	24	Residential	16,092	AC	N/A	N/A	N/A	N/A
MOZART VE	2302	270	24	Residential	6,484	AC	N/A	N/A	N/A	N/A
OAKLEY VE	2354	667	24	Residential	16,005	AC	N/A	N/A	N/A	N/A
RICHMONVE	2375	677	24	Residential	16,247	AC	N/A	400	57	Fair
ROCKWELVE	2326	609	24	Residential	14,607	AC	N/A	N/A	N/A	N/A
ROCKWELVE	2347	1,337	24	Residential	32,096	AC	N/A	N/A	N/A	N/A
ROCKWELVE	2365	503	24	Residential	12,069	AC	N/A	N/A	N/A	N/A
Roesner_Pk	2328	548	24	Residential	13,146	AC	N/A	290	76	Satisfactory
S ALBANVE	2386	677	24	Residential	16,251	AC	N/A	400	60	Fair
S OXFORDR	2370	74	24	Residential	1,783	AC	N/A	400	64	Fair
S SACRAVE	2301	659	24	Residential	15,806	AC	N/A	400	40	Very Poor
S TROY VE	2319	675	24	Residential	16,197	AC	N/A	400	53	Poor
SAWYER VE	2327	522	24	Residential	12,522	AC	N/A	303	91	Good

PCI - 'N/A' - Pavement data was not collected

BranchID	SectionID	Length (ft)	Width (ft)	Section Rank	Area (SqFt)	Surface Type	AADT	IRI (in./mi)	PCI	PCI Category
TURNER VE	2389	212	24	Residential	5,088	AC	N/A	373	67	Fair
W 149THST	2313	331	24	Residential	7,948	AC	N/A	400	50	Poor
W 149THST	2318	328	24	Residential	7,875	AC	N/A	400	34	Very Poor
W 149THST	2352	336	24	Residential	8,076	AC	N/A	400	34	Very Poor
W 149THST	2388	337	24	Residential	8,079	AC	N/A	400	38	Very Poor
W 151STST	2308	509	24	Residential	12,222	AC	N/A	306	70	Fair
W 151STST	2333	359	24	Residential	8,610	AC	N/A	193	78	Satisfactory
W 153RDST	2309	488	24	Residential	11,720	AC	N/A	400	73	Satisfactory
W 155THST	2306	998	24	Residential	23,958	AC	N/A	400	82	Satisfactory
W 155THST	2357	249	24	Residential	5,975	AC	N/A	N/A	N/A	N/A
W 156THPL	2317	919	24	Residential	22,055	AC	N/A	281	47	Poor
W 156THPL	2382	648	24	Residential	15,556	AC	N/A	335	48	Poor
W 156THST	2305	168	24	Residential	4,028	AC	N/A	N/A	N/A	N/A
W 156THST	2310	107	24	Residential	2,561	AC	N/A	60	49	Poor
W 156THST	2366	334	24	Residential	8,012	AC	N/A	323	51	Poor
W 157THST	2369	356	24	Residential	8,537	AC	N/A	60	64	Fair
W 158THST	2332	336	24	Residential	8,074	AC	N/A	400	29	Very Poor
W 159THPL	2368	747	24	Residential	17,927	AC	2950	265	55	Poor
W 159THPL	2376	609	24	Residential	14,616	AC	2950	400	47	Poor
W 159THST	2300	328	24	Arterial	7,877	AC	30900	120	52	Poor
W 159THST	2315	168	24	Arterial	4,037	AC	30900	147	70	Fair
W 159THST	2320	334	24	Arterial	8,009	AC	30900	167	57	Fair
W 159THST	2346	331	24	Arterial	7,943	AC	30900	115	59	Fair
W 159THST	2355	328	24	Arterial	7,878	AC	30900	133	66	Fair
W 159THST	2358	336	24	Arterial	8,075	AC	30900	134	59	Fair
W 159THST	2360	326	24	Arterial	7,812	AC	30900	158	57	Fair
W 160THST	2312	339	24	Residential	8,141	AC	N/A	N/A	N/A	N/A
W 160THST	2325	201	24	Residential	4,834	AC	N/A	N/A	N/A	N/A
W 160THST	2335	280	24	Residential	6,720	AC	N/A	N/A	N/A	N/A
W 160THST	2342	323	24	Residential	7,747	AC	N/A	N/A	N/A	N/A
W 160THST	2343	80	24	Residential	1,920	AC	N/A	N/A	N/A	N/A
W 160THST	2345	291	24	Residential	6,983	AC	N/A	N/A	N/A	N/A
W 160THST	2349	334	24	Residential	8,009	AC	N/A	N/A	N/A	N/A
W 160THST	2351	40	24	Residential	960	AC	N/A	N/A	N/A	N/A
W 160THST	2367	35	24	Residential	830	AC	N/A	N/A	N/A	N/A
W 160THST	2387	200	24	Residential	4,800	AC	N/A	N/A	N/A	N/A
W 162NDST	2330	287	24	Residential	6,894	AC	N/A	N/A	N/A	N/A
W 163RDPL	2348	640	24	Residential	15,367	AC	N/A	241	89	Good
W 164THST	2324	350	24	Residential	8,404	AC	N/A	376	37	Very Poor
W 166THST	2361	403	24	Residential	9,671	AC	N/A	400	72	Satisfactory
WASHTENVE	2304	700	24	Residential	16,800	AC	N/A	399	77	Satisfactory
WASHTENVE	2322	360	24	Residential	8,638	AC	N/A	400	68	Fair
WASHTENVE	2337	900	24	Residential	21,600	AC	N/A	170	79	Satisfactory
WASHTENVE	2379	700	24	Residential	16,802	AC	N/A	291	55	Poor

PCI - 'N/A' - Pavement data was not collected

BranchID	SectionID	Length (ft)	Width (ft)	Section Rank	Area (SqFt)	Surface Type	AADT	IRI (in./mi)	PCI	PCI Category
WESTERNVE	2299	679	24	Residential	16,285	AC	N/A	N/A	N/A	N/A
WESTERNVE	2307	117	24	Residential	2,799	AC	N/A	400	75	Satisfactory
WESTERNVE	2314	328	24	Residential	7,871	AC	N/A	239	58	Fair
WESTERNVE	2321	273	24	Residential	6,559	AC	N/A	400	38	Very Poor
WESTERNVE	2336	514	24	Residential	12,331	AC	N/A	330	68	Fair
WESTERNVE	2380	576	24	Residential	13,818	AC	N/A	N/A	N/A	N/A
WESTERNVE	2381	332	24	Residential	7,959	AC	N/A	341	39	Very Poor
WHIPPLEVE	2350	1,382	24	Residential	33,178	AC	N/A	372	39	Very Poor

PCI - 'N/A' - Pavement data was not collected

Table A-3: Details of Localized Distress Maintenance Plan 2020

BranchID	SectionID	Description	Severity	Distress Qty	Distress Unit	Percent Distress	Work Description	Work Qty	Work Unit	Unit Cost	Work Cost
153RD ST	360	ALLIGATOR CR	Medium	123.8	SqFt	0.63	Patching - AC Deep	172.2	SqFt	\$9.00	\$1,553.58
153RD ST	360	L & T CR	Medium	308.5	Ft	1.58	Crack Sealing - AC	308.4	Ft	\$1.50	\$462.77
155TH ST	99	ALLIGATOR CR	Medium	4.3	SqFt	0.03	Patching - AC Deep	17.2	SqFt	\$9.00	\$150.27
155TH ST	99	L & T CR	Medium	541.0	Ft	3.20	Crack Sealing - AC	541.	Ft	\$1.50	\$811.52
155TH ST	100	ALLIGATOR CR	Medium	54.6	SqFt	0.34	Patching - AC Deep	88.3	SqFt	\$9.00	\$794.44
155TH ST	100	L & T CR	Medium	884.3	Ft	5.49	Crack Sealing - AC	884.2	Ft	\$1.50	\$1,326.45
155TH ST	101	ALLIGATOR CR	Medium	4.1	SqFt	0.02	Patching - AC Deep	16.2	SqFt	\$9.00	\$146.77
155TH ST	101	L & T CR	Medium	600.4	Ft	2.39	Crack Sealing - AC	600.4	Ft	\$1.50	\$900.66
155TH ST	102	L & T CR	Medium	5.8	Ft	0.47	Crack Sealing - AC	5.9	Ft	\$1.50	\$8.77
155TH ST	342	ALLIGATOR CR	Medium	4.6	SqFt	0.06	Patching - AC Deep	17.2	SqFt	\$9.00	\$155.48
155TH ST	342	L & T CR	Medium	109.5	Ft	1.32	Crack Sealing - AC	109.6	Ft	\$1.50	\$164.28
155TH ST	343	L & T CR	Medium	121.9	Ft	1.38	Crack Sealing - AC	122.1	Ft	\$1.50	\$182.88
157TH ST	320	L & T CR	Medium	40.4	Ft	0.15	Crack Sealing - AC	40.4	Ft	\$1.50	\$60.60
157TH ST	323	L & T CR	Medium	159.7	Ft	2.04	Crack Sealing - AC	159.8	Ft	\$1.50	\$239.61
161ST ST	383	ALLIGATOR CR	Medium	38.8	SqFt	0.49	Patching - AC Deep	67.8	SqFt	\$9.00	\$610.08
161ST ST	383	L & T CR	Medium	372.2	Ft	4.69	Crack Sealing - AC	372.1	Ft	\$1.50	\$558.22
161ST ST	384	L & T CR	Medium	187.6	Ft	2.37	Crack Sealing - AC	187.7	Ft	\$1.50	\$281.37
161ST ST	421	ALLIGATOR CR	Medium	38.5	SqFt	0.53	Patching - AC Deep	67.8	SqFt	\$9.00	\$607.19
161ST ST	421	L & T CR	Medium	523.4	Ft	7.22	Crack Sealing - AC	523.3	Ft	\$1.50	\$785.04
161ST ST	422	ALLIGATOR CR	Medium	76.0	SqFt	0.97	Patching - AC Deep	115.2	SqFt	\$9.00	\$1,036.21
161ST ST	422	L & T CR	Medium	564.8	Ft	7.22	Crack Sealing - AC	565.	Ft	\$1.50	\$847.26
161ST ST	424	ALLIGATOR CR	Medium	13.4	SqFt	0.17	Patching - AC Deep	32.3	SqFt	\$9.00	\$289.18
161ST ST	424	L & T CR	Medium	409.8	Ft	5.22	Crack Sealing - AC	409.8	Ft	\$1.50	\$614.79
161ST ST	425	ALLIGATOR CR	Medium	48.0	SqFt	0.59	Patching - AC Deep	79.7	SqFt	\$9.00	\$719.27
161ST ST	425	L & T CR	Medium	376.4	Ft	4.63	Crack Sealing - AC	376.3	Ft	\$1.50	\$564.64
162ND ST	428	ALLIGATOR CR	Medium	5.4	SqFt	0.07	Patching - AC Deep	18.3	SqFt	\$9.00	\$167.82
162ND ST	428	L & T CR	Medium	75.3	Ft	1.04	Crack Sealing - AC	75.1	Ft	\$1.50	\$112.94
162ND ST	436	L & T CR	Medium	187.2	Ft	2.39	Crack Sealing - AC	187.	Ft	\$1.50	\$280.75
163rd St	417	L & T CR	Medium	2770.7	Ft	9.60	Crack Sealing - AC	2,770.7	Ft	\$1.50	\$4,156.14
163rd St	499	L & T CR	Medium	123.6	Ft	1.61	Crack Sealing - AC	123.7	Ft	\$1.50	\$185.32
163rd St	500	L & T CR	Medium	37.4	Ft	0.47	Crack Sealing - AC	37.4	Ft	\$1.50	\$56.13

BranchID	SectionID	Description	Severity	Distress Qty	Distress Unit	Percent Distress	Work Description	Work Qty	Work Unit	Unit Cost	Work Cost
163rd St	501	L & T CR	Medium	23.1	Ft	0.29	Crack Sealing - AC	23.	Ft	\$1.50	\$34.68
163rd St	502	L & T CR	Medium	206.2	Ft	2.56	Crack Sealing - AC	206.4	Ft	\$1.50	\$309.37
163rd St	503	L & T CR	Medium	131.3	Ft	1.68	Crack Sealing - AC	131.2	Ft	\$1.50	\$197.00
163rd St	504	L & T CR	Medium	65.1	Ft	0.82	Crack Sealing - AC	65.	Ft	\$1.50	\$97.63
163rd St	505	L & T CR	Medium	52.7	Ft	0.67	Crack Sealing - AC	52.8	Ft	\$1.50	\$79.09
163rd St	506	L & T CR	Medium	16.4	Ft	0.31	Crack Sealing - AC	16.4	Ft	\$1.50	\$24.61
163rd St	507	ALLIGATOR CR	Medium	9.5	SqFt	0.36	Patching - AC Deep	25.8	SqFt	\$9.00	\$233.00
163rd St	507	L & T CR	Medium	11.1	Ft	0.42	Crack Sealing - AC	11.2	Ft	\$1.50	\$16.61
163rd St	508	L & T CR	Medium	24.8	Ft	1.25	Crack Sealing - AC	24.9	Ft	\$1.50	\$37.27
163rd St	509	ALLIGATOR CR	Medium	0.9	SqFt	0.00	Patching - AC Deep	8.6	SqFt	\$9.00	\$77.66
163rd St	509	L & T CR	Medium	315.9	Ft	0.93	Crack Sealing - AC	315.9	Ft	\$1.50	\$473.85
163RD ST	531	L & T CR	Medium	10.1	Ft	0.13	Crack Sealing - AC	10.2	Ft	\$1.50	\$15.21
163RD ST	534	ALLIGATOR CR	Medium	7.1	SqFt	0.09	Patching - AC Deep	21.5	SqFt	\$9.00	\$196.56
163RD ST	534	L & T CR	Medium	37.6	Ft	0.48	Crack Sealing - AC	37.7	Ft	\$1.50	\$56.47
163RD ST	536	L & T CR	Medium	13.4	Ft	0.16	Crack Sealing - AC	13.5	Ft	\$1.50	\$20.08
163RD ST	537	L & T CR	Medium	13.1	Ft	0.18	Crack Sealing - AC	13.1	Ft	\$1.50	\$19.61
164TH ST	445	ALLIGATOR CR	Medium	15.5	SqFt	0.23	Patching - AC Deep	35.5	SqFt	\$9.00	\$317.85
164TH ST	445	L & T CR	Medium	310.2	Ft	4.52	Crack Sealing - AC	310.4	Ft	\$1.50	\$465.32
164TH ST	448	L & T CR	Medium	216.1	Ft	2.66	Crack Sealing - AC	216.2	Ft	\$1.50	\$324.24
164TH ST	450	ALLIGATOR CR	Medium	0.5	SqFt	0.01	Patching - AC Deep	7.5	SqFt	\$9.00	\$66.95
164TH ST	450	L & T CR	Medium	340.9	Ft	4.39	Crack Sealing - AC	340.9	Ft	\$1.50	\$511.33
164TH ST	455	ALLIGATOR CR	Medium	1.0	SqFt	0.03	Patching - AC Deep	8.6	SqFt	\$9.00	\$81.79
164TH ST	455	L & T CR	Medium	187.7	Ft	6.00	Crack Sealing - AC	187.7	Ft	\$1.50	\$281.49
165TH ST	468	L & T CR	Medium	103.8	Ft	1.46	Crack Sealing - AC	103.7	Ft	\$1.50	\$155.73
165TH ST	476	ALLIGATOR CR	Medium	3.4	SqFt	0.04	Patching - AC Deep	15.1	SqFt	\$9.00	\$134.30
165TH ST	476	L & T CR	Medium	373.8	Ft	4.68	Crack Sealing - AC	373.7	Ft	\$1.50	\$560.73
166TH ST	489	ALLIGATOR CR	Medium	61.0	SqFt	0.91	Patching - AC Deep	96.9	SqFt	\$9.00	\$867.80
166TH ST	489	L & T CR	Medium	519.2	Ft	7.75	Crack Sealing - AC	519.	Ft	\$1.50	\$778.76
AFTON DR	202	L & T CR	Medium	67.7	Ft	0.62	Crack Sealing - AC	67.6	Ft	\$1.50	\$101.59
ALBANY AV	203	L & T CR	Medium	29.1	Ft	1.69	Crack Sealing - AC	29.2	Ft	\$1.50	\$43.58
ARTHURERR	415	L & T CR	Medium	258.2	Ft	2.36	Crack Sealing - AC	258.2	Ft	\$1.50	\$387.24
ASHLAN AV	166	ALLIGATOR CR	Medium	14.8	SqFt	0.09	Patching - AC Deep	34.4	SqFt	\$9.00	\$307.40
ASHLAN AV	166	L & T CR	Medium	6.4	Ft	0.04	Crack Sealing - AC	6.6	Ft	\$1.50	\$9.65

BranchID	SectionID	Description	Severity	Distress Qty	Distress Unit	Percent Distress	Work Description	Work Qty	Work Unit	Unit Cost	Work Cost
ASHLAN AV	167	ALLIGATOR CR	Medium	0.7	SqFt	0.00	Patching - AC Deep	7.5	SqFt	\$9.00	\$70.71
ASHLAN AV	167	L & T CR	Medium	30.4	Ft	0.19	Crack Sealing - AC	30.5	Ft	\$1.50	\$45.61
ASHLAN AV	168	L & T CR	Medium	31.5	Ft	0.10	Crack Sealing - AC	31.5	Ft	\$1.50	\$47.28
ASHLAN AV	169	L & T CR	Medium	2.3	Ft	0.01	Crack Sealing - AC	2.3	Ft	\$1.50	\$3.40
BELLEP DR	456	ALLIGATOR CR	Medium	21.5	SqFt	0.12	Patching - AC Deep	44.1	SqFt	\$9.00	\$397.30
BELLEP DR	456	L & T CR	Medium	833.6	Ft	4.58	Crack Sealing - AC	833.7	Ft	\$1.50	\$1,250.44
BELLEP DR	457	L & T CR	Medium	399.8	Ft	3.58	Crack Sealing - AC	399.9	Ft	\$1.50	\$599.67
BELLEP DR	459	ALLIGATOR CR	Medium	4.6	SqFt	0.05	Patching - AC Deep	17.2	SqFt	\$9.00	\$156.08
BELLEP DR	459	L & T CR	Medium	391.4	Ft	4.24	Crack Sealing - AC	391.4	Ft	\$1.50	\$587.11
BERKSHIRE	191	L & T CR	Medium	337.9	Ft	2.79	Crack Sealing - AC	337.9	Ft	\$1.50	\$506.84
BrennaHwy	103	ALLIGATOR CR	Medium	218.1	SqFt	0.34	Patching - AC Deep	282.	SqFt	\$9.00	\$2,533.62
BrennaHwy	103	L & T CR	Medium	1555.0	Ft	2.43	Crack Sealing - AC	1,555.1	Ft	\$1.50	\$2,332.49
BrennaHwy	336	ALLIGATOR CR	Medium	41.1	SqFt	0.12	Patching - AC Deep	71.	SqFt	\$9.00	\$638.57
BrennaHwy	336	L & T CR	Medium	464.9	Ft	1.35	Crack Sealing - AC	464.9	Ft	\$1.50	\$697.38
BrennaHwy	337	L & T CR	Medium	210.1	Ft	1.82	Crack Sealing - AC	210.	Ft	\$1.50	\$315.13
CALIFO AV	520	L & T CR	Medium	9.9	Ft	0.05	Crack Sealing - AC	9.8	Ft	\$1.50	\$14.92
CALIFO AV	522	L & T CR	Medium	6.6	Ft	0.02	Crack Sealing - AC	6.6	Ft	\$1.50	\$9.90
CAMBRI DR	183	ALLIGATOR CR	Medium	5.4	SqFt	0.02	Patching - AC Deep	18.3	SqFt	\$9.00	\$168.67
CAMBRI DR	183	L & T CR	Medium	931.4	Ft	4.06	Crack Sealing - AC	931.4	Ft	\$1.50	\$1,397.10
CentraAve	281	L & T CR	Medium	125.3	Ft	1.44	Crack Sealing - AC	125.3	Ft	\$1.50	\$187.95
CentraAve	283	L & T CR	Medium	224.1	Ft	4.66	Crack Sealing - AC	224.1	Ft	\$1.50	\$336.19
CentraAve	284	ALLIGATOR CR	Medium	5.1	SqFt	0.03	Patching - AC Deep	18.3	SqFt	\$9.00	\$163.83
CentraAve	284	L & T CR	Medium	1103.4	Ft	6.72	Crack Sealing - AC	1,103.4	Ft	\$1.50	\$1,655.09
CentraAve	494	ALLIGATOR CR	Medium	30.7	SqFt	0.30	Patching - AC Deep	57.1	SqFt	\$9.00	\$512.60
CentraAve	494	L & T CR	Medium	172.4	Ft	1.71	Crack Sealing - AC	172.2	Ft	\$1.50	\$258.60
CentraAve	497	L & T CR	Medium	38.9	Ft	0.24	Crack Sealing - AC	38.7	Ft	\$1.50	\$58.25
CIRCLE DR	181	L & T CR	Medium	696.6	Ft	1.62	Crack Sealing - AC	696.5	Ft	\$1.50	\$1,044.82
CLIFTO AV	276	ALLIGATOR CR	Medium	23.8	SqFt	0.15	Patching - AC Deep	47.4	SqFt	\$9.00	\$426.72
CLIFTO AV	276	L & T CR	Medium	584.8	Ft	3.69	Crack Sealing - AC	584.7	Ft	\$1.50	\$877.20
DAMEN ST	139	ALLIGATOR CR	Medium	29.7	SqFt	0.22	Patching - AC Deep	56.	SqFt	\$9.00	\$501.06
DAMEN ST	139	L & T CR	Medium	30.1	Ft	0.23	Crack Sealing - AC	30.2	Ft	\$1.50	\$45.13
HAMLIN AV	305	L & T CR	Medium	2.8	Ft	0.27	Crack Sealing - AC	2.6	Ft	\$1.50	\$4.15
HamlinAve	309	L & T CR	Medium	40.9	Ft	0.83	Crack Sealing - AC	40.7	Ft	\$1.50	\$61.25

BranchID	SectionID	Description	Severity	Distress Qty	Distress Unit	Percent Distress	Work Description	Work Qty	Work Unit	Unit Cost	Work Cost
HEATHE DR	354	ALLIGATOR CR	Medium	12.3	SqFt	0.06	Patching - AC Deep	30.1	SqFt	\$9.00	\$272.90
HEATHE DR	354	L & T CR	Medium	1278.7	Ft	5.79	Crack Sealing - AC	1,278.5	Ft	\$1.50	\$1,918.04
HERMIT ST	153	ALLIGATOR CR	Medium	70.8	SqFt	0.52	Patching - AC Deep	108.7	SqFt	\$9.00	\$978.40
HERMIT ST	153	L & T CR	Medium	440.2	Ft	3.25	Crack Sealing - AC	440.3	Ft	\$1.50	\$660.24
HERMIT ST	155	L & T CR	Medium	349.4	Ft	2.20	Crack Sealing - AC	349.4	Ft	\$1.50	\$524.05
Homanman	238	ALLIGATOR CR	Medium	29.6	SqFt	0.40	Patching - AC Deep	56.	SqFt	\$9.00	\$499.08
Homanman	238	L & T CR	Medium	167.7	Ft	2.24	Crack Sealing - AC	167.7	Ft	\$1.50	\$251.58
Homanman	242	ALLIGATOR CR	Medium	122.8	SqFt	0.77	Patching - AC Deep	171.2	SqFt	\$9.00	\$1,542.62
Homanman	242	L & T CR	Medium	759.9	Ft	4.78	Crack Sealing - AC	759.8	Ft	\$1.50	\$1,139.93
HONORE AV	149	ALLIGATOR CR	Medium	42.3	SqFt	0.32	Patching - AC Deep	72.1	SqFt	\$9.00	\$652.56
HONORE AV	149	L & T CR	Medium	584.7	Ft	4.38	Crack Sealing - AC	584.7	Ft	\$1.50	\$876.98
HONORE AV	150	ALLIGATOR CR	Medium	152.4	SqFt	0.48	Patching - AC Deep	205.6	SqFt	\$9.00	\$1,855.15
HONORE AV	150	L & T CR	Medium	1286.0	Ft	4.05	Crack Sealing - AC	1,286.1	Ft	\$1.50	\$1,928.98
HONORE AV	152	ALLIGATOR CR	Medium	67.0	SqFt	0.21	Patching - AC Deep	103.3	SqFt	\$9.00	\$934.81
HONORE AV	152	L & T CR	Medium	2522.6	Ft	7.95	Crack Sealing - AC	2,522.6	Ft	\$1.50	\$3,783.92
JUSTIN ST	170	ALLIGATOR CR	Medium	6.7	SqFt	0.06	Patching - AC Deep	21.5	SqFt	\$9.00	\$189.39
JUSTIN ST	170	L & T CR	Medium	229.9	Ft	1.97	Crack Sealing - AC	230.	Ft	\$1.50	\$344.90
JUSTIN ST	172	ALLIGATOR CR	Medium	43.7	SqFt	0.28	Patching - AC Deep	74.3	SqFt	\$9.00	\$669.08
JUSTIN ST	172	L & T CR	Medium	866.0	Ft	5.45	Crack Sealing - AC	865.8	Ft	\$1.50	\$1,298.95
KEDZIEAVE	115	ALLIGATOR CR	Medium	1.1	SqFt	0.01	Patching - AC Deep	9.7	SqFt	\$9.00	\$83.93
KEDZIEAVE	115	L & T CR	Medium	179.5	Ft	2.44	Crack Sealing - AC	179.5	Ft	\$1.50	\$269.31
KEDZIEAVE	116	ALLIGATOR CR	Medium	5.1	SqFt	0.07	Patching - AC Deep	18.3	SqFt	\$9.00	\$162.26
KEDZIEAVE	116	L & T CR	Medium	213.9	Ft	2.86	Crack Sealing - AC	213.9	Ft	\$1.50	\$320.90
KEDZIEAVE	118	ALLIGATOR CR	Medium	7.4	SqFt	0.10	Patching - AC Deep	22.6	SqFt	\$9.00	\$200.75
KEDZIEAVE	118	L & T CR	Medium	158.4	Ft	2.10	Crack Sealing - AC	158.5	Ft	\$1.50	\$237.57
LAFILIN ST	175	ALLIGATOR CR	Medium	18.8	SqFt	0.12	Patching - AC Deep	39.8	SqFt	\$9.00	\$363.13
LAFILIN ST	175	L & T CR	Medium	403.6	Ft	2.54	Crack Sealing - AC	403.5	Ft	\$1.50	\$605.40
LANCAS DR	401	ALLIGATOR CR	Medium	7.6	SqFt	0.10	Patching - AC Deep	22.6	SqFt	\$9.00	\$204.92
LANCAS DR	401	L & T CR	Medium	146.8	Ft	1.99	Crack Sealing - AC	146.7	Ft	\$1.50	\$220.20
LAWNDA AV	291	ALLIGATOR CR	Medium	57.6	SqFt	0.25	Patching - AC Deep	92.6	SqFt	\$9.00	\$829.38
LAWNDA AV	291	L & T CR	Medium	910.2	Ft	3.96	Crack Sealing - AC	910.1	Ft	\$1.50	\$1,365.31
LAWNDA AV	293	ALLIGATOR CR	Medium	15.3	SqFt	0.06	Patching - AC Deep	35.5	SqFt	\$9.00	\$315.57
LAWNDA AV	293	L & T CR	Medium	811.2	Ft	3.26	Crack Sealing - AC	811.	Ft	\$1.50	\$1,216.79

BranchID	SectionID	Description	Severity	Distress Qty	Distress Unit	Percent Distress	Work Description	Work Qty	Work Unit	Unit Cost	Work Cost
LINCOL DR	192	ALLIGATOR CR	Medium	5.3	SqFt	0.05	Patching - AC Deep	18.3	SqFt	\$9.00	\$165.90
LINCOL DR	192	L & T CR	Medium	25.8	Ft	0.26	Crack Sealing - AC	25.9	Ft	\$1.50	\$38.68
LINCOL DR	193	ALLIGATOR CR	Medium	4.4	SqFt	0.05	Patching - AC Deep	17.2	SqFt	\$9.00	\$151.83
LINCOL DR	193	L & T CR	Medium	317.9	Ft	3.75	Crack Sealing - AC	317.9	Ft	\$1.50	\$476.82
LINCOL DR	195	ALLIGATOR CR	Medium	5.1	SqFt	0.05	Patching - AC Deep	18.3	SqFt	\$9.00	\$162.11
LINCOL DR	195	L & T CR	Medium	185.0	Ft	1.77	Crack Sealing - AC	185.	Ft	\$1.50	\$277.52
MILLAR AV	296	ALLIGATOR CR	Medium	12.8	SqFt	0.04	Patching - AC Deep	31.2	SqFt	\$9.00	\$280.49
MILLAR AV	296	L & T CR	Medium	1784.0	Ft	5.60	Crack Sealing - AC	1,784.1	Ft	\$1.50	\$2,676.05
NO NAM ST	404	L & T CR	Medium	73.3	Ft	4.20	Crack Sealing - AC	73.5	Ft	\$1.50	\$110.01
NOTTIN AV	391	ALLIGATOR CR	Medium	59.2	SqFt	0.12	Patching - AC Deep	94.7	SqFt	\$9.00	\$847.75
NOTTIN AV	391	L & T CR	Medium	2189.8	Ft	4.51	Crack Sealing - AC	2,190.	Ft	\$1.50	\$3,284.75
OXFORD DR	180	L & T CR	Medium	78.9	Ft	0.27	Crack Sealing - AC	79.1	Ft	\$1.50	\$118.38
PARKSI DR	346	L & T CR	Medium	41.1	Ft	0.59	Crack Sealing - AC	41.	Ft	\$1.50	\$61.73
PARKSI DR	347	ALLIGATOR CR	Medium	44.4	SqFt	0.14	Patching - AC Deep	75.4	SqFt	\$9.00	\$676.79
PARKSI DR	347	L & T CR	Medium	1225.0	Ft	3.85	Crack Sealing - AC	1,225.1	Ft	\$1.50	\$1,837.49
PAULIN ST	160	ALLIGATOR CR	Medium	9.6	SqFt	0.03	Patching - AC Deep	25.8	SqFt	\$9.00	\$233.85
PAULIN ST	160	L & T CR	Medium	127.8	Ft	0.41	Crack Sealing - AC	127.6	Ft	\$1.50	\$191.61
PLYMOU DR	187	L & T CR	Medium	365.8	Ft	2.54	Crack Sealing - AC	365.8	Ft	\$1.50	\$548.68
RichmoAve	510	ALLIGATOR CR	Medium	33.2	SqFt	0.66	Patching - AC Deep	60.3	SqFt	\$9.00	\$542.89
RichmoAve	510	L & T CR	Medium	161.8	Ft	3.22	Crack Sealing - AC	161.8	Ft	\$1.50	\$242.64
RichmoAve	511	L & T CR	Medium	167.1	Ft	2.56	Crack Sealing - AC	167.	Ft	\$1.50	\$250.60
RichmoAve	512	ALLIGATOR CR	Medium	8.0	SqFt	0.17	Patching - AC Deep	23.7	SqFt	\$9.00	\$209.56
RichmoAve	512	L & T CR	Medium	208.6	Ft	4.41	Crack Sealing - AC	208.7	Ft	\$1.50	\$312.95
RichmoAve	514	L & T CR	Medium	247.9	Ft	2.88	Crack Sealing - AC	248.	Ft	\$1.50	\$371.92
RichmoAve	515	L & T CR	Medium	222.6	Ft	1.53	Crack Sealing - AC	222.8	Ft	\$1.50	\$333.93
RichmoAve	516	ALLIGATOR CR	Medium	26.6	SqFt	0.68	Patching - AC Deep	51.7	SqFt	\$9.00	\$461.40
RichmoAve	516	L & T CR	Medium	119.7	Ft	3.07	Crack Sealing - AC	119.8	Ft	\$1.50	\$179.47
RichmoAve	517	L & T CR	Medium	277.2	Ft	3.73	Crack Sealing - AC	277.2	Ft	\$1.50	\$415.82
RichmoAve	518	ALLIGATOR CR	Medium	14.0	SqFt	0.10	Patching - AC Deep	33.4	SqFt	\$9.00	\$297.66
RichmoAve	518	L & T CR	Medium	565.2	Ft	4.10	Crack Sealing - AC	565.3	Ft	\$1.50	\$847.84
RIDGEW AV	297	ALLIGATOR CR	Medium	10.0	SqFt	0.07	Patching - AC Deep	26.9	SqFt	\$9.00	\$241.25
RIDGEW AV	297	L & T CR	Medium	357.8	Ft	2.33	Crack Sealing - AC	357.9	Ft	\$1.50	\$536.79
ROESNE DR	356	ALLIGATOR CR	Medium	92.1	SqFt	0.53	Patching - AC Deep	134.6	SqFt	\$9.00	\$1,213.52

BranchID	SectionID	Description	Severity	Distress Qty	Distress Unit	Percent Distress	Work Description	Work Qty	Work Unit	Unit Cost	Work Cost
ROESNE DR	356	L & T CR	Medium	1295.3	Ft	7.50	Crack Sealing - AC	1,295.3	Ft	\$1.50	\$1,943.03
ROESNE DR	358	ALLIGATOR CR	Medium	1.6	SqFt	0.02	Patching - AC Deep	10.8	SqFt	\$9.00	\$96.91
ROESNE DR	358	L & T CR	Medium	615.1	Ft	8.43	Crack Sealing - AC	615.2	Ft	\$1.50	\$922.67
ROSE MERR	375	L & T CR	Medium	259.2	Ft	1.01	Crack Sealing - AC	259.2	Ft	\$1.50	\$388.85
ROSE MERR	376	ALLIGATOR CR	Medium	2.1	SqFt	0.03	Patching - AC Deep	11.8	SqFt	\$9.00	\$106.96
ROSE MERR	376	L & T CR	Medium	131.0	Ft	1.69	Crack Sealing - AC	130.9	Ft	\$1.50	\$196.51
Sawyerer	207	ALLIGATOR CR	Medium	2.4	SqFt	0.07	Patching - AC Deep	12.9	SqFt	\$9.00	\$112.35
Sawyerer	207	L & T CR	Medium	23.1	Ft	0.72	Crack Sealing - AC	23.	Ft	\$1.50	\$34.58
Sawyerer	208	ALLIGATOR CR	Medium	90.4	SqFt	0.56	Patching - AC Deep	132.4	SqFt	\$9.00	\$1,193.86
Sawyerer	208	L & T CR	Medium	1014.4	Ft	6.33	Crack Sealing - AC	1,014.4	Ft	\$1.50	\$1,521.56
Sawyerer	210	ALLIGATOR CR	Medium	14.0	SqFt	0.09	Patching - AC Deep	33.4	SqFt	\$9.00	\$297.06
Sawyerer	210	L & T CR	Medium	565.1	Ft	3.55	Crack Sealing - AC	565.	Ft	\$1.50	\$847.58
Sawyerer	211	ALLIGATOR CR	Medium	50.8	SqFt	0.32	Patching - AC Deep	84.	SqFt	\$9.00	\$750.95
Sawyerer	211	L & T CR	Medium	740.3	Ft	4.60	Crack Sealing - AC	740.2	Ft	\$1.50	\$1,110.37
Sawyerer	212	L & T CR	Medium	175.9	Ft	1.11	Crack Sealing - AC	175.9	Ft	\$1.50	\$263.87
Sawyerer	214	ALLIGATOR CR	Medium	1.4	SqFt	0.01	Patching - AC Deep	9.7	SqFt	\$9.00	\$90.81
Sawyerer	214	L & T CR	Medium	308.6	Ft	1.95	Crack Sealing - AC	308.7	Ft	\$1.50	\$462.96
Sawyerer	216	ALLIGATOR CR	Medium	24.2	SqFt	0.16	Patching - AC Deep	48.4	SqFt	\$9.00	\$432.32
Sawyerer	216	L & T CR	Medium	583.2	Ft	3.78	Crack Sealing - AC	583.3	Ft	\$1.50	\$874.77
SPAULDAVE	221	ALLIGATOR CR	Medium	7.9	SqFt	0.05	Patching - AC Deep	23.7	SqFt	\$9.00	\$208.88
SPAULDAVE	221	L & T CR	Medium	450.9	Ft	2.86	Crack Sealing - AC	450.8	Ft	\$1.50	\$676.28
SPAULDAVE	222	ALLIGATOR CR	Medium	28.2	SqFt	0.18	Patching - AC Deep	53.8	SqFt	\$9.00	\$482.45
SPAULDAVE	222	L & T CR	Medium	555.7	Ft	3.55	Crack Sealing - AC	555.8	Ft	\$1.50	\$833.56
SPAULDAVE	226	ALLIGATOR CR	Medium	20.8	SqFt	0.13	Patching - AC Deep	43.1	SqFt	\$9.00	\$388.75
SPAULDAVE	226	L & T CR	Medium	726.1	Ft	4.54	Crack Sealing - AC	726.1	Ft	\$1.50	\$1,089.19
SPRING AV	310	ALLIGATOR CR	Medium	14.0	SqFt	0.07	Patching - AC Deep	33.4	SqFt	\$9.00	\$298.01
SPRING AV	310	L & T CR	Medium	1161.1	Ft	5.64	Crack Sealing - AC	1,161.1	Ft	\$1.50	\$1,741.59
St. Louis	264	ALLIGATOR CR	Medium	42.1	SqFt	0.13	Patching - AC Deep	72.1	SqFt	\$9.00	\$650.00
St. Louis	264	L & T CR	Medium	247.9	Ft	0.76	Crack Sealing - AC	248.	Ft	\$1.50	\$371.87
St. Louis	265	ALLIGATOR CR	Medium	45.3	SqFt	0.28	Patching - AC Deep	76.4	SqFt	\$9.00	\$688.25
St. Louis	265	L & T CR	Medium	823.8	Ft	5.17	Crack Sealing - AC	823.8	Ft	\$1.50	\$1,235.62
St. Louis	267	L & T CR	Medium	131.3	Ft	0.84	Crack Sealing - AC	131.2	Ft	\$1.50	\$197.00
STAFFO AV	398	L & T CR	Medium	121.7	Ft	0.32	Crack Sealing - AC	121.7	Ft	\$1.50	\$182.52

BranchID	SectionID	Description	Severity	Distress Qty	Distress Unit	Percent Distress	Work Description	Work Qty	Work Unit	Unit Cost	Work Cost
STAFFO AV	399	L & T CR	Medium	547.7	Ft	2.13	Crack Sealing - AC	547.6	Ft	\$1.50	\$821.51
SUSSEX AV	523	L & T CR	Medium	146.6	Ft	1.25	Crack Sealing - AC	146.7	Ft	\$1.50	\$219.81
SUSSEX AV	524	L & T CR	Medium	5.6	Ft	0.04	Crack Sealing - AC	5.6	Ft	\$1.50	\$8.38
SUSSEX AV	525	L & T CR	Medium	11.6	Ft	0.06	Crack Sealing - AC	11.5	Ft	\$1.50	\$17.34
SUSSEX CT	189	L & T CR	Medium	199.2	Ft	2.08	Crack Sealing - AC	199.2	Ft	\$1.50	\$298.76
TROY A AV	196	L & T CR	Medium	393.0	Ft	3.74	Crack Sealing - AC	393.	Ft	\$1.50	\$589.58
Trumbuull	247	L & T CR	Medium	1185.3	Ft	3.66	Crack Sealing - AC	1,185.4	Ft	\$1.50	\$1,778.01
Trumbuull	249	ALLIGATOR CR	Medium	20.6	SqFt	0.13	Patching - AC Deep	43.1	SqFt	\$9.00	\$385.45
Trumbuull	249	L & T CR	Medium	464.8	Ft	2.94	Crack Sealing - AC	464.9	Ft	\$1.50	\$697.21
Trumbuull	250	ALLIGATOR CR	Medium	7.1	SqFt	0.05	Patching - AC Deep	21.5	SqFt	\$9.00	\$195.72
Trumbuull	250	L & T CR	Medium	546.0	Ft	3.82	Crack Sealing - AC	545.9	Ft	\$1.50	\$819.00
Trumbuull	251	ALLIGATOR CR	Medium	7.6	SqFt	0.05	Patching - AC Deep	22.6	SqFt	\$9.00	\$205.54
Trumbuull	251	L & T CR	Medium	421.0	Ft	2.56	Crack Sealing - AC	420.9	Ft	\$1.50	\$631.55
Trumbuull	253	ALLIGATOR CR	Medium	27.2	SqFt	0.17	Patching - AC Deep	52.7	SqFt	\$9.00	\$470.13
Trumbuull	253	L & T CR	Medium	293.9	Ft	1.81	Crack Sealing - AC	294.	Ft	\$1.50	\$440.84
Trumbuull	254	L & T CR	Medium	375.0	Ft	2.37	Crack Sealing - AC	375.	Ft	\$1.50	\$562.46
Trumbuull	255	ALLIGATOR CR	Medium	6.5	SqFt	0.04	Patching - AC Deep	20.5	SqFt	\$9.00	\$185.86
Trumbuull	255	L & T CR	Medium	552.7	Ft	3.53	Crack Sealing - AC	552.5	Ft	\$1.50	\$828.99
TURNERAVE	232	ALLIGATOR CR	Medium	42.3	SqFt	0.26	Patching - AC Deep	72.1	SqFt	\$9.00	\$651.80
TURNERAVE	232	L & T CR	Medium	593.7	Ft	3.68	Crack Sealing - AC	593.5	Ft	\$1.50	\$890.49
Turnerner	228	ALLIGATOR CR	Medium	27.7	SqFt	0.10	Patching - AC Deep	52.7	SqFt	\$9.00	\$475.60
Turnerner	228	L & T CR	Medium	504.0	Ft	1.90	Crack Sealing - AC	503.9	Ft	\$1.50	\$756.05
WILSHI AV	396	L & T CR	Medium	30.2	Ft	0.09	Crack Sealing - AC	30.2	Ft	\$1.50	\$45.23
WILSHI AV	397	L & T CR	Medium	78.5	Ft	0.63	Crack Sealing - AC	78.4	Ft	\$1.50	\$117.79
WINCHE AV	142	L & T CR	Medium	36.7	Ft	0.12	Crack Sealing - AC	36.8	Ft	\$1.50	\$54.98
WINCHE AV	144	ALLIGATOR CR	Medium	49.8	SqFt	0.16	Patching - AC Deep	81.8	SqFt	\$9.00	\$740.07
WINCHE AV	144	L & T CR	Medium	1914.5	Ft	6.01	Crack Sealing - AC	1,914.4	Ft	\$1.50	\$2,871.71
WOLCOT AV	145	L & T CR	Medium	210.8	Ft	1.59	Crack Sealing - AC	211.	Ft	\$1.50	\$316.24
WOLCOT AV	146	L & T CR	Medium	5.5	Ft	0.02	Crack Sealing - AC	5.6	Ft	\$1.50	\$8.15
Wood S St	93	LINEAR CR	High	17.7	Slabs	13.33	Patching - PCC Full Depth	4,256.1	SqFt	\$15.00	\$63,840.02
Wood S St	93	LINEAR CR	Medium	30.2	Slabs	22.67	Crack Sealing - PCC	482.3	Ft	\$1.50	\$723.53
Wood S St	94	LINEAR CR	High	9.2	Slabs	14.00	Patching - PCC Full Depth	2,217.4	SqFt	\$15.00	\$33,264.01
Wood S St	94	LINEAR CR	Medium	7.9	Slabs	12.00	Crack Sealing - PCC	126.6	Ft	\$1.50	\$190.08

BranchID	SectionID	Description	Severity	Distress Qty	Distress Unit	Percent Distress	Work Description	Work Qty	Work Unit	Unit Cost	Work Cost
Wood S St	95	LINEAR CR	High	9.0	Slabs	16.00	Patching - PCC Full Depth	2,150.6	SqFt	\$15.00	\$32,256.01
Wood S St	95	LINEAR CR	Medium	5.6	Slabs	10.00	Crack Sealing - PCC	89.6	Ft	\$1.50	\$134.40
Wood S St	96	LINEAR CR	High	22.7	Slabs	17.33	Patching - PCC Full Depth	5,449.8	SqFt	\$15.00	\$81,744.02
Wood S St	96	LINEAR CR	Medium	28.0	Slabs	21.33	Crack Sealing - PCC	447.2	Ft	\$1.50	\$670.73
149TH ST	2372	L & T CR	Medium	16.8	Ft	0.17	Crack Sealing - AC	16.7	Ft	\$1.50	\$25.16
151ST ST	361	ALLIGATOR CR	Medium	7.4	SqFt	0.08	Patching - AC Deep	22.6	SqFt	\$9.00	\$202.28
151ST ST	361	L & T CR	Medium	187.5	Ft	2.01	Crack Sealing - AC	187.3	Ft	\$1.50	\$281.23
154TH PL	344	ALLIGATOR CR	Medium	59.7	SqFt	0.19	Patching - AC Deep	94.7	SqFt	\$9.00	\$853.45
154TH PL	344	L & T CR	Medium	1420.9	Ft	4.46	Crack Sealing - AC	1,420.9	Ft	\$1.50	\$2,131.33
156th_ST	2329	L & T CR	Medium	67.3	Ft	0.88	Crack Sealing - AC	67.3	Ft	\$1.50	\$100.87
BERKSHIDR	2303	L & T CR	Medium	202.5	Ft	0.81	Crack Sealing - AC	202.4	Ft	\$1.50	\$303.77
CAMPBELVE	2353	L & T CR	Medium	156.5	Ft	0.92	Crack Sealing - AC	156.5	Ft	\$1.50	\$234.80
CAMPBELVE	2377	L & T CR	Medium	43.7	Ft	0.64	Crack Sealing - AC	43.6	Ft	\$1.50	\$65.49
CENTRALVE	2340	ALLIGATOR CR	Medium	5.9	SqFt	0.18	Patching - AC Deep	19.4	SqFt	\$9.00	\$177.67
CENTRALVE	2340	L & T CR	Medium	103.1	Ft	3.17	Crack Sealing - AC	103.	Ft	\$1.50	\$154.62
CENTRALVE	2383	L & T CR	Medium	44.3	Ft	1.23	Crack Sealing - AC	44.3	Ft	\$1.50	\$66.39
FIELDCRDR	2363	L & T CR	Medium	626.9	Ft	2.83	Crack Sealing - AC	627.	Ft	\$1.50	\$940.35
HAMLIN VE	2341	ALLIGATOR CR	Medium	31.5	SqFt	0.27	Patching - AC Deep	58.1	SqFt	\$9.00	\$523.46
HAMLIN VE	2341	L & T CR	Medium	536.8	Ft	4.65	Crack Sealing - AC	536.8	Ft	\$1.50	\$805.19
HAMLIN VE	2356	ALLIGATOR CR	Medium	36.0	SqFt	0.23	Patching - AC Deep	64.6	SqFt	\$9.00	\$576.69
HAMLIN VE	2356	L & T CR	Medium	436.2	Ft	2.75	Crack Sealing - AC	436.	Ft	\$1.50	\$654.24
LAWNDALVE	2385	ALLIGATOR CR	Medium	49.2	SqFt	0.34	Patching - AC Deep	81.8	SqFt	\$9.00	\$733.26
LAWNDALVE	2385	L & T CR	Medium	209.3	Ft	1.42	Crack Sealing - AC	209.3	Ft	\$1.50	\$313.93
RICHMONVE	2375	ALLIGATOR CR	Medium	25.0	SqFt	0.15	Patching - AC Deep	49.5	SqFt	\$9.00	\$441.22
RICHMONVE	2375	L & T CR	Medium	1224.3	Ft	7.54	Crack Sealing - AC	1,224.4	Ft	\$1.50	\$1,836.48
Roesner_Pk	2328	ALLIGATOR CR	Medium	22.0	SqFt	0.17	Patching - AC Deep	45.2	SqFt	\$9.00	\$403.42
Roesner_Pk	2328	L & T CR	Medium	74.2	Ft	0.56	Crack Sealing - AC	74.2	Ft	\$1.50	\$111.34
S ALBANVE	2386	ALLIGATOR CR	Medium	34.7	SqFt	0.21	Patching - AC Deep	62.4	SqFt	\$9.00	\$561.67
S ALBANVE	2386	L & T CR	Medium	770.9	Ft	4.74	Crack Sealing - AC	771.	Ft	\$1.50	\$1,156.33
S OXFORDR	2370	ALLIGATOR CR	Medium	2.2	SqFt	0.12	Patching - AC Deep	11.8	SqFt	\$9.00	\$109.13
S OXFORDR	2370	L & T CR	Medium	56.8	Ft	3.18	Crack Sealing - AC	56.8	Ft	\$1.50	\$85.16
SAWYER VE	2327	ALLIGATOR CR	Medium	5.2	SqFt	0.04	Patching - AC Deep	18.3	SqFt	\$9.00	\$165.73
SAWYER VE	2327	L & T CR	Medium	53.9	Ft	0.43	Crack Sealing - AC	53.8	Ft	\$1.50	\$80.83

BranchID	SectionID	Description	Severity	Distress Qty	Distress Unit	Percent Distress	Work Description	Work Qty	Work Unit	Unit Cost	Work Cost
TURNER VE	2389	ALLIGATOR CR	Medium	1.3	SqFt	0.03	Patching - AC Deep	9.7	SqFt	\$9.00	\$88.87
TURNER VE	2389	L & T CR	Medium	255.8	Ft	5.03	Crack Sealing - AC	255.9	Ft	\$1.50	\$383.65
W 151STST	2308	ALLIGATOR CR	Medium	20.5	SqFt	0.17	Patching - AC Deep	43.1	SqFt	\$9.00	\$383.24
W 151STST	2308	L & T CR	Medium	476.5	Ft	3.90	Crack Sealing - AC	476.4	Ft	\$1.50	\$714.78
W 151STST	2333	ALLIGATOR CR	Medium	5.5	SqFt	0.06	Patching - AC Deep	19.4	SqFt	\$9.00	\$170.05
W 151STST	2333	L & T CR	Medium	268.1	Ft	3.11	Crack Sealing - AC	268.	Ft	\$1.50	\$402.20
W 153RDST	2309	ALLIGATOR CR	Medium	51.7	SqFt	0.44	Patching - AC Deep	85.	SqFt	\$9.00	\$761.11
W 153RDST	2309	L & T CR	Medium	350.0	Ft	2.99	Crack Sealing - AC	350.1	Ft	\$1.50	\$524.99
W 155THST	2306	ALLIGATOR CR	Medium	3.7	SqFt	0.02	Patching - AC Deep	15.1	SqFt	\$9.00	\$137.86
W 155THST	2306	L & T CR	Medium	44.4	Ft	0.19	Crack Sealing - AC	44.3	Ft	\$1.50	\$66.53
W 157THST	2369	ALLIGATOR CR	Medium	23.6	SqFt	0.28	Patching - AC Deep	47.4	SqFt	\$9.00	\$423.44
W 157THST	2369	L & T CR	Medium	675.1	Ft	7.91	Crack Sealing - AC	675.2	Ft	\$1.50	\$1,012.68
W 159THST	2315	L & T CR	Medium	219.5	Ft	5.44	Crack Sealing - AC	219.5	Ft	\$1.50	\$329.30
W 159THST	2320	ALLIGATOR CR	Medium	7.0	SqFt	0.09	Patching - AC Deep	21.5	SqFt	\$9.00	\$195.03
W 159THST	2320	L & T CR	Medium	868.5	Ft	10.85	Crack Sealing - AC	868.4	Ft	\$1.50	\$1,302.82
W 159THST	2346	ALLIGATOR CR	Medium	3.3	SqFt	0.04	Patching - AC Deep	15.1	SqFt	\$9.00	\$132.73
W 159THST	2346	L & T CR	Medium	805.1	Ft	10.14	Crack Sealing - AC	805.1	Ft	\$1.50	\$1,207.67
W 159THST	2355	L & T CR	Medium	644.2	Ft	8.18	Crack Sealing - AC	644.	Ft	\$1.50	\$966.23
W 159THST	2358	ALLIGATOR CR	Medium	18.1	SqFt	0.22	Patching - AC Deep	38.8	SqFt	\$9.00	\$352.45
W 159THST	2358	L & T CR	Medium	762.2	Ft	9.44	Crack Sealing - AC	762.1	Ft	\$1.50	\$1,143.29
W 159THST	2360	ALLIGATOR CR	Medium	5.2	SqFt	0.07	Patching - AC Deep	18.3	SqFt	\$9.00	\$165.17
W 159THST	2360	L & T CR	Medium	584.6	Ft	7.48	Crack Sealing - AC	584.7	Ft	\$1.50	\$876.91
W 163RDPL	2348	ALLIGATOR CR	Medium	0.4	SqFt	0.00	Patching - AC Deep	7.5	SqFt	\$9.00	\$64.75
W 163RDPL	2348	L & T CR	Medium	173.9	Ft	1.13	Crack Sealing - AC	173.9	Ft	\$1.50	\$260.89
W 166THST	2361	ALLIGATOR CR	Medium	15.4	SqFt	0.16	Patching - AC Deep	35.5	SqFt	\$9.00	\$317.37
W 166THST	2361	L & T CR	Medium	497.0	Ft	5.14	Crack Sealing - AC	497.1	Ft	\$1.50	\$745.54
WASHTENVE	2304	ALLIGATOR CR	Medium	10.1	SqFt	0.06	Patching - AC Deep	26.9	SqFt	\$9.00	\$242.40
WASHTENVE	2304	L & T CR	Medium	919.4	Ft	5.47	Crack Sealing - AC	919.3	Ft	\$1.50	\$1,379.08
WASHTENVE	2322	ALLIGATOR CR	Medium	18.2	SqFt	0.21	Patching - AC Deep	38.8	SqFt	\$9.00	\$353.59
WASHTENVE	2322	L & T CR	Medium	316.9	Ft	3.67	Crack Sealing - AC	316.9	Ft	\$1.50	\$475.33
WASHTENVE	2337	L & T CR	Medium	109.7	Ft	0.51	Crack Sealing - AC	109.6	Ft	\$1.50	\$164.55
WESTERNVE	2307	L & T CR	Medium	54.3	Ft	1.94	Crack Sealing - AC	54.1	Ft	\$1.50	\$81.43
WESTERNVE	2314	L & T CR	Medium	785.2	Ft	9.98	Crack Sealing - AC	785.1	Ft	\$1.50	\$1,177.76

BranchID	SectionID	Description	Severity	Distress Qty	Distress Unit	Percent Distress	Work Description	Work Qty	Work Unit	Unit Cost	Work Cost
WESTERNVE	2336	L & T CR	Medium	53.4	Ft	0.43	Crack Sealing - AC	53.5	Ft	\$1.50	\$80.12