
Village Board of Trustees Work Session Agenda

November 18, 2025
5:30 PM

Meeting Information

A Work Session of the Scarsdale Village Board of Trustees is scheduled for 5:30 PM on Tuesday, November 18, 2025. The meeting will be held in Village Hall. Members of the public wishing to attend the meeting remotely can do so via online link at https://zoom.us/j/93183703358, or call into the meeting using 1-929-436-2866 and entering the Meeting ID 931 8370 3358.*

Agenda

- Sidewalk and Pathways Discussion
- Pavement Maintenance Program
- Stormwater Projects Update
- Route 22 Road Diet Feasibility Study

SCARSDALE 1701 NEW YORK

Date: Tuesday, November 18, 2025
Re: Sidewalk and Pathways Discussion

COVER PAGE
Department of Public Works

ATTACHMENT(S):

- 11.18.2025 - J. Coleman Memo - Sidewalk and Pathway Update
- 11.18.2025 - Scarsdale Pathway Improvement Program, FY24-25
- 11.18.2025 - Proposed Sidewalk Materials Map
- 07.10.2025 - Sidewalks and Pathways Budget Appropriations
- 06.01.2025 - Sidewalk and Pathway Restoration Budget
- 05.12.2023 - Pavement Management Final Project Report
- 05.12.2023 - PMG 2023 Pathways Conditions Map

SCARSDALE
1701
NEW YORK

To: Alexandra Marshall, Village Manager

From: Jeffrey C. Coleman, PE, Superintendent of Public Works
David Goessl, PE, Village Engineer

Date: November 7, 2025, Rev. November 13, 2025

Re: Sidewalks and Pathways

MEMORANDUM
Department of Public Works

On Tuesday, July 15th, the Department appeared before the Village Board to discuss Sidewalks and Pathways. The attached informational memorandum, dated July 10, 2025, was submitted in advance of that meeting.

As an action item from that meeting, Department staff convened a workshop to evaluate all sidewalks and pathways in the village to make a recommendation as to the material that should be used for the replacement of the sidewalk when the time comes for it to be replaced. The attached plan indicates the future recommended sidewalk material for those sidewalk sections identified in the PMG report in the poor and failed category. It is assumed that there is no desire to change the existing bluestone in the Village center. Overall, the following list indicates those sections of sidewalk and pathways that should remain as asphalt. All other sidewalks and pathways that are currently asphalt would be reconstructed using concrete when replaced.

Asphalt Sidewalks and Pathways to be Replaced with Asphalt		
Normandy Lane	Broadmoor Road DE to Meadow Road	Hutchinson Avenue
Gatehouse Road to Weaver Street	Wynmor Park	Secor Road
Kelwynne Road	Garden Road	Oxford Road
Kingston Road	Colvin Road	Montrose Road @ School park/field
Overhill Road		

On a life cycle basis, concrete has been shown to be more cost-effective sidewalk material. However, areas with relatively low pedestrian traffic, limited vehicle loading, location, and areas of limited traffic along roadways, warrant the use of asphalt as a material.

The current year's budget appropriates $295,0000 for sidewalk replacement. Based on the PMG sidewalk evaluation, volume of sidewalk users, and types of sidewalk users (bicyclists, senior citizens, elementary school age, etc), the Department identified the following sections of sidewalk to be replaced with the current year of funding. However, this list was developed based on the current policy of replacing sidewalk with material similar to what exists.

- Heathcote Rd (Morris La - Kelwynne Rd)
- Heathcote Rd (Kelwynne Rd - Brookby Rd)
- Mamaroneck Rd (Crossway - Palmer Ave)
- Mamaroneck Rd (Griffen Ave - Barker La)
- Mamaroneck Rd (Barker La - Colonial Rd)
- Secor Rd (Mamaroneck Rd - Ramsey Rd)
- Walworth Ave (Fenimore Rd - Greenacres Ave)
- Huntington Rd (Brewster Rd - Putnam Rd)
- Fenimore Rd (Fox Meadow Rd - Oak La)

The Department recommends discussing the following considerations with the Village Board at the Work Session on November 18:

1. The Public Works Department's proposed plan for sidewalk materials at each location as described above.
2. The use of the $295,000 appropriated in the current fiscal year and whether that dollar amount should be amended to support the use of concrete rather than asphalt. For example, if the Village were to replace the sidewalks on the current year schedule with concrete instead of asphalt, the cost would increase from $295,000 to $700,000.
3. As the capital budget is being prepared, whether there is a desire to accelerate the replacement schedule to address sections of sidewalk in the failed and poor categories. This would be a similar approach to what had been done over the last three years for roadways. For additional information, the attached tables indicate the estimated cost per sidewalk section based on the current policy of replacement using in-kind materials.

We look forward to discussing this topic with the Village Board of Trustees.

VILLAGE OF SCARSDALE
PATHWAY IMPROVEMENT PROGRAM
FY 2024-2025

VM 1306 B - Acocella Contracting Corp.

UNIT COSTS APPLIED:

Sidewalk and Pathway Restoration (per SF)	$	14.50
Portland Concrete Sidewalk and Pathway Restoration (per SF)	$	20.00
Sidewalk and Pathway Overlay (per SF)	$	5.50
Sidewalk and ADA Ramp (Per EACH)	$	1,500.00

SCORE	Year Proposed	Location	Width (Ft)	Length (Ft)	Area	Cost for Pathway Overlay	Cost for Full Depth Pathway Resoration	Date Completed
61	FY 24/25	Greenacres Ave (Fountain Ter-Walworth) **Concrete**	5	643	3215		$64,300.00	Aug-24
-	FY 24/25	Hampton Rd (Dead End) **Concrete**	5	93	465		$10,800.00	Sep-24
38	FY 24/25	Oxford Road (Park Rd - Garden Rd) **Overlay**	5	516	2580	$14,190.00		Oct-24
38	FY 24/25	Oxford Road (Park Rd - Garden Rd) **Full Depth Asphalt**	5	180	900		$13,050.00	Oct-24
38	FY 24/25	Heathcote Rd (Bridge - Scarsdale Medical Group) **Concrete**	5	431	2155		$43,100.00	Nov-24
38	FY 24/25	Heathcote Rd (House #17 - Morris La) **Full Depth Asphalt**	5	678	3390		$49,155.00	Dec-24
38	FY 24/25	Heathcote Rd (House #17 - Morris La) **Overlay**	5	1013	5065	$27,857.50		Dec-24
			Total Miles	0.67		$ 42,047.50	$ 180,405.00	
						Total Cost	**$ 222,452.50**	

PCI AND CONDITION CATEGORY DEFINITION

The PCI is on a scale of 0 – 100 with 0 being the worst and 100 being the best. PAVER calculates it through the input of distress type, severity, and quantity information. Figure 2 illustrates the factors that go into the PCI and the 5 condition categories of the PCI.

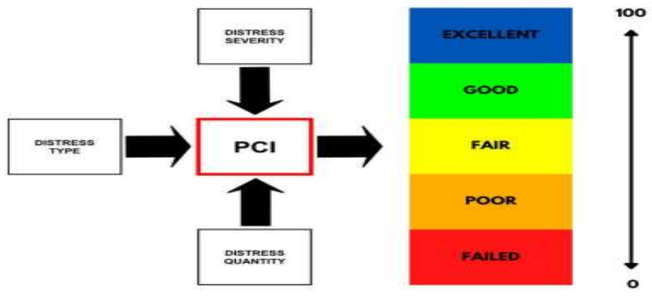
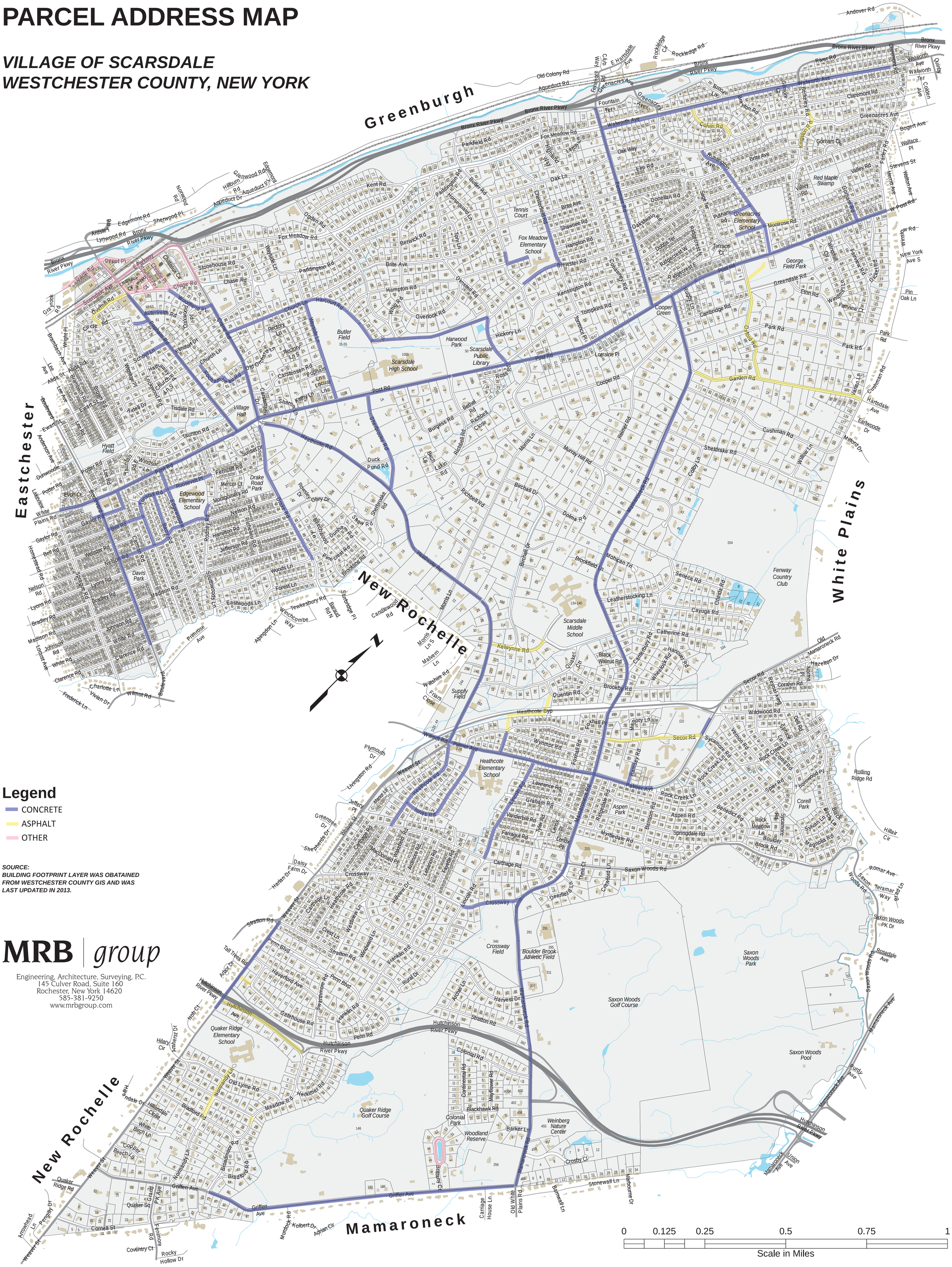


Figure. 2 Factors Determining PCI Value

CONDITION CATEGORY	LOW PCI VALUE	HIGH PCI VALUE
EXCELLENT	90	100
GOOD	70	89
FAIR	50	69
POOR	30	49
FAILED	0	29

PARCEL ADDRESS MAP

VILLAGE OF SCARSDALE
WESTCHESTER COUNTY, NEW YORK



Legend

- CONCRETE
- ASPHALT
- OTHER

SOURCE:
BUILDING FOOTPRINT LAYER WAS OBATAINED FROM WESTCHESTER COUNTY GIS AND WAS LAST UPDATED IN 2013.

MRB | *group*

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0 0.125 0.25 0.5 0.75 1

Scale in Miles

SCARSDALE
1701
NEW YORK

To: Alexandra Marshall, Village Manager

From: Jeffrey C. Coleman, PE, Superintendent of Public Works
David Goessl, PE, Village Engineer

Date: July 10, 2025

Re: Sidewalks and Pathways

MEMORANDUM
Department of Public Works

In advance of the Village Board discussion on Sidewalks and Pathways, scheduled for Tuesday, July 15th, we offer the following information:

- Attached, is the information included in ClearGOV in support of the Department's 2025/2026 capital budget request for the sidewalk replacement program. The attachments to that request are also attached to this memorandum. This includes the 2023 report by PMG (Village consultant) which assessed all sidewalks and pathways in the Village.

- For historical perspective, the following represents the annual budget appropriation for sidewalks for the past several budget cycles. With the exception of the current year, all funds have been expended.

Budget Year	Budget
2019/2020	$20,000
2020/2021	$20,000
2021/2022	$46,700
2022/2023	$20,000
2023/2024	$155,000
2024/2025	$185,000
2025/2026	$295,000

- As some of the discussion may focus on the consideration of concrete sidewalk in lieu of asphalt sidewalk, we have performed a simple cost analysis based on our current unit price contract. A more accurate economic analysis would entail determining present and future value of each replacement cycle and quantifying the cost over time. However in the interest of providing a ballpark comparison, we offer the following.

  The estimated cost to repair/replace approximately 126,400 sf (1 mile) of sidewalk with asphalt is $336,000. Removing and replacing the same with concrete is approximately $528,000. The expected serviceable life of asphalt sidewalk is approximately 10 years while concrete is approximately 40 years. Both lifecycles assume minor spot repairs are necessary.

Highway Improvements - Sidewalk and Pathway Restoration

Overview

Request Owner	David Goessl, Village Engineer
Est. Start Date	06/01/2025
Est. Completion Date	05/31/2030
Department	Engineer
Form Type	Capital Improvement
Request Type	Roadways

Description

Pathway Improvement Program: In the 2023 assessment for Village pathways performed by consultant PMG, it was determined that the Village has an estimated 20 miles of bike paths and walkways utilized by residents, commuters and school children. As time progresses, pathways tend to deteriorate due to various conditions. The Village often receives requests to repair sections of walkways due to uneven and potentially hazardous conditions. The most cost-efficient method to rehabilitate walkways is to overlay them with new materials. However, at times, walkways, whether originally constructed of concrete or asphalt, have been found with multiple overlays of asphalt, and it does become necessary to fully remove and construct with new materials. The work may often include regrading, tree stump/root removal, tree protection, form work, and full depth reconstruction of base materials. The average lifecycle of asphalt pathways ranges anywhere from 10 to 20 years (with exception to snowplow damage). The schedule for rehabilitation is estimated as the following: 20 miles / 15 years = 1.4 miles per year.

The estimated annual cost for rehabilitation and types of repairs are the following:

- Asphalt Overlay: 1.0 miles x (5,280 ft/mile) x 4.5 ft avg. width @ $ 5.50/sf = $ 130,680 (round to $131,000)
- Full Depth Asphalt Replacement: 0.2 miles x (5,280 ft/mile) x 4.5 ft avg. width @ $14.50/sf = $ 68,904 (round to $69,000)
- Concrete Sidewalk Replacement: 0.2 miles x (5,280 ft/mile) x 4.5 ft avg. width @ $ 20.00/sf = $ 95,040 (round to $ 95,000)

TOTAL ESTIMATED ANNUAL COST = $ 295,000

Images

David Goessl

New ADA Ramp Photo

David Goessl

Asphalt Pathway Overlay Photo

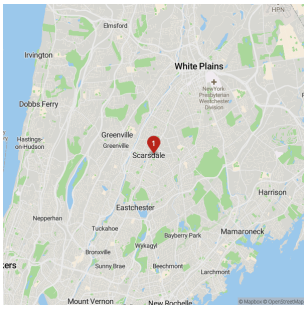
David Goessl

Pathway Over Heathcote Bypass. (2020 project photo)

Details

Type of Project	Other

Location



Supplemental Attachments

Village Map of Pathways(/resource/cg-prod-v2/projects/documents/cf2cc5ed0795eb945a3a.pdf)

Pathway Improvements Location Map 2022

PMG Final Report on Pathway Assessment(/resource/cg-prod-v2/projects/documents/8c620253f06a2edbd78a.pdf)

PMG Final Report on Pathway Assessment

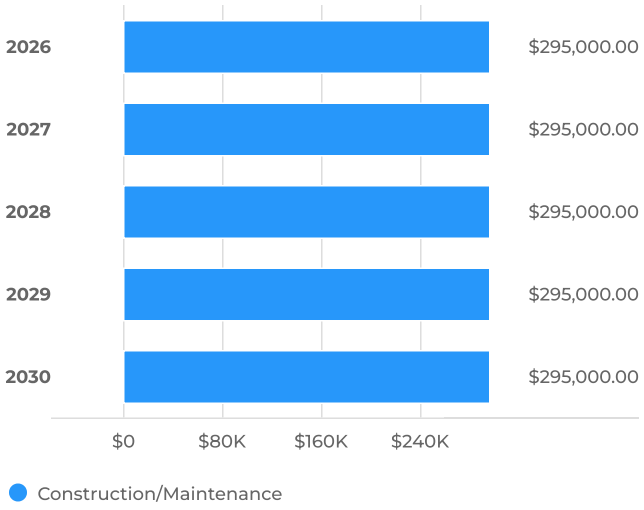
FY 24-25 Actual Costs Expended(/resource/cg-prod-v2/projects/documents/1deb95d287af247588dd.pdf)

FY 25-26 Estimated Annual Budget - Lifecycle Costs(/resource/cg-prod-v2/projects/documents/ba52ab25cd95461c86f7.pdf)

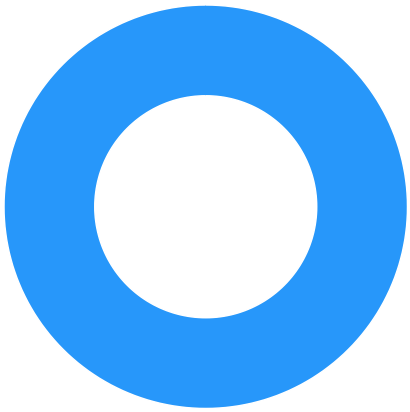
Capital Cost

Total Historical	FY2026 Budget	Total Budget (all years)	Project Total
$185,000	$295,000	$1.475M	$1.66M

Capital Cost by Year



Capital Cost for Budgeted Years



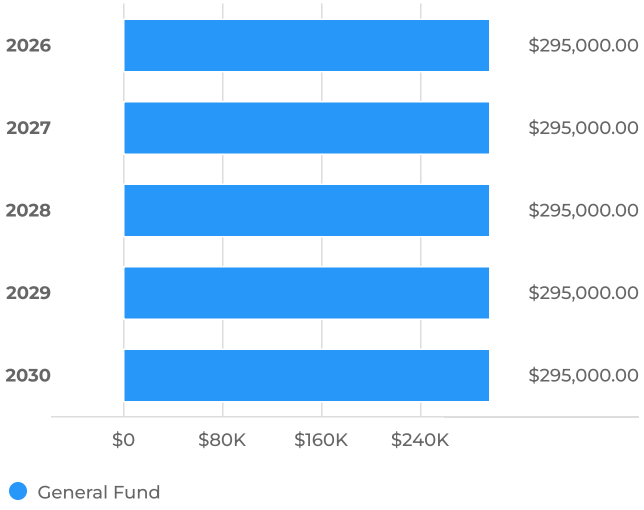
Capital Cost Breakdown

Capital Cost	Historical	FY2026	FY2027	FY2028	FY2029	FY2030	Total
Construction/Maintenance	$185,000	$295,000	$295,000	$295,000	$295,000	$295,000	$1,660,000
Total	**$185,000**	**$295,000**	**$295,000**	**$295,000**	**$295,000**	**$295,000**	**$1,660,000**

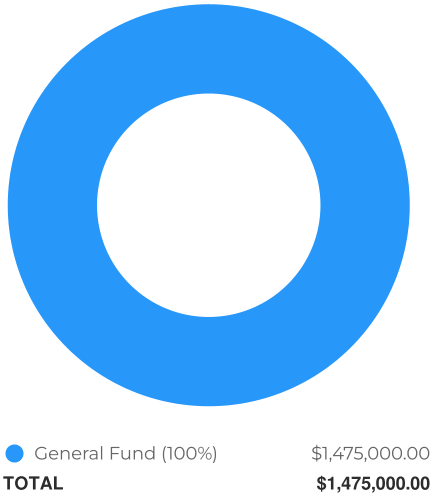
Funding Sources

Total Historical	FY2026 Budget	Total Budget (all years)	Project Total
$185,000	$295,000	$1.475M	$1.66M

Funding Sources by Year



Funding Sources for Budgeted Years



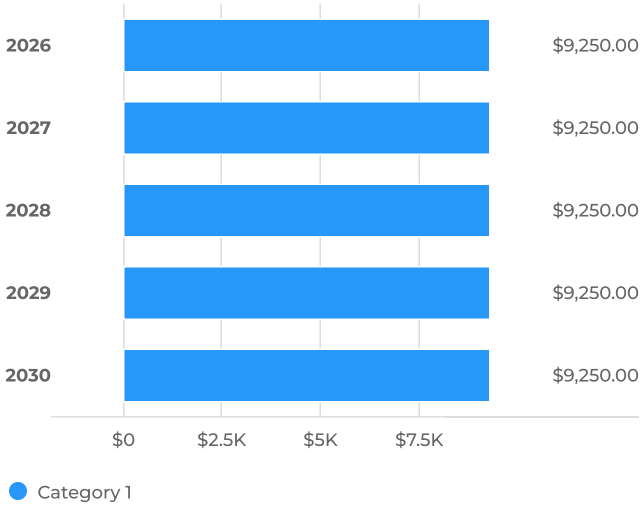
Funding Sources Breakdown

Funding Sources	Historical	FY2026	FY2027	FY2028	FY2029	FY2030	Total
General Fund	$185,000	$295,000	$295,000	$295,000	$295,000	$295,000	$1,660,000
Total	**$185,000**	**$295,000**	**$295,000**	**$295,000**	**$295,000**	**$295,000**	**$1,660,000**

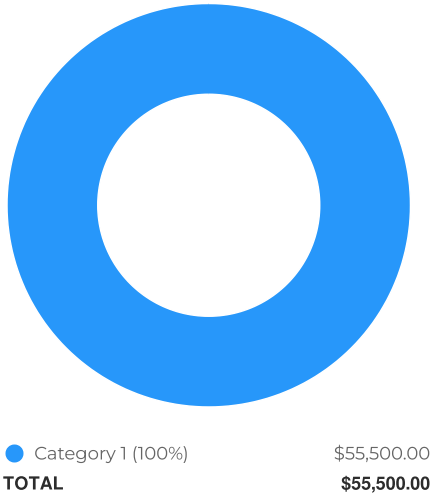
Cost Savings

Total Historical	FY2026 Budget	Total Budget (all years)	Project Total
$9,250	$9,250	$46.25K	$55.5K

Cost Savings by Year



Cost Savings for Budgeted Years



Cost Savings Breakdown

Cost Savings	Historical	FY2026	FY2027	FY2028	FY2029	FY2030	Total
Category 1	$9,250	$9,250	$9,250	$9,250	$9,250	$9,250	$55,500
Total	**$9,250**	**$9,250**	**$9,250**	**$9,250**	**$9,250**	**$9,250**	**$55,500**

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PAVEMENT MANAGEMENT GROUP

PAVEMENT MANAGEMENT FINAL PROJECT REPORT

Scarsdale, NY - PATHWAYS

Friday, May 12, 2023

Pavement Management Group

COMPLETE PAVEMENT MANAGEMENT SOLUTIONS

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Village of Scarsdale contracted with Pavement Management Group (PMG) to provide a turn-key Pavement Management Program (PMP). The backbone of PMG's turnkey PMP is the PAVER Pavement Management System (PMS) which provides specific tools such as pavement modeling, maintenance decision trees and budget/target driven scenarios maximizing the return on investment from available maintenance and rehabilitation funds, generating a prioritized plan, and identifying specific areas in need of maintenance and rehabilitation.

- Verify and setup any new pavement network inventory
- Provide an HD video of each pavement section
- Identify all distress types, severity levels and quantities within through ASTM D6433-20
- Calculate the Pavement Condition Index (PCI) for each pathway section
- Assign all pavement management data to GIS
- Create GIS current condition map
- Provide an HTML based condition map with geo located streaming HD video
- Provide a complete inventory and condition listing of each pavement section
- Provide a final report of findings
- Provide continued support services

2023 PATHWAY NETWORK SUMMARY

- 20 centerline miles
- 527,533 square feet
- 220 management sections
- Average network PCI is 64
- Average network condition category of **FAIR**

INTRODUCTION

PMG was contracted by The Village of Scarsdale to provide pavement management services for the village's 20-centerline mile pathway network. Through these services a field inventory setup of pathways, an inventory review and inspections were performed on all 220 management sections within the network. All inventory items were added or updated within their PMS database and a PCI was calculated for each section. HD videos were taken at each section location (from beginning to end of section). This provides for a virtual, high-definition account of the pathway network, and provides value in a variety of ways such as condition review and network level decision making from the office. This report provides a thorough definition of the inspection process performed as well as the condition results of our project.

CONDITION ASSESSMENT PROCESS

PMG adheres to the ASTM D6433-20 standard for assessing the condition of asphalt and concrete surfaces. Our skilled inspection team reviews high-definition video of each pavement section in conjunction with our proprietary artificial intelligence (AI) model to identify and document the distress types, severity levels, and quantities that are occurring. The data goes into the PAVER™ Pavement Management System (PMS) for Pavement Condition Index (PCI) calculation, resulting in a PCI score for each management section within the network.

PAVEMENT DISTRESS DEFINITION

20 possible distress types can occur within asphalt-based surfaces and 19 possible distress types that can occur within a concrete surface. The U.S. Army Corps of Engineers publishes the Asphalt Distress Manual and the Concrete Distress Manual. These manuals describe each distress type, the criteria to determine each severity level (low, medium, high), and how to measure each. The asphalt and concrete distress types are highlighted below in Figure 1.

01 – Alligator Cracking	06 – Depression	11 – Patch/Utility Cut	16 – Shoving
02 – Bleeding	07 – Edge Cracking	12 – Polished Aggregate	17 – Slippage Cracking
03 – Block Cracking	08 – Joint Reflection	13 – Pothole	18 – Swell
04 – Bumps and Sags	09 – Lane/Shoulder Drop	14 – Railroad Crossing	19 – Raveling
05 - Corrugation	10 – L&T Cracking	15 – Rutting	20 – Weathering
21 – Blow Up/Buckling	26 – Joint Seal Damage	31 – Polished Aggregate	36 – Scaling
22 – Corner Break	27 – Lane/Shoulder Drop	32 – Popouts	37 – Shrinkage Cracks
23 – Divided Slab	28 – Linear Cracking	33 – Pumping	38 – Corner Spalling
24 – Durability Cracking	29 – Large Patch/Utility Cut	34 – Punchout	39 – Join Spalling
25 - Faulting	30 – Small Patch	35 – Railroad Crossing	

Figure 1. Asphalt and Concrete Distresses

PCI AND CONDITION CATEGORY DEFINITION

The PCI is on a scale of 0 – 100 with 0 being the worst and 100 being the best. PAVER calculates it through the input of distress type, severity, and quantity information. Figure 2 illustrates the factors that go into the PCI and the 5 condition categories of the PCI.

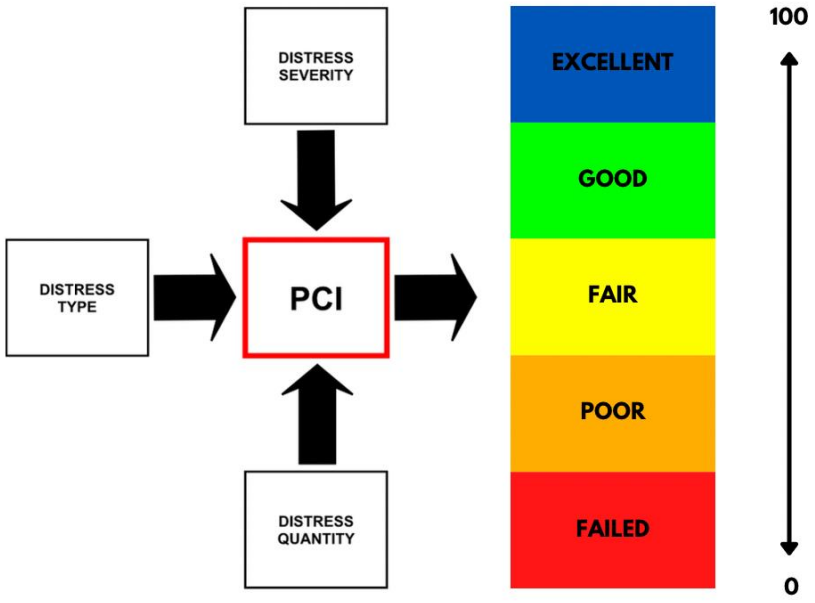


Figure. 2 Factors Determining PCI Value

CONDITION CATEGORY	LOW PCI VALUE	HIGH PCI VALUE
EXCELLENT	90	100
GOOD	70	89
FAIR	50	69
POOR	30	49
FAILED	0	29

Table 1. Condition Category Values

EXAMPLES OF PATHWAY CONDITIONS

During the inspection process, high resolution video was captured for each pathway section. A snapshot from several videos have been chosen to provide as documentation for this report of the inspected section location and serves as visual identification as to what types of distresses are occurring within the pavement section. The following 2023 images of pavements from within the Pathway Network provide a sense of what various PCI levels look like:

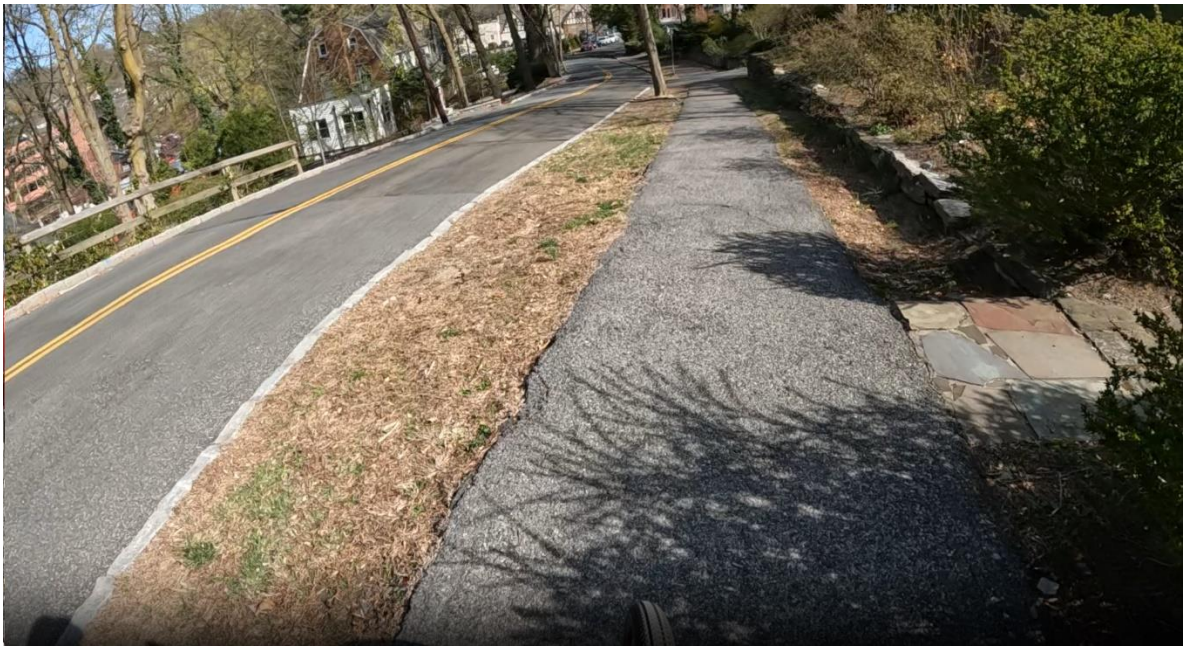
EXCELLENT CONDITION

POPHAM ROAD | PCI 93

GOOD CONDITION

SPENCER PLACE | PCI 88

FAIR CONDITION



OVERHILL ROAD | PCI 61

POOR

CRANE ROAD | PCI 32

FAILED

CHURCH LA | PCI 26

NETWORK CONDITION RESULTS

After completion of the 2023 pavement management project, PMG has determined that the average PCI for Scarsdale's 20 centerline mile pathway network is a 64 and considered to be in "FAIR" condition. Table 2 displays the condition summary data by category across the network while Figures 3, 4, and 5 illustrate the conditions in graph form. A complete Inventory and Condition Report in Excel spreadsheet was provided as a part of this project deliverable.

CONDITION CATEGORY	SECTIONS	CENTERLINE MILES	PAVEMENT AREA (SF)	PERCENT AREA	AVERAGE CONDITION
EXCELLENT	26	2.32	61,351	11.63%	95
GOOD	75	7.88	207,904	39.41%	81
FAIR	46	3.85	101,758	19.29%	60
POOR	63	4.98	131,477	24.92%	39
FAILED	10	0.95	25,043	4.75%	24
TOTALS	**220**	**20**	**527,533**	**100%**	

Table 2. Condition Summary

CONDITION GRAPHS

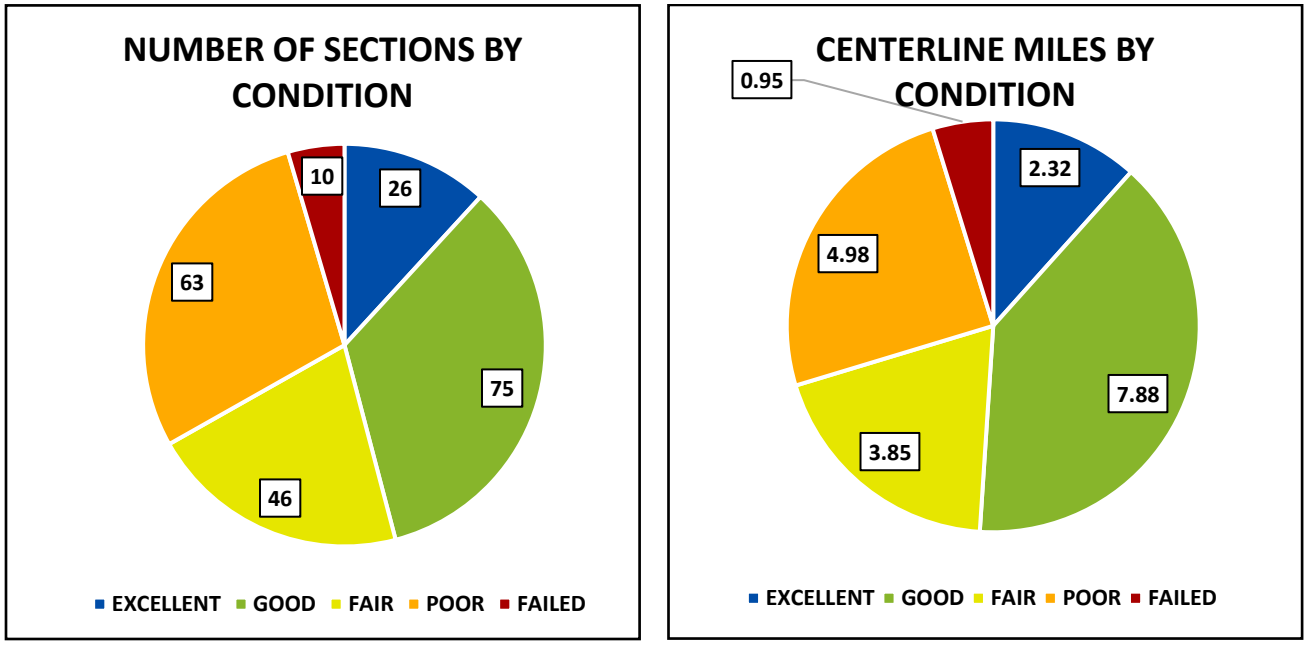


Figure 3. Number of Sections and Centerline Miles by Condition Category

CONDITION CATEGORY	SECTIONS	CENTERLINE MILES	PAVEMENT AREA (SF)	PERCENT AREA	AVERAGE CONDITION
ASPHALT	149	13.17	347,616	65.89%	56
BLUE STONE	24	3.35	88,461	16.77%	84
BRICK	3	0.08	2,153	0.41%	80
CONCRETE	44	3.38	89,303	16.93%	77
TOTALS	**220**	**20**	**527,533**	**100%**	

Table 3. Surface Material Summary

SURFACE GRAPHS

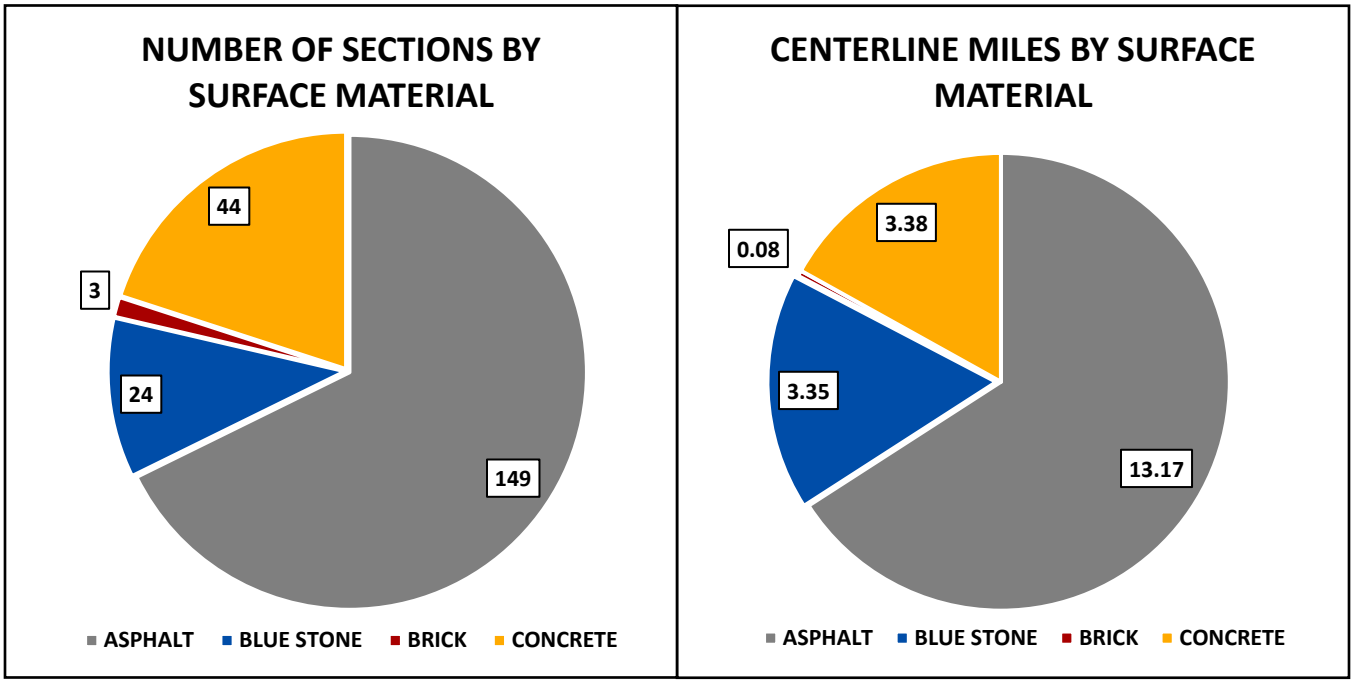


Figure 4. Average Condition, Number of Sections, and Centerline Miles by Surface Material

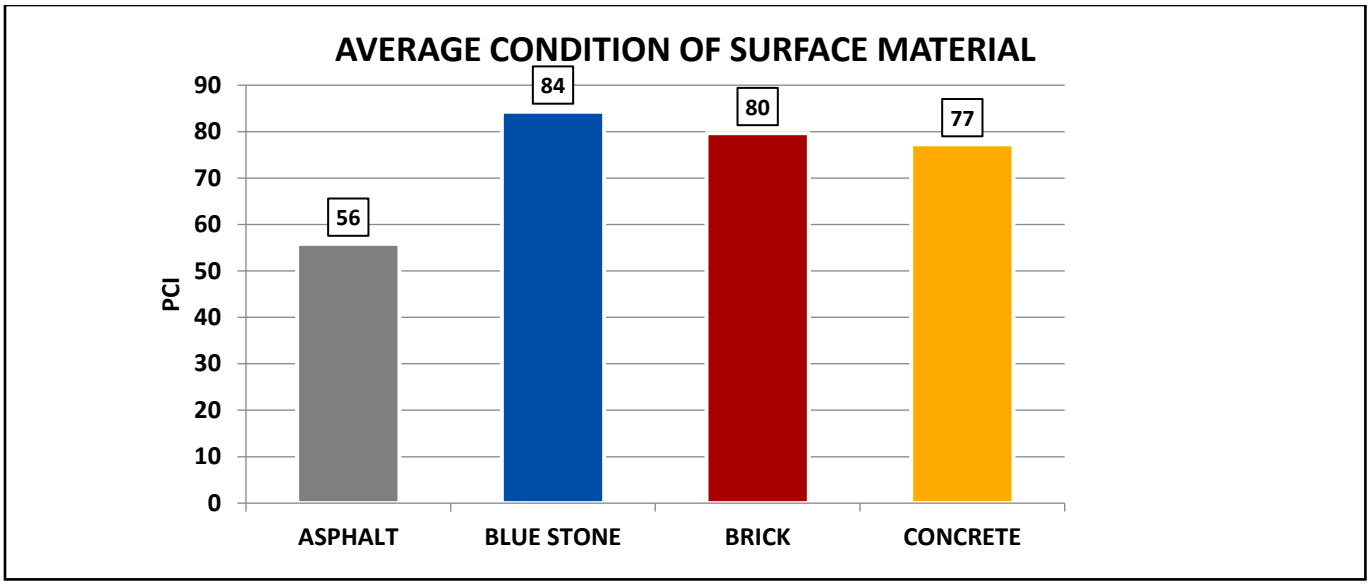


Figure 5. Average Condition, Number of Sections, and Centerline Miles by Surface Material

GIS CONDITION MAP

PMG assigned all pavement management data to GIS and will provide the shapefile to the agency. This allows for a wide variety of mapping options within both ESRI's ArcGIS and Google Earth. The following shows an example of a Latest Condition Map that has been created in both GIS and Google Earth for illustrative purposes. An ANCI Size C plot ready PDF version has been provided as a part of the project deliverable.

Figure 6. Pathway Section Latest Condition maps

CONCLUSION

The PCI study provides a PCI rating on each pavement section within the maintained pathway network. Based upon the distresses identified within each representative sample location inspected, a PCI number is assigned to each pavement section. This number is on a scale of 0 – 100 with 0 being the worst and 100 being the best.

The Scarsdale pathway network is approximately 20 centerline miles in size. Through the ASTM D6433-20 PCI study, PMG has determined the pathway network has an average PCI of **64** and is classified as being in **FAIR** condition.

PMG would again like to The Village of Scarsdale for the opportunity to provide them with this PCI study and our pavement management services. Our goal is to provide the highest level of services and support, providing our clients with the data, tools, and expertise necessary to be successful in their goals of pavement management. Should you require any additional information or support regarding this PCI study or the PAVER™ PMS, please do not hesitate to ask.

PAVEMENT MANAGEMENT GROUP
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Founder/CEO

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Scarsdale New York
2023 Pathway Conditions

N

Legend

Town Line

Condition

- EXCELLENT
- GOOD
- FAIR
- POOR
- FAILED

New York State, Maxar

PMG
PAVEMENT MANAGEMENT GROUP

SCARSDALE
1701
NEW YORK

Date: Tuesday, November 18, 2025
Re: Pavement Maintenance Program

COVER PAGE
Department of Public Works

ATTACHMENT(S):

- 11.06.2025 - J. Coleman Memo - Pavement Management Budget Recommendations
- 09.17.2025 - Pavement Management Group Project Report
- 09.17.2025 - Pavement Management Group - Asphalt Deterioration Curve and Information

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To: Alexandra Marshall, Village Manager

From: Jeffrey C. Coleman, PE, Superintendent of Public Works

David Goessl, PE, Village Engineer

Date: November 6, 2025

Re: Pavement Maintenance Program

MEMORANDUM
Department of Public Works

During the 2023/2024 budget deliberations, the Village Board spent significant time focusing on the condition of the roadways throughout Scarsdale. The discussion was framed by the 2023 Pavement Condition report that was completed by the Pavement Management Group (PMG). The study concluded with the Village's roadways falling into the following categories:

CONDITION CATEGORY	SECTIONS	CENTERLINE MILES	LANE MILES	PAVEMENT AREA (SF)	PERCENT AREA	AVERAGE CONDITION
EXCELLENT	230	24.4	46.54	2,948,880	29.70%	97
GOOD	164	14.2	28.17	1,784,981	17.98%	81
FAIR	182	19.4	37.93	2,403,472	24.21%	59
POOR	222	21.8	42.23	2,675,640	26.95%	42
FAILED	10	1.0	1.84	116,514	1.17%	25
TOTALS	808	81	157	9,929,487	100%	

The overall Pavement Condition Index identified in the report for all of the 81 miles of roadway maintained by the Village was determined to be **64 (FAIR)**.

In an effort to address the roadways that fell into the "Failed", and "Poor" category, the Village Board developed a plan to accelerate the resurfacing program, by doubling the funding for resurfacing to 10 centerline miles per year for the following 3 years. This resulted in approximately 30 centerline miles of roadway being resurfaced from 2022 to 2025. The costs for the accelerated schedule including curb preparation is as follows:

Budget Year	Centerline Miles Resurfaced	Village Cost
2023/2024	**10.63 (plus 3.28 by Con Ed)**	**$3,559,630**
2024/2025	**8.55 (plus 1.5by Con Ed)**	**$3,076,125**
2025/2026	**9.8 (plus 0.75 by Con Ed)**	**$4,014,206**
Total		**$10,649,961**

($367,500 per Mile)

To measure the effectiveness of the 3-year accelerated paving schedule and to determine the need for road resurfacing efforts for the next several years, PMG was engaged to rate the condition of the roadways in

September of 2025. The attached study identifies the present condition of the roadways throughout Scarsdale. The condition categories are as follows:

CONDITION CATEGORY	SECTIONS	CENTERLINE MILES	LANE MILES	PAVEMENT AREA (SQFT)	PERCENT AREA	AVERAGE PCI
EXCELLENT	568	57.10	111.29	7,051,578	71.14%	96
GOOD	148	12.46	23.96	1,518,053	15.31%	81
FAIR	64	7.83	15.10	956,644	9.65%	61
POOR	29	3.19	6.10	386,315	3.90%	43
FAILED	0	0.00	0.00	0	0.00%	NA
TOTALS	809	81	156	9,912,590	100%	

The overall Pavement Condition Index identified after this year's work for all 81 miles of Village roadways was determined to be an **89 (GOOD).**

Future Efforts:

Up to this point, the pavement maintenance/replacement philosophy has been to let roadways deteriorate toward failure and to mill and resurface once the roadways deteriorate to that point. Roads with this degree of deterioration will often develop potholes and, as the potholes are filled, the roads are no longer smooth (even at 25 miles per hour). Going forward, the Department recommends extending the life of each roadway while they are in the GOOD and EXCELLENT categories to the highest degree practicable. As a result the driver should experience road surfaces that run smooth and are pothole free for a longer portion of the pavement's life. In order to accomplish this change, the Village funded the purchase of crack sealing equipment, which offers one alternative measure for road preservation. After initial training, DPW staff already have begun sealing cracks in roadways, targeting roads that were resurfaced in the last 5 years. The proactive treatment for crack sealing preserves the Village's investment by effectively addressing pavement separation and deterioration at early stages before noticeable defects and potholes develop. Department forces will continue to do this annually as part of its annual work program.

In addition to crack sealing, it is proposed that the Village introduce additional measures to extend the overall life of the roads beyond their typical 15-year life span. While there are several measures available, it is recommended that fog sealing be introduced next year into our road program as one of the new road preservation measures. Fog sealing is not a new technology and has been used by many road agencies worldwide. As pavements age, they lose their rich black color which is the result of the oxidation of the pavement and the loss of its oil. With this loss, the pavement loses its flexibility and cracks are formed. Its basic concept is simple for most to understand. The process reintroduces oils/rejuvenators into the pavement to restore material characteristics. This is the reason that driveway paving contractors recommend "sealing" driveways after a few years of being replaced.

In terms of cost, this treatment is approximately 3 to 5 percent of the cost of traditional resurfacing with a 2-inch overlay. It is anticipated that this treatment will extend the overall life of the road by 2 to 4 years when applied at the right time. On a per mile basis, one additional year of life beyond 15 years has an estimated present-day value of $24,500. At a cost of $9,000 per mile for a standard 24-foot-wide road, one mile of fog sealing would save $49,000 to $98,000.

2026/2027 Budget

Based on the results of the PMG study, 3.19 miles of roadway are currently in the POOR category, 7.83 are currently in the FAIR category with approximately 4 miles at the lower limit of that category. It is recommended that the village allocate $1,837,500 to resurface 5 miles of road in 2026/2027 and allocate $100,000 to fog seal 10 miles.

2027/2028 Budget

Looking forward, it is anticipated that in the 2027/2028 budget year, some of the section of roadway in the "Good" category will drop into the "Fair" category and the remaining 3.83 miles of roadways currently in the "Fair" category will remain fair or drop into the poor category. It is currently proposed that we allocate $1,837,500 to resurface 5 miles of road and allocate $100,000 to fog seal 10 miles. This would be revisited during the development of that annual budget

2028/2029 Budget

It is our professional opinion that as the Village continues to improve the aggregate PCI through road restoration and pavement preservation techniques, the aggregate PCI should continue to improve. However in the 2028/2029 fiscal budget, we would still propose to resurface 5 miles to flush out any roads that may have fallen into the POOR and FAIR category. Recommendation would continue to fund $1,837,500 to resurface 5 miles of road and allocate $100,000 to fog seal 10 miles. This would be revisited during the development of that annual budget

2029/2030 Budget

In the 2029/2030 budget a reduction in road resurfacing is envisioned from the prior 5 mile goal to 3 miles with the assumption that the aggregate PCI continues to improve. Also proposed is to increase funding for the fog sealing program to a higher goal of 15 miles of roadway. Recommendation would be for $1,102,500 for road resurfacing and $150,000 for fog sealing. This would be revisited during the development of that annual budget

2030/2031 Budget

Revisit proposed funding schedule after another round of road condition assessment reporting is performed by Pavement Management Group (PMG) or comparable consultant to verify the effectiveness of the prior 4 year approach.

655 Hopewell Dr
PO Box 2407
Heath, OH 43056
(800) 638-8040

PAVEMENT MANAGEMENT GROUP

PAVEMENT MANAGEMENT FINAL PROJECT REPORT

The Village of Scarsdale, NY

Wednesday, September 17, 2025

Pavement Management Group

COMPLETE PAVEMENT MANAGEMENT SOLUTIONS

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Village of Scarsdale contracted with Pavement Management Group (PMG) to provide a turn-key Pavement Management Program (PMP). The backbone of PMG's turnkey PMP is the PAVER Pavement Management System (PMS), which provides specific tools such as pavement modeling, maintenance decision trees, and budget/target-driven scenarios, maximizing the return on investment from available maintenance and rehabilitation funds, generating a prioritized plan, and identifying specific areas in need of maintenance and rehabilitation.

- Verify and setup any new pavement network inventory
- Provide an HD video of each pavement section
- Identify all distress types, severity levels, and quantities through ASTM D6433-23
- Calculate the Pavement Condition Index (PCI) for each pavement section
- Assign all pavement management data to GIS
- Create a GIS current condition map
- Provide a complete inventory and condition listing of each pavement section
- Provide a final report of findings
- Provide our RoadINsights Dashboard of the network through ArcGIS
- Provide continued support services

2025 ROADWAY NETWORK SUMMARY

ROADWAY INVENTORY SUMMARY	
TOTAL SECTIONS	809
TOTAL PAVEMENT AREA	9,912,590
TOTAL CENTERLINE MILES	81
TOTAL LANE MILES (12' WIDE)	156

ROADWAY CONDITION SUMMARY	
AVERAGE PCI	89
AVERAGE CONDITION	*GOOD*

INTRODUCTION

The Village of Scarsdale contracted PMG to provide pavement management services for their 81-centerline mile (156 lane mile) roadway network. These services included a field inventory setup of any new roadway sections, an inventory review, and inspections on all 809 pavement management sections within the network. All inventory items were added or updated within their PMS database, and a PCI was calculated for each section. HD videos were taken at each section location (from the beginning to the end of the section). This provides for a virtual, high-definition account of the roadway network and provides value in various ways, such as condition review and network-level decision-making from the office. This report provides a thorough definition of the inspection process performed as well as the condition results of our project.

CONDITION ASSESSMENT PROCESS

PMG adheres to the ASTM D6433-23 standard for assessing the condition of asphalt and concrete surfaces. Our skilled inspection team reviews high-definition video of each pavement section with our proprietary artificial intelligence (AI) model to identify and document the distress types, severity levels, and quantities occurring. The data goes into the PAVER™ Pavement Management System (PMS) for Pavement Condition Index (PCI) calculation, resulting in a PCI score for each management section within the network.

PAVEMENT DISTRESS DEFINITION

20 possible distress types can occur within asphalt-based surfaces, and 19 possible ones within a concrete surface. The U.S. Army Corps of Engineers publishes the Asphalt and Concrete Distress Manual. These manuals describe each distress type, the criteria to determine each severity level (low, medium, high), and how to measure each. The asphalt and concrete distress types are highlighted below in Figure 1.

01 – Alligator Cracking	06 – Depression	11 – Patch/Utility Cut	16 – Shoving
02 – Bleeding	07 – Edge Cracking	12 – Polished Aggregate	17 – Slippage Cracking
03 – Block Cracking	08 – Joint Reflection	13 – Pothole	18 – Swell
04 – Bumps and Sags	09 – Lane/Shoulder Drop	14 – Railroad Crossing	19 – Raveling
05 - Corrugation	10 – L&T Cracking	15 – Rutting	20 – Weathering
21 – Blow Up/Buckling	26 – Joint Seal Damage	31 – Polished Aggregate	36 – Scaling
22 – Corner Break	27 – Lane/Shoulder Drop	32 – Popouts	37 – Shrinkage Cracks
23 – Divided Slab	28 – Linear Cracking	33 – Pumping	38 – Corner Spalling
24 – Durability Cracking	29 – Large Patch/Utility Cut	34 – Punchout	39 – Join Spalling
25 - Faulting	30 – Small Patch	35 – Railroad Crossing	

Figure 1. Asphalt and Concrete Distresses

PCI AND CONDITION CATEGORY DEFINITION

The PCI is on a scale of 0 to 100, with 0 being the worst and 100 being the best. PAVER™ calculates it by inputting distress type, severity, and quantity information. Figure 2 illustrates the factors that go into the PCI and its' 5 condition categories.

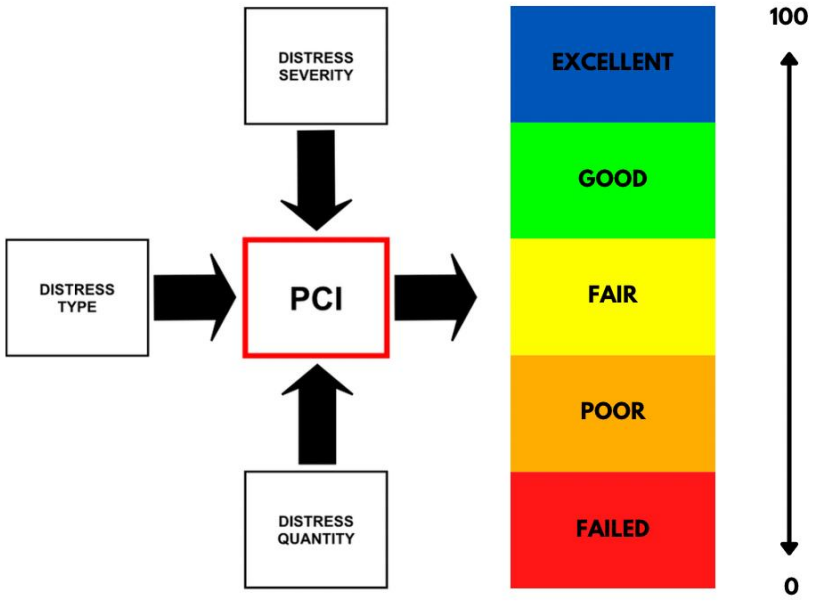


Figure. 2 Factors Determining PCI Value

CONDITION CATEGORY	LOW PCI VALUE	HIGH PCI VALUE
EXCELLENT	90	100
GOOD	70	89
FAIR	50	69
POOR	30	49
FAILED	0	29

Table 1. Condition Category Values

EXAMPLES OF ROADWAY CONDITIONS

A high-resolution video was captured for each management section during the inspection process. A snapshot from several videos has been chosen to provide documentation for this report of the inspected section location and serves as visual identification as to what types of distress are occurring within the pavement section. The following 2025 images of pavements from within the Roadway Network provide a sense of what various PCI levels look like:

EXCELLENT CONDITION

ONEIDA RD | SECTION 01 | PCI 100

GOOD CONDITION

WAKEFIELD RD | SECTION 02 | PCI 80

FAIR CONDITION

CANTERBURY RD | SECTION 01 | PCI 56

POOR CONDITION

WAYSIDE LN | SECTION 06 | PCI 37

FAILED CONDITION

NONE IN NETWORK

ROADWAY CONDITION RESULTS

After completing the 2025 pavement management project, PMG has determined that the average PCI for Scarsdale's 156-lane-mile (81 Centerline Mile) roadway network is an ***89*** and is classified as in ***GOOD*** condition. Table 2 displays the condition summary data by category across the network, while Figures 3 and 4 illustrate the conditions in graph form. A complete Inventory and Condition Report in an Excel spreadsheet was provided for this project deliverable.

CONDITION CATEGORY	SECTIONS	CENTERLINE MILES	LANE MILES	PAVEMENT AREA (SQFT)	PERCENT AREA	AVERAGE PCI
EXCELLENT	568	57.10	111.29	7,051,578	71.14%	96
GOOD	148	12.46	23.96	1,518,053	15.31%	81
FAIR	64	7.83	15.10	956,644	9.65%	61
POOR	29	3.19	6.10	386,315	3.90%	43
FAILED	0	0.00	0.00	0	0.00%	NA
TOTALS	809	81	156	9,912,590	100%	

Table 2. Condition Summary

CONDITION GRAPHS

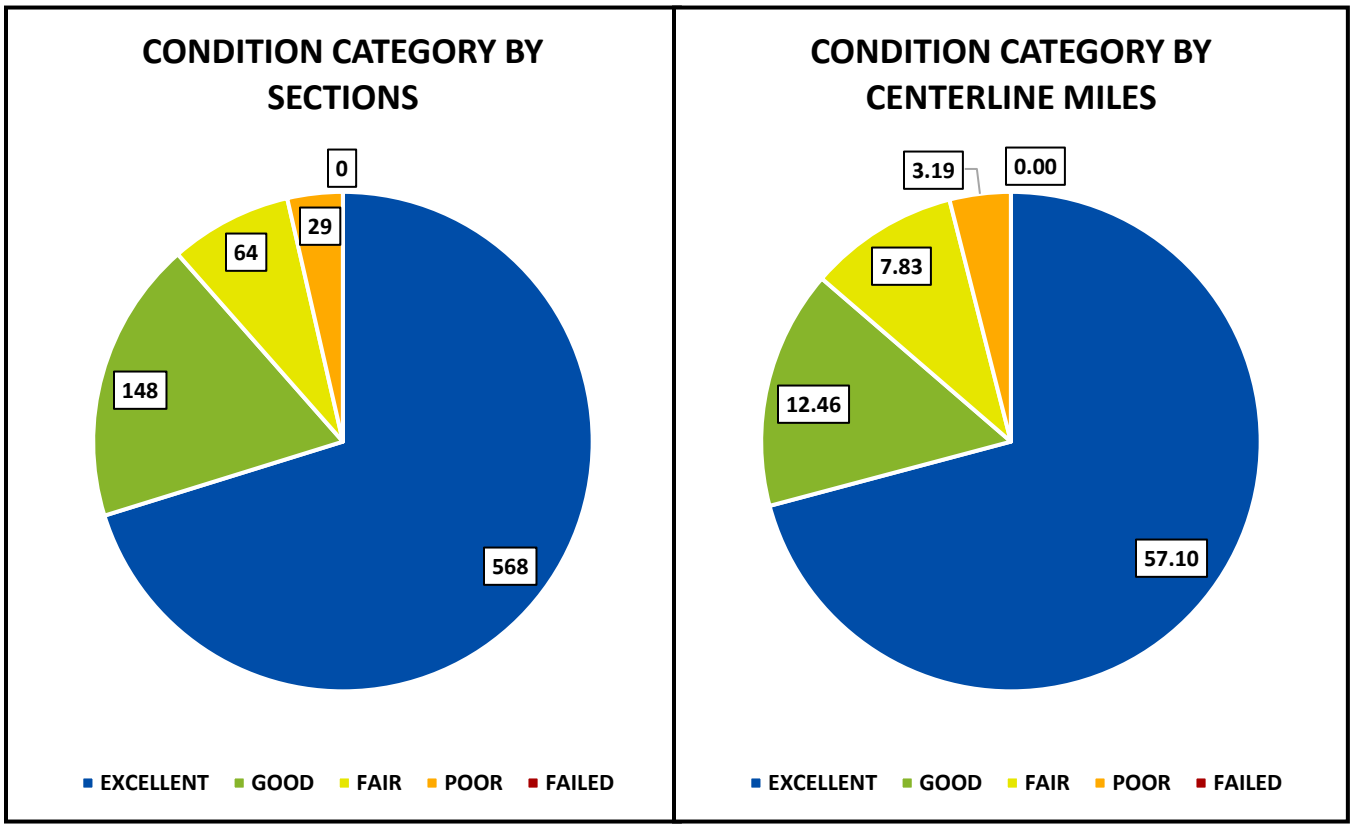


Figure 3. Condition Category by Number of Sections and Centerline Miles

FUNCTIONAL CLASSIFICATION GRAPHS

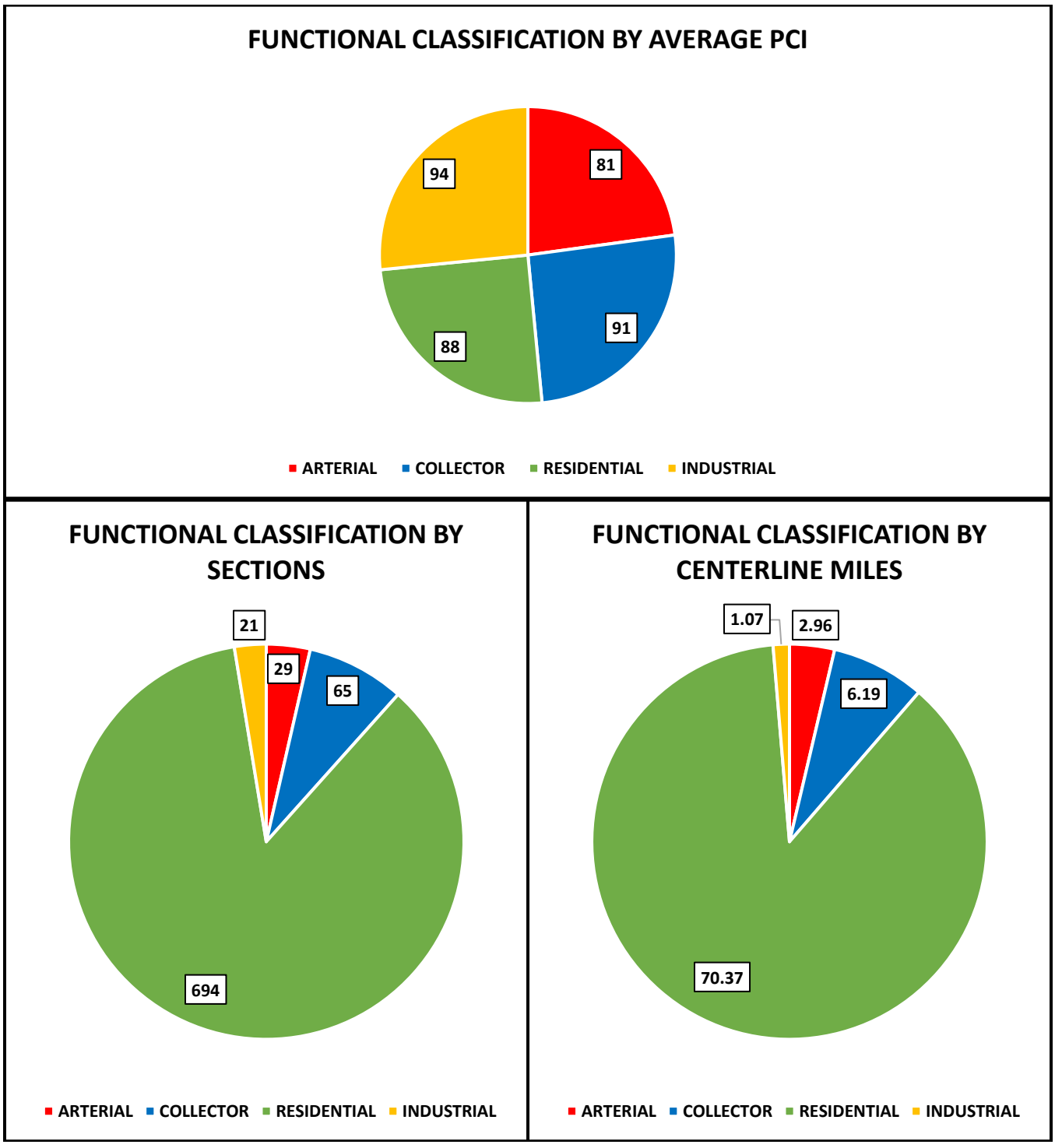


Figure 4. Functional Classification by Average PCI, Number of Sections, and Centerline Miles

GIS CONDITION MAP

PMG assigned all pavement management data to GIS and will provide the shapefile to the agency. This allows for various mapping options within ESRI's ArcGIS and Google Earth. The following shows an example of the Latest Condition Map created in GIS and Google Earth for illustrative purposes. An ANCI Size C plot-ready PDF version has been provided as part of the project deliverables.

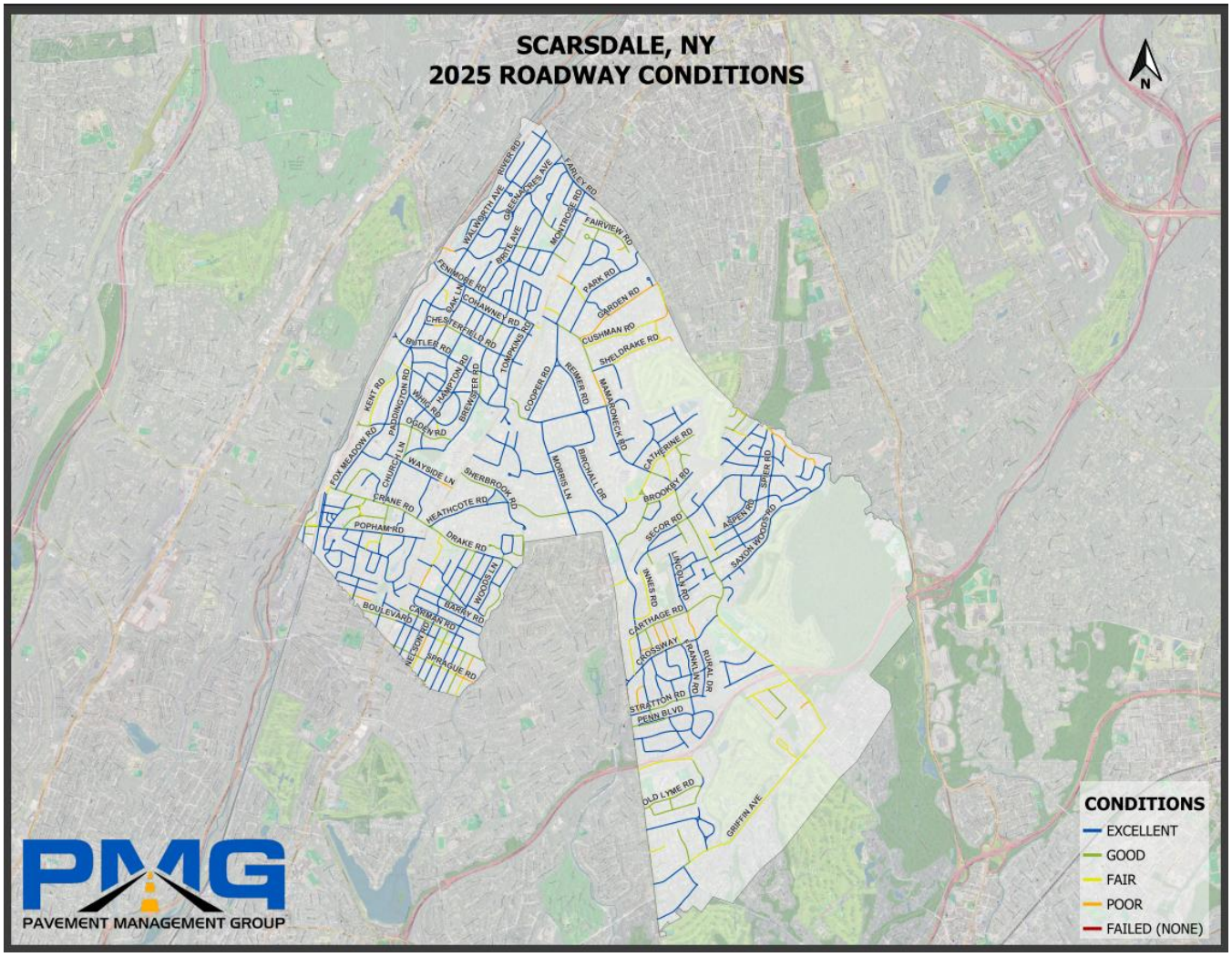


Figure 5. Roadway Conditions Map

CONCLUSION

The PCI study provides a PCI rating for each pavement section within the maintained roadway network. A PCI number is assigned to each pavement section based on the distresses identified within each section. This number is on a scale of 0 to 100, with 0 being the worst and 100 being the best.

The Village of Scarsdale's Roadway network is approximately 156 lane miles (81 centerline miles) in size. Through the ASTM D6433-23 PCI study, PMG has determined that the roadway network has an average PCI of an ***89*** and is classified as being in ***GOOD*** condition.

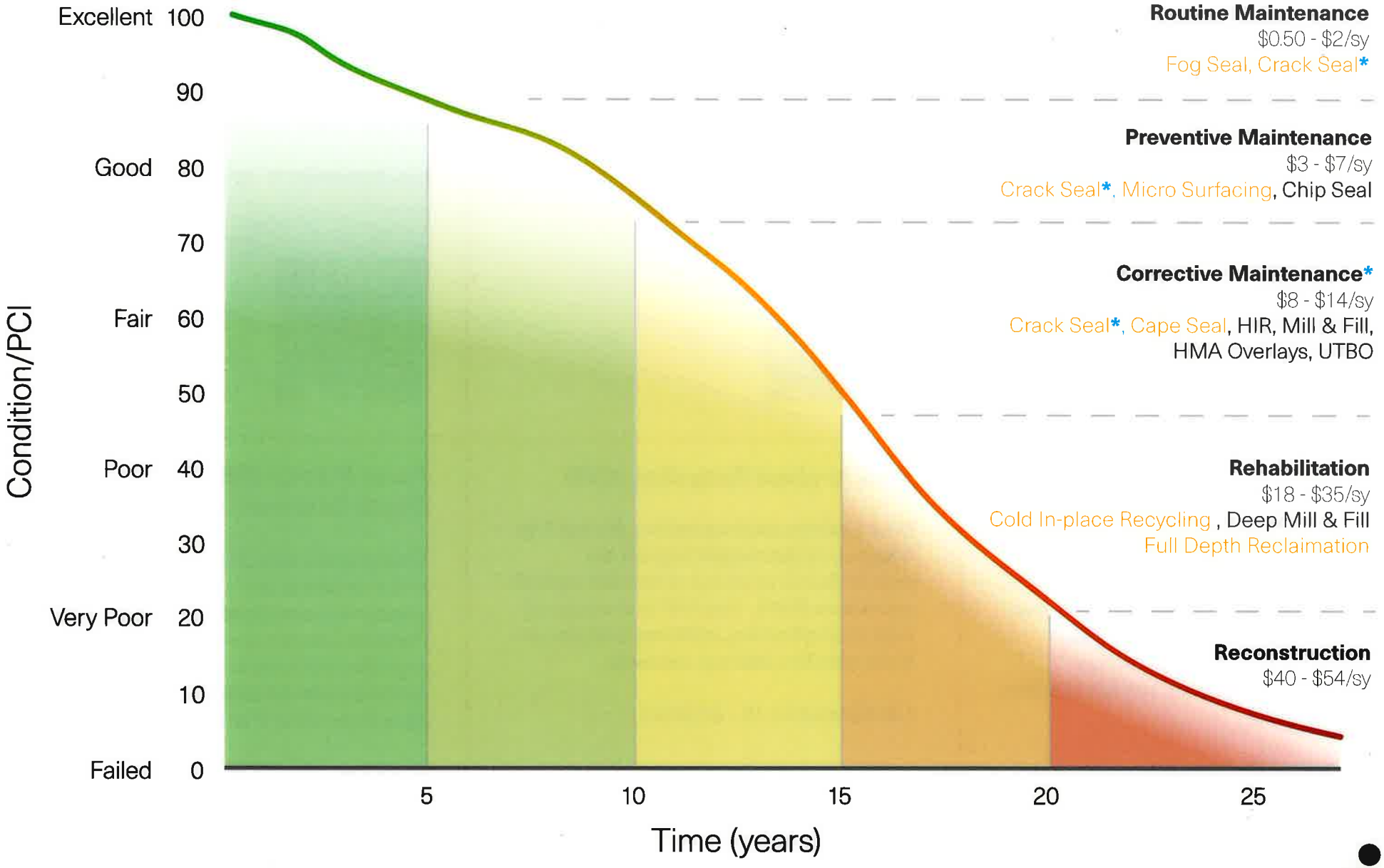
PMG would again like to thank you for the opportunity to provide the Village of Scarsdale with this PCI study and our pavement management services. Our goal is to provide the highest level of services and support, providing our clients with the data, tools, and expertise necessary to succeed in their pavement management goals. Please do not hesitate to ask if you require additional information or support regarding this PCI study or the PAVER™ PMS.

PAVEMENT MANAGEMENT GROUP
JAMES GOLDEN III
Founder/CEO

P: (740) 507-3842
E: James@PavementManagementGroup.com

ASPHALT DETERIORATION CURVE

indus treatments in yellow



Crack Seal when needed $0.50-$1/sy.

indus

Fog Seal Rejuvenators

Using a pressurized distributor, a light application of asphalt emulsion or bio-based rejuvenator is sprayed directly onto the existing pavement. Designed to slow the aging of an existing asphalt surface, this treatment prevents moisture, oxidation, and raveling.

Life Extension: 2 - 5 years

Bio-based

Asphaltic-based

Crack Sealing

After preparing the cracked area, a mixture of asphalt cement, polymer, and reinforcing fibers is placed in and over the crack. This prevents moisture and incompressible materials from entering the cracks and making them worse.

Life Extension: 2 - 5 years

Micro Surfacing

A precise mixture of polymer-modified asphalt emulsion, quality aggregates, mineral filler and water is uniformly spread over the existing, properly prepared surface. Most installations are done in two successive lifts (a leveling course plus a wearing course).

Life Extension: 6 - 8 years

Cape Sealing

After crack sealing, a chip seal is applied to the existing pavement with the liquid asphalt binder filling any fine open cracks. After the chip seal has cured, one or two lifts of micro surfacing are applied, locking in the chip seal aggregate (reducing stone loss) and providing a final wearing surface.

Life Extension: 8 - 10 years

Cold In-place Recycling (CIR)

In one continuous operation, the top 3 to 5 inches of distressed asphalt are cold-milled to produce reclaimed asphalt pavement (RAP). The RAP is then mixed with strengthening additives and placed back onto the existing roadway.

Life Extension: 15 - 20 years

Paver-Placed Stabilized Full Depth Reclamation (PPSFDR)

This process recycles existing asphalt and subbase in one continuous operation greatly reducing traffic disruption. Adding Portland cement and foamed-liquid asphalt stabilizers to the pulverized existing material creates a long-lasting base layer up to 8" thick.

Life Extension: 15 - 20 years

SCARSDALE
1701
NEW YORK

Date: Tuesday, November 18, 2025
Re: Stormwater Projects Update

COVER PAGE
Department of Public Works

ATTACHMENT(S):

- 11.06.2025 - J. Coleman Memo - Stormwater Project Update
- 11.12.2025 - E. Giovanni Memo - Catherine Road Drainage Improvement Report

SCARSDALE
1701
NEW YORK

To: Alexandra Marshall, Village Manager

From: Jeffrey C. Coleman, PE, Superintendent of Public Works

Date: November 6, 2025

Re: Stormwater Project Update

MEMORANDUM
Department of Public Works

Following the completion of their respective Hydraulic studies, the following projects have been submitted to the Westchester County Flood Mitigation Project program for funding in October:

- Griffen Avenue Culvert Replacement
- George Field Park/Oxford Road/Rugby Road Drainage Improvements
- Cushman Road/Garden Road/Willow Lane/Sheldrake Road Drainage Improvements

This grant program supports up to 50% of the project costs. The Village will be presenting to the Westchester County Stormwater Advisory Board on November 20th in support of these applications.

Brite Avenue/Chesterfield Road/Fox Meadow Road Drainage improvement project is currently working its way through the SEQR process. Once that process is complete, an application will be made to the County grant program.

Replacement of the two box culverts below Catherine Road, adjacent to the Scarsdale Middle School has been let to bid. Bids are due on December 9, 2025. As a reminder this is a FEMA funded project.

Lastly, the attached "Catherine Road Drainage Improvements, Hydrologic and Hydraulic Analysis" has been prepared by Mott MacDonald. This report documents their efforts to date to study the area of the Sheldrake River between Fenway Golf Club and the culverts adjacent to the Scarsdale Middle School. This report, as well as the other studies, have been placed on the Village's website.

In summary, the report identifies three projects, as follows:

1. Construction of a 24-inch drain line along Catherine Road from Wheelock Road to Canterbury Road to by-pass flooded areas behind the properties on Catherine Road. This project has an estimated construction cost of $384,000. This is a very localized improvement that will provide benefit for storms of a magnitude of 10-years or less.

2. Construction of a large bypass culvert from Canterbury Road (Between Cayuga Road and Catherine Road) to the Scarsdale Middle School to increase stormwater flow to that location. To mitigate the increase in flow, a 300' long x 200' wide x 10' deep underground detention system would be constructed on Scarsdale Middle School property. A large pump station would be required to overcome the difference in water surface elevations. The estimated construction cost range for this project is $11 million to $20+ million. The BCR for this project is 0.25 for the low end construction cost.

3. A review of the Village Code, perhaps specific to this area, which recognizes the unique flood risks and encourages flood mitigation efforts on private property.

Recommendations

The Department recommends proceeding with design and construction of the 24-inch drain along Catherine Road, as identified in the study as Alternative 1, using existing appropriated funding. The bypass culvert and detention basin project and analysis and modification of the Village Code should be discussed with the Village Board before any additional effort is expended.

SCARSDALE
1701
NEW YORK

To: Mayor Arest and the Village Board of Trustees

From: Emily Giovanni, Assistant Village Manager

Date: November 12, 2025

RE: Drainage Improvement Reports

MEMORANDUM
Village Manager's Office

Please find below link to the Catherine Road Drainage Improvements Hydrologic and Hydraulic Analysis prepared by Mott MacDonald:

> **Catherine Road Drainage Improvements Hydrologic and Hydraulic Analysis**
> **October 2025**
> Prepared by Mott MacDonald
> https://scarsdale.gov/DocumentCenter/View/11129/Sheldrake-River-Flood-Mitigation-Study-and-H-H-Analysis---October-2025

Due to the extensive length of the report, it is not included as an agenda backup material. However, it is available in full via the above link for your review and reference.

Please let me know if you have any questions or would like assistance navigating the document.

SCARSDALE
1701
NEW YORK

Date: Tuesday, November 18, 2025
Re: Route 22 Road Diet Feasibility Study

COVER PAGE
Department of Public Works

ATTACHMENT(S):

- 10.23.2025 - J. Coleman Memo - Route 22 Road Diet
- 10.21.2025 - Creighton Manning - Route 22 Road Diet Proposal
- 09.26.2025 - Creighton Manning - Route 22 Road Diet Feasibility Study

SCARSDALE
1701
NEW YORK

To: Alexandra Marshall, Village Manager

From: Jeffrey C. Coleman, PE, Superintendent of Public Works

Date: October 23, 2025

Re: Post Road (Route 22) Road Diet

MEMORANDUM
Department of Public Works

The issue of traffic (vehicular, pedestrian and bicycle) and safety along Post Road (Route 22) has been raised in multiple settings over the last several years. The idea of a "road diet", (a reduction in through lanes) has been discussed as a potential improvement. Post Road (Route 22) is under New York State Department of Transportation jurisdiction.

The Department engaged Creighton Manning, an engineering firm that has recently undertaken a road diet project along a state route in Ossining, to perform a feasibility study to determine the appropriateness of a road diet along Post Road in Scarsdale. While not a comprehensive traffic and civil engineering evaluation, the study provides a starting point for the Village to engage New York State Department of Transportation, and our state officials, to discuss a future state sponsored project.

The completed analysis is attached and concludes that a road diet appears feasible and can provide improved operational and safety benefits. As a next step, it is recommended that Creighton Manning develop a conceptual level signage and striping plan in order to illustrate the concepts. The study and the concept plans would form the basis for future discussions with our state officials.

Cc:
W/attach: Village Engineer
Village Planner

October 21, 2025

Mr. Jeffrey Coleman, PE
Superintendent of Public Works
Village of Scarsdale
jcoleman@scarsdale.gov

RE: Proposal for Professional Engineering Services – Supplemental Work Authorization #1
NYS Route 22 Road Diet Feasibility Study, Conceptual Plans and Estimate
Village of Scarsdale, Westchester County, New York; CM Proposal No. R251172.01

Mr. Coleman:

Creighton Manning Engineering & Surveying, PLLC (CM) is pleased to present this supplemental work authorization (SWA) for continued Professional Transportation Engineering Services related to the previously prepared Road Diet Feasibility Study along the NYS Route 22 (Post Road) corridor within the Village of Scarsdale. CM understands the Village is interested in conceptual level plans over aerial imagery to gain a visual understanding of the proposed Road Diet and facilitate conversations with the Village Board, NYSDOT and interested stakeholders.

SCOPE OF SERVICES

CM will prepare a conceptual level plan over aerial imagery and concept level estimate. One round of comments is accounted for on both deliverables. Our highway engineers will also perform a site visit to verify existing conditions and gain site familiarity. The scope will include:

- Site visit for one (1) Project Engineer and one (1) Junior Engineer.
- Development of conceptual level sign and striping plans at 40 scale on 11" x 17" sheets.
- Development of a conceptual level cost estimate for road diet implementation.
- One (1) meeting with Village staff/the Village Board to discuss the conceptual plans.
- One (1) meeting with NYSDOT staff to initiate project discussion and determine potential next steps.

SCHEDULE

CM can complete the Scope of Services as outlined in Four (4) to Six (6) weeks following Notice to Proceed.

FEE

Our fee for the work outlined herein is **$16,000** invoiced on a percent-complete basis. Invoices will be mailed monthly, due upon receipt, and be based upon the percent complete. Timely remittance of payments is necessary for work tasks to continue. It is noted that the **Fee** and **Schedule** are valid for a period of 90 days. After that, CM reserves the right to modify the **Fee** and **Schedule** based on company backlog and current conditions.

EXTRA WORK

CM is aware that proposals are subject to change as projects are refined. To the extent possible, CM will address evolving issues as they arise within this budget. However, there are several instances where additional work may be requested and/or required, which would be billed as "extra work." "Extra work" would only be initiated after the Client is informed of the nature of the work and associated costs. "Extra work" may include the following:

- Additional meetings with the Village Board, NYSDOT or other Project stakeholders.
- Topography/boundary survey to determine specific project impacts.
- Additional rounds of comments on the deliverables.
- Public engagement.

Thank you for the opportunity to submit this Proposal for this exciting and transformative project. If the Proposal is acceptable, please sign and return it for our records. We can begin work immediately upon your authorization.

Respectfully submitted,
Creighton Manning Engineering & Surveying, PLLC

Jared M. Anderson, PE
Associate | Project Manager

Amanda LaRosa, PE
Project Manager

CONTENTS NOTED AND APPROVED:

CM Proposal No. R251172.01

The person signing the proposal represents that he or she is authorized to legally bind the Client for payment of all bills incurred.

Name (Please Print)	Signature Date
Agency Name	Telephone
Street	Town/State/Zip

MEMORANDUM

Date: September 26, 2025

To: Jeffrey Coleman, PE and David Goessl, PE
From: Amanda LaRosa, PE
CC: Mark Sargent, PE

Project: Route 22 Road Diet Feasibility Study, Village of Scarsdale, Westchester County

---

The purpose of this memo is to provide a recommendation as to whether a road diet is considered feasible on NY Route 22, locally named Post Road, in the Village of Scarsdale. The NY Route 22 corridor is approximately 2.8 miles in length throughout the Village and provides a four-lane cross section that contributes to a poor pedestrian/bicycle environment and a documented crash history. North of the Village line, NY Route 22 provides a two-lane cross section. South of the Village line, NY Route 22 provides a four-lane cross section. For the analysis contained herein, a 3-lane cross section consisting of one travel lane in each direction and a center two-way left-turn lane (TWLTL) was considered.

The Federal Highway Administration's (FHWA) *Road Diet Informational Guide* was referenced as the basis for the recommendations contained herein. The FHWA indicates that the objective(s) of a Road Diet could be one or more of the following:

- Improve safety
- Reduce speeds
- Mitigate queues associated with left-turning traffic
- Improve pedestrian environment
- Improve bicyclist accessibility
- Enhance transit stops

Within the *Road Diet Informational Guide,* guidance is provided regarding several factors that should be considered when determining the feasibility of a road diet. Table 1 summarizes operational considerations of a road diet and identifies whether these factors are consistent with existing and planned operations of NY Route 22.

Table 1 – Summary of Road Diet Feasibility Considerations

Operational Factors	FHWA Reference[1]	Consistent with NY Route 22 Operations and Goals?	
		Yes	No
Safety Factors	3.1	✓	
De Facto Three-Lane Roadway Operation	3.3.1		✓
Speed	3.3.2	✓	
Level of Service	3.3.3	✓	
Average Daily Traffic	3.3.5	✓	
Peak Hour and Peak Direction	3.3.6	✓	
Turning Volumes and Patterns	3.3.7		✓
Frequently Stopping and Slow-Moving Vehicles and Transit Considerations	3.3.8 3.4.3		✓
Bicycle Considerations	3.4.1	✓	
Pedestrian Considerations	3.4.2	✓	
Case Studies	3.6	✓	

[1] FHWA *Road Diet Informational Guide*

Safety Factors: Implementation of a road diet is considered a proven safety measure by FHWA with an expected crash reduction of 17 to 47 percent.[1] Road diets address rear-end, left-turn, and speed discrepancy crashes. Road diets may also improve safety for bicyclists and pedestrians. This is considered **consistent** with a goal of the Village of Scarsdale to reduce crashes since a road diet will decrease the number of vehicular conflict points that contribute to overtaking, sideswipe, and rear end crashes currently experienced in the corridor.

De Facto Three-Lane Roadway Operation: The FHWA *Road Diet Informational Guide* indicates that "the overall objective of the road diet is to match the design with the intended or preferred function of the roadway for all road users." A road diet works best when there are significant left-turning volumes causing through traffic to use the outer lane. This operational factor is **not** consistent with existing driving behavior.

Speed: Road diets typically reduce speeds through a corridor. Lowering speeds on NY Route 22 would improve conditions for pedestrians and bicyclists while lowering speed variability between vehicles in the corridor. Existing speed data recorded in the corridor indicated average and 85th percentile speed of 35-36 mph and 44 mph, respectively, along the northern portion of the corridor and average and 85th percentile speed of 32-33 mph and 38-39 mph along the southern portion of the corridor. Implementing a road diet in this corridor would be considered beneficial due to improvements to the pedestrian/bicycle environment; and is **consistent** with the Project Objectives for the corridor.

Level of Service: The level of service analysis conducted for the study area intersections on NY Route 22 indicates that study intersections would experience increases in delay beyond acceptable levels of service during peak hours if reduced to a single through lane in each direction along NY Route 22. Therefore, additional lanes will likely need to be maintained at intersection approaches. The following two (2) sections of NY Route 22 within the Village would need to maintain 4 lane sections to provide adequate capacity and prevent spillback of queueing: (i) between Mamaroneck Road and Fenimore Road and (ii) between Popham Road and Crane Road.

A center two-way left-turn lane will improve operations of the unsignalized intersections on NY Route 22 by allowing two-stage left-turns. Additional Level of Service analyses should be performed at select 3-leg intersections and 4+-leg intersections between Fenimore Road and Crane Road in consultation with the NYSDOT to validate the expectation that the middle section of NY Route 22 through the Village is consistent with road diet. Based on the Level of Service analyses conducted for the critical intersections, the corridor is expected to operate **consistently** with road diet guidelines, with the provision of additional lanes at select intersection approaches.

Average Daily Traffic: The Average Daily Traffic (ADT) of a roadway can be used to determine if a road diet is feasible. FHWA guidance indicates that roadways with an ADT less than 20,000 vehicles per day (vpd) are typically good candidates for the implementation of a road diet. It is noted that the New York State Department of Transportation (NYSDOT) Highway Design Manual (HDM) Complete Streets Checklist provides a more conservative approach for considering road diets and uses an ADT of less than 15,000 vpd; however, more progressive communities such as Seattle have successfully implemented road diets on roadways with an ADT of 25,000 vpd or less. NY Route 22 has an existing ADT of 12,200 vpd at the northern extents of the Village (NYSDOT station 870046) and an ADT of 14,400 vpd at the southern extents of the Village (NYSDOT station 870098). Based on historic DOT data, NY Route 22 has experienced annual growth rates of -0.55% and 1.46% at the northern and southern extents, respectively. Therefore, ADTs of approximately 12,200-15,500 vpd are forecasted for the year 2030. The ADT on NY Route 22 is **consistent** with road diet guidelines.

Peak Hour and Peak Direction: FHWA notes that a road diet is less feasible when traffic volumes exceed 875 vehicles per hour per direction (vphpd). The maximum one-way hourly traffic volume reported along NY Route 22 through the Village of Scarsdale (NYSDOT stations 870046 and 870098) is approximately 680 vphpd during

[1] https://highways.dot.gov/safety/other/road-diets

the PM peak hour. The peak hour, peak direction traffic volumes on NY Route 22 are **consistent** with road diet guidelines.

Turning Volumes and Patterns: FHWA guidelines suggests that a road diet may not be appropriate on roadway segments with closely spaced intersections that have high volumes of left-turns which create additional conflict points. The corridor is generally **consistent** with road diet guidelines.

Frequently Stopping and Slow-Moving Vehicles and Transit Considerations: The probability that a slow-moving or frequently stopping vehicle impacts through traffic is much higher on a three-lane roadway facility when compared to a four-lane roadway since vehicles are not provided legal passing areas. A review of NY Route 22 indicated that Westchester Bee-Line bus lines 40/41 operate throughout the entirety of the Village and line 63 operates along NY Route 22 for the 0.5 mile stretch between Popham Road and Grand Boulevard. In total, these lines are scheduled to run approximately 5 times per direction in the peak hour. It is recommended that Westchester County Department of Planning is consulted to ascertain typical frequency of stops on the subject bus lines throughout study corridor. The bus stop frequency along NY Route 22 **may be inconsistent** with road diet guidelines.

Bicycle Considerations: Westchester County Department of Planning's County Trail & Bike Route System map indicates that NY Route 22 is a proposed bike lane/route throughout the Village of Scarsdale and nearby Cities and Towns in southern Westchester. The implementation of a road diet is considered a preferred alternative when considering bicycle access since it enhances bicyclist comfort by removing them from the vehicular travel way. One study documented a 57% increase in bike use where a conventional bike lane was striped on an existing City street.[2] Bicycle volumes were not collected as part of the data collection efforts; however, it is anticipated that bicycle volumes would increase if a road diet alternative was implemented in the corridor and is therefore **consistent** with road diet operations.

Pedestrian Considerations: Road diets provide increased space between moving traffic and pedestrians which makes the roadway more comfortable for pedestrians. A more comfortable pedestrian environment is considered **consistent** with the goals for the corridor.

Case Studies: Factors and guidance have been developed to determine the feasibility of road diets across the country. The City of Seattle developed a flow chart (Figure 1) to assist in the determination of road diet feasibility.

[2] https://pubmed.ncbi.nlm.nih.gov/21350269/

According to the flow chart, NY Route 22 **is** a viable corridor for a road diet The ADT during ETC (2030) traffic volume conditions is expected to be between 12,200 and 15,500 vpd which indicates that key intersection analyses would inform of the feasibility of a road diet.

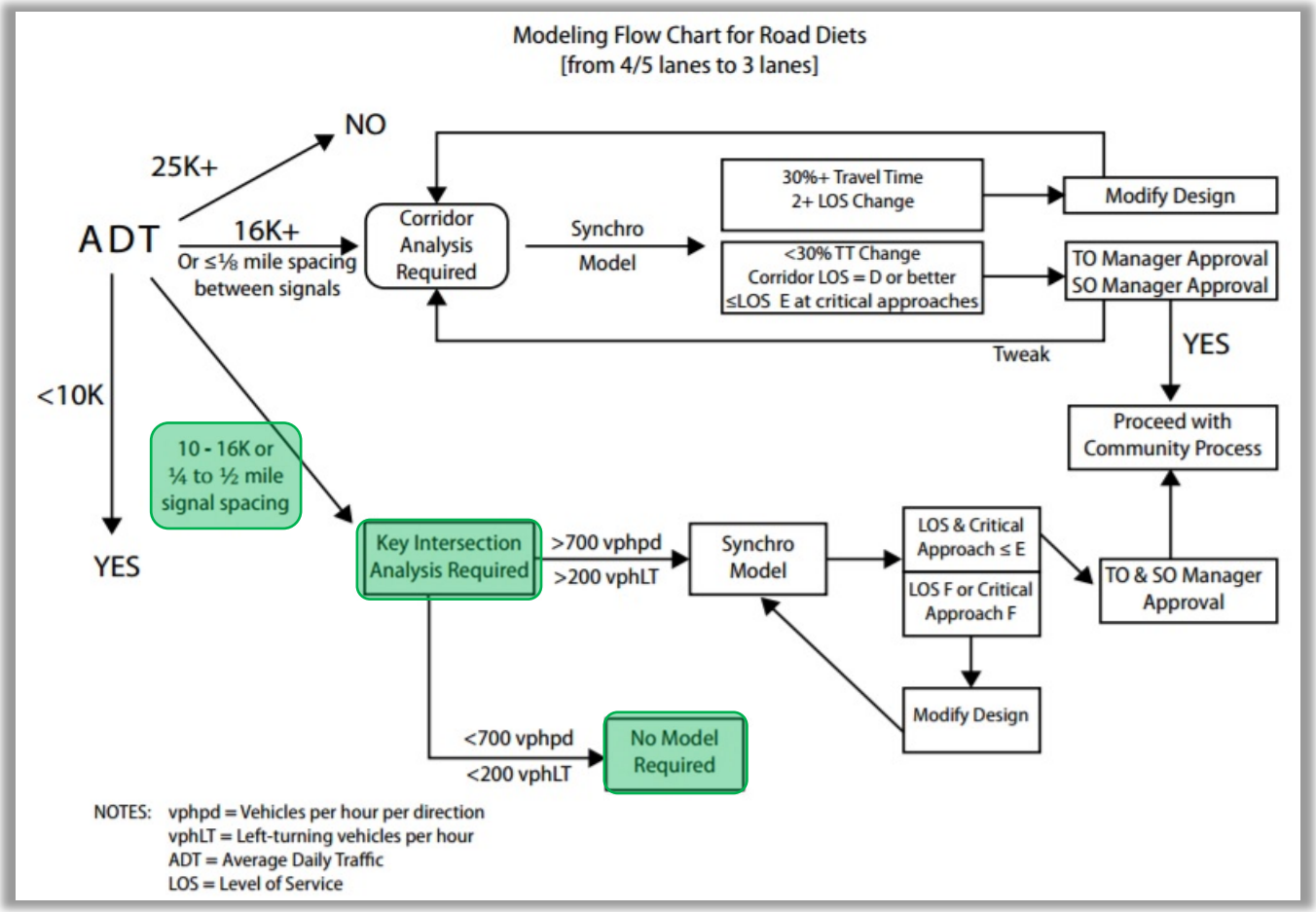


Figure 1: City of Seattle Modeling Flow Chart for Road Diet Feasibility Determination (FHWA)

Conclusions:

Road diets can improve appropriate corridors from a safety aspect and complete streets design, making corridors more attractive and comfortable for all users, while providing reasonable traffic operations for motorists. A review of operational factors on NY Route 22 through the Village of Scarsdale indicates that the corridor is likely a good candidate for a road diet. The subject corridor would be expected to benefit from safety improvements associated with a reduced number of conflict points, lower speeds, and decreased speed differential, as well as offering an improved bicycle and pedestrian environment.

This study concludes that a road diet appears feasible along most of NY Route 22 through the Village of Scarsdale, while maintaining additional lanes at key intersections will likely be necessary to maintain reasonable capacity, delay and queuing during peak hours. This roadway is owned and maintained by the NYSDOT and the findings of this study are subject to review and approval by the NYSDOT.

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Attachment A
Crash Heat Map

NYS Rte 22 Road Diet
Scarsdale, New York


Crashes Along Post Road
2020-2024
N
Fenimore Rd
Mamaroneck Rd
Crane Rd
Heathcote Rd
Popham Rd
Drake Rd
Dense
Sparse
0
0.1
0.2
0.4 Miles
Source: NYSDOT CLEAR Data, 2020-2024

Attachment B
Crash Table

NYS Rte 22 Road Diet
Scarsdale, New York

Accident Summary
01/01/2020 - 12/31/2024

Intersection/Segment	Injury	Property Damage	Total
Post Rd & Farley Rd	**0**	**1**	**1**
OVERTAKING	0	1	1
Post Rd & Dickel Rd	**0**	**1**	**1**
UNKNOWN	0	1	1
Post Rd & Fairview Rd	**2**	**4**	**6**
COLLISION WITH OBJECT	0	1	1
LEFT TURN	1	0	1
OVERTAKING	0	2	2
REAR END	1	0	1
SIDESWIPE	0	1	1
Post Rd & Kingston Rd	**1**	**0**	**1**
RIGHT ANGLE	1	0	1
Post Rd & Huntington Ave	**3**	**4**	**7**
COLLISION WITH OBJECT	1	0	1
LEFT TURN	2	2	4
OVERTAKING	0	1	1
SIDESWIPE	0	1	1
Post Rd & Oxford Rd	**0**	**1**	**1**
COLLISION WITH OBJECT	0	1	1
Post Road between Rugby Lane and Oxford Road	**0**	**1**	**1**
COLLISION WITH PARKED VEHICLE	0	1	1
Post Rd & Rugby Ln	**3**	**0**	**3**
COLLISION WITH OBJECT	1	0	1
COLLISION WITH PEDESTRIAN	1	0	1
SIDESWIPE	1	0	1
Post Rd & Mamaroneck Rd	**3**	**6**	**9**
COLLISION WITH OBJECT	0	2	2
LEFT TURN	2	1	3
OVERTAKING	0	1	1
REAR END	0	2	2
RIGHT ANGLE	1	0	1
Post Rd & Fenimore Rd	**3**	**6**	**9**
LEFT TURN	1	1	2
OVERTAKING	1	2	3
REAR END	1	2	3
RIGHT TURN (WITH OTHER CAR)		1	1
Post Road between Fenimore Road and Murray Hill Road	**1**	**13**	**14**
COLLISION WITH OBJECT	0	3	3
LEFT TURN	0	1	1
OVERTAKING	0	5	5
REAR END	0	1	1
SIDESWIPE	0	2	2
HEAD ON	1	1	2

Accident Summary
01/01/2020 - 12/31/2024

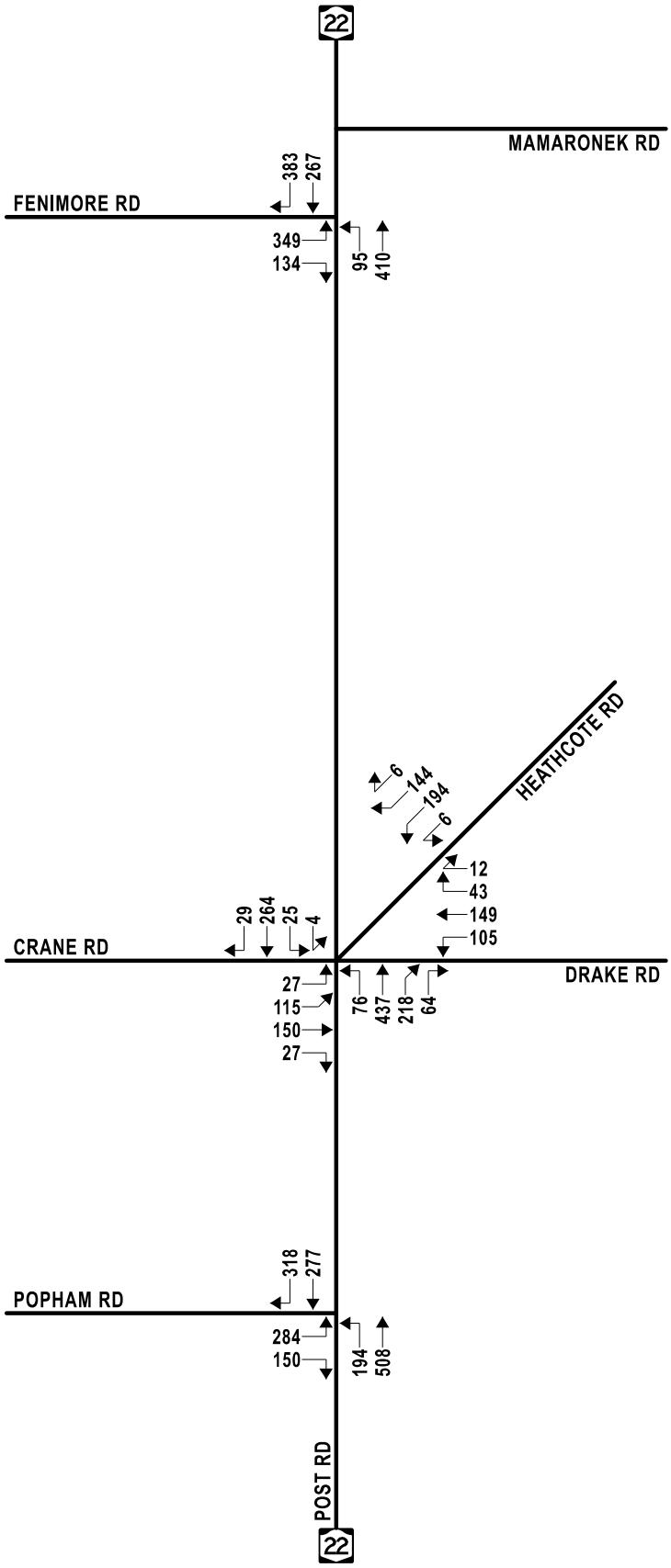
Intersection/Segment	Injury	Property Damage	Total
Post Rd & Murray Hill Rd	**4**	**4**	**8**
LEFT TURN	1	1	2
OVERTAKING	0	3	3
REAR END	3	0	3
Post Rd & Olmsted Rd/Ross Rd/Tompkins Rd	**4**	**5**	**9**
OVERTAKING	1	3	4
REAR END	3	2	5
Post Rd & Richbell Rd	**2**	**0**	**2**
RIGHT ANGLE	1	0	1
SIDESWIPE	1	0	1
Post Road between Burgess Rd and Richbell Rd	**0**	**2**	**2**
COLLISION WITH OBJECT	0	2	2
Post Rd & Burgess Rd	**1**	**3**	**4**
LEFT TURN	0	1	1
OVERTAKING	0	1	1
REAR END	1	0	1
SIDESWIPE	0	1	1
Post Rd & Sherbrooke Rd	**1**	**3**	**4**
COLLISION WITH OBJECT	0	1	1
COLLISION WITH PEDESTRIAN	1	0	1
OVERTAKING	0	1	1
REAR END	0	1	1
Post Road between Sherbrooke Road and Wayside Lane	**0**	**2**	**2**
COLLISION WITH OBJECT	0	2	2
Post Rd & Wayside Ln	**3**	**5**	**8**
COLLISION WITH OBJECT	1	0	1
LEFT TURN	1	0	1
OVERTAKING	0	1	1
REAR END	1	0	1
RIGHT TURN (WITH OTHER CAR)	0	2	2
SIDESWIPE	0	2	2
Post Rd & Heathcote Rd/Crane Rd/Drake Rd	**6**	**16**	**22**
COLLISION WITH PEDESTRIAN	1	0	1
LEFT TURN	0	2	2
OVERTAKING	3	4	7
REAR END	1	3	4
RIGHT ANGLE	0	1	1
RIGHT TURN (WITH OTHER CAR)	1	1	2
SIDESWIPE	0	5	5

Accident Summary
01/01/2020 - 12/31/2024

Intersection/Segment	Injury	Property Damage	Total
Post Rd & Popham Rd	**5**	**7**	**12**
COLLISION WITH OBJECT	0	1	1
COLLISION WITH PEDESTRIAN	1	0	1
LEFT TURN	1	1	2
OVERTAKING	0	3	3
REAR END	3	2	5
Post Road between Popham Road and Ferncliff Road	**0**	**3**	**3**
OVERTAKING	0	1	1
REAR END	0	1	1
COLLISION WITH PARKED VEHICLE	0	1	1
Post Rd & Ferncliff Rd	**2**	**0**	**2**
COLLISION WITH BICYCLIST	1	0	1
HEAD ON	1	0	1
Post Rd & Edgewood Rd	**4**	**2**	**6**
COLLISION WITH PEDESTRIAN	3	1	4
LEFT TURN	0	1	1
SIDESWIPE	1	0	1
Post Road between Edgewood Rd and Carman Road	**1**	**0**	**1**
RIGHT TURN (WITH OTHER CAR)	1	0	1
Post Rd & Lee Rd	**2**	**3**	**5**
LEFT TURN	1	0	1
OVERTAKING	0	1	1
RIGHT ANGLE	1	0	1
RIGHT TURN (WITH OTHER CAR)	0	1	1
SIDESWIPE	0	1	1
Post Rd & Boulevard	**3**	**7**	**10**
LEFT TURN	1	2	3
OVERTAKING	0	3	3
REAR END	1	0	1
RIGHT ANGLE	1	1	2
SIDESWIPE	0	1	1
Grand Total	**54**	**99**	**153**

Attachment C
Traffic Volume Figures

NYS Rte 22 Road Diet
Scarsdale, New York



AM PEAK HOUR

2025 EXISTING TRAFFIC VOLUMES

NYS ROUTE 22
SCARSDALE ROAD DIET TRAFFIC STUDY
WESTCHESTER COUNTY, NEW YORK

Creighton Manning
a GAI Company

PROJECT:	R251172	DATE:	09/2025	FIGURE:	1

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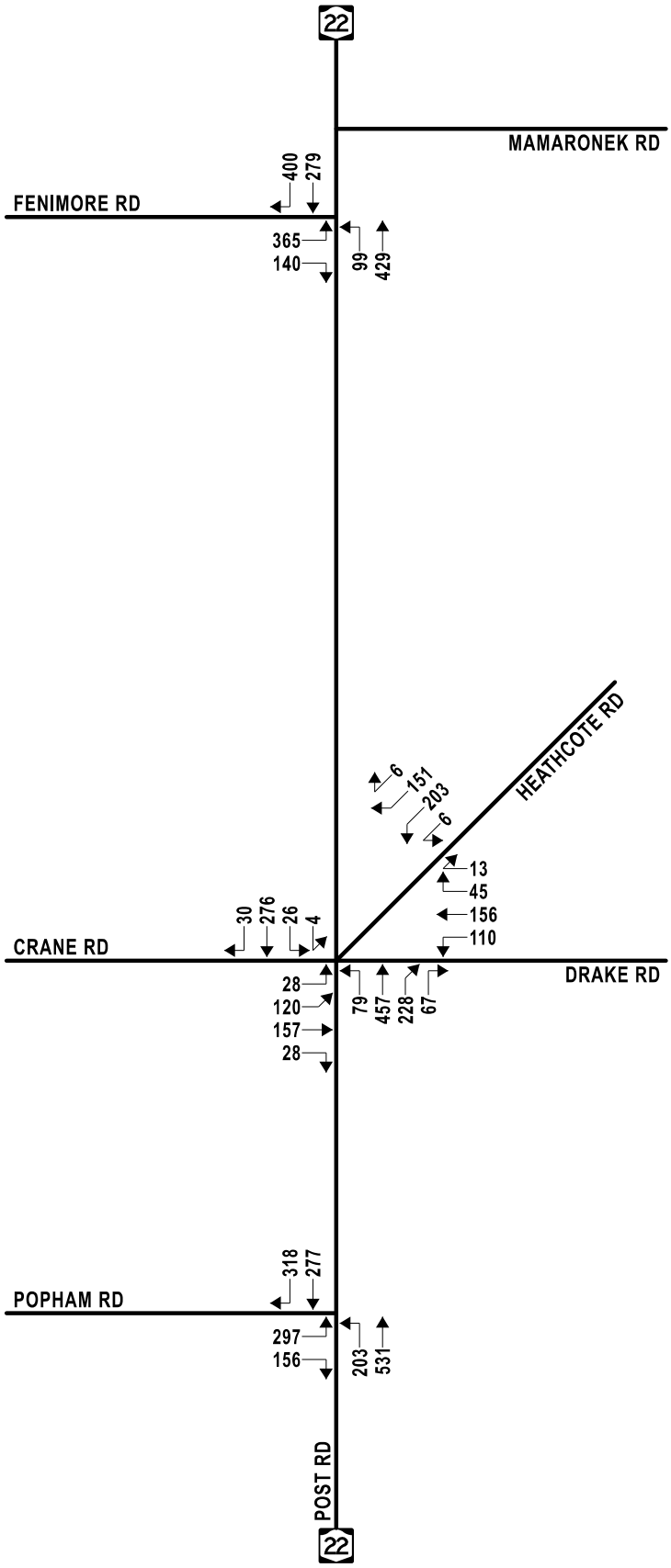

AM PEAK HOUR

2028 BUILD TRAFFIC VOLUMES

NYS ROUTE 22
SCARSDALE ROAD DIET TRAFFIC STUDY
WESTCHESTER COUNTY, NEW YORK

Creighton Manning
a GAI Company

PROJECT:	R251172	DATE:	09/2025	FIGURE:	2

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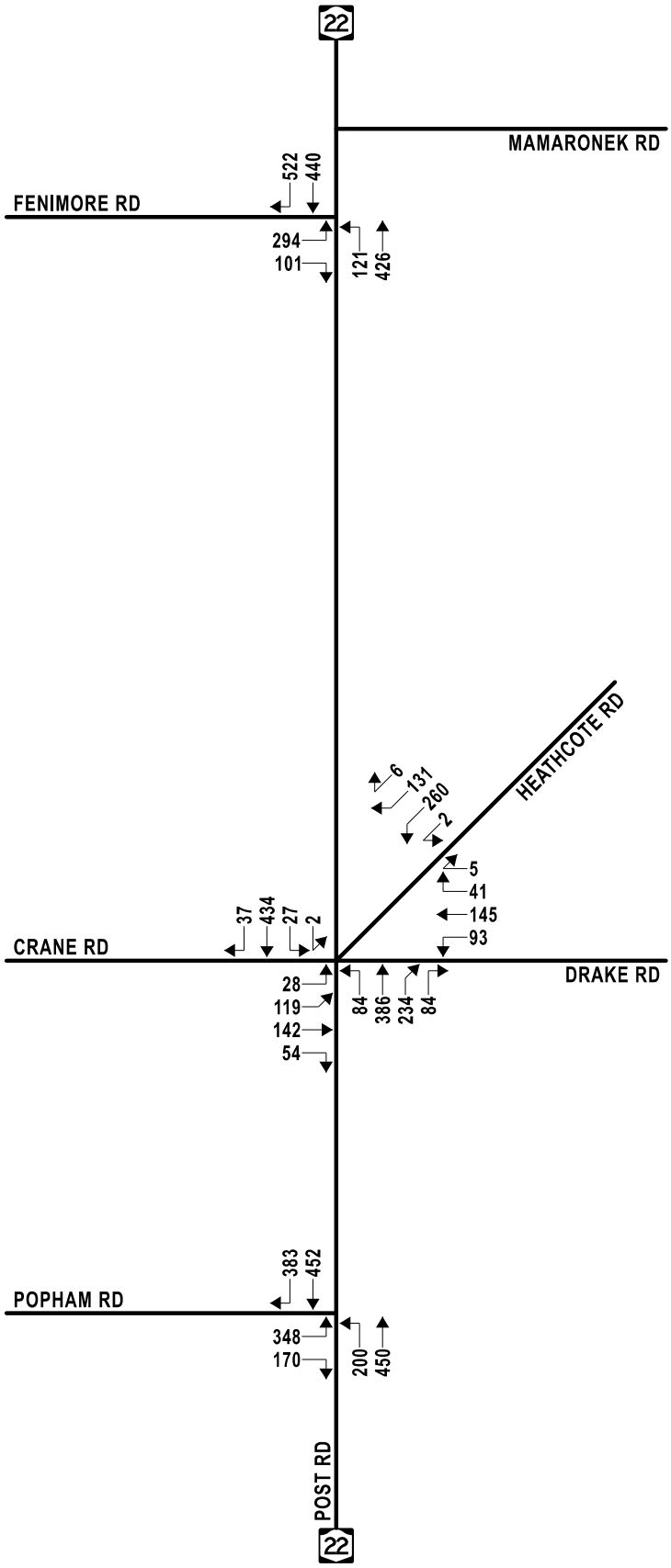

PM PEAK HOUR

2025 EXISTING TRAFFIC VOLUMES

NYS ROUTE 22
SCARSDALE ROAD DIET TRAFFIC STUDY
WESTCHESTER COUNTY, NEW YORK

Creighton Manning
a GAI Company

PROJECT:	R251172	DATE:	09/2025	FIGURE:	3

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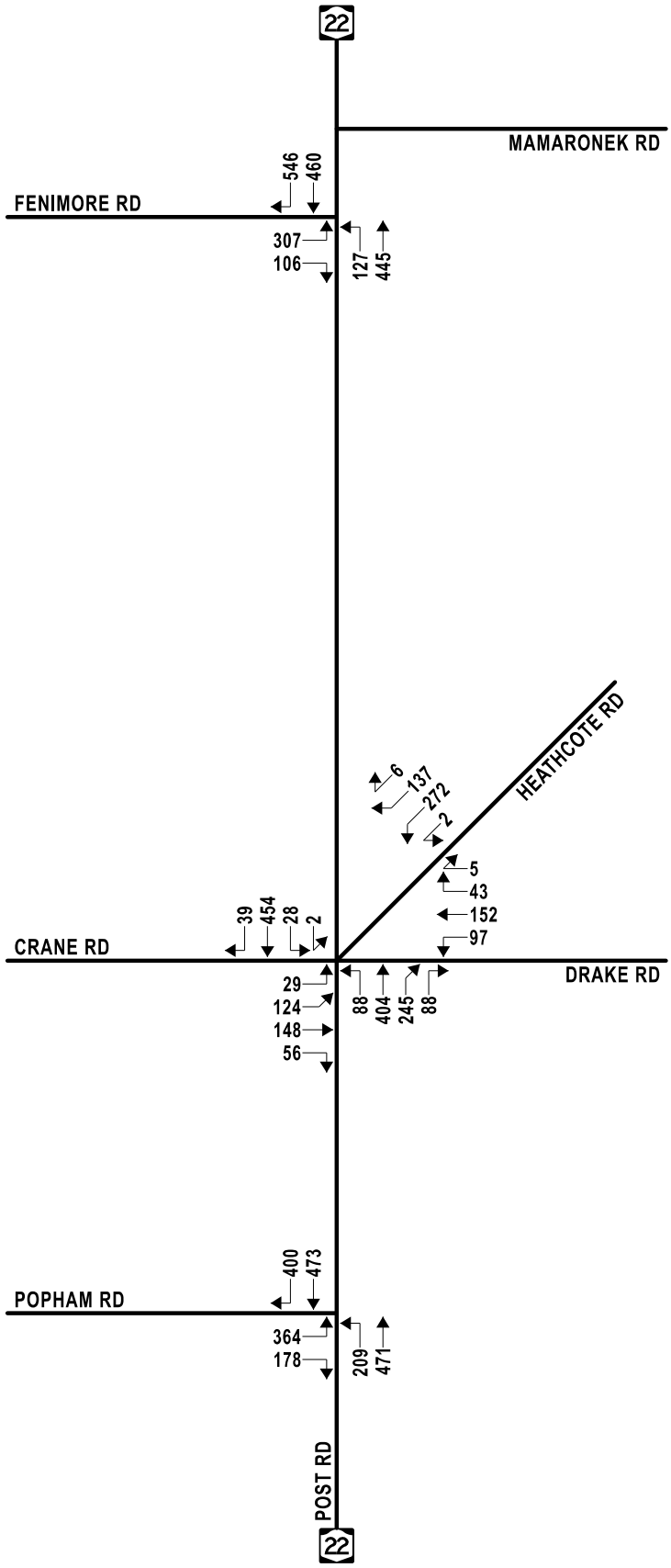

PM PEAK HOUR

2028 BUILD TRAFFIC VOLUMES

NYS ROUTE 22
SCARSDALE ROAD DIET TRAFFIC STUDY
WESTCHESTER COUNTY, NEW YORK

Creighton Manning
a GAI Company

PROJECT:	R251172	DATE:	09/2025	FIGURE:	4

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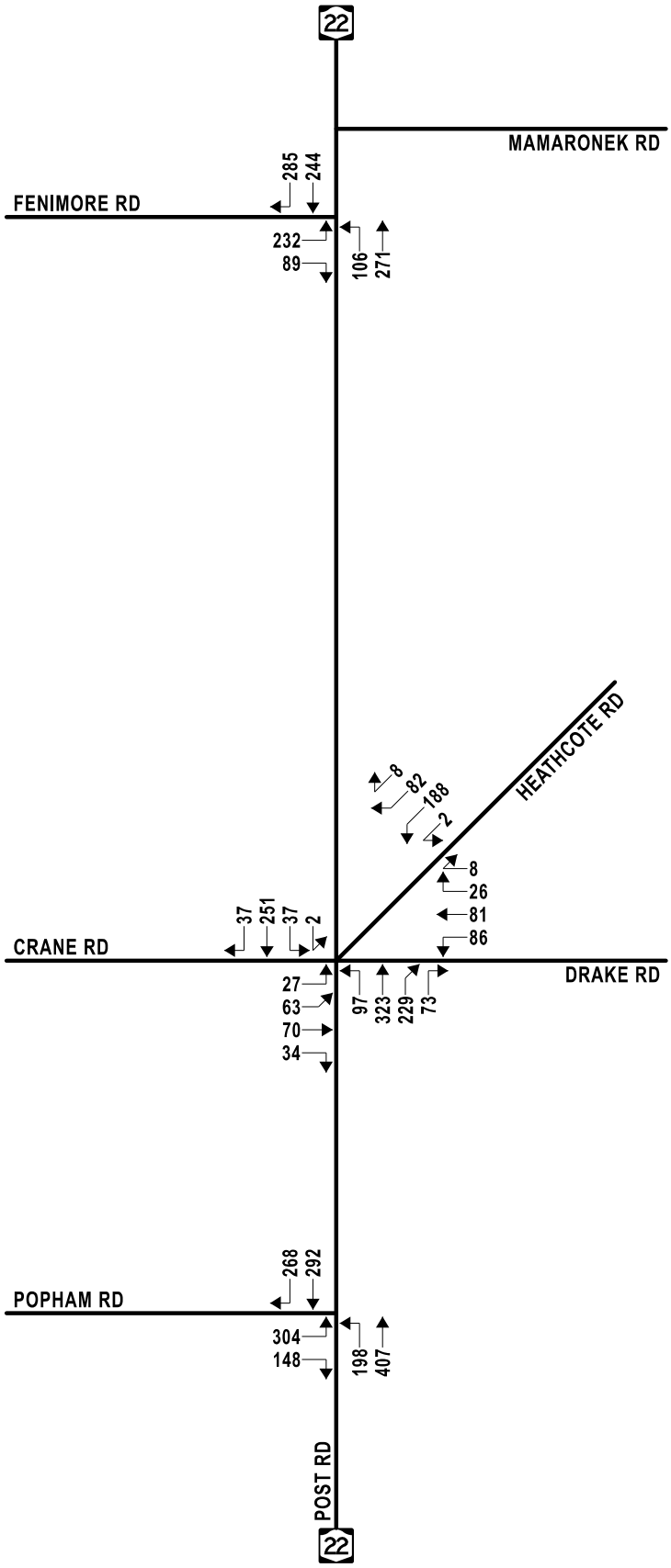

SAT PEAK HOUR

2025 EXISTING TRAFFIC VOLUMES

NYS ROUTE 22
SCARSDALE ROAD DIET TRAFFIC STUDY
WESTCHESTER COUNTY, NEW YORK

Creighton Manning
a GAI Company

PROJECT:	R251172	DATE:	09/2025	FIGURE:	5

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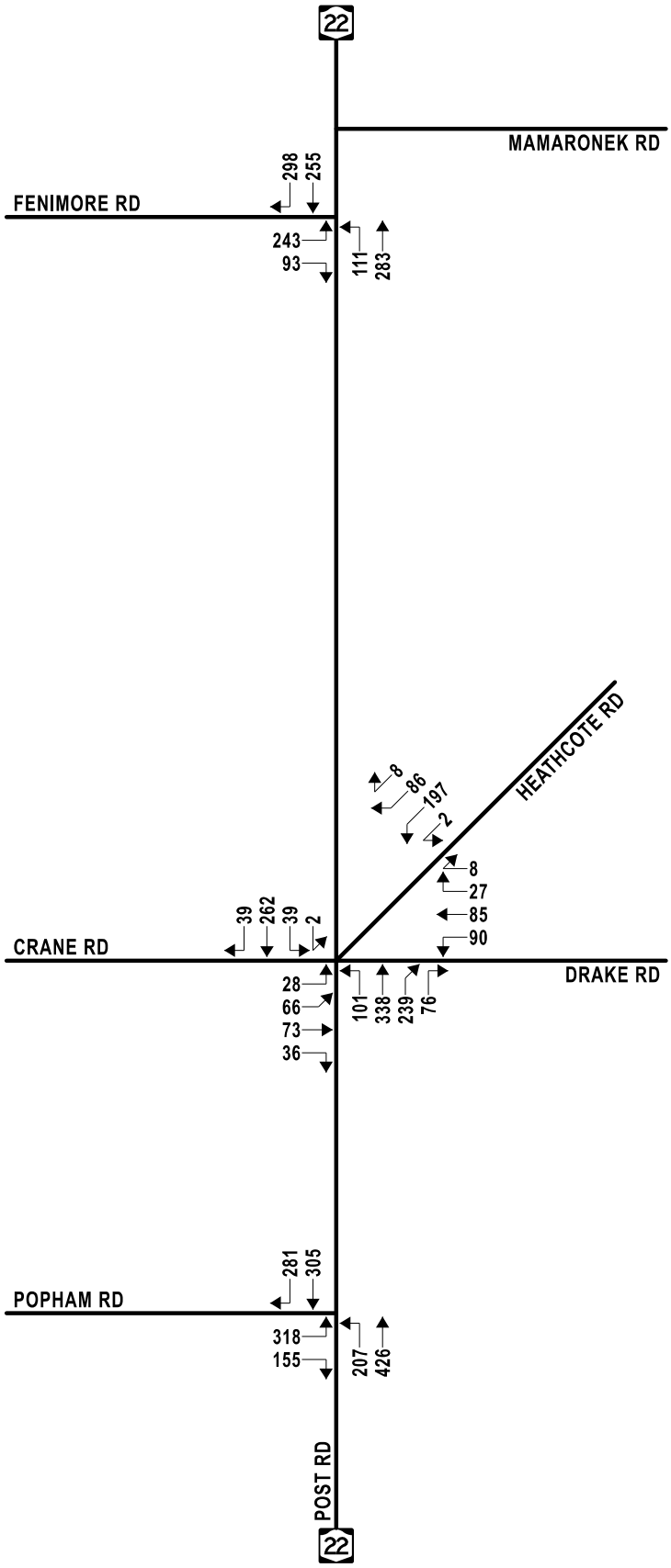

SAT PEAK HOUR

2028 BUILD TRAFFIC VOLUMES

NYS ROUTE 22
SCARSDALE ROAD DIET TRAFFIC STUDY
WESTCHESTER COUNTY, NEW YORK

Creighton Manning
a GAI Company

PROJECT:	R251172	DATE:	09/2025	FIGURE:	6

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Attachment D
Level of Service Summary

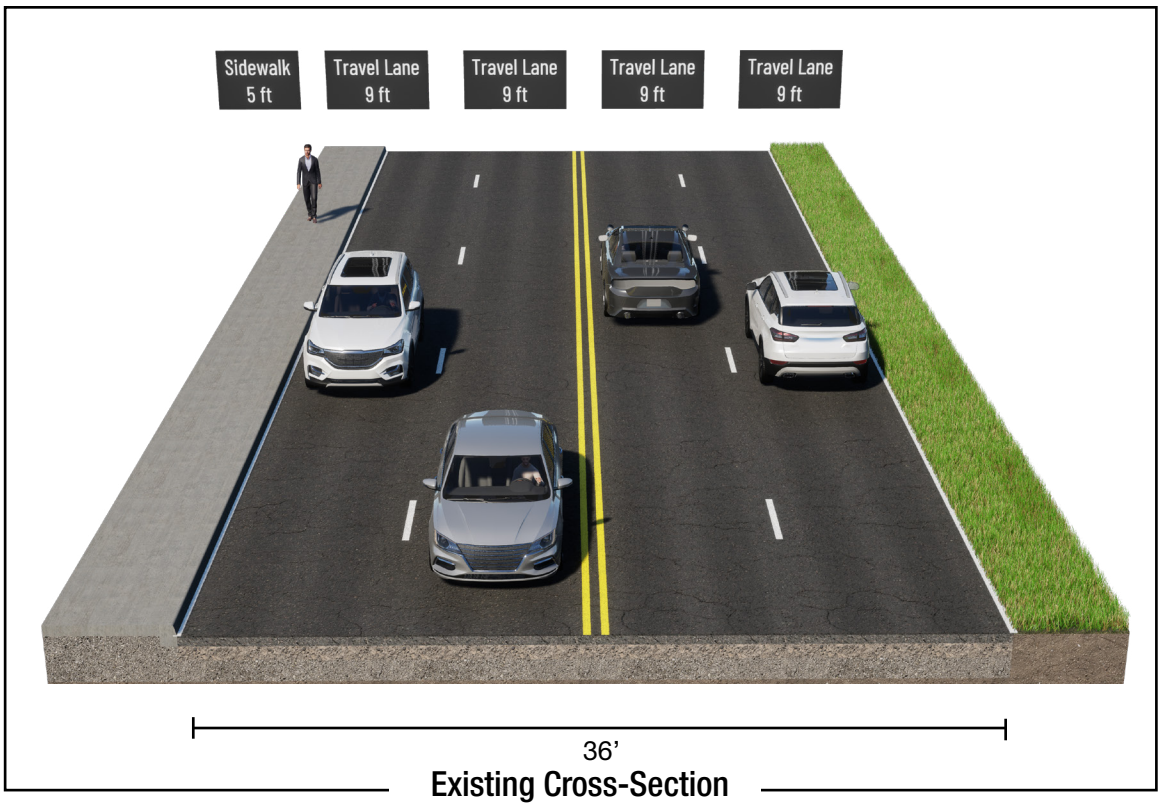
NYS Rte 22 Road Diet
Scarsdale, New York

Intersection		Control	Weekday AM Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
			2025 Existing	2028 No-Build	2028 Build	2025 Existing	2028 No-Build	2028 Build	2025 Existing	2028 No-Build	2028 Build
NYS Rte 22/Fenimore Rd		S									
Fenimore Rd EB	L		B (19.5)	C (20.2)	B (19.6)	C (24.9)	C (26.2)	C (22.5)	B (15.8)	B (16.4)	B (15.5)
	R		B (14.4)	B (14.7)	A (9.8)	B (19.2)	B (19.9)	B (12.7)	B (13.7)	B (13.9)	A (9.7)
NYS Rte 22 NB	[L]		--	--	A (9.0)	--	--	B (10.3)	--	--	A (7.2)
	LT [T]		A (9.2)	A (9.7)	B (10.5)	A (8.5)	A (8.9)	A (9.6)	A (6.8)	A (7.0)	A (7.5)
NYS Rte 22 SB	TR [T]		B (19.6)	C (20.1)	C (20.5)	C (21.1)	C (22.0)	C (25.0)	B (16.5)	B (16.8)	B (16.3)
	[R]		--	--	A (6.0)	--	--	A (6.4)	--	--	A (5.8)
Overall			B (15.9)	B (16.5)	B (12.9)	B (18.0)	B (18.8)	B (14.5)	B (13.2)	B (13.5)	B (10.5)
NYS Rte 22/Heathcote Rd/Drake Rd/Crane Rd		S									
Crane Rd EB	LT		D (51.2)	E (55.1)	C (31.3)	E (60.5)	E (64.4)	D (36.8)	D (39.3)	D (44.1)	C (27.1)
	TR		D (38.2)	D (39.3)	C (29.4)	D (42.7)	D (43.2)	C (33.5)	D (37.6)	D (40.3)	C (26.9)
Drake Rd WB	LT		D (39.3)	D (40.8)	D (41.7)	D (43.2)	D (44.0)	D (44.7)	D (38.6)	D (42.0)	D (40.4)
	TR		D (39.9)	D (40.9)	D (47.9)	D (42.9)	D (43.4)	D (52.3)	D (38.4)	D (41.1)	D (40.3)
NYS Rte 22 NB	LTR		C (33.9)	D (37.3)	D (36.6)	D (43.2)	E (60.2)	D (43.1)	C (24.2)	C (24.3)	C (26.9)
NYS Rte 22 SB	LTR		C (32.0)	C (32.8)	D (39.6)	D (36.3)	D (38.9)	D (44.4)	C (26.4)	C (25.8)	D (35.2)
Heathcote Rd SWB	L [TR]		D (52.1)	E (55.6)	D (44.5)	E (58.2)	E (59.5)	D (47.8)	D (40.2)	D (44.7)	D (38.5)
	TR		D (48.2)	D (51.0)	--	D (44.0)	D (44.6)	--	C (34.9)	D (37.5)	--
Overall			D (38.8)	D (41.2)	D (38.8)	D (44.5)	D (51.4)	D (43.8)	C (30.2)	C (31.5)	C (32.0)
NYS Rte 22/Popham Rd		S									
Popham Rd EB	L		D (44.6)	D (45.2)	C (20.9)	D (45.9)	D (47.2)	C (29.7)	D (43.9)	D (44.8)	C (22.3)
	R		C (30.6)	C (30.5)	A (9.1)	C (29.3)	C (29.3)	B (12.9)	C (29.4)	C (29.5)	A (9.3)
NYS Rte NB	[L]		--	--	A (8.5)	--	--	B (12.9)	--	--	A (8.9)
	LT		A (7.9)	A (8.5)	B (10.1)	B (10.1)	B (10.8)	B (10.9)	A (8.0)	A (8.6)	A (9.1)
NYS Rte SB	TR		B (17.7)	B (18.6)	C (20.7)	C (23.2)	C (24.3)	C (28.4)	B (17.4)	B (18.5)	C (21.6)
	[R]		--	--	A (6.2)	--	--	A (5.3)	--	--	A (6.0)
Overall			B (19.3)	B (19.9)	B (12.6)	C (23.4)	C (24.3)	B (17.6)	B (20.0)	C (20.7)	B (13.3)

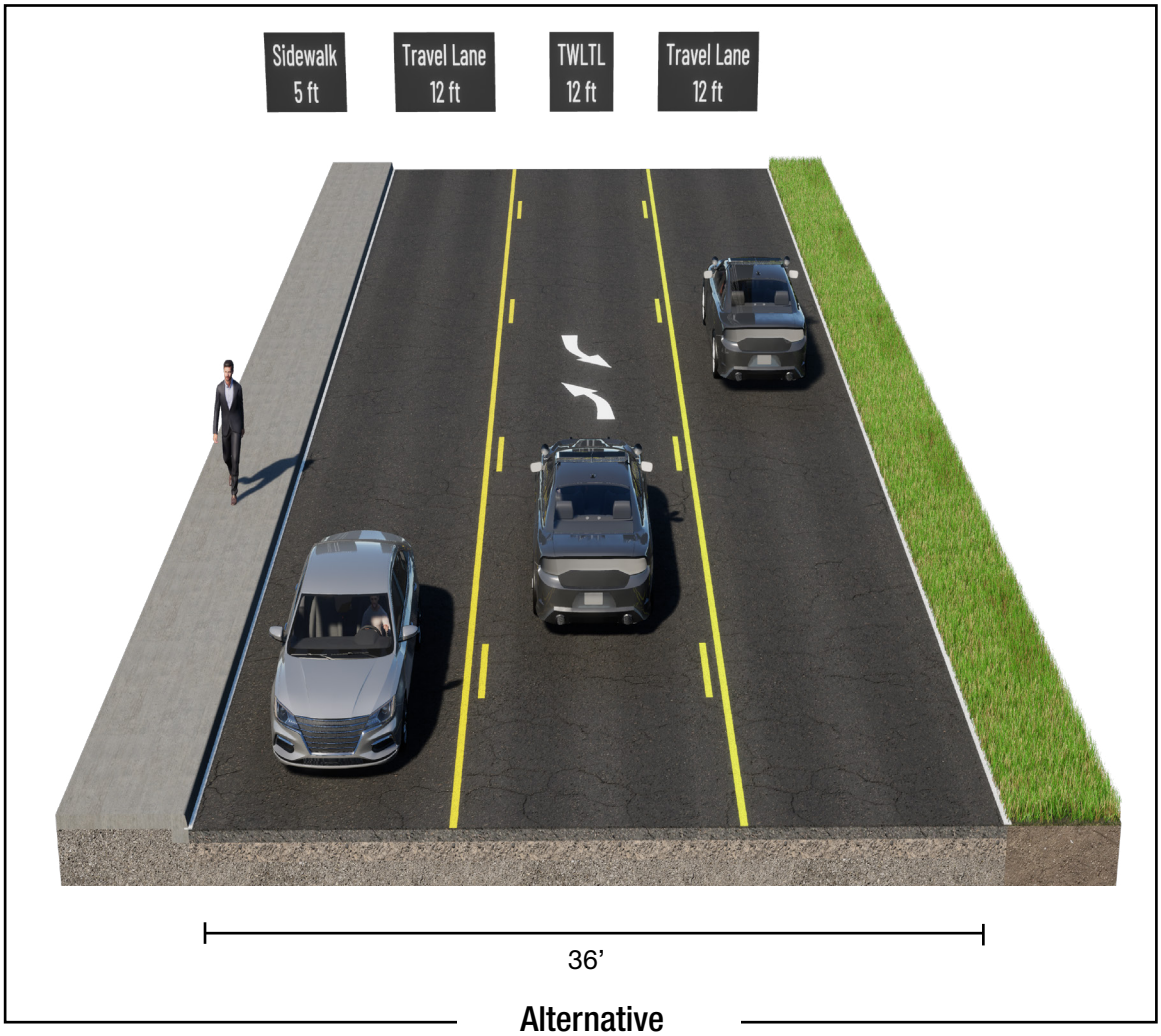
Attachment E
Cross-Sections: Existing and Alternatives

NYS Rte 22 Road Diet
Scarsdale, New York

Post Road (NYS Route 22) - Northern Section of the Village of Scarsdale

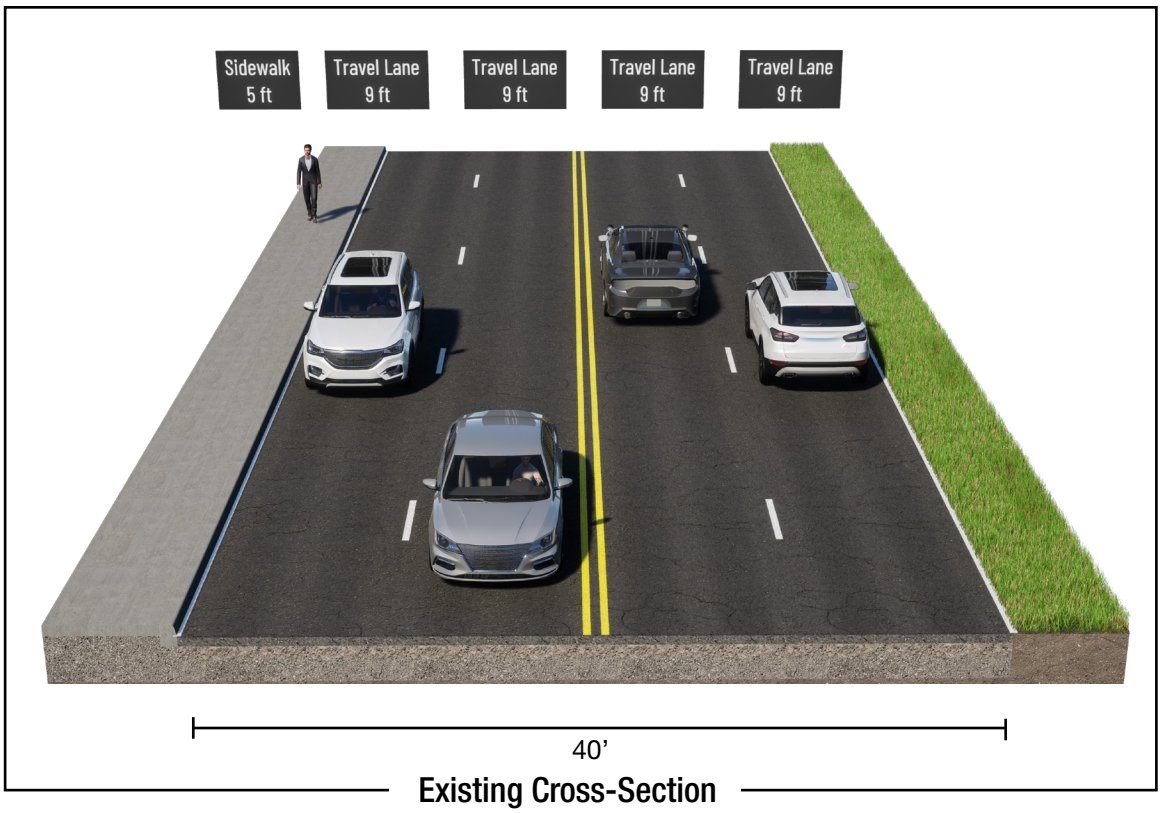


Existing Cross-Section



Alternative

Post Road (NYS Route 22) - Southern Section of the Village of Scarsdale



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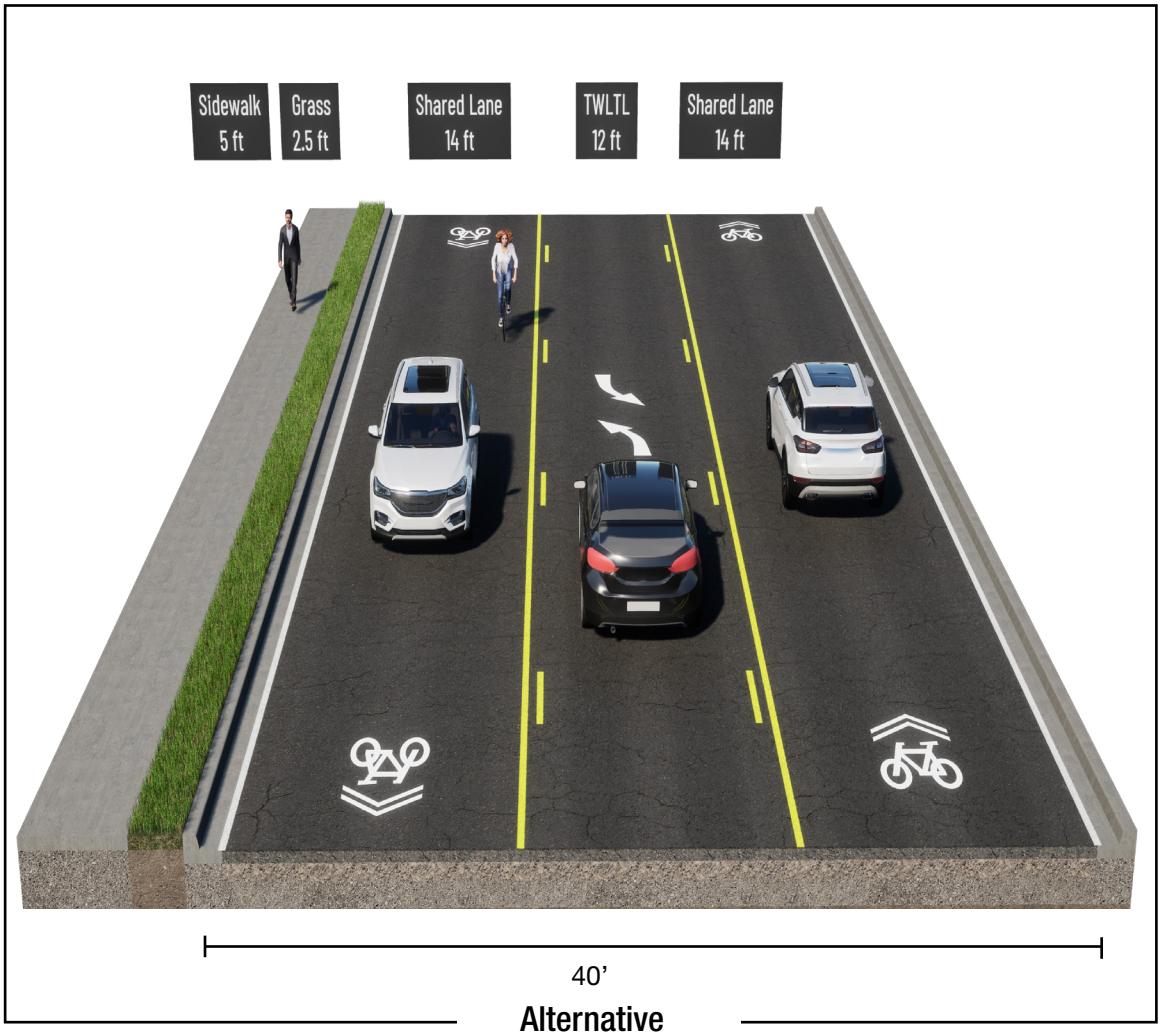
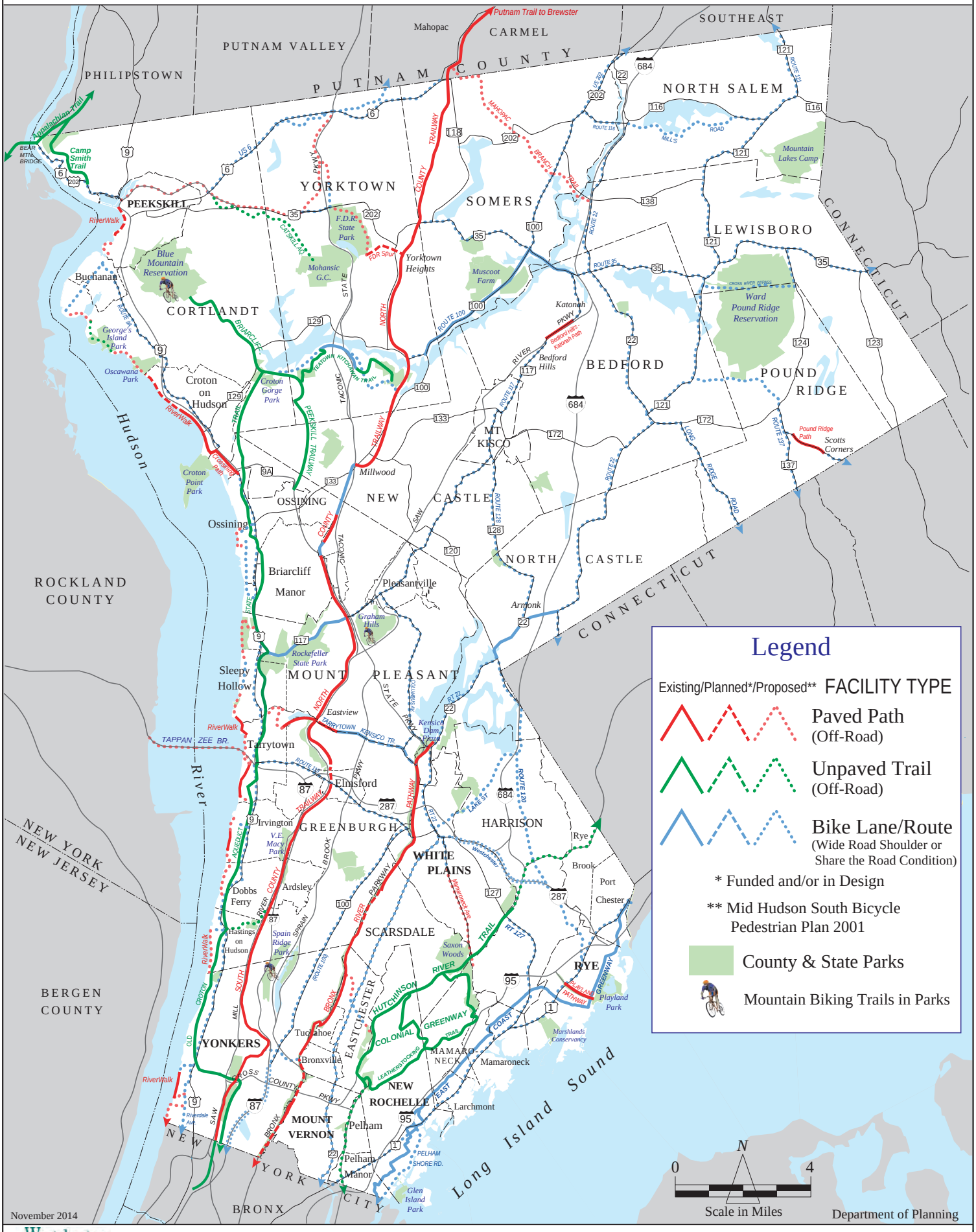


Alternative

Attachment F
Westchester County Trails and Bike Path Map

NYS Rte 22 Road Diet
Scarsdale, New York

WESTCHESTER COUNTY, NEW YORK



November 2014

Department of Planning

Westchestergov.com

County Trail & Bike Route System

432 Michaelian Office Building
White Plains, New York 10601
www.westchestergov.com/planning