ROADWAY ASSESSMENT REPORT

FOR THE

VILLAGE OF HASTINGS-ON-HUDSON
PUBLIC WORKS DEPARTMENT

PREPARED BY

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ATTACHMENTS

ROADWAY MAPS

EXECUTIVE SUMMARY

This comprehensive roadway assessment report was completed for the Village of Hastings-on-Hudson specifically to be used by the Department of Public Works to develop a multi-year rehabilitation plan. This report provides general roadway information, roadway maintenance information, a road classification system, field evaluation procedures, a comprehensive plan including a sequencing strategy and a sequencing plan, and recommendations for the Village staff to use for future assessments.

The Village has 151 separate roadways and 10 parking lots they maintain which have been evaluated for this report. A classification system has been developed based on the system used by the NYSDOT, which has been modified to meet the needs of the Village. Each roadway was evaluated on its usage, ride quality, and distress. The evaluation criteria provides a rating method that allows the roadways to be scored on a scale of 0 to 10, and subsequently ranked in order of lowest to highest. The higher the road score value, the better the condition of the road. The goal was to create a system that will make evaluating each roadway consistent between employees. Overall the conditions of the roadways were good with the majority of the roadways scoring above a 5.

Following the ranking of the entire list of roadways, a multi-year comprehensive rehabilitation plan was created to give the Village's Department of Public Works a sequence strategy and sequencing plan. The goal of the sequencing strategy and sequencing plan is to bring all the roadways within the Village up to an average score of an 8. This can be accomplished by the comprehensive plan outlined in this report. This includes a yearly plan to mill and pave, which lists the roadways that are in need of repair along with the cost associated to resurface each roadway. The installation of curbs has also been included as part of the sequencing plan. To optimize the allowable time to resurface the road, curbs are intended to be install the year prior.

Based on the Village's maintenance requirements, and discussions with the Village, we recommend an annual budget of $500,000. A list of roads to be repaired on an annual basis has been developed and is provided in Appendix J. This plan has been extended for a 10-year period and includes approximately 4 to 7 roadways per year that can be re-surfaced. Some roadway resurfacing is postponed due to known drainage concerns that need to be addressed. As some roadways are in similar condition, sequencing can be swapped as long as curbs are installed before paving.

The costs provided in this report are to mill and pave the roadways and install concrete curbs. Additional costs for striping, structure adjustments, drainage improvements, or other improvements are to be determined separately. To assist with determining these costs, an annual checklist is provided in Appendix H.

INTRODUCTION

James J. Hahn Engineering, P.C., was awarded the task of assessing the condition of all the roadways within the Village of Hastings-on-Hudson. This roadway assessment report includes developing a classification system and creating a multi-year comprehensive rehabilitation plan.

The classification system is based on the NYSDOT road evaluation system and has been customized to meet the Village's needs. The classification system includes a map of the Village's roadways, a list of all roadway names, identification numbers, lengths and average widths.

The multi-year comprehensive rehabilitation plan ranks and rates the roadways in the order which we recommend roadway re-surfacing. Recommendations and costs for the roadways that require the most work have been provided. The rating system is described in detail in this report and will be reviewed with Village staff so that future roadway evaluations can be conducted by the Village staff. A list of all the roadways with their corresponding rankings is included in Appendix A and B.

GENERAL ROADWAY INFORMATION

Asphalt roadways can last up to 30 years however durability decreases significantly after about 20 years. The lifespan is directly related to its construction, foundation, climate, and traffic. Depending on these factors a roadway may only last a few years.

Roadways consist of various elements including the surface type, subbase materials, cross slope, crown, width, shoulders, curbs, and drainage. This section of the report will briefly discuss the general elements of typical roadways, and which were used in our evaluation.

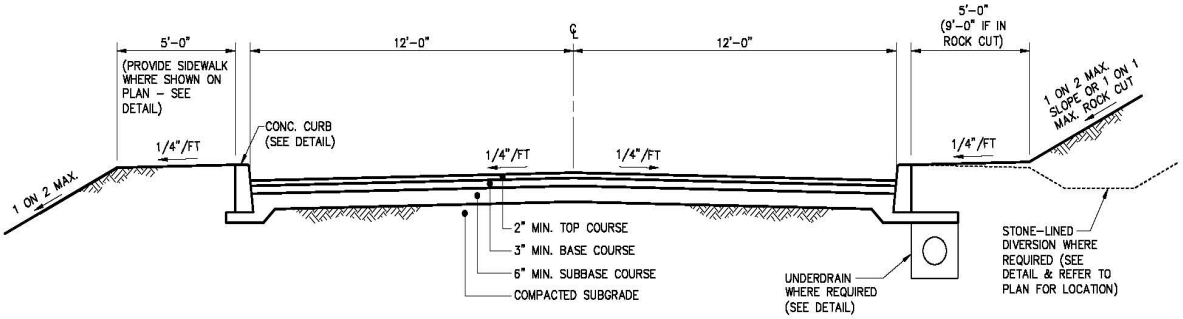
Surface types are either rigid or flexible. Concrete roads are considered rigid; asphalt roads or concrete roads with an asphalt overlay are considered flexible. Road surface material is typically selected based on traffic volume, soil characteristics, weather, initial cost, overall annual maintenance and service-life cost. All of the Village roads are asphalt which is typical for areas that experience extreme climate changes. Due to the age and history of the communities along the Hudson River, it is not uncommon to find cobble or other types of material below the existing roadway. In some cases unsuitable material below the roadway causes failure of the roadway.

The width of a roadway is important since it influences the safety and comfort of driving. The road width includes the lane as well as the shoulders. Lane widths generally vary between 9 to 12 feet. Most of the Village's lanes were found to be approximately 9 feet wide. Roadway shoulders also vary in width and can vary from a few inches to 9 feet. The shoulder provides an area for vehicles to stop, use in emergencies, and for lateral support of the subbase material.

Curbs are a raised or vertical element that are typically constructed of concrete, asphalt, or stone and are an important part of a roadway system. Curbs provide drainage control, roadway edge delineation, aesthetics, delineation of pedestrian walkways and can reduce maintenance

operations. The standard height of a curb should be 4 to 6 inches. The majority of the roadways have a curb of some type.

A working drainage system is important to maintaining a safe roadway. Drainage design should incorporate safety, good appearance, control pollutants and be economical to maintain. Drainage systems are either open or closed systems. In an open system, the runoff is conveyed in a swale or open gutter, where a closed system is piped. The majority of roadways in the Village use a closed drainage system or combination of the two.



TYPICAL ROAD SECTION

N.T.S.

The detail above is a typical cross section of a road that includes curbs, asphalt surface, subbase material and an under drain. The typical cross pitch is ¼ inch per foot. The crown of the roadway is at the center line where water pitches to either side. An underdrain may be used when there is a high groundwater table or excessive runoff from an uphill slope.

MAINTENANCE OF ROADWAYS

Proper road maintenance improves ease of transportation and reduces costs for the Village. An improperly maintained road could also lead to an increased number of accidents. This assessment and report was developed for the Village staff to evaluate periodic repairs for the roadways.

Roadways can display various types of distress, including cracking, delamination, raveling, patching, sealing, rutting, and more. Descriptions and photographs of various types of distresses are shown in Appendix C.

Periodic repairs should be performed as needed to preserve the structural integrity of the road. Roadway repair work can be grouped into categories that include preventative measures, surface overlay, re-surfacing, and pavement reconstruction.

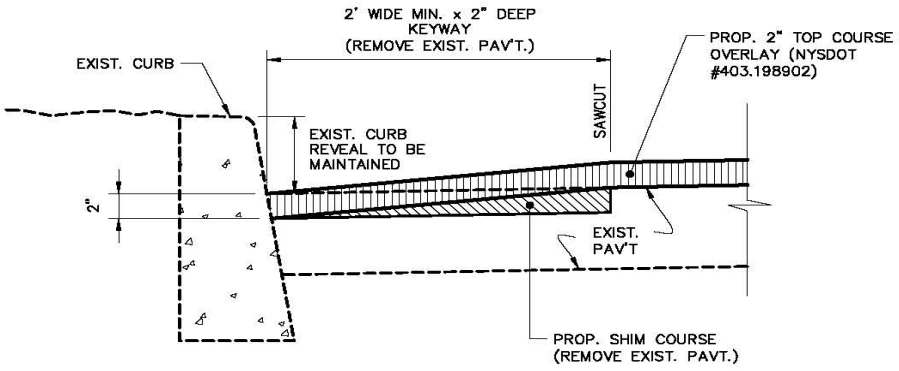
Preventative measures are minor repairs which include joint and crack sealing, temporary and permanent patching, other miscellaneous paving, drainage improvements, or curb installation.

Pavement overlay work consists of paving over the existing roadway to cover cracks, fill potholes and increase the strength of the roadway. Various items should be reviewed prior to placing an overlay on a road, including curb reveal and structures that may need adjusting (valve

boxes, catch basins, manholes, etc.). The pavement along the curb will need to be removed prior to paving, if the curb reveal is limited.

Re-surfacing work includes removing the existing pavement (milling), generally between 1 ½ and 2 inches, then paving the area that was milled. Ideally no additional work is required (such as adjusting valve boxes or manholes), since the existing grade is usually the same. However frequent adjustments may be required, which should be verified prior to bidding any road improvements.

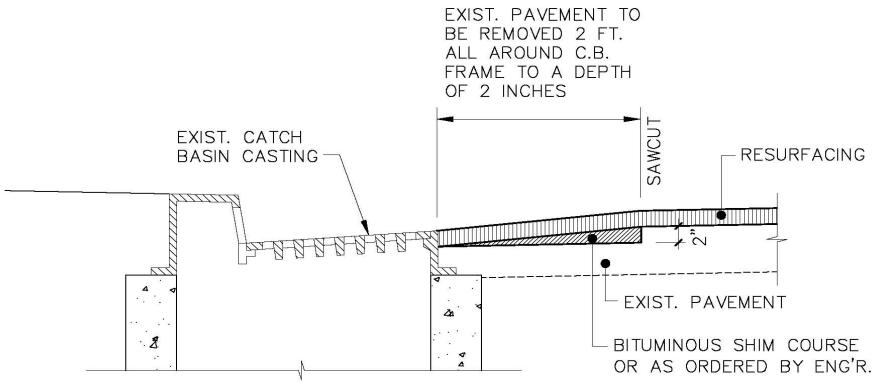
Pavement reconstruction may be needed when the structural integrity of the road is compromised. Prior to reconstructing the roadway, an engineer should determine the extent of work required.



PAVEMENT KEYWAY AT EXISTING CURB

N.T.S.

The detail above is a typical cross section of a pavement keyway used to maintain proper curb reveal during pavement overlaying.



SECTION

PAVEMENT KEY AT EXISTING CATCH BASIN

N.T.S.

The pavement keyway detail above is typical for maintaining the proper catch basin reveal during pavement overlaying.

It is important to track the maintenance of a roadway. Some roads need to be resurfaced, or repaired, more frequently than others, which may be due to an underlining issue.

CLASSIFICATION SYSTEM

The classification system in this report has been derived from the NYSDOT classification system and refined to meet the needs of the Village.

The classification system consists of an evaluation procedure, roadway map, and road inventory list. A Field Evaluation Form (Appendix D) was created to analyze the roadways, calculate a road rating, and to compare roads to one another in the Village.

The roadway map identifies which roads are owned by the Village, the State, the County, or privately owned. It also includes dimensional information including length, width, and area.

The Field Evaluation Form is used to record information known about each roadway, record details of each evaluation, and rate each roadway.

To classify the roadways, a roadway map, list of roadways, and evaluation procedure was developed. The roadway map identifies all the roadways the Village maintains and identifies the usage, which is described later in this section. The roadway list provides information on the roadways including the length, width, and asphalt tonnage. The field evaluation form provides information on the roadway features, usage, ride quality, pavement distress, and overall rating.

This section of the report describes the evaluation procedure, rating methods, and rating calculations.

Field Evaluation Procedure

The steps used to evaluate each roadway in the field are as follows:

1) Drive the length of each roadway at the posted speed limit to assess the ride quality and identify general areas of distress.
2) Drive the length of the roadway slowly, noting each distress.
3) Photograph every 1,000 to 2,000 feet of road and recording areas showing significant signs of distress.
4) Record data on Field Evaluation Form. Complete and score roadway in the field.

Each roadway pavement evaluation form should detail the roadway attributes and condition. Sample forms have been included in Appendix D. The first section describes all the main details of roadway. The subsequent sections have been used to determine the overall rating of each road. These sections are listed below in more detail.

A roadway inventory map has been created, which lists the roadways with their name, ID#, length, average width and area. Field evaluation forms are used to rate each roadway based on three types of criteria, usage, ride quality and distress. This system will then be used to evaluate each roadway annually and assess the condition of each roadway and the need for repair.

Rating Methods

The rating methods used for each individual roadways will evaluate the usage, ride quality, and visible signs of distress. It is important to conduct the evaluations of a roadway prior to ground frost which may intensify the distress that is visible.

I. Usage Rating

The usage rating is determined by the amount of traffic, or use, a roadway experiences. This is categorized as either low, medium, or high. A low usage road is typically a road that does not have an outlet, or connects to a few homes. A high usage road experiences the most traffic and use. It typically includes main roads, roads that share traffic with state or county roads, or roads that connect to populated or popular areas. A medium usage road connects the high usage roads to the low usage roads. The amount of use is important in ranking the roadways, since a more traveled roadway will impact more people. In addition, a roadway with less use should require less maintenance.

Higher use roads have the lowest assigned value in the ranking system. The scoring used is as follows: 10 for low usage, 5 for medium usage, and 0 for high usage. A roadway map has been attached to this report.

II. Ride Quality Rating

This section uses three parameters to rate the ride quality, which are listed on the field evaluation form and described below.

The main parameter is the overall ride quality, which is determined by the driver during step 1 of the evaluation procedure. This assessment is conducted while driving over each road at the posted speed limit and noting the "seat feel" of the ride. The scores range from a low of 2 and high of 10.

The second parameter is determining the presence of corrugations in the road, which is defined as a series of closely spaced ridges and valleys (ripples) occurring at fairly regular intervals, usually less than 10' along the pavement. The ridges are perpendicular to the traffic direction. This type of distress is usually caused by traffic action combined with an unstable pavement surface or base.

The last parameter is the presence of settlements or heaves, which is described as localized pavement surface areas having elevations slightly lower than surrounding pavement or localized upward displacements of the pavement surface.

Generally when assessing ride quality the Department of Transportation uses a high speed profiler system attached to their vehicles to rate the ride quality on a score from 1 being the worst to 100 being the best. For the purposes of this study due to certain limitations the ride quality will be assessed by the driver. It is important the field evaluations are consistent, therefore drivers should also be consistent.

III. Distress Rating

The distress rating is a score given that reflects the distress type, severity, and frequency of a roadway. Types of distress may vary depending if the pavement is flexible or rigid.

Flexible distresses include cracking, raveling, wheel path rutting, delamination, patching crack filling, and overlays. A description and photograph of these distresses is shown in Appendix E.

Rigid distresses include spalling, delamination, patching, settlements and heaves, blowups, joint failure, faulting, cracking, scaling, and rutting. A description and photographs of these distresses is shown in Appendix F.

The distress rating is determined in the field at the end of evaluating the roadway. The pavement rating charts in Appendix G are used to rate the roads based on frequency, severity, and appearance. The field evaluation form is completed and a score is determined.

CALCULATING THE RATING

The overall rating of each roadway is based on the scores that were determined for usage, ride quality, and distress. The scores are not equally weighted as shown below.

Distress:	65%
Ride Quality:	20%
Usage:	15%
Total:	100%

Distress measures the condition of the roadway and is the most important variable, therefore determines most of the overall rating. Ride quality is important and is dependent on the distress, however it is evaluated separately since a high ride quality is desirable for vehicles.

Usage is not directly related to the quality of the roadway; however the amount a road is used does affect the lifespan of the roadway. Usage is also important since higher traveled roadways affect more people. Therefore all conditions of a roadway being equal, a more used roadway should generally be re-paved before a low use roadway. It is important to note that a roadway identified as low usage can have a maximum rating of 10, medium usage road can have a maximum rating of 9.25, and a high usage road can have a maximum rating of 8.5.

FIELD EVALUATION

A field evaluation for the Village-owned roadways was performed in December 2022 and January 2023. Evaluations can vary slightly between roadway inspectors. To minimize variations all evaluations were completed by the same roadway inspector. The roads were ranked and listed in order from the lowest to the highest; the lowest being in the worst condition (Appendix B).

Ideally field evaluations should be performed annually, or at the least every few years. This will allow the Village to identify problematic areas fairly and possibly reduce the cost of repair or maintenance.

COMPREHENSIVE PLAN

A comprehensive plan is to improve the overall quality of all the roads in the Village cost effectively by developing a sequencing strategy and sequencing plan.

Sequencing Strategy

The recommended sequencing strategy is to improve the lowest ranking roadways first, thereby increasing each roadway's rating to above an 8. The goal of the Village is to create a 5-year sequence for milling and paving and curb installation.

In some cases, the entire road may not need to be resurfaced; it may only require a portion of the road be resurfaced to bring the overall rating of the roadway to an acceptable quality. For example, if a road is rated at 4, and re-surfacing one-third of the road would bring the overall

rating to an 8, there is no need to pave the entire road. The savings on the portion of road not paved, can be used for other roads in the Village.

The roadways with the lowest overall rating are the first roadways that are recommended to be resurfaced. The first roadways recommended to be resurfaced had an overall rating of 3 or 4, which are listed on a spreadsheet. The next roadways that are added to the list have an overall rating of 5. Since there are a numerous amount of these ratings, they have been grouped by location. Grouping roadways allows a contractor to work faster and may lead to a lower repair cost. The roadways with an overall rating of 6 were added next, followed by 7 through 10.

An estimated cost to resurface each roadway and install curbs based on the length and area of the roads was calculated and was added to the spreadsheet. The previous budget for milling and paving was $200,000. The cost of curbs exceeds the cost to mill and pave a roadway upwards of 2 or 3 times. Based on the previous budget for milling and paving, and the addition of curb installation, we recommend an annual budget of not less than $500,000.

The cost to resurface the grouped sets of roadways was calculated and if the group exceeded the amount of $500,000, some of the roads were placed in the following year. The groups were reevaluated until the cost was approximately within 10 percent of the annual budget. A summary sheet of the road sequence has been provided in Appendix J.

It is important to note that numerous roadways have overall ratings that vary only slightly, and that the logistics of the roadway paving should be considered. In this case, the features that should be considered are the need for additional drainage, utility projects, or other projects that may impact a roadway. If a utility project will be completed in a few years, the Village may consider waiting to re-surface the roadway. When meeting with the Village, areas where drainage concerns are in the process of repair or planning, those roadways are assumed to be resurfaced after the drainage improvements.

It is also important to note that the costs to re-surface each roadway does not include miscellaneous items such as pavement markings, catch basin resetting, manhole/valve cover adjustments, or other items that should be reviewed prior to finalizing the budget. These items are included on the annual check list provided in Appendix H.

Sequencing Plan

The sequencing plan is the order in which the roadways are re-surfaced. As described above, they are grouped according to cumulative cost and logistical location. The estimated cost of re-surfacing and install curbs for each road is calculated, and a cumulative cost is totaled, as shown in Appendix I.

The phasing plan provided in this report should not be assumed as final, or exact. It provides a basis for the Village to understand which roadways we considered most in need of repair. The entire recommended sequencing plan is provided in Appendix J. A summary of the first five (5) years is shown below, and a map showing these roads is attached. Additional options have also been provided. The sequence options have been provided if the Village has reason to pave one

section of the Village prior to another. Some adjustments may be required so curbing is installed prior to road surface replacement.

STREET NAME	COST MILL AND PAVE ($165/ton, $9/SY)	COST OF CURBS ($65/ft plus $26 Rest.)	TOTAL COST PER ROAD
2023			
S CLINTON ST	$63,395		$63,395
CHEMKA POOL RD	$36,214		$36,214
HILLSIDE AVE (portion)	$46,922		$46,922
CURRY RD		$112,840	$112,840
PRINCE ST		$122,850	$122,850
RONNY CIR		$123,214	$123,214
		TOTAL COST	**$505,435**
2024			
CURRY RD	$37,659		$37,659
GREEN ST	$30,978	$92,820	$123,798
PRINCE ST	$56,489		$56,489
RONNY CIR	$41,121		$41,121
FAIRMONT AVE (portion)		$254,800	$254,800
		TOTAL COST	**$513,867**
2025			
FARLANE DR	$58,615		$58,615
FAIRMONT AVE (portion)	$93,541		$93,541
GOODWIN ST		$128,674	$128,674
PINECREST DR*		$200,200	$200,200
		TOTAL COST	**$481,030**
2026			
GOODWIN ST	$64,416		$64,416
PINECREST DR	$136,837		$136,837
BELLAIR DR		$32,396	$32,396
FLOWER AVE		$233,870	$233,870
MAGNOLIA DR		$8,008	$8,008
PALISADE AVE		$12,558	$12,558
SOUTHLAWN AVE		$19,656	$19,656
		TOTAL COST	**$507,740**
2027			
BELLAIR DR	$9,731		$9,731
FLOWER AVE	$78,052		$78,052
MAGNOLIA DR	$4,009		$4,009
PALISADE AVE	$6,287		$6,287
SOUTHLAWN AVE	$10,496		$10,496
CIRCLE DR		$364,000	$364,000
TOMPKINS AVE (portion)		$40,950	$40,950
		TOTAL COST	**$513,524**

The quantities provided in this report must be verified prior to bid. Miscellaneous items such as pavement markings, adjusting manholes, adjusting valves, or other are not included in these costs. Some roadway lengths shown above do not reflect the entire roadway, only the section in need of repair. The roadways have been identified in Appendix J.

The sequencing of years 2023 and 2024 were chosen as the first 2 years since they had the lowest rankings. Years 2025 through 2027 had similar rankings and are therefore interchangeable.

RECOMMENDATIONS

Based on our field evaluations and cost analysis, we recommend using the strategy and plan described in this report. The annual cost should be re-evaluated by the Village. James J. Hahn Engineering would work with the Village to further customize the road re-surfacing plan based on specific concerns the Village.

We also recommend identifying any work needed to be completed before a road is resurfaced. Therefore the work can be scheduled and completed prior to paving.

CONCLUSION

This roadway classification report and assessment for The Village of Hastings-on-Hudson was conducted to be used by the Public Works Department as a tool to quantify the various states of condition that each roadway is in within the Village. The Village staff will be able to use the methods explained in this report in the future to conduct roadway assessments on their own and develop an ongoing multiyear comprehensive plan. Additionally any existing records that the Village has on file regarding past roadway resurfacing projects will improve future assessments. For example if a roadway was recently repaved but already showing signs of deterioration further investigation should be conducted, such as evaluating the subbase for replacement rather than simply milling and repaving a roadway.

APPENDICES

A –ROADWAY LIST

LIST OF ROADWAYS
VILLAGE OF HASTINGS-ON-HUDSON

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	DATE RESURFACED	NOTES
AMHERST DR	1	1710	30	51300	5700		
AQUEDUCT LN	2	838	16	13408	1490	2018	
ASHLEY RD	3	851	18	15318	1702	2016	
BAKER LN (LOOP)	4	500	16	8000	889		
BELLAIR DR	5	178	18	3204	356		
BEVERS ST	6	240	24	5760	640	2020	
BRANDT ST	7	457	24	10968	1219	2020	
BRANFORD RD	8	1200	22	26400	2933	2016	
BUENA VISTA DR	9	827	20	16540	1838		
BURKELY PL	10	181	13	2353	261		
BURNSIDE DR (EAST)	11	155	20	3100	344		
BURNSIDE DR (WEST)	12	1202	20	24040	2671		
BURNSIDE PL	13	391	20	7820	869		
CALUMET AVE	14	967	30	29010	3223		
CEDARS STREET	15	942	20	18840	2093	2020	
CHAUNCEY LN	16	1212	24	29088	3232		Repave first 400' to improve road
CHEMKA POOL RD	17	542	22	11924	1325	2023	
CHESTNUT DR	18	808	20	16160	1796		
CIRCLE DR	19	2000	20	40000	4444		
CLARENCE AVE	20	380	22	8360	929	2017	
CLIFF ST	21	1429	18	25722	2858	2019	
CLINTON AVE	22	692	22	15224	1692		
CLUNIE AVE	23	550	22	12100	1344		
COCHRANE AVE	24	1653	24	39672	4408	2017	
COLUMBIA AVE	25	427	27	11529	1281		
CROPSEY LN	26	769	19	14611	1623		
CROSSBAR RD	27	1431	30	42930	4770	2019	
CROTON AVE	28	594	27	16038	1782	2017	
CURRY RD	29	620	20	12400	1378		
DARWIN AVE	30	595	30	17850	1983		
DASSERN DR	31	2274	14	31836	3537		Private
DAVID LN	32	159	26	4134	459		Private
DERRY LN (EAST)	33	425	15	6375	708		
DERRY LN (WEST)	34	237	15	3555	395		
DEVON WAY	35	553	20	11060	1229		
DIVISION ST	36	300	18	5400	600		
DORCHESTER AVE	37	1095	20	21900	2433		
DUDLEY ST	38	866	24	20784	2309		Private
EDGARS LN	39	2214	26	57564	6396		
EDGEWOOD AVE	40	1056	25	26400	2933	2017	
EDISON AVE	41	195	24	4680	520		
EDMARTH PL	42	192	20	3840	427		
EUCLID AVE	43	1925	30	57750	6417		
FAIRMONT AVE	44	2162	22	47564	5285		
FARLANE DR	45	965	20	19300	2144		
FARRAGUT AVE	46	2220	24	53280	5920	2016	Con-Ed to pave after gas main is installed
FENWICK RD	47	765	20	15300	1700	2016	
FERNDALE DR	48	1215	20	24300	2700		
FLORAL DR	49	622	20	12440	1382		
FLOWER AVE	50	1285	20	25700	2856		
FOREST AVE	51	690	20	13800	1533		
FRASER PL	52	1298	23	29854	3317		
FULTON ST	53	539	22	11858	1318	2020	
GARLAND DR	54	523	15	7845	872		
GLENN PL	55	584	30	17520	1947		
GLENWOOD AVE	56	415	22	9130	1014		
GOODWIN ST	57	707	30	21210	2357		
GREEN ST	58	510	20	10200	1133	2016	
HALL PL	59	147	26	3822	425		

LIST OF ROADWAYS
VILLAGE OF HASTINGS-ON-HUDSON

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	DATE RESURFACED	NOTES
HAMILTON AVE	60	1662	25	41550	4617		
HARVARD LN	61	820	30	24600	2733		
HASTINGS LNDG	62	1190	20	23800	2644		Private
HIGH ST	63	3257	26	84682	9409		
HILLSIDE AVE	64	1287	30	38610	4290	2023	Portion from circle to Valley paved 2023
HOLLY PL	65	475	24	11400	1267		
HOLLYWOOD DR	66	1217	18	21906	2434		
HOPKE AVE	67	491	26	12766	1418		
HORNER AVE	68	685	22	15070	1674		
HUDSON ST (EAST)	69	325	30	9750	1083	2019	
HUDSON ST (WEST)	70	700	25	17500	1944		
JAMES ST	71	2060	22	45320	5036		
JEFFERSON AVE	72	1070	22	23540	2616		
JORDAN RD	73	1624	30	48720	5413	2019	
KENT AVE	74	1524	24	36576	4064	2016	
LEFURGY AVE	75	1721	26	44746	4972	2018	
LEFURGY TER	76	167	18	3006	334		
LINCOLN AVE	77	2515	24	60360	6707		
MAGNOLIA DR	78	44	30	1320	147		
MAIN ST	79	1212	40	48480	5387		
MAPLE AVE	80	1408	40	56320	6258		
MAPLE LANE	81	200	15	3000	333		Gravel
MARBLE TER	82	244	20	4880	542		
MARIANA DR	83	781	30	23430	2603		
MARION AVE	84	264	26	6864	763		
MERRILL ST	85	386	28	10808	1201		
MINTURN ST	86	832	25	20800	2311	2018	
MT HOPE BLVD	87	4580	34	155720	17302	2017	
N END PL (EAST)	88	245	20	4900	544		
N END PL (WEST)	89	230	24	5520	613		
NEPERA PL	90	614	22	13508	1501		
NEPPERHAN AVE	91	580	23	13340	1482		
NICHOLS DR	92	545	20	10900	1211		
NORTH ST	93	249	30	7470	830		
OAKDALE DR	94	612	19	11628	1292		
OLINDA AVE	95	510	30	15300	1700	2018	
OVERLOOK RD	96	2245	20	44900	4989	2017	
OXFORD RD	97	941	30	28230	3137		
PALISADE AVE	98	69	30	2070	230		
PEARL ST	99	234	24	5616	624	2020	
PINE ST	100	230	24	5520	613	2020	
PINECREST DR	101	2048	22	45056	5006		
PINECREST PKY	102	1440	30	43200	4800	2021	
PLEASANT AVE	103	359	28	10052	1117		
PRESCOTT PL	104	278	22	6116	680		
PRINCE ST	105	930	20	18600	2067		
RAVENSDALE RD	106	2776	28	77728	8636		
RAVINE DR	107	794	18	14292	1588		
RIDGE ST	108	542	24	13008	1445		
RIDGEDELL AVE	109	193	20	3860	429		
RIVER ST	110	1506	45	67770	7530	2017	
RIVERPOINTE RD	111	748	24	17952	1995		Private
RIVERVIEW PL	112	427	24	10248	1139		
RONNY CIR	113	677	20	13540	1504		
ROSE ST	114	1181	24	28344	3149		
ROSEDALE AVE	115	2375	30	71250	7917	2017	
S CALUMET AVE	116	610	30	18300	2033	2017	

LIST OF ROADWAYS
VILLAGE OF HASTINGS-ON-HUDSON

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	DATE RESURFACED	NOTES
S CLINTON ST	117	994	21	20874	2319	2023	
SAUNDERS ST	118	258	28	7224	803		
SCENIC DR	119	1399	20	27980	3109		
SCHOOL ST	120	490	30	14700	1633		
SHELDON PL	121	803	20	16060	1784		
SOUTH DR	122	576	20	11520	1280	2017	
SOUTHGATE AVE	123	1905	22	41910	4657	2017	
SOUTHLAWN AVE	124	108	32	3456	384		
SOUTHSIDE AVE	125	3578	25	89450	9939		
SPRING ST	126	265	38	10070	1119		
STANLEY AVE (NORTH)	127	621	30	18630	2070	2017	
STANLEY AVE (SOUTH)	128	1591	20	31820	3536		
STRATFORD LN	129	524	20	10480	1164		
SUMMIT DR	130	1382	18	24876	2764		
SUMMIT ST	131	541	18	9738	1082		
SUNSET ST	132	217	22	4774	530	2017	
TAFT ST	133	208	25	5200	578	2017	
TERRACE AVE	134	660	20	13200	1467	2017	
THE FENWAY	135	290	32	9280	1031	2016	
TOMPKINS AVE	136	2204	30	66120	7347	2018	Portion paved 2018. Oxford to Mariana needs replacement.
TRAVIS PL	137	305	25	7625	847	2017	
VALLEY PL	138	429	26	11154	1239		
VILLARD AVE	139	3527	30	105810	11757	2017	
W MAIN ST	140	285	30	8550	950		
WAGNER PL	141	377	26	9802	1089		
WARD ST	142	230	22	5060	562		
WARREN ST (EAST)	143	138	20	2760	307	2020	
WARREN ST (WEST)	144	727	20	14540	1616		
WASHINGTON AVE	145	1780	30	53400	5933	2018	
WHITMAN ST	146	952	24	22848	2539		
WILLIAM ST	147	414	25	10350	1150	2018	
WILSON ST	148	220	25	5500	611		
WINDSOR RD	149	807	20	16140	1793		
YALE RD	150	255	30	7650	850		
ZINSSER WAY	151	367	24	8808	979		

TOTAL LENGTH (ft) 136835
TOTAL LENGTH (mi) 25.9

STREET NAME	#	LOCATION	AREA (SF)	AREA (SY)	DATE RESURFACED	NOTES
VILLAGE HALL	152	7 Maple Avenue	13860	1540		Misc. curb repair. Extent TBD
BOULANGER PLAZE	153	13 Main Street	19080	2120		Center curb good condition. Sidewalk need repair.
POST OFFICE	154	590 Warburton Avenue	5715	635		
CHEMKA POOL	155	1 Chemka Pool Road	32220	3580		Extent of curb repair TBD.
STEINSCHNEIDER LOT	156	10 Spring St /2 W Main St	19485	2165		Curbs and sidewalk on east and south need repair. Design TBD
CON ED SOUTHSIDE	157	145 Southside Avenue	9450	1050		
ZINSSER: 127 SOUTHSIDE	158	127 Southside Avenue	82890	9210		Curbs and sidewalk replacement need design. TBD
ZINSSER: EDGARS LN	159	1-29 Edgars Lane	16200	1800		Curb replacement and locations TBD. Need Design.
DRAPER PARK	160	407 Broadway	4050	450		
UNIONTOWN	161	1 Rose Street	16155	1795		Need for curbs TBD.

NOTE: The length of roadway was taken at the center of the intersection when applicable. The areas provided are estimates and should be re-evaluated when necessary.

B – ROADWAY RATINGS

ROADWAY RATING TABLE
VILLAGE OF HASTINGS-ON-HUDSON, NY

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	OVERALL RATING
CHEMKA POOL RD	17	542	22	11924	1325	3
FARLANE DR	45	965	20	19300	2144	3
CIRCLE DR	19	2000	20	40000	4444	4
FAIRMONT AVE	44	2162	22	47564	5285	4
FLOWER AVE	50	1285	20	25700	2856	4
FRASER PL	52	1298	23	29854	3317	4
GARLAND DR	54	523	15	7845	872	4
GOODWIN ST	57	707	30	21210	2357	4
GREEN ST	58	510	20	10200	1133	4
HAMILTON AVE	60	1662	25	41550	4617	4
HILLSIDE AVE	64	1287	30	38610	4290	4
HOLLYWOOD DR	66	1217	18	21906	2434	4
HORNER AVE	68	685	22	15070	1674	4
LEFURGY TER	76	167	18	3006	334	4
PALISADE AVE	98	69	30	2070	230	4
PINECREST DR	101	2048	22	45056	5006	4
PRINCE ST	105	930	20	18600	2067	4
RONNY CIR	113	677	20	13540	1504	4
S CLINTON ST	117	994	21	20874	2319	4
TOMPKINS AVE (portion)	136	420	30	12600	1400	4
BOULANGER PLAZE	153	(Village parking lot)		19080	2120	4
AMHERST DR	1	1710	30	51300	5700	5
BELLAIR DR	5	178	18	3204	356	5
CHESTNUT DR	18	808	20	16160	1796	5
CLINTON AVE	22	692	22	15224	1692	5
CURRY RD	29	620	20	12400	1378	5
DARWIN AVE	30	595	30	17850	1983	5
DERRY LN (WEST)	34	237	15	3555	395	5
DORCHESTER AVE	37	1095	20	21900	2433	5
EDGARS LN	39	2214	26	57564	6396	5
EDISON AVE	41	195	24	4680	520	5
EUCLID AVE	43	1925	30	57750	6417	5
GLENWOOD AVE	56	415	22	9130	1014	5
HOLLY PL	65	475	24	11400	1267	5
JEFFERSON AVE	72	1070	22	23540	2616	5
MAGNOLIA DR	78	44	30	1320	147	5
MAIN ST	79	1212	40	48480	5387	5
MERRILL ST	85	386	28	10808	1201	5
NICHOLS DR	92	545	20	10900	1211	5
RAVINE DR	107	794	18	14292	1588	5
RIVER ST	110	1506	45	67770	7530	5
SCHOOL ST	120	490	30	14700	1633	5
STANLEY AVE (SOUTH)	128	1591	20	31820	3536	5
STRATFORD LN	129	524	20	10480	1164	5
WARD ST	142	230	22	5060	562	5
WHITMAN ST	146	952	24	22848	2539	5
WINDSOR RD	149	807	20	16140	1793	5
CHEMKA POOL	155	(Village parking lot)		32220	3580	5
ZINSSER: EDGARS LN	159	(Village parking lot)		16200	1800	5
BUENA VISTA DR	9	827	20	16540	1838	6
BURNSIDE DR (EAST)	11	155	20	3100	344	6
BURNSIDE DR (WEST)	12	1202	20	24040	2671	6
CALUMET AVE	14	967	30	29010	3223	6
COCHRANE AVE	24	1653	24	39672	4408	6
DEVON WAY	35	553	20	11060	1229	6
DIVISION ST	36	300	18	5400	600	6

ROADWAY RATING TABLE
VILLAGE OF HASTINGS-ON-HUDSON, NY

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	OVERALL RATING
FERNDALE DR	48	1215	20	24300	2700	6
GLENN PL	55	584	30	17520	1947	6
HARVARD LN	61	820	30	24600	2733	6
HUDSON ST (WEST)	70	700	25	17500	1944	6
LINCOLN AVE	77	2515	24	60360	6707	6
MAPLE AVE	80	1408	40	56320	6258	6
MARIANA DR	83	781	30	23430	2603	6
N END PL (WEST)	89	230	24	5520	613	6
NORTH ST	93	249	30	7470	830	6
OXFORD RD	97	941	30	28230	3137	6
PLEASANT AVE	103	359	28	10052	1117	6
PRESCOTT PL	104	278	22	6116	680	6
RIVERVIEW PL	112	427	24	10248	1139	6
ROSE ST	114	1181	24	28344	3149	6
ROSEDALE AVE	115	2375	30	71250	7917	6
SAUNDERS ST	118	258	28	7224	803	6
SCENIC DR	119	1399	20	27980	3109	6
SHELDON PL	121	803	20	16060	1784	6
SOUTHGATE AVE	123	1905	22	41910	4657	6
SOUTHLAWN AVE	124	108	32	3456	384	6
SOUTHSIDE AVE	125	3578	25	89450	9939	6
SPRING ST	126	265	38	10070	1119	6
SUMMIT DR	130	1382	18	24876	2764	6
SUMMIT ST	131	541	18	9738	1082	6
THE FENWAY	135	290	32	9280	1031	6
VILLARD AVE	139	3527	30	105810	11757	6
W MAIN ST	140	285	30	8550	950	6
WAGNER PL	141	377	26	9802	1089	6
WARREN ST (WEST)	144	727	20	14540	1616	6
WASHINGTON AVE	145	1780	30	53400	5933	6
ZINSSER WAY	151	367	24	8808	979	6
POST OFFICE	154	(Village parking lot)		5715	635	6
STEINSCHNEIDER LOT	156	(Village parking lot)		19485	2165	6
CON ED SOUTHSIDE	157	(Village parking lot)		9450	1050	6
ZINSSER: 127 SOUTHSIDE	158	(Village parking lot)		82890	9210	6
AQUEDUCT LN	2	838	16	13408	1490	7
ASHLEY RD	3	851	18	15318	1702	7
BAKER LN	4	500	16	8000	889	7
BEVERS ST	6	240	24	5760	640	7
BRANDT ST	7	457	24	10968	1219	7
BRANFORD RD	8	1200	22	26400	2933	7
BURKELY PL	10	181	13	2353	261	7
BURNSIDE PL	13	391	20	7820	869	7
CEDARS STREET	15	942	20	18840	2093	7
CHAUNCEY LN	16	1212	24	29088	3232	7
CLARENCE AVE	20	380	22	8360	929	7
CLIFF ST	21	1429	18	25722	2858	7
CROPSEY LN	26	769	19	14611	1623	7
CROSSBAR RD	27	1431	30	42930	4770	7
DERRY LN (EAST)	33	425	15	6375	708	7
EDGEWOOD AVE	40	1056	25	26400	2933	7
EDMARTH PL	42	192	20	3840	427	7
FARRAGUT AVE	46	2220	24	53280	5920	7
FENWICK RD	47	765	20	15300	1700	7
FLORAL DR	49	622	20	12440	1382	7
FOREST AVE	51	690	20	13800	1533	7

ROADWAY RATING TABLE
VILLAGE OF HASTINGS-ON-HUDSON, NY

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	OVERALL RATING
FULTON ST	53	539	22	11858	1318	7
HALL PL	59	147	26	3822	425	7
HIGH ST	63	3257	26	84682	9409	7
HOPKE AVE	67	491	26	12766	1418	7
HUDSON ST (EAST)	69	325	30	9750	1083	7
JAMES ST	71	2060	22	45320	5036	7
KENT AVE	74	1524	24	36576	4064	7
LEFURGY AVE	75	1721	26	44746	4972	7
MARBLE TER	82	244	20	4880	542	7
MARION AVE	84	264	26	6864	763	7
OAKDALE DR	94	612	19	11628	1292	7
OLINDA AVE	95	510	30	15300	1700	7
OVERLOOK RD	96	2245	20	44900	4989	7
PEARL ST	99	234	24	5616	624	7
PINE ST	100	230	24	5520	613	7
RAVENSDALE RD	106	2776	28	77728	8636	7
RIDGE ST	108	542	24	13008	1445	7
RIDGEDELL AVE	109	193	20	3860	429	7
SOUTH DR	122	576	20	11520	1280	7
STANLEY AVE (NORTH)	127	621	30	18630	2070	7
TAFT ST	133	208	25	5200	578	7
TERRACE AVE	134	660	20	13200	1467	7
WARREN ST (EAST)	143	138	20	2760	307	7
WILLIAM ST	147	414	25	10350	1150	7
YALE RD	150	255	30	7650	850	7
VILLAGE HALL	152	(Village parking lot)		13860	1540	7
DRAPER PARK	160	(Village parking lot)		4050	450	7
UNIONTOWN	161	(Village parking lot)		16155	1795	7
CROTON AVE	28	594	27	16038	1782	8
JORDAN RD	73	1624	30	48720	5413	8
MINTURN ST	86	832	25	20800	2311	8
PINECREST PKY	102	1440	30	43200	4800	8
S CALUMET AVE	116	610	30	18300	2033	8
SUNSET ST	132	217	22	4774	530	8
TOMPKINS AVE (portion)	136	1784	30	53520	5947	8
TRAVIS PL	137	305	25	7625	847	8
VALLEY PL	138	429	26	11154	1239	8
COLUMBIA AVE	25	427	27	11529	1281	9
NEPERA PL	90	614	22	13508	1501	9
WILSON ST	148	220	25	5500	611	9
CLUNIE AVE	23	550	22	12100	1344	10
N END PL (EAST)	88	245	20	4900	544	10
NEPPERHAN AVE	91	580	23	13340	1482	10
MT HOPE BLVD	87	4580	34	155720	17302	4/5
MAPLE LANE	81	200	15	3000	333	Gravel
DASSERN DR	31	2274	14	31836	3537	Private
DAVID LN	32	159	26	4134	459	Private
DUDLEY ST	38	866	24	20784	2309	Private
HASTINGS LNDG	62	1190	20	23800	2644	Private
RIVERPOINTE RD	111	748	24	17952	1995	Private

C – ROADWAY DISTRESS TYPES

Alligator Cracking

Typical alligator cracking is composed of frequent inter-connected cracks. The distress is load-related, so it is identified only when present in the wheelpath of a full-depth asphalt pavement.

Alligator cracking is identified as "isolated" when it occurs over less than 20% of the length of the segment, and "general" when it occurs over more than 20% of the segment.

The longitudinal crack in this photo qualifies as alligator cracking even though it lacks the interconnected cracking. The crack is in the early stages of development, but still represents a load-related distress because it occurs in the wheelpath.

Spalling

Two types of spalling can occur on concrete pavement: mid-slab when the mesh reinforcement is close to the surface and corrosion causes popouts; and at the joints, when incompressible material prevents the joint from moving and the compressive stresses in the slab fracture the concrete.

Spalling is identified as "isolated" when it occurs on less then 20% of the slabs, and "general" when it occurs on more than 20% of the slabs.

Delamination

Delamination occurs when an overlaid pavement looses the bond to the underlying layers and becomes dislodged. This distress is not identified directly in the NYSDOT survey, so when it is observed, the delaminated areas should be considered the same as cracking distress.

Widening Dropoff

Widening dropoff occurs when an old concrete pavement is widened with an asphalt overlay. The dissimilar base materials settle relative to each other, causing a dropoff at the edge of the underlying slab.

The widening dropoff dominant distress is identified as "low" severity (photo at right) when the cracking at the drop becomes well developed.

The distress is identified as "high" severity (photo at right) when the effect of the height difference can be detected when driving across the drop, or has the potential to influence the track of a vehicle.

Permanent Patching

Patches with straight, saw-cut edges are assumed to be permanent repairs to the pavement and are expected to perform as original pavement. These areas are not counted as distress until the patch itself begins to show signs of distress.

Temporary Patching

Temporary patching, such as "throw and go" patches, do not repair the structural damage in the pavement and therefore are counted as distress. These patches can be identified by their rounded, random shapes.

Crack Seal

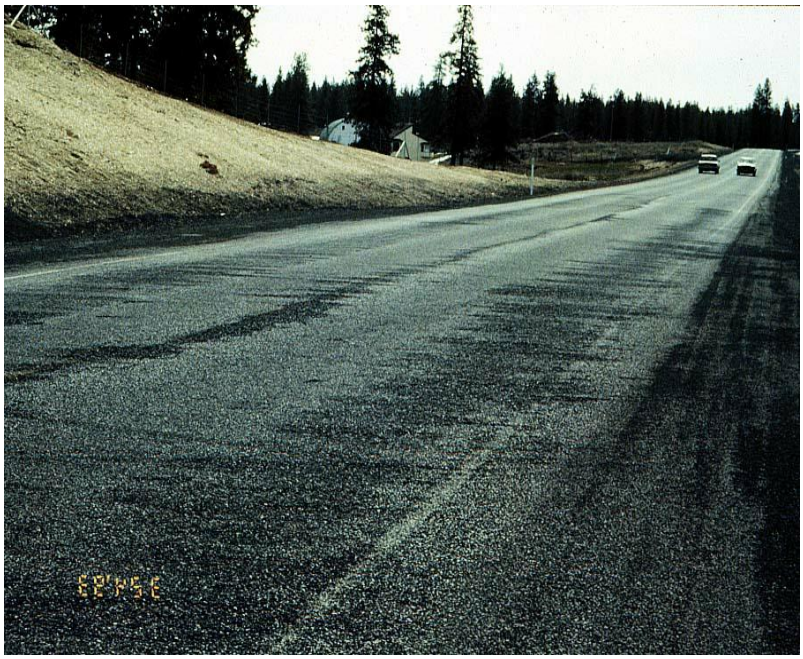
Crack seal is an effective preventive maintenance activity that helps keep water out of the pavement structure. When a pavement is crack sealed, the sealant tends to highlight the cracks, which could make the pavement look worse and cause a decrease in the rating. Roads that are crack sealed should be given the same rating as the prior year until the continued development of the cracking extends beyond the sealed areas.

Flushing

Flushing occurs when excess liquid asphalt material rises to the surface of the pavement. This distress is not identified directly in the NYSDOT survey, but should be reported separately to the Resident Engineer and/or the Regional Materials Engineer, as it may present an urgent safety condition.

Raveling

Raveling is caused by the action of traffic on a weak surface. Raveling of a weak surface course is generally due to insufficient binder in the mix. Raveling is different than weathering, which is caused by climatic conditions that result in a drying out of the pavement surface. Raveling is the wearing away of the pavement surface, resulting in a roughened surface texture. This rough surface texture is due to the dislodging of coarse aggregate and loss of the asphalt binder.



Wheel Path Rutting

Wheel path rutting is caused by Heavy trucks, slow traffic, stopping and standing traffic and poor aggregate. This causes permanent deformations of the pavement (indentations) in the wheel paths, which can lead to cracking and further deterioration. Most common in intersections, where there is braking and stopping traffic.

Settlements and Heaves

This is described as localized pavement surface areas having elevations slightly lower than surrounding pavement or localized upward displacements of the pavement surface. Settlements are caused by failure in the lower pavement layers will heaving is caused by expansive soils, typically from water freezing within the soils during winter months.

Blowups

Blowups are caused by compression stresses resulting from heat and water, and they generally occur at a joint or crack. It is known that intrusion of foreign material, water, and chemical deicing solution into joints and cracks causes extensive damage to rigid pavements. The intrusion of incompressible soils into the joint space causes even greater problems.

Joint Sealer Failure

Liquid sealer failure is characterized by loss of bond between the sealer and the joint faces, internal tearing within the sealer itself and /or entrapment of incompressibles within the sealer matrix and/or loss of sealer from the joint. Preformed neoprene sealer failure is characterized by loss of recovery from a compressed state and/or internal web sticking allowing the infiltration of water or incompressibles into the joint.

Transverse/ Logitudinal Joint Faulting/ Separation/ Distress

Transverse joint faulting is caused by a differential vertical displacement of abutting slabs at joints or slab cracks creating a step deformation on the pavement surface. Faulting is caused by the loss of fine material under a slab and the increase in fine material under nearby slabs. This flow of fine material is called pumping, and is caused by the presence of high levels of free moisture under a slab carrying heavy traffic loading

Slab Cracking

A crack or cracks within a pavement slab that propagate in any direction. Cracks may vary from hairline to more than one inch in width. Slab cracks are caused by shrinkage or curing stresses early on in the life of the slab. Cracks later in the slabs life can be caused by environmental and load bearing stresses. The loss of the sub base support along with excessive loading can cause slab cracking.

Scaling non-Joint Spalling

Scaling are irregularities in the pavement slab surface other than those occurring at joints and characterized by popouts and/or spalling. These distress types may be patched with asphalt. Scaling is caused by excessive water used in finishing the concretes surface or lack of proper amount of entrained air, in combination with freezing and thawing.

D – FIELD EVALUATION FORM

PAVEMENT FIELD EVALUATION FORM
VILLAGE OF HASTINGS-ON-HUDSON, NY

General

Name of Roadway: _____ Inspection Date: _____
Roadway I.D.#: _____ Usage (H-0,M-5,L-10): _____ Inspected by: _____
Length of Roadway: _____ Width (avg.): _____ Type (A,O,C): _____
Start of roadway: _____ End of roadway: _____
Last paved/rehabilitated: _____
Known issue(s): _____

Roadway Features

Lanes: _____
Shoulder / Side Parking: _____
Curbs (N/A, partial, entire) _____ Curb reveal (avg): _____ Curb Type: _____
Sidewalks (N/A, partial, entire): _____ Replace curbs (Y/N/P): _____
Road crown (acceptable, required): _____
Drainage type (open system, closed system): _____
Traffic light/sensor: _____
Notes: _____

Ride Quality

Corrugations effecting ride quality (Y,N) _____
Settlements and heaves effecting ride quality (Y,N) _____
Overall ride quality (very good-10, good-8, fair-6, mediocre-4, poor-2) _____

Distress Rating

Pavement: Flexible (asphalt, asphalt overlay)

Section / Type	ROADWAY REPAIR LENGTH PER SECTION (ft) 0 - 1,000 ft	1,000 - 2,000 ft	2,000 - 3,000 ft	3,000 - 4,000 ft	Severity	Notes
Alligator cracking						
Wheel path cracking						
Transverse cracking						
Longitudinal cracking						
Edge cracking						
Slippage cracking						
Cracking (other)						
Raveling						
Wheel path rutting						
Delamination						
Widening drop-off						
Pavement patching (temporary)						
Pavement patching (permanent)						
Crack seal						
Thin overlays						
Flushing						

Score _____

Pavement: Rigid (concrete) Section Type	ROADWAY REPAIR LENGTH PER SECTION (ft) 0 - 1,000 ft	1,000 - 2,000 ft	2,000 - 3,000 ft	3,000 - 4,000 ft	Severity	Notes
Spalling						
Delamination						
Pavement patching (temporary)						
Pavement patching (permanent)						
Settlements and heaves						
Blowups						
Asphalt concrete overlay						
Joint sealer failure						
Trans. joint faulting/sep./distress						
Long. joint faulting/sep./distress						
Slab cracking						
Wheelpath rutting						
Scaling non-joint spalling						

Score _____

Rating

	Score	Proportion	Prorated total
Distress		65%	
Ride Quality		20%	
Usage		15%	

Total _____

Overall rating score _____

General Notes

Pavement Notes

Shoulder / Parking Notes

Drainage Notes

E – FLEXIBLE DISTRESS RATING

10
Excellent

New
Pavement

No
Distress

9
Excellent

No
Distress

8
Good

Infrequent

Slight

8
Good

Infrequent

Minor

Asphalt

8
Good

Infrequent

Moderate

8
Good

Infrequent
to
Occasional

Slight

7
Good

Infrequent
to
Occasional

Minor

7
Good

Occasional
to
Frequent

Slight

7
Good

Infrequent

Moderate
to
Severe

7
Good

Infrequent

Severe

7
Good

Infrequent
to
Occasional

Moderate

7
Good

Infrequent
to
Occasional

Moderate
to
Severe

7
Good

Occasional
to
Frequent

Minor

7
Good

Occasional
to
Frequent

Minor

6
Fair

Frequent

Minor

6
Fair

Frequent

Minor

6
Fair

Frequent

Minor

6
Fair

Very
Frequent

Slight

6
Fair

Very
Frequent

Minor

6
Fair

Occasional
to
Frequent

Moderate

6
Fair

Occasional
to
Frequent

Moderate
to
Severe

6
Fair

Infrequent
to
Occasional

Severe

6
Fair

Frequent

Moderate

6
Fair

Frequent

Moderate

6
Fair

Frequent

Moderate

6
Fair

Frequent

Moderate

5
Poor

Frequent

Moderate
to
Severe

5
Poor

Frequent

Moderate
to
Severe

5
Poor

Occasional
to
Frequent

Severe

5
Poor

Very
Frequent

Moderate

5
Poor

Very
Frequent

Moderate
to
Severe

4
Poor

Frequent

Severe

4
Poor

Very
Frequent

Severe

3
Very Poor

Very
Frequent

Very
Severe

2
Very Poor

Very
Frequent

Impaired
Travel

1
Very Poor

Risk of
Damage
to Vehicle

F – RIGID DISTRESS RATING

10
Excellent

New
Pavement

No
Distress

9
Excellent

No
Distress

8
Good

Infrequent

Slight

8
Good

Infrequent

Slight

8
Good

Infrequent

Minor

8
Good

Infrequent

Moderate

7
Good

Infrequent

Severe

7
Good

Infrequent
to
Occasional

Minor

7
Good

Infrequent
to
Occasional

Minor

7
Good

Occasional
to
Frequent

Minor

7
Good

Infrequent
to
Occasional

Moderate

7
Good

Infrequent
to
Occasional

Moderate

7
Good

Infrequent
to
Occasional

Moderate

7
Good

Infrequent
to
Occasional

Moderate
to
Severe

6
Fair

Occasional
to
Frequent

Moderate

6
Fair

Occasional
to
Frequent

Moderate

6
Fair

Occasional
to
Frequent

Moderate
to
Severe

6
Fair

Occasional
to
Frequent

Moderate
to
Severe

6
Fair

Occasional
to
Frequent

Moderate
to
Severe

6
Fair

Very
Frequent

Minor

6
Fair

Frequent

Moderate

6
Fair

Frequent

Moderate

5
Poor

Frequent

Moderate
to
Severe

5
Poor

Frequent

Moderate
to
Severe

5
Poor

Frequent

Moderate
to
Severe

5
Poor

Very
Frequent

Moderate

5
Poor

Occasional
to
Frequent

Severe

5
Poor

Occasional
to
Frequent

Severe

4
Poor

Very
Frequent

Severe

3
Very Poor

Frequent

Very
Severe

2
Very Poor

Very
Frequent

Impaired
Travel

1
Very Poor

Risk of
Damage
to Vehicle

G – DISTRESS RATING TABLES

Pavement Distress Rating Warrants					
	Rating	General Description	Warrants		
			Frequency	Severity	Appearance
Flexible/Overlaid	10	No Distress Recently Constructed or Rehabilitated	No distress is present.		New pavement, dark black and neat. Typically one year old or less.
	9	No Significant Distress	All to nearly all of the pavement is free of distress; a single defect or crack per 0.10 mile is allowed.	The defect is superficial or the crack is tight.	Surface is typically oxidized to gray color. Typically one to three years old.
	8	Infrequent Distress, Slight Severity	Most of the pavement is free of cracking. Easy to count number of cracks at highway speed.	Cracks are tight and very widely spaced. No secondary cracking. No Dominant Distresses present.	Surface looks uniform and neat. May or may not be crack sealed.
	7	Infrequent to Occasional Distress with Minor Severity	Much of the pavement is free of cracking. More difficult to count number of cracks but still possible.	Cracks are mostly less than 1/8" wide. Cracks may have secondary cracking. No to very little connected cracking. May have isolated Dominant Distresses.	Looks fairly good but cracking is noticeable. Additional cracking has developed since last crack seal. Too many cracks to effectively crack seal- good candidate for single course overlay.

Pavement Distress Rating Warrants					
	Rating	General Description	Warrants		
			Frequency	Severity	Appearance
Flexible/Overlaid	6	Occasional to Frequent Distress with Moderate Severity	Much to most of the pavement is cracked. Cracks are spaced only a few feet apart or less.	Cracks vary in width from tight to greater than 1/8" wide. Most cracks have secondary cracking. Cracks extend to connect with adjacent cracks. Dominant Distresses may be common.	Condition looks "Fair." Needs work, likely more than a single course overlay.
	5	Distress is Frequent and Moderate to Severe	Nearly all the pavement or wheel paths have multiple, well developed cracks.	Cracks are wide and/or well developed with secondary cracking. Many cracks are interconnected. Pieces of pavement are dislodged or have been patched.	Condition looks "Poor." Needs major work.
	4	Distress is Frequent and Severe	Pavement is mostly cracked. Travel on the pavement is impaired.	Cracks are wide and connected. Potholes and/or patches are common. Patches on patches.	Beyond repair.

Pavement Distress Rating Warrants					
	Rating	General Description	Warrants		
			Frequency	Severity	Appearance
Rigid	10	No Distress Recently Constructed or Rehabilitated	No distress is present.		New pavement, white and neat. Typically one year old or less.
	9	No Significant Distress	All to nearly all of the pavement is free of distress; a single defect or crack per 0.10 mile is allowed.	The defect is superficial or the crack is tight.	Slight discoloration in wheel paths due to traffic. Typically one to three years old.
	8	Infrequent Distress, Slight Severity	A few slabs have minor popouts or corner breaks.	Popouts are shallow and few in number. Corner cracks, if present, are tight and not displaced. Joint distress is rare. No visible mid-slab cracking.	Slight weathered appearance on surface.
	7	Infrequent to Occasional Distress with Minor Severity	Popouts are more frequent and may be patched. Some joints show distress.	Joint spall cracks are tight and not displaced. Little or no secondary cracks. Some slabs may have a single mid-slab crack. Many slabs have mid-slab spalling and patching.	Distress is noticeable but not too severe.

Pavement Distress Rating Warrants					
	Rating	General Description	Warrants		
			Frequency	Severity	Appearance
Rigid	6	Occasional to Frequent Distress with Moderate Severity	Many slabs contain distress.	Advanced cracking at joints with some spalling and loose/displaced concrete. Mid-slab cracks are well defined. May have additional mid-slab cracks.	Distress is noticeable and needs repair.
	5	Distress is Frequent and Moderate to Severe	Most slabs contain distress. Distress covers a large portion of the slab.	Multiple cracks in the majority of slabs. Extensive cracking at joints with displaced concrete and/or patching.	Needs major work.
	4	Distress is Frequent and Severe	Most slabs are badly damaged. Extensive spalling and/or patching.	Cracks are wide. Broken concrete is common. Patches on patches.	Beyond repair.

Pavement Surface Rating Based on Frequency and Severity Descriptions

FREQUENCY		SEVERITY								
		None	Slight	Minor	Moderate	Moderate to Severe	Severe	Very Severe	Travel is Impaired	Impas-sible
No distress is present. A single random defect per 0.10 mile is allowed.	None	10 / 9	9	-	-	-	-	-	-	-
Most of the pavement is free of distress. One or two cracks or distresses are visible for the next 0.10 mile.	Infrequent	-	8	8	8	7	7	-	-	-
Much of the pavement is free of cracking. Large blocks of distress-free pavement are present.	Infrequent to Occasional	-	8	7	7	7	6	6	-	-
Much (< 1/2) to most (> 1/2) of the pavement is cracked. Uncracked or undistressed blocks of pavement range from 20-30 ft per lane to 12 ft per lane.	Occasional to Frequent	-	7	7	6	6	5	5	-	-
Nearly all the pavement is cracked. Uncracked or undistressed blocks of pavement are 12 ft square or less.	Frequent	-	7	6	6	5	4	3	2	1
Mostly cracked. Cracks or distress are continuous and spaced only a few feet apart.	Very Frequent	-	6	6	5	5	4	3	2	1

Slight	Cracks are tight, single and only a few feet long. Tight, single longitudinal joint cracks, partial or continuous, are included.
Minor	Cracks are generally < 1/8 inch wide, some with minor secondary cracks, no or very few connected cracks. May have a few small spalls (< 1 ft square).
Moderate	Cracks are generally >1/8 inch wide; secondary cracking is common, some cracks connected; may have some minor popouts or small (1-2 ft) to medium (3-4 ft) patching.
Moderate to Severe	Distresses vary from "Moderate" to "Severe."
Severe	Cracks are wide and/or have extensive interconnnected secondary cracking; holes, loose material and/or patching are common; patches may have patches.
Very Severe	Cracks are very wide, holes and/or patching is extensive; patches extend across the full lane or extend several feet along the lane; patches on patches are common.
Travel is Impaired	Holes in pavement are large and/or pavement has so many layers of patches that the section can be traveled only at reduced speed.
Impassible	Travel by ordinary car would risk damage to the vehicle.

Notes: - Ratings in blue are the definitions from the original Pavement Rating Manual c.1981.
- "Very Slight" from the original Manual = "Slight" here.
- "Slight" from the orginal Manual = "Minor" here.

3/16/2010

H – ANNUAL CHECKLIST AND COST EVALUATION

VILLAGE OF HASTINGS-ON-HUDSON

ANNUAL ROAD RE-SURFACING CHECK LIST

The items listed below should be reviewed by the Village prior to the inter-municipal paving agreement and bidding process.

DRAINAGE	**YES**	**NO**
Does drainage need to be replaced or is drainage required?	____	____
Are there any flooding issues that need to be resolved?	____	____
Are utility improvements planned?	____	____

PERMITS/APPROVALS		
Are any permits or approvals required?	____	____

GENERAL INFORMATION		
Do curbs need to be replaced (get length, type, cost, etc)?	____	____
Are traffic loops required?	____	____
Are pavement markings required?	____	____
Do catch basins or manhole covers need to be adjusted?	____	____
Do valve boxes need to be adjusted?	____	____
Do any other structures need to be adjusted?	____	____

BUDGET

1.	Has additional cost of items listed above been determined?	____	____

ANNUAL COST EVALUATION

ROADWAY PAVING PROCEDURE
VILLAGE OF HASTINGS-ON-HUDSON

Description	Estimated Quantity	Units	Unit Cost	Total
Top course		TONS		
Milling		SY		
Concrete curbs		LF		
Asphalt curbs		LF		
Stone curbs		LF		
Adjust MH/CB		EA		
Adjust valve box		EA		
Line Striping (4")		LF		
Traffic loop		EA		
			Total cost	

Other potential costs	(Y/N)
Does drainage need to be replaced or is drainage required?	
Are there any flooding issues that need to be resolved?	
Are utility improvements planned?	
Are any permits or approvals required?	

I – ESTIMATED COSTS

ESTIMATED COSTS TO RESURFACE ROADWAYS
VILLAGE OF HASTINGS-ON-HUDSON, NY

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	TONNAGE (per 2" mill and pave)	COST MILL AND PAVE ($165/ton, $9/SY)	CURB LENGTH (ft)	COST OF CURBS ($65/ft plus $26 Rest.)	TOTAL COST PER ROAD
AMHERST DR	1	1710	30	51300	5700	633.3	$155,800	3420	$311,220	$467,020
AQUEDUCT LN	2	838	16	13408	1490	165.5	$40,721	1676	$152,516	$193,237
ASHLEY RD	3	851	18	15318	1702	189.1	$46,521	1702	$154,882	$201,403
BAKER LN	4	500	16	8000	889	98.8	$24,296	1000	$91,000	$115,296
BELLAIR DR	5	178	18	3204	356	39.6	$9,731	356	$32,396	$42,127
BEVERS ST	6	240	24	5760	640	71.1	$17,493	480	$43,680	$61,173
BRANDT ST	7	457	24	10968	1219	135.4	$33,310	914	$83,174	$116,484
BRANFORD RD	8	1200	22	26400	2933	325.9	$80,178	2400	$218,400	$298,578
BUENA VISTA DR	9	827	20	16540	1838	204.2	$50,233	1654	$150,514	$200,747
BURKELY PL	10	181	13	2353	261	29.0	$7,146	362	$32,942	$40,088
BURNSIDE DR (EAST)	11	155	20	3100	344	38.3	$9,415	310	$28,210	$37,625
BURNSIDE DR (WEST)	12	1202	20	24040	2671	296.8	$73,010	2404	$218,764	$291,774
BURNSIDE PL	13	391	20	7820	869	96.5	$23,750	782	$71,162	$94,912
CALUMET AVE	14	967	30	29010	3223	358.1	$88,104	1934	$175,994	$264,098
CEDARS STREET	15	942	20	18840	2093	232.6	$57,218	1884	$171,444	$228,662
CHAUNCEY LN	16	1212	24	29088	3232	359.1	$88,341	2424	$220,584	$308,925
CHEMKA POOL RD	17	542	22	11924	1325	147.2	$36,214	1084	$98,644	$134,858
CHESTNUT DR	18	808	20	16160	1796	199.5	$49,079	1616	$147,056	$196,135
CIRCLE DR	19	2000	20	40000	4444	493.8	$121,481	4000	$364,000	$485,481
CLARENCE AVE	20	380	22	8360	929	103.2	$25,390	760	$69,160	$94,550
CLIFF ST	21	1429	18	25722	2858	317.6	$78,119	2858	$260,078	$338,197
CLINTON AVE	22	692	22	15224	1692	188.0	$46,236	1384	$125,944	$172,180
CLUNIE AVE	23	550	22	12100	1344	149.4	$36,748	1100	$100,100	$136,848
COCHRANE AVE	24	1653	24	39672	4408	489.8	$120,485	3306	$300,846	$421,331
COLUMBIA AVE	25	427	27	11529	1281	142.3	$35,014	854	$77,714	$112,728
CROPSEY LN	26	769	19	14611	1623	180.4	$44,374	1538	$139,958	$184,332
CROSSBAR RD	27	1431	30	42930	4770	530.0	$130,380	2862	$260,442	$390,822
CROTON AVE	28	594	27	16038	1782	198.0	$48,708	1188	$108,108	$156,816
CURRY RD	29	620	20	12400	1378	153.1	$37,659	1240	$112,840	$150,499
DARWIN AVE	30	595	30	17850	1983	220.4	$54,211	1190	$108,290	$162,501
DERRY LN (EAST)	33	425	15	6375	708	78.7	$19,361	850	$77,350	$96,711
DERRY LN (WEST)	34	237	15	3555	395	43.9	$10,797	474	$43,134	$53,931
DEVON WAY	35	553	20	11060	1229	136.5	$33,590	1106	$100,646	$134,236
DIVISION ST	36	300	18	5400	600	66.7	$16,400	600	$54,600	$71,000
DORCHESTER AVE	37	1095	20	21900	2433	270.4	$66,511	2190	$199,290	$265,801
EDGARS LN	39	2214	26	57564	6396	710.7	$174,824	4428	$402,948	$577,772
EDGEWOOD AVE	40	1056	25	26400	2933	325.9	$80,178	2112	$192,192	$272,370

ESTIMATED COSTS TO RESURFACE ROADWAYS
VILLAGE OF HASTINGS-ON-HUDSON, NY

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	TONNAGE (per 2" mill and pave)	COST MILL AND PAVE ($165/ton, $9/SY)	CURB LENGTH (ft)	COST OF CURBS ($65/ft plus $26 Rest.)	TOTAL COST PER ROAD
EDISON AVE	41	195	24	4680	520	57.8	$14,213	390	$35,490	$49,703
EDMARTH PL	42	192	20	3840	427	47.4	$11,662	384	$34,944	$46,606
EUCLID AVE	43	1925	30	57750	6417	713.0	$175,389	3850	$350,350	$525,739
FAIRMONT AVE	44	2162	22	47564	5285	587.2	$144,454	4324	$393,484	$537,938
FARLANE DR	45	965	20	19300	2144	238.3	$58,615	1930	$175,630	$234,245
FARRAGUT AVE	46	2220	24	53280	5920	657.8	$161,813	4440	$404,040	$565,853
FENWICK RD	47	765	20	15300	1700	188.9	$46,467	1530	$139,230	$185,697
FERNDALE DR	48	1215	20	24300	2700	300.0	$73,800	2430	$221,130	$294,930
FLORAL DR	49	622	20	12440	1382	153.6	$37,781	1244	$113,204	$150,985
FLOWER AVE	50	1285	20	25700	2856	317.3	$78,052	2570	$233,870	$311,922
FOREST AVE	51	690	20	13800	1533	170.4	$41,911	1380	$125,580	$167,491
FRASER PL	52	1298	23	29854	3317	368.6	$90,668	2596	$236,236	$326,904
FULTON ST	53	539	22	11858	1318	146.4	$36,013	1078	$98,098	$134,111
GARLAND DR	54	523	15	7845	872	96.9	$23,826	1046	$95,186	$119,012
GLENN PL	55	584	30	17520	1947	216.3	$53,209	1168	$106,288	$159,497
GLENWOOD AVE	56	415	22	9130	1014	112.7	$27,728	830	$75,530	$103,258
GOODWIN ST	57	707	30	21210	2357	261.9	$64,416	1414	$128,674	$193,090
GREEN ST	58	510	20	10200	1133	125.9	$30,978	1020	$92,820	$123,798
HALL PL	59	147	26	3822	425	47.2	$11,608	294	$26,754	$38,362
HAMILTON AVE	60	1662	25	41550	4617	513.0	$126,189	3324	$302,484	$428,673
HARVARD LN	61	820	30	24600	2733	303.7	$74,711	1640	$149,240	$223,951
HIGH ST	63	3257	26	84682	9409	1045.5	$257,182	6514	$592,774	$849,956
HILLSIDE AVE	64	1287	30	38610	4290	476.7	$117,260	2574	$234,234	$351,494
HOLLY PL	65	475	24	11400	1267	140.7	$34,622	950	$86,450	$121,072
HOLLYWOOD DR	66	1217	18	21906	2434	270.4	$66,529	2434	$221,494	$288,023
HOPKE AVE	67	491	26	12766	1418	157.6	$38,771	982	$89,362	$128,133
HORNER AVE	68	685	22	15070	1674	186.0	$45,768	1370	$124,670	$170,438
HUDSON ST (EAST)	69	325	30	9750	1083	120.4	$29,611	650	$59,150	$88,761
HUDSON ST (WEST)	70	700	25	17500	1944	216.0	$53,148	1400	$127,400	$180,548
JAMES ST	71	2060	22	45320	5036	559.5	$137,639	4120	$374,920	$512,559
JEFFERSON AVE	72	1070	22	23540	2616	290.6	$71,492	2140	$194,740	$266,232
JORDAN RD	73	1624	30	48720	5413	601.5	$147,964	3248	$295,568	$443,532
KENT AVE	74	1524	24	36576	4064	451.6	$111,083	3048	$277,368	$388,451
LEFURGY AVE	75	1721	26	44746	4972	552.4	$135,895	3442	$313,222	$449,117
LEFURGY TER	76	167	18	3006	334	37.1	$9,129	334	$30,394	$39,523
LINCOLN AVE	77	2515	24	60360	6707	745.2	$183,316	5030	$457,730	$641,046
MAGNOLIA DR	78	44	30	1320	147	16.3	$4,009	88	$8,008	$12,017

ESTIMATED COSTS TO RESURFACE ROADWAYS
VILLAGE OF HASTINGS-ON-HUDSON, NY

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	TONNAGE (per 2" mill and pave)	COST MILL AND PAVE ($165/ton, $9/SY)	CURB LENGTH (ft)	COST OF CURBS ($65/ft plus $26 Rest.)	TOTAL COST PER ROAD
MAIN ST	79	1212	40	48480	5387	598.5	$147,236	2424	$220,584	$367,820
MAPLE AVE	80	1408	40	56320	6258	695.3	$171,046	2816	$256,256	$427,302
MARBLE TER	82	244	20	4880	542	60.2	$14,821	488	$44,408	$59,229
MARIANA DR	83	781	30	23430	2603	289.3	$71,158	1562	$142,142	$213,300
MARION AVE	84	264	26	6864	763	84.7	$20,846	528	$48,048	$68,894
MERRILL ST	85	386	28	10808	1201	133.4	$32,824	772	$70,252	$103,076
MINTURN ST	86	832	25	20800	2311	256.8	$63,170	1664	$151,424	$214,594
MT HOPE BLVD	87	4580	34	155720	17302	1922.5	$472,927	9160	$833,560	$1,306,487
N END PL (EAST)	88	245	20	4900	544	60.5	$14,881	490	$44,590	$59,471
N END PL (WEST)	89	230	24	5520	613	68.1	$16,764	460	$41,860	$58,624
NEPERA PL	90	614	22	13508	1501	166.8	$41,024	1228	$111,748	$152,772
NEPPERHAN AVE	91	580	23	13340	1482	164.7	$40,514	1160	$105,560	$146,074
NICHOLS DR	92	545	20	10900	1211	134.6	$33,104	1090	$99,190	$132,294
NORTH ST	93	249	30	7470	830	92.2	$22,687	498	$45,318	$68,005
OAKDALE DR	94	612	19	11628	1292	143.6	$35,315	1224	$111,384	$146,699
OLINDA AVE	95	510	30	15300	1700	188.9	$46,467	1020	$92,820	$139,287
OVERLOOK RD	96	2245	20	44900	4989	554.3	$136,363	4490	$408,590	$544,953
OXFORD RD	97	941	30	28230	3137	348.5	$85,736	1882	$171,262	$256,998
PALISADE AVE	98	69	30	2070	230	25.6	$6,287	138	$12,558	$18,845
PEARL ST	99	234	24	5616	624	69.3	$17,056	468	$42,588	$59,644
PINE ST	100	230	24	5520	613	68.1	$16,764	460	$41,860	$58,624
PINECREST DR	101	2048	22	45056	5006	556.2	$136,837	4096	$372,736	$509,573
PINECREST PKY	102	1440	30	43200	4800	533.3	$131,200	2880	$262,080	$393,280
PLEASANT AVE	103	359	28	10052	1117	124.1	$30,528	718	$65,338	$95,866
PRESCOTT PL	104	278	22	6116	680	75.5	$18,575	556	$50,596	$69,171
PRINCE ST	105	930	20	18600	2067	229.6	$56,489	1350	$122,850	$179,339
RAVENSDALE RD	106	2776	28	77728	8636	959.6	$236,063	5552	$505,232	$741,295
RAVINE DR	107	794	18	14292	1588	176.4	$43,405	1588	$144,508	$187,913
RIDGE ST	108	542	24	13008	1445	160.6	$39,506	1084	$98,644	$138,150
RIDGEDELL AVE	109	193	20	3860	429	47.7	$11,723	386	$35,126	$46,849
RIVER ST	110	1506	45	67770	7530	836.7	$205,820	3012	$274,092	$479,912
RIVERVIEW PL	112	427	24	10248	1139	126.5	$31,124	854	$77,714	$108,838
RONNY CIR	113	677	20	13540	1504	167.2	$41,121	1354	$123,214	$164,335
ROSE ST	114	1181	24	28344	3149	349.9	$86,082	2362	$214,942	$301,024
ROSEDALE AVE	115	2375	30	71250	7917	879.6	$216,389	4750	$432,250	$648,639
S CALUMET AVE	116	610	30	18300	2033	225.9	$55,578	1220	$111,020	$166,598
S CLINTON ST	117	994	21	20874	2319	257.7	$63,395	1988	$180,908	$244,303

ESTIMATED COSTS TO RESURFACE ROADWAYS
VILLAGE OF HASTINGS-ON-HUDSON, NY

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	TONNAGE (per 2" mill and pave)	COST MILL AND PAVE ($165/ton, $9/SY)	CURB LENGTH (ft)	COST OF CURBS ($65/ft plus $26 Rest.)	TOTAL COST PER ROAD
SAUNDERS ST	118	258	28	7224	803	89.2	$21,940	516	$46,956	$68,896
SCENIC DR	119	1399	20	27980	3109	345.4	$84,976	2798	$254,618	$339,594
SCHOOL ST	120	490	30	14700	1633	181.5	$44,644	980	$89,180	$133,824
SHELDON PL	121	803	20	16060	1784	198.3	$48,775	1606	$146,146	$194,921
SOUTH DR	122	576	20	11520	1280	142.2	$34,987	1152	$104,832	$139,819
SOUTHGATE AVE	123	1905	22	41910	4657	517.4	$127,282	3810	$346,710	$473,992
SOUTHLAWN AVE	124	108	32	3456	384	42.7	$10,496	216	$19,656	$30,152
SOUTHSIDE AVE	125	3578	25	89450	9939	1104.3	$271,663	7156	$651,196	$922,859
SPRING ST	126	265	38	10070	1119	124.3	$30,583	530	$48,230	$78,813
STANLEY AVE (NORTH)	127	621	30	18630	2070	230.0	$56,580	1242	$113,022	$169,602
STANLEY AVE (SOUTH)	128	1591	20	31820	3536	392.8	$96,639	3182	$289,562	$386,201
STRATFORD LN	129	524	20	10480	1164	129.4	$31,828	1048	$95,368	$127,196
SUMMIT DR	130	1382	18	24876	2764	307.1	$75,549	2764	$251,524	$327,073
SUMMIT ST	131	541	18	9738	1082	120.2	$29,575	1082	$98,462	$128,037
SUNSET ST	132	217	22	4774	530	58.9	$14,499	434	$39,494	$53,993
TAFT ST	133	208	25	5200	578	64.2	$15,793	416	$37,856	$53,649
TERRACE AVE	134	660	20	13200	1467	163.0	$40,089	1320	$120,120	$160,209
THE FENWAY	135	290	32	9280	1031	114.6	$28,184	580	$52,780	$80,964
TOMPKINS AVE	136	2204	30	66120	7347	816.3	$200,809	4408	$401,128	$601,937
TRAVIS PL	137	305	25	7625	847	94.1	$23,157	610	$55,510	$78,667
VALLEY PL	138	429	26	11154	1239	137.7	$33,875	858	$78,078	$111,953
VILLARD AVE	139	3527	30	105810	11757	1306.3	$321,349	7054	$641,914	$963,263
W MAIN ST	140	285	30	8550	950	105.6	$25,967	570	$51,870	$77,837
WAGNER PL	141	377	26	9802	1089	121.0	$29,769	754	$68,614	$98,383
WARD ST	142	230	22	5060	562	62.5	$15,367	460	$41,860	$57,227
WARREN ST (EAST)	143	138	20	2760	307	34.1	$8,382	276	$25,116	$33,498
WARREN ST (WEST)	144	727	20	14540	1616	179.5	$44,159	1454	$132,314	$176,473
WASHINGTON AVE	145	1780	30	53400	5933	659.3	$162,178	3560	$323,960	$486,138
WHITMAN ST	146	952	24	22848	2539	282.1	$69,390	1904	$173,264	$242,654
WILLIAM ST	147	414	25	10350	1150	127.8	$31,433	828	$75,348	$106,781
WILSON ST	148	220	25	5500	611	67.9	$16,704	440	$40,040	$56,744
WINDSOR RD	149	807	20	16140	1793	199.3	$49,018	1614	$146,874	$195,892
YALE RD	150	255	30	7650	850	94.4	$23,233	510	$46,410	$69,643
ZINSSER WAY	151	367	24	8808	979	108.7	$26,750	734	$66,794	$93,544
VILLAGE HALL	152	(Village parking lot)		13860	1540	171.1	$42,093	250	$22,750	$64,843
BOULANGER PLAZE	153	(Village parking lot)		19080	2120	235.6	$57,947	0	$0	$57,947
POST OFFICE	154	(Village parking lot)		5715	635	70.6	$17,357	250	$22,750	$40,107

ESTIMATED COSTS TO RESURFACE ROADWAYS
VILLAGE OF HASTINGS-ON-HUDSON, NY

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	TONNAGE (per 2" mill and pave)	COST MILL AND PAVE ($165/ton, $9/SY)	CURB LENGTH (ft)	COST OF CURBS ($65/ft plus $26 Rest.)	TOTAL COST PER ROAD
CHEMKA POOL	155	(Village parking lot)		32220	3580	397.8	$97,853	80	$7,280	$105,133
STEINSCHNEIDER LOT	156	(Village parking lot)		19485	2165	240.6	$59,177	860	$78,260	$137,437
CON ED SOUTHSIDE	157	(Village parking lot)		9450	1050	116.7	$28,700	380	$34,580	$63,280
ZINSSER: 127 SOUTHSIDE	158	(Village parking lot)		82890	9210	1023.3	$251,740	200	$18,200	$269,940
ZINSSER: EDGARS LN	159	(Village parking lot)		16200	1800	200.0	$49,200	340	$30,940	$80,140
DRAPER PARK	160	(Village parking lot)		4050	450	50.0	$12,300	0	$0	$12,300
UNIONTOWN	161	(Village parking lot)		16155	1795	199.4	$49,063	0	$0	$49,063

J – SEQUENCING PLAN

RESURFACING SEQUENCING PLAN
VILLAGE OF HASTINGS-ON-HUDSON, NY

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	TONNAGE (per 2" mill and pave)	COST MILL AND PAVE ($165/ton, $9/SY)	CURB LENGTH (ft)	COST OF CURBS ($65/ft plus $26 Rest.)	TOTAL COST PER ROAD	COMB. COSTS
2023											
S CLINTON ST	117	994	21	20874	2319	257.7	$63,395			$63,395	$63,395
CHEMKA POOL RD	17	542	22	11924	1325	147.2	$36,214			$36,214	$99,609
HILLSIDE AVE (portion)	64	515	30	15450	1717	190.7	$46,922			$46,922	$146,531
CURRY RD	29	620	20	12400	1378			1240	$112,840	$112,840	$259,371
PRINCE ST	105	930	20	18600	2067			1350	$122,850	$122,850	$382,221
RONNY CIR	113	677	20	13540	1504			1354	$123,214	$123,214	$505,435
2024											
CURRY RD	29	620	20	12400	1378	153.1	$37,659			$37,659	$37,659
GREEN ST	58	510	20	10200	1133	125.9	$30,978	1020	$92,820	$123,798	$161,457
PRINCE ST	105	930	20	18600	2067	229.6	$56,489			$56,489	$217,946
RONNY CIR	113	677	20	13540	1504	167.2	$41,121			$41,121	$259,067
FAIRMONT AVE (portion)	44	1400	22	30800	3422			2800	$254,800	$254,800	$513,867
2025											
FARLANE DR	45	965	20	19300	2144	238.3	$58,615			$58,615	$58,615
FAIRMONT AVE (portion)	44	1400	22	30800	3422	380.2	$93,541			$93,541	$152,156
GOODWIN ST	57	707	30	21210	2357			1414	$128,674	$128,674	$280,830
PINECREST DR*	101	2048	22	45056	5006			2200	$200,200	$200,200	$481,030
2026											
GOODWIN ST	57	707	30	21210	2357	261.9	$64,416			$64,416	$64,416
PINECREST DR	101	2048	22	45056	5006	556.2	$136,837			$136,837	$201,252
BELLAIR DR	5	178	18	3204	356			356	$32,396	$32,396	$233,648
FLOWER AVE	50	1285	20	25700	2856			2570	$233,870	$233,870	$467,518
MAGNOLIA DR	78	44	30	1320	147			88	$8,008	$8,008	$475,526
PALISADE AVE	98	69	30	2070	230			138	$12,558	$12,558	$488,084
SOUTHLAWN AVE	124	108	32	3456	384			216	$19,656	$19,656	$507,740
2027											
BELLAIR DR	5	178	18	3204	356	39.6	$9,731			$9,731	$9,731
FLOWER AVE	50	1285	20	25700	2856	317.3	$78,052			$78,052	$87,783
MAGNOLIA DR	78	44	30	1320	147	16.3	$4,009			$4,009	$91,791
PALISADE AVE	98	69	30	2070	230	25.6	$6,287			$6,287	$98,078
SOUTHLAWN AVE	124	108	32	3456	384	42.7	$10,496			$10,496	$108,574
CIRCLE DR	19	2000	20	40000	4444			4000	$364,000	$364,000	$472,574
TOMPKINS AVE (portion)	136	2204	30	66120	7347			450	$40,950	$40,950	$513,524

RESURFACING SEQUENCING PLAN
VILLAGE OF HASTINGS-ON-HUDSON, NY

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	TONNAGE (per 2" mill and pave)	COST MILL AND PAVE ($165/ton, $9/SY)	CURB LENGTH (ft)	COST OF CURBS ($65/ft plus $26 Rest.)	TOTAL COST PER ROAD	COMB. COSTS
Post 5-Year OPTION 1											
CIRCLE DR	19	2000	20	40000	4444	493.8	$121,481			$121,481	$121,481
CHESTNUT DR	18	808	20	16160	1796			1616	$147,056	$147,056	$268,537
HOLLYWOOD DR	66	1217	18	21906	2434			2434	$221,494	$221,494	$490,031
TOMPKINS AVE (portion)	136	2204	30	66120	7347	150.0	$90,870			$90,870	$580,901
Post 5-Year OPTION 2											
HOLLYWOOD DR	66	1217	18	21906	2434	270.4	$66,529			$66,529	$66,529
CHESTNUT DR	18	808	20	16160	1796	199.5	$49,079			$49,079	$115,608
MT HOPE BLVD (portion)	87	4580	34	155720	17302			4160	$378,560	$378,560	$494,168
Post 5-Year OPTION 3											
MT HOPE BLVD (portion)	87	4580	34	155720	17302	922.5	$307,933	2200	$200,200	$508,133	$508,133
Post 5-Year OPTION 4											
MT HOPE BLVD (portion)	87	4580	34	155720	17302	600.0	$254,720	2800	$254,800	$509,520	$509,520
Post 5-Year OPTION 5											
MT HOPE BLVD (portion)	87	4580	34	155720	17302	400.0	$221,720			$221,720	$221,720
HAMILTON AVE	60	1662	25	41550	4617			3324	$302,484	$302,484	$524,204
Post 5-Year OPTION 6											
HAMILTON AVE	60	1662	25	41550	4617	513.0	$126,189			$126,189	$126,189
LEFURGY TER	76	167	18	3006	334	37.1	$9,129	334	$30,394	$39,523	$165,712
Re-evaluate											
FAIRMONT AVE (portion)	44	762	22	16764	1863	207.0	$50,913	1524	$138,684	$189,597	
HILLSIDE AVE (portion)	64	772	30	23160	2573	285.9	$70,338	1544	$140,504	$210,842	
FRASER PL	52	1298	23	29854	3317	368.6	$90,668	2596	$236,236	$326,904	
GARLAND DR	54	523	15	7845	872	96.9	$23,826	1046	$95,186	$119,012	
HORNER AVE	68	685	22	15070	1674	186.0	$45,768	1370	$124,670	$170,438	
LEFURGY TER	76	167	18	3006	334	37.1	$9,129	334	$30,394	$39,523	
BOULANGER PLAZE	153	(Village parking lot)		19080	2120	235.6	$57,947	0	$0	$57,947	
AMHERST DR	1	1710	30	51300	5700	633.3	$155,800	3420	$311,220	$467,020	
CLINTON AVE	22	692	22	15224	1692	188.0	$46,236	1384	$125,944	$172,180	
DARWIN AVE	30	595	30	17850	1983	220.4	$54,211	1190	$108,290	$162,501	
DERRY LN (WEST)	34	237	15	3555	395	43.9	$10,797	474	$43,134	$53,931	
DORCHESTER AVE	37	1095	20	21900	2433	270.4	$66,511	2190	$199,290	$265,801	
EDGARS LN	39	2214	26	57564	6396	710.7	$174,824	4428	$402,948	$577,772	
EDISON AVE	41	195	24	4680	520	57.8	$14,213	390	$35,490	$49,703	
EUCLID AVE	43	1925	30	57750	6417	713.0	$175,389	3850	$350,350	$525,739	
GLENWOOD AVE	56	415	22	9130	1014	112.7	$27,728	830	$75,530	$103,258	
HOLLY PL	65	475	24	11400	1267	140.7	$34,622	950	$86,450	$121,072	

RESURFACING SEQUENCING PLAN
VILLAGE OF HASTINGS-ON-HUDSON, NY

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	TONNAGE (per 2" mill and pave)	COST MILL AND PAVE ($165/ton, $9/SY)	CURB LENGTH (ft)	COST OF CURBS ($65/ft plus $26 Rest.)	TOTAL COST PER ROAD	COMB. COSTS
JEFFERSON AVE	72	1070	22	23540	2616	290.6	$71,492	2140	$194,740	$266,232	
MAIN ST	79	1212	40	48480	5387	598.5	$147,236	2424	$220,584	$367,820	
MERRILL ST	85	386	28	10808	1201	133.4	$32,824	772	$70,252	$103,076	
NICHOLS DR	92	545	20	10900	1211	134.6	$33,104	1090	$99,190	$132,294	
RAVINE DR	107	794	18	14292	1588	176.4	$43,405	1588	$144,508	$187,913	
RIVER ST	110	1506	45	67770	7530	836.7	$205,820	3012	$274,092	$479,912	
SCHOOL ST	120	490	30	14700	1633	181.5	$44,644	980	$89,180	$133,824	
STANLEY AVE (SOUTH)	128	1591	20	31820	3536	392.8	$96,639	3182	$289,562	$386,201	
STRATFORD LN	129	524	20	10480	1164	129.4	$31,828	1048	$95,368	$127,196	
WARD ST	142	230	22	5060	562	62.5	$15,367	460	$41,860	$57,227	
WHITMAN ST	146	952	24	22848	2539	282.1	$69,390	1904	$173,264	$242,654	
WINDSOR RD	149	807	20	16140	1793	199.3	$49,018	1614	$146,874	$195,892	
CHEMKA POOL	155	(Village parking lot)		32220	3580	397.8	$97,853	80	$7,280	$105,133	
ZINSSER: EDGARS LN	159	(Village parking lot)		16200	1800	200.0	$49,200	340	$30,940	$80,140	
BUENA VISTA DR	9	827	20	16540	1838	204.2	$50,233	1654	$150,514	$200,747	
BURNSIDE DR (EAST)	11	155	20	3100	344	38.3	$9,415	310	$28,210	$37,625	
BURNSIDE DR (WEST)	12	1202	20	24040	2671	296.8	$73,010	2404	$218,764	$291,774	
CALUMET AVE	14	967	30	29010	3223	358.1	$88,104	1934	$175,994	$264,098	
COCHRANE AVE	24	1653	24	39672	4408	489.8	$120,485	3306	$300,846	$421,331	
DEVON WAY	35	553	20	11060	1229	136.5	$33,590	1106	$100,646	$134,236	
DIVISION ST	36	300	18	5400	600	66.7	$16,400	600	$54,600	$71,000	
FERNDALE DR	48	1215	20	24300	2700	300.0	$73,800	2430	$221,130	$294,930	
GLENN PL	55	584	30	17520	1947	216.3	$53,209	1168	$106,288	$159,497	
HARVARD LN	61	820	30	24600	2733	303.7	$74,711	1640	$149,240	$223,951	
HUDSON ST (WEST)	70	700	25	17500	1944	216.0	$53,148	1400	$127,400	$180,548	
LINCOLN AVE	77	2515	24	60360	6707	745.2	$183,316	5030	$457,730	$641,046	
MAPLE AVE	80	1408	40	56320	6258	695.3	$171,046	2816	$256,256	$427,302	
MARIANA DR	83	781	30	23430	2603	289.3	$71,158	1562	$142,142	$213,300	
N END PL (WEST)	89	230	24	5520	613	68.1	$16,764	460	$41,860	$58,624	
NORTH ST	93	249	30	7470	830	92.2	$22,687	498	$45,318	$68,005	
OXFORD RD	97	941	30	28230	3137	348.5	$85,736	1882	$171,262	$256,998	
PLEASANT AVE	103	359	28	10052	1117	124.1	$30,528	718	$65,338	$95,866	
PRESCOTT PL	104	278	22	6116	680	75.5	$18,575	556	$50,596	$69,171	
RIVERVIEW PL	112	427	24	10248	1139	126.5	$31,124	854	$77,714	$108,838	
ROSE ST	114	1181	24	28344	3149	349.9	$86,082	2362	$214,942	$301,024	
ROSEDALE AVE	115	2375	30	71250	7917	879.6	$216,389	4750	$432,250	$648,639	
SAUNDERS ST	118	258	28	7224	803	89.2	$21,940	516	$46,956	$68,896	

RESURFACING SEQUENCING PLAN
VILLAGE OF HASTINGS-ON-HUDSON, NY

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	TONNAGE (per 2" mill and pave)	COST MILL AND PAVE ($165/ton, $9/SY)	CURB LENGTH (ft)	COST OF CURBS ($65/ft plus $26 Rest.)	TOTAL COST PER ROAD	COMB. COSTS
SCENIC DR	119	1399	20	27980	3109	345.4	$84,976	2798	$254,618	$339,594	
SHELDON PL	121	803	20	16060	1784	198.3	$48,775	1606	$146,146	$194,921	
SOUTHGATE AVE	123	1905	22	41910	4657	517.4	$127,282	3810	$346,710	$473,992	
SOUTHSIDE AVE	125	3578	25	89450	9939	1104.3	$271,663	7156	$651,196	$922,859	
SPRING ST	126	265	38	10070	1119	124.3	$30,583	530	$48,230	$78,813	
SUMMIT DR	130	1382	18	24876	2764	307.1	$75,549	2764	$251,524	$327,073	
SUMMIT ST	131	541	18	9738	1082	120.2	$29,575	1082	$98,462	$128,037	
THE FENWAY	135	290	32	9280	1031	114.6	$28,184	580	$52,780	$80,964	
VILLARD AVE	139	3527	30	105810	11757	1306.3	$321,349	7054	$641,914	$963,263	
W MAIN ST	140	285	30	8550	950	105.6	$25,967	570	$51,870	$77,837	
WAGNER PL	141	377	26	9802	1089	121.0	$29,769	754	$68,614	$98,383	
WARREN ST (WEST)	144	727	20	14540	1616	179.5	$44,159	1454	$132,314	$176,473	
WASHINGTON AVE	145	1780	30	53400	5933	659.3	$162,178	3560	$323,960	$486,138	
ZINSSER WAY	151	367	24	8808	979	108.7	$26,750	734	$66,794	$93,544	
POST OFFICE	154	(Village parking lot)		5715	635	70.6	$17,357	250	$22,750	$40,107	
STEINSCHNEIDER LOT	156	(Village parking lot)		19485	2165	240.6	$59,177	860	$78,260	$137,437	
CON ED SOUTHSIDE	157	(Village parking lot)		9450	1050	116.7	$28,700	380	$34,580	$63,280	
ZINSSER: 127 SOUTHSIDE	158	(Village parking lot)		82890	9210	1023.3	$251,740	200	$18,200	$269,940	
AQUEDUCT LN	2	838	16	13408	1490	165.5	$40,721	1676	$152,516	$193,237	
ASHLEY RD	3	851	18	15318	1702	189.1	$46,521	1702	$154,882	$201,403	
BAKER LN	4	500	16	8000	889	98.8	$24,296	1000	$91,000	$115,296	
BEVERS ST	6	240	24	5760	640	71.1	$17,493	480	$43,680	$61,173	
BRANDT ST	7	457	24	10968	1219	135.4	$33,310	914	$83,174	$116,484	
BRANFORD RD	8	1200	22	26400	2933	325.9	$80,178	2400	$218,400	$298,578	
BURKELY PL	10	181	13	2353	261	29.0	$7,146	362	$32,942	$40,088	
BURNSIDE PL	13	391	20	7820	869	96.5	$23,750	782	$71,162	$94,912	
CEDARS STREET	15	942	20	18840	2093	232.6	$57,218	1884	$171,444	$228,662	
CHAUNCEY LN	16	1212	24	29088	3232	359.1	$88,341	2424	$220,584	$308,925	
CLARENCE AVE	20	380	22	8360	929	103.2	$25,390	760	$69,160	$94,550	
CLIFF ST	21	1429	18	25722	2858	317.6	$78,119	2858	$260,078	$338,197	
CROPSEY LN	26	769	19	14611	1623	180.4	$44,374	1538	$139,958	$184,332	
CROSSBAR RD	27	1431	30	42930	4770	530.0	$130,380	2862	$260,442	$390,822	
DERRY LN (EAST)	33	425	15	6375	708	78.7	$19,361	850	$77,350	$96,711	
EDGEWOOD AVE	40	1056	25	26400	2933	325.9	$80,178	2112	$192,192	$272,370	
EDMARTH PL	42	192	20	3840	427	47.4	$11,662	384	$34,944	$46,606	
FARRAGUT AVE	46	2220	24	53280	5920	657.8	$161,813	4440	$404,040	$565,853	
FENWICK RD	47	765	20	15300	1700	188.9	$46,467	1530	$139,230	$185,697	

RESURFACING SEQUENCING PLAN
VILLAGE OF HASTINGS-ON-HUDSON, NY

STREET NAME	#	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SF)	AREA (SY)	TONNAGE (per 2" mill and pave)	COST MILL AND PAVE ($165/ton, $9/SY)	CURB LENGTH (ft)	COST OF CURBS ($65/ft plus $26 Rest.)	TOTAL COST PER ROAD	COMB. COSTS
FLORAL DR	49	622	20	12440	1382	153.6	$37,781	1244	$113,204	$150,985	
FOREST AVE	51	690	20	13800	1533	170.4	$41,911	1380	$125,580	$167,491	
FULTON ST	53	539	22	11858	1318	146.4	$36,013	1078	$98,098	$134,111	
HALL PL	59	147	26	3822	425	47.2	$11,608	294	$26,754	$38,362	
HIGH ST	63	3257	26	84682	9409	1045.5	$257,182	6514	$592,774	$849,956	
HOPKE AVE	67	491	26	12766	1418	157.6	$38,771	982	$89,362	$128,133	
HUDSON ST (EAST)	69	325	30	9750	1083	120.4	$29,611	650	$59,150	$88,761	
JAMES ST	71	2060	22	45320	5036	559.5	$137,639	4120	$374,920	$512,559	
KENT AVE	74	1524	24	36576	4064	451.6	$111,083	3048	$277,368	$388,451	
LEFURGY AVE	75	1721	26	44746	4972	552.4	$135,895	3442	$313,222	$449,117	
MARBLE TER	82	244	20	4880	542	60.2	$14,821	488	$44,408	$59,229	
MARION AVE	84	264	26	6864	763	84.7	$20,846	528	$48,048	$68,894	
OAKDALE DR	94	612	19	11628	1292	143.6	$35,315	1224	$111,384	$146,699	
OLINDA AVE	95	510	30	15300	1700	188.9	$46,467	1020	$92,820	$139,287	
OVERLOOK RD	96	2245	20	44900	4989	554.3	$136,363	4490	$408,590	$544,953	
PEARL ST	99	234	24	5616	624	69.3	$17,056	468	$42,588	$59,644	
PINE ST	100	230	24	5520	613	68.1	$16,764	460	$41,860	$58,624	
RAVENSDALE RD	106	2776	28	77728	8636	959.6	$236,063	5552	$505,232	$741,295	
RIDGE ST	108	542	24	13008	1445	160.6	$39,506	1084	$98,644	$138,150	
RIDGEDELL AVE	109	193	20	3860	429	47.7	$11,723	386	$35,126	$46,849	
SOUTH DR	122	576	20	11520	1280	142.2	$34,987	1152	$104,832	$139,819	
STANLEY AVE (NORTH)	127	621	30	18630	2070	230.0	$56,580	1242	$113,022	$169,602	
TAFT ST	133	208	25	5200	578	64.2	$15,793	416	$37,856	$53,649	
TERRACE AVE	134	660	20	13200	1467	163.0	$40,089	1320	$120,120	$160,209	
TOMPKINS AVE	136	2204	30	66120	7347	816.3	$200,809	4408	$401,128	$601,937	
WARREN ST (EAST)	143	138	20	2760	307	34.1	$8,382	276	$25,116	$33,498	
WILLIAM ST	147	414	25	10350	1150	127.8	$31,433	828	$75,348	$106,781	
YALE RD	150	255	30	7650	850	94.4	$23,233	510	$46,410	$69,643	
VILLAGE HALL	152	(Village parking lot)		13860	1540	171.1	$42,093	250	$22,750	$64,843	
DRAPER PARK	160	(Village parking lot)		4050	450	50.0	$12,300	0	$0	$12,300	
UNIONTOWN	161	(Village parking lot)		16155	1795	199.4	$49,063	0	$0	$49,063	
CROTON AVE	28	594	27	16038	1782	198.0	$48,708	1188	$108,108	$156,816	
JORDAN RD	73	1624	30	48720	5413	601.5	$147,964	3248	$295,568	$443,532	
MINTURN ST	86	832	25	20800	2311	256.8	$63,170	1664	$151,424	$214,594	
PINECREST PKY	102	1440	30	43200	4800	533.3	$131,200	2880	$262,080	$393,280	
S CALUMET AVE	116	610	30	18300	2033	225.9	$55,578	1220	$111,020	$166,598	
SUNSET ST	132	217	22	4774	530	58.9	$14,499	434	$39,494	$53,993	

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TRAVIS PL	137	305	25	7625	847	94.1	$23,157	610	$55,510	$78,667	
VALLEY PL	138	429	26	11154	1239	137.7	$33,875	858	$78,078	$111,953	
COLUMBIA AVE	25	427	27	11529	1281	142.3	$35,014	854	$77,714	$112,728	
NEPERA PL	90	614	22	13508	1501	166.8	$41,024	1228	$111,748	$152,772	
WILSON ST	148	220	25	5500	611	67.9	$16,704	440	$40,040	$56,744	
CLUNIE AVE	23	550	22	12100	1344	149.4	$36,748	1100	$100,100	$136,848	
N END PL (EAST)	88	245	20	4900	544	60.5	$14,881	490	$44,590	$59,471	
NEPPERHAN AVE	91	580	23	13340	1482	164.7	$40,514	1160	$105,560	$146,074	