

2015

PAVEMENT CONDITION RATINGS



FOR THE NON-STATE
FEDERAL-AID ELIGIBLE
HIGHWAY SYSTEM
IN CHEMUNG COUNTY, NY



ELMIRA-CHEMUNG
TRANSPORTATION COUNCIL

2015

PAVEMENT CONDITION RATINGS

for the

Non-State Federal-Aid Highway System

in

Chemung County, NY

Prepared by
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Introduction

The core components of a Transportation Asset Management system (TAM) are its roads and bridges. This report details the results of the 2015 pavement assessment condition ratings for Non-State Federal Aid Eligible roads in Chemung County, NY. The report is a valuable component in the progression of Chemung County's Transportation Assessment Management system.

In the Fall of 2015 the Elmira-Chemung Transportation Council (ECTC) rated the Non-State Federal-Aid Eligible Highway System. The majority of Non-State Federal-Aid Eligible Road System consists of roads owned by the City of Elmira and Chemung County. There are seven other political jurisdictions with minor Federal Aid Eligible roads in the western portion of the county. Those seven are the Towns of Big Flats, Catlin, Elmira, Horseheads and Veteran, and the Villages of Elmira Heights and Horseheads. Road assessment techniques were developed with the cooperation of various New York State Metropolitan Planning Organizations (MPOs) and the New York State Department of Transportation (NYSDOT), and are used as the basis for the annual road condition assessment. Information contained within this report complements data collected by NYSDOT for the state Touring System. Together, these two documents comprise a complete report of the condition of the Federal-Aid Highway System in Chemung County, as well as aid the production of functional-class mapping of the entire Federal-Aid Highway System statewide.

This report will aid ECTC to understand the financial resources required to maintain the surveyed roads in the future and in development of its Transportation Improvement Program (TIP). A local municipal Pavement Management System (PMS) should minimally consist of a pavement condition survey and a needs estimating process. This information can assist municipalities in planning maintenance and capital needs.

Data Preparation & Methodology

The pavement condition assessment process, more commonly referred to as road scoring or scoring, was performed using an internally developed system of data sources and software. This system uses ESRI's ArcGIS BASIC geographic information system (GIS) mapping software (formerly known as ArcView), the State of Minnesota's Dept. of Natural Resources DNRGPS freeware software program, a Garmin consumer grade GPS unit, a mid-level laptop computer, the New York State Streets digital road centerline (RCL) file and a GPS camera.

NYSDOT provides all MPOs in the state, such as ECTC, with the ArcGIS software. NYSDOT also provides the Streets RCL GIS file used for the base map and data repository for all related roadway data. The Minnesota Dept. of Natural Resources provides their DNRGPS program freely available via the internet, and is used for real-time GPS tracking to monitor the current location on the Streets rcl. When field scoring, the current location is an important aid in knowing the exact location to score the appropriate section of roadway. Roadways being scored are displayed with a line style different than other roadways, a visual aid to know which roads are to be scored.

For 2015 an additional Ricoh GPS camera was added to the photo logging process. The GPS camera-enabled photos allow for an objective visual record of the roadway condition at known location, time and date. The additional camera allows for a greater field of vision captured as the cameras are mounted

side by side allowing more roadway related features to be captured in the shoulder areas of the roadway. The capture of geocoded photos continues to prove to be an excellent resource for roadway related infrastructure. The Chemung County Department of Public Works located and categorized all guiderail along the County road network using the photo log and 2014 aerial imagery.

Segmentation and Scoring Methodology:

While performing the field observations for pavement scoring in Chemung County the NYS Streets GIS RCL file has been used since the inception of the road assessment program. The segmentation in urban areas is intersection to intersection, which is the area the majority of federal aid eligible roadways scored are located. In rural areas segmentation is based on intersections, political boundaries, and physical features such as bridges. NYSDOT, through the Bureau of Highway Data Services has been working to update this road centerline to match the official Local Highway Inventory (LHI). This same RCL file is in progress to eventually be consistent with each county's 911 RCL file. It is the intention that this program will utilize this new file in road scoring for greater uniformity amongst other agencies.

The ECTC attends the NYSDOT Highway Data Services Bureau annual workshop, which includes refresher training for NYSDOT employees on the procedures of pavement assessment. In the Spring of 2015 the ECTC presented the methodology and equipment that is used in the Chemung County pavement assessment program.

NYSDOT methodology measures pavement condition from within the wheel path of the traffic being carried, "white line to white line", any cracking, faulting or other pavement failure beyond that area is not recognized to define the road condition. The ECTC follows this procedure for consistency with the NYSDOT scoring of the state system. The ECTC photo log is used for reference of areas outside the white lines, to the edge of pavement for bicycled travel suitability. It has been found that a large majority of roads of within Chemung County have the same pavement condition to the edge of the roads as within the area of vehicular wheel paths.

The procedure used to rate the roads is documented in the NYSDOT Network Level Pavement Condition Rating Manual. General Guidelines for Sufficiency Scoring are listed below:

1.	Scoring represents an average of conditions throughout the entire scoring section.
2.	Scoring is across all lanes of roadway where possible.
3.	A dominant distress is only noted when appropriate.
4.	If a section has sealed cracks, last year's score is used. Credit is given to patched areas only if 1 inch or more material has been applied.
5.	Patched spalls are still noted as spalling.
6.	Where grader or skin patching has been done, the unimproved portions are scored.
7.	If patching exists on all lanes, last year's score is used. Credit is given to patched areas only if 1 inch or more material has been applied.
8.	Bridge decks and utility cuts are ignored when rating.
9.	Widening drop-off cannot occur on curbed sections.
10.	Longitudinal cracking of 20% or more shall be considered "general "alligator cracking.

Source: NYSDOT Pavement Condition Rating Manual

The Pavement Conditions Rating Manual uses two rating scales, which together are used to classify highway sections into five general treatment categories. A segment of pavement is rated from 1 (very poor with severe distress features), to 10 (excellent). The actual score is determined by matching the observed condition of a pavement segment with photographs in the manual until the approximate condition of the pavement is found. The photographs show typical distress features with specific information to help determine the appropriate rating. The NYSDOT chart describing the surface rating scale with associated treatment category is shown below:

Condition	Scale	Frequency	Distress	Treatment	Cost
Excellent	9-10		None	None	No Cost
Good	8	Infrequent	Very Slight	Preventative Maintenance	Min. Cost
Good	7	Infrequent-Occasional	Slight	Preventative Maintenance	Min + Cost
Fair	6	Occasional-Frequent	Moderate	Corrective Measures	Mod. Cost
Poor	5	Frequent	Mod – Severe	Rehabilitation	High Cost
Poor	4	Frequent	Severe	Rehabilitation	High + Cost
Very Poor	1-3	Very Frequent	Very Severe	Reconstruction	Max. Cost

Scale points were selected by NYSDOT based on the general treatments required by the highway represented in each photograph. There are three photographic scales, one each for each type of pavement, rigid (Portland Cement Concrete), overlaid (asphalt overlaid on rigid), and flexible (full depth asphalt) pavement structures. The scored road surface is defined as the wearing course of the pavement structure. The road base is defined as the material supporting the surface, including the lower portion of the pavement and sub-pavement material. The road is also scored by observing distress symptoms at the road surface and comparing them to distress features in the manual. Distress symptoms are defined as cracks or other abnormalities observable at posted speeds, which will trigger a treatment category different than the treatment category based on the surface rating alone. A table of dominant distress definitions and their associated codes used is shown below.

Condition Rating Description

Score	General Condition	Condition Rating Description	
		Surface	Distress Features
10	Excellent	There are no visual deviations from a smooth surface. Pavement recently constructed, reconstructed, or overlaid within the last two years.	The riding quality is excellent with no indication of any subsurface shifting. Includes facilities constructed within the last two years.
9	Excellent	Pavement should have no cracks or patches. Flexible pavement recently resurfaced within the past year or two. Overlay pavements may show evidence of some hairline reflection cracking. Rigid pavement joints functioning properly.	Riding quality is excellent, with no indication of subsurface problems. Facilities reconstructed or rehabilitated within the last two years are included in this category.
8	Good	Pavement gives an excellent ride and exhibits infrequent signs of surface deterioration. Flexible pavements begin to show very slight evidence of raveling, cracking, and wheel track wear. Rigid pavements begin to show very slight evidence of surface deteriorating such as cracking, joint spalling, or scaling. Overlay pavements show evidence of very slight reflection cracking.	Pavement shows infrequent evidence of base or sub-base deteriorating. Flexible pavements show evidence of very slight longitudinal cracking in wheelpaths. Rigid pavements show evidence of very slight displacement and pumping. Overlay pavements show evidence of non-joint reflection cracking.
7	Good	Pavement gives a good ride but show infrequent to occasional signs of surface deterioration. Flexible pavements show very slight evidence of joint spalling, scaling, or minor, cracking. Overlay pavements show evidence of slight reflection cracking and multiple cracking at reflection cracks.	Roadway show infrequent to occasional signs of rupture and displacement caused by roadbed movement. Flexible pavements may show slight evidence of rutting and wheelpath cracking. Overlay pavements show evidence of non-joint reflection cracking. Rigid pavements show evidence of very slight displacement and pumping, faulting, and base-related cracking. Overlay pavements show slight evidence of longitudinal cracking.
6	Fair	Riding quality is noticeably inferior to new pavements, showing infrequent to occasional signs of distress. Surface defects of flexible pavements may include moderate rutting, cracking, and raveling; patch is apparent. Overlay pavements show evidence of slight moderate cracking and raveling along cracks.	Roadway shows infrequent to occasional signs of distress caused by roadbed movement or inadequate roadbed support. Flexible pavements show evidence of moderate rutting and moderate cracking. Rigid pavements show evidence of moderate pumping, faulting, and base related cracking. Overlay pavements show evidence of reflection cracking and surface distortion.
5	Poor	Riding quality is noticeably inferior to new pavements, but may be tolerable for high speed traffic. Surface defects of pavements are the same as under the 6 rating but are more severe.	Roadway show occasional signs of distress caused by roadbed movement. The types of distress are the same as under the 6 rating but are more severe for rigid and overlay pavements.

continued

Score	General Condition	Condition Rating Description	
		Surface	Distress Features
4	Poor	Pavements have deteriorated to a point where resurfacing is required. Drivability, even at slow speeds, is impaired. Surface defects on flexible pavement include severe rutting, cracking, raveling, and patching. Surface defects on rigid pavements include severe joint spalling, cracking, scaling and patching. Overlay pavements show evidence of severe surface delamination.	Roadway shows frequent to occasional signs of distress caused by roadbed movement/inadequate roadbed support. Flexible pavements show signs of severe rutting and alligator cracking Rigid pavements show evidence of severe corner and diagonal cracking caused by loss of foundation material under the slab. Severe pumping and faulting is also evident. Overlay pavements show evidence of severe reflection cracking and surface distortion (faulting).
3	Poor	Pavements have deteriorated to a point where resurfacing is required immediately. Flexible pavements show evidence of severe and frequent scaling, joint spalling, faulting, cracking and patching. Overlay pavements show evidence of severe and frequent surface delamination. Rigid pavements show signs of frequent and severe joint spalling, cracking and scaling.	Roadway shows frequent signs of severe rutting and alligator cracking and pavements displacement. Rigid pavements show evidence of severe faulting and cracking. Overlay pavements show evidence of frequent rupture and displacement resulting in motorist discomfort.
2	Very Poor	Pavement is in extremely deteriorated condition and may require complete reconstruction. Motorists experience discomfort and travel speeds will decrease.	Roadways are in extreme deteriorated condition and may require reconstruction. Flexible, rigid and overlay pavements show evidence of frequent rupture and displacement resulting in motorist discomfort.
1	Very Poor	Pavement is extremely deteriorated condition and in need of immediate action. These facilities are considered impassable at posted speeds.	Roadways are in extremely deteriorated condition and are in need of immediate correction. These facilities are considered impassable at posted speeds.

Report and Maps Online

The report and maps of the following areas: City of Elmira, Chemung County and Non-State Federal Aid Eligible Roadways can be found on the ECTC web site, <http://elmiramapo.org>. Colored lines define and describe the conditions of the non-State Federal Aid System. The pavement scores are color coded: red = poor; yellow = fair, green = good, dark gray = excellent. The line style shows the distress observation.

Overall Results

There were 141 miles of Non-State Federal-Aid Eligible roadways assessed and scored in Chemung County, NY in 2015. Of the 141 miles scored 85 miles belonged to Chemung County, 35 miles to the City of Elmira, and 21 miles belonged to the 7 other local municipalities. For the overall system, 14% of the roads were found to be in excellent condition, 56% in good condition, 26% in fair condition, and 4% in poor condition.

Chemung County Routes were found to have following pavement surface conditions; 10 miles or 12% excellent, 47 miles or 55% good, 27 miles or 31% fair, 1 mile or 2% poor.

City of Elmira streets were found to have the following surface conditions: 5 miles or 14% excellent, 21 miles or 59% good, 6 miles or 16% fair, 4 miles or 12% poor.

The seven other locally owned roads had the following pavement surface conditions: 5 miles or 25% excellent, 11 or 54% good, 4 miles or 19% fair, >1 mile or 2% poor.

NOTE: Mileages and percentages are rounded and were measured using ArcGIS on the NYS Streets RCL file. Refer to the NYSDOT Local Highways Inventory (LHI) for official mileages.

Non-State Federal Aid Eligible Roads - Overall Results

Table 1

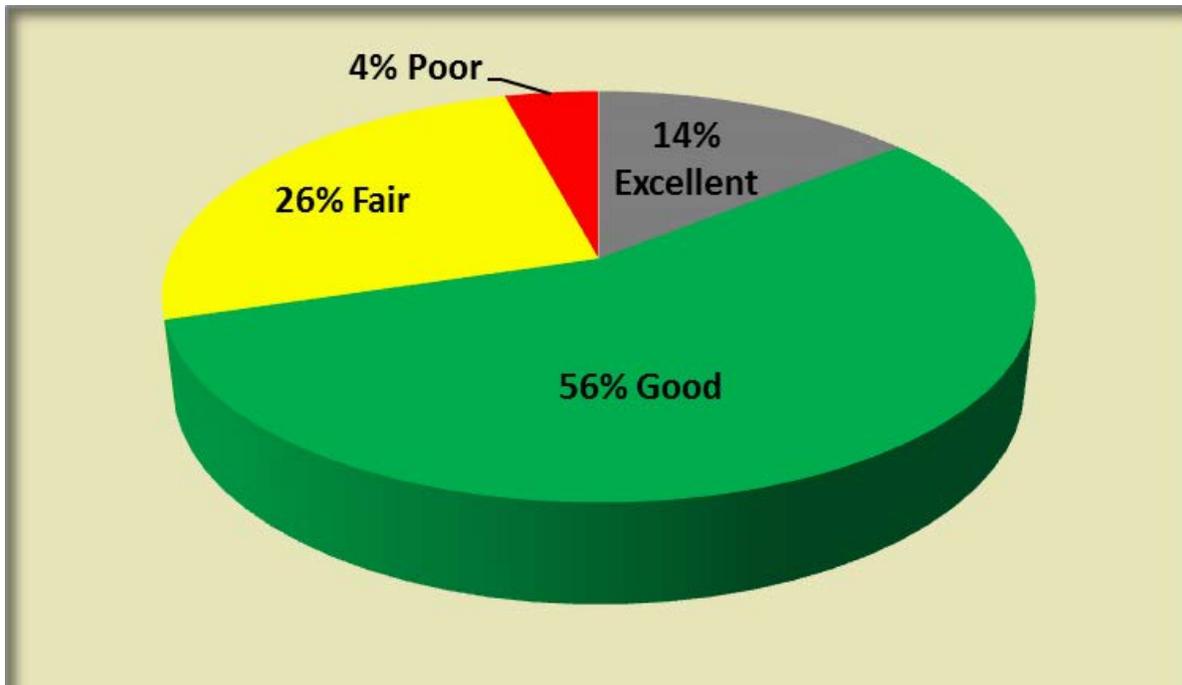
Summary of Miles by Condition 2015

All Non State Federal Aid Roads Scored		
	Miles	Percentage
Excellent 9 & 10	20	14%
Good 7 & 8	79	56%
Fair 6	36	26%
Poor 1 - 5	6	4%
Total Roads Scored	141	100%

NOTE: Mileages & percentages have been rounded to whole number.

Chart 1

2015 All Non-State Federal Aid Eligible Road Surface Conditions



Chemung County Pavement Assessment Scoring Results

Table 2

Summary of Miles by Condition 2015

Chemung County Federal Aid Eligible Roads		
	Miles	Percentage
Excellent 9 & 10	10	12%
Good 7 & 8	47	55%
Fair 6	27	31%
Poor 1 - 5	1	2%
Total Roads Scored	85	100%

NOTE: Mileages & percentages have been rounded to whole number

Chart 2

2015 Chemung County Federal Aid Eligible Road Surface Conditions



City of Elmira Pavement Assessment Scoring Results

Table 3

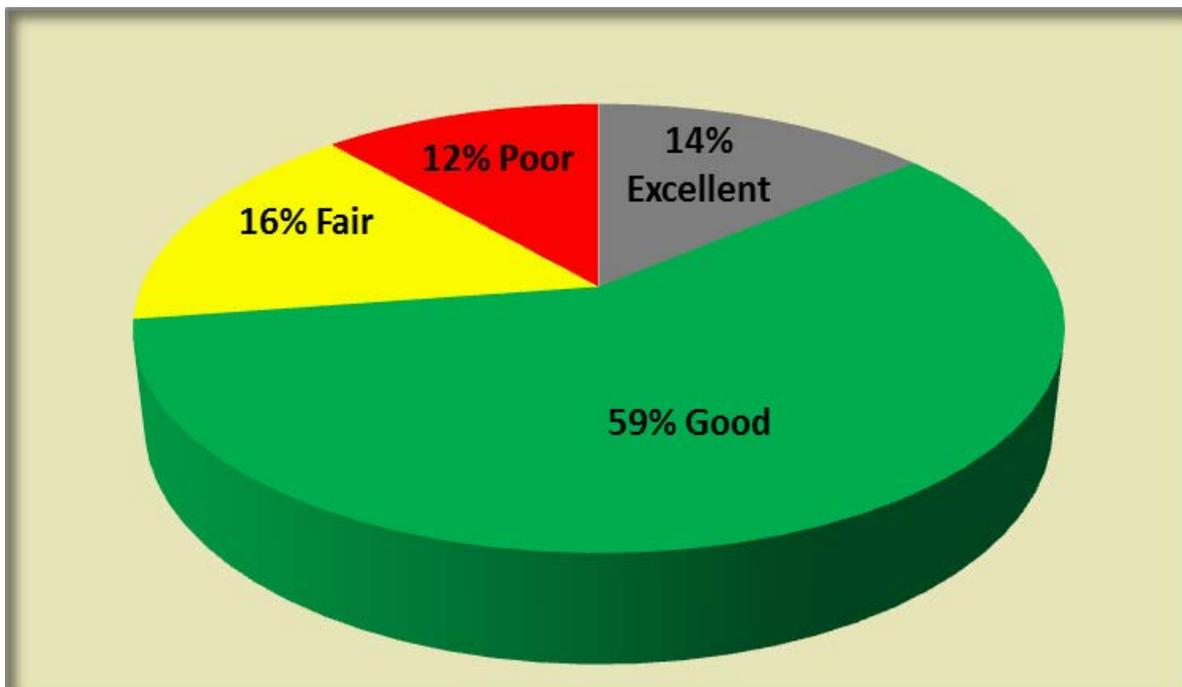
Summary of Miles by Condition 2015

City of Elmira Federal Aid Eligible Roads		
	Miles	Percentage
Excellent 9 & 10	5	14%
Good 7 & 8	20.5	59%
Fair 6	5.5	16%
Poor 1 - 5	4	12%
Total Roads Scored	35	100%

NOTE: Mileages have been rounded to the nearest half & percentages have been rounded to nearest half

Chart 3

2015 City of Elmira Road Surface Conditions



7 Other Local Owned Federal Aid Eligible Roadways

Table 4

All other Federal Aid Eligible Roads		
	Miles	Percentage
Excellent 9 & 10	5	25%
Good 7 & 8	11	54%
Fair 6	4	19%
Poor 1 - 5	1	2%
Total Roads Scored	21	100%

NOTE: Mileages & percentages have been rounded to whole number

Chart 4

2015 Local Federal Aid Eligible Road Surface Conditions

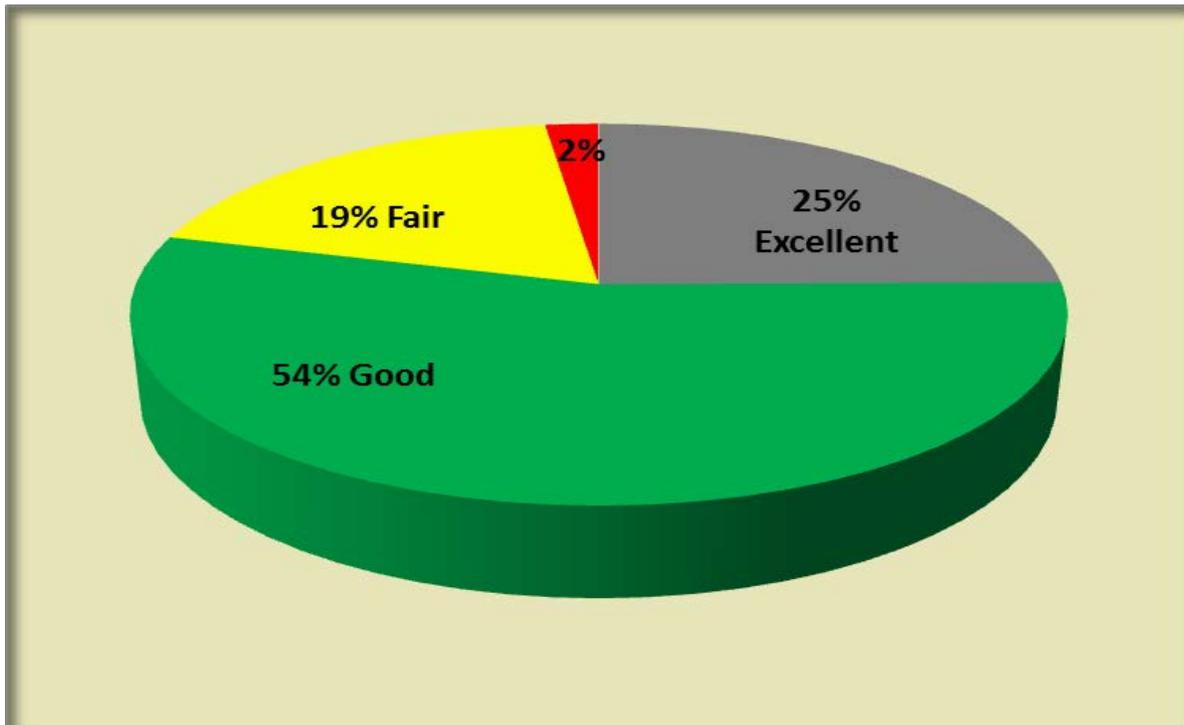


Table 5**Non-State Federal Aid Eligible Roads****2015 Mileage****Condition by NYS DOT Functional Classification**

<u>Functional Class</u>	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Excellent</u>	<u>Total</u>
07 Rural Major Collector	0	8	17	10	36
14 Principal Arterial	<1	3	2	1	6
16 Urban Minor Arterial	1	13	28	2	45
17 Urban Major Collector	4	12	32	7	55

NOTE: All mileages have been rounded

2015 Mileage Percentage

<u>Functional Class</u>	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Excellent</u>	<u>Total</u>
07 Rural Major Collector	0%	23%	49%	28%	100%
14 Urban Principal Arterial	6%	48%	36%	10%	100%
16 Urban Minor Arterial	3%	30%	62%	5%	100%
*17 Urban Major Collector	7%	22%	58%	13%	100%

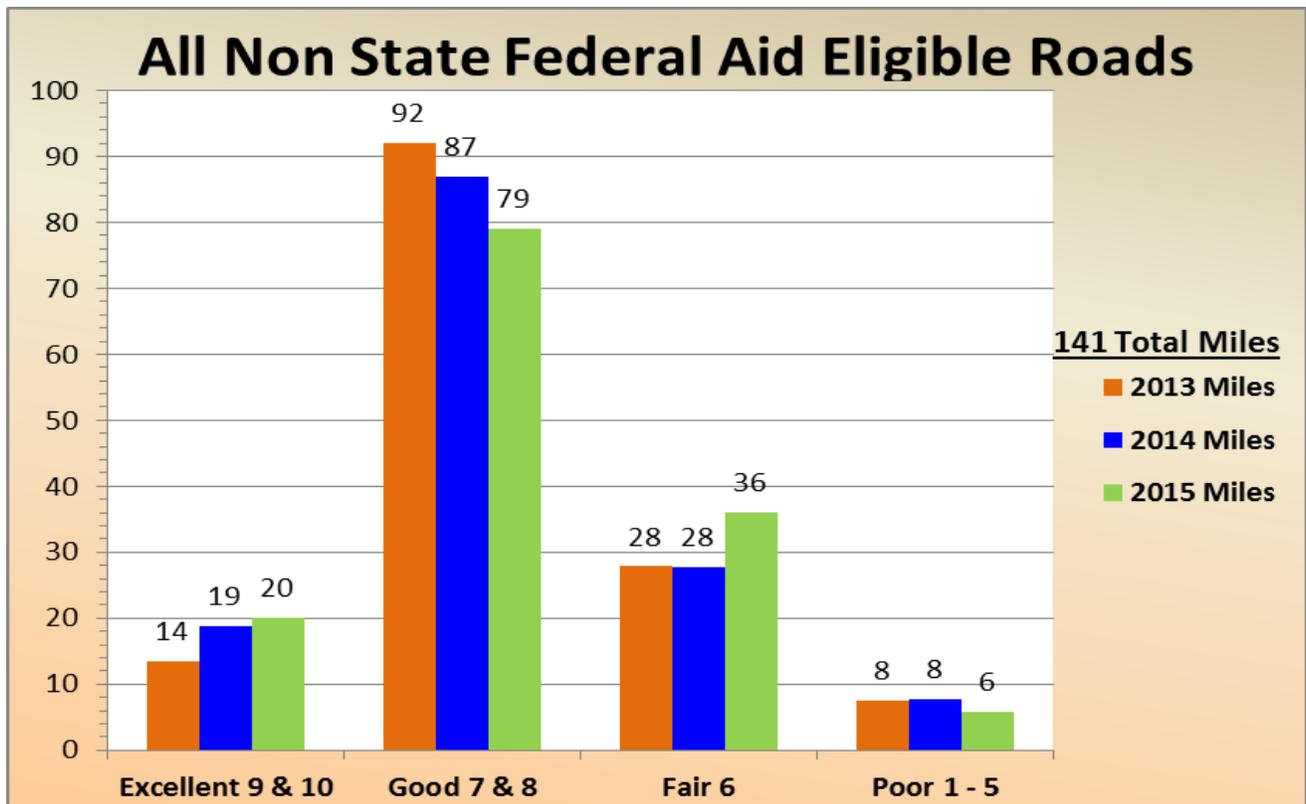
Note: All percentages have been rounded.

3 Year Analysis

The Elmira-Chemung Transportation Council assessed the pavement condition of the Non-State Federal-Aid Eligible Road System the past 3 consecutive years. The 3 years of pavement condition scores allow the opportunity to see how and where the pavement condition is improving and where further analysis of the conditions are needed.

Chart 5 provides a comparison all 141 miles of Non-State Federal-Aid Eligible Highways from 2013 through 2015. In 2013 there were 14 miles of roads which received an ‘Excellent’ rating. This number increased 4%, or 5 miles to 19 miles from 2013 to 2014 and an additional 1 mile from 2014 to 2015 to 20 total miles. The number of roads rated as ‘Good’ in 2013 was 92 miles. The number of good miles decreased in 2014 by 4% or 5 miles to 87 miles and decreased again in 2015 by 5% or 8 miles to 79 miles. The number of roads rated as ‘Fair’ was 28 miles in 2013 and stayed at the level through 2014 and increased 6%, up 8 miles from 2014 to 2015. The number of roads rated ‘Poor’ was 8 miles in 2013 and 2014 and decreased 1% to 6 miles in 2015.

Chart 5



Note: Mileages have been rounded to whole number

In Chart 6 is a breakdown of the miles by rating for the County owned Federal Aid Eligible roads in Chemung County.

Chart 6

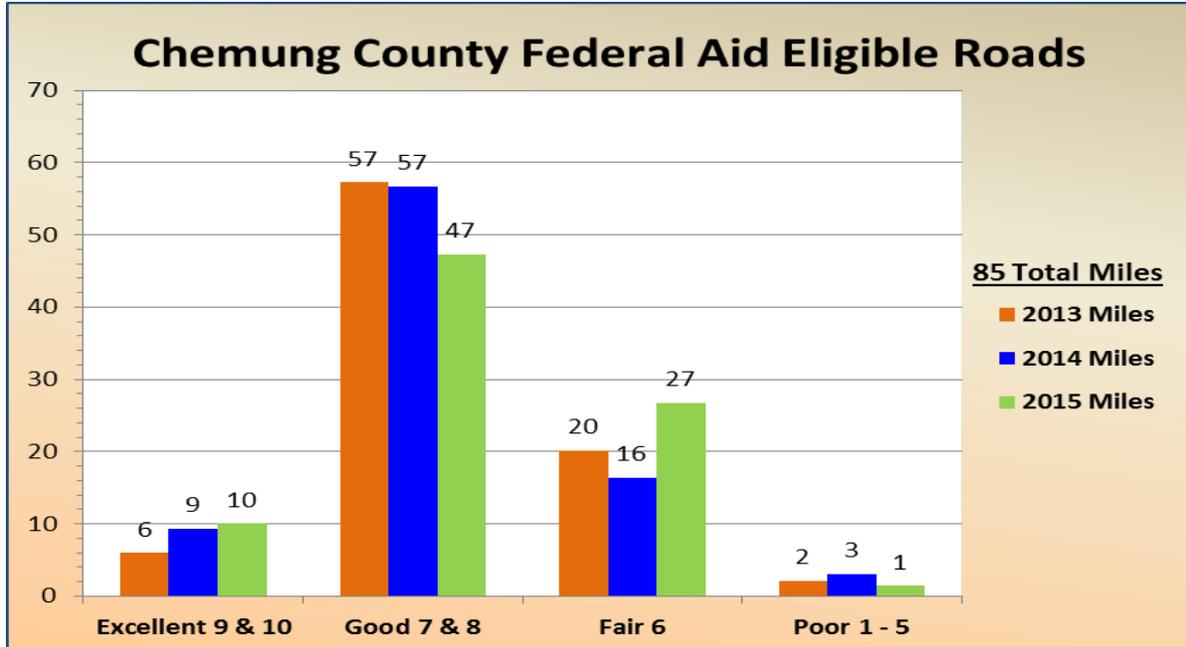
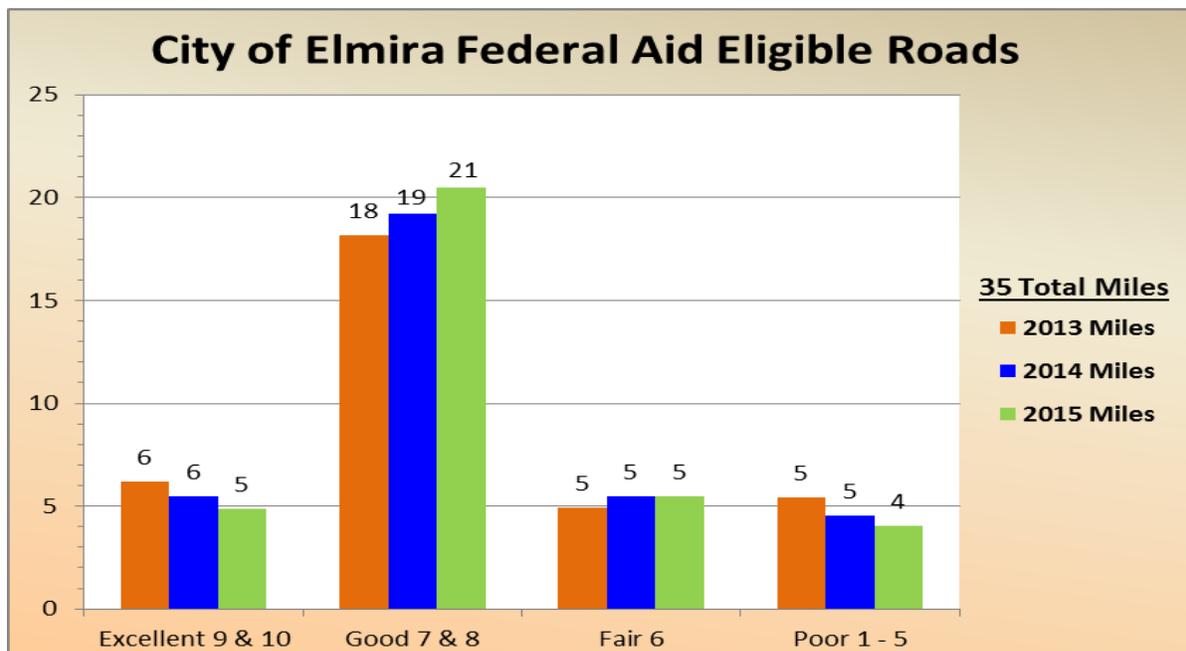


Chart 7 is a breakdown of the miles by rating for the City of Elmira owned Federal Aid Eligible roads.

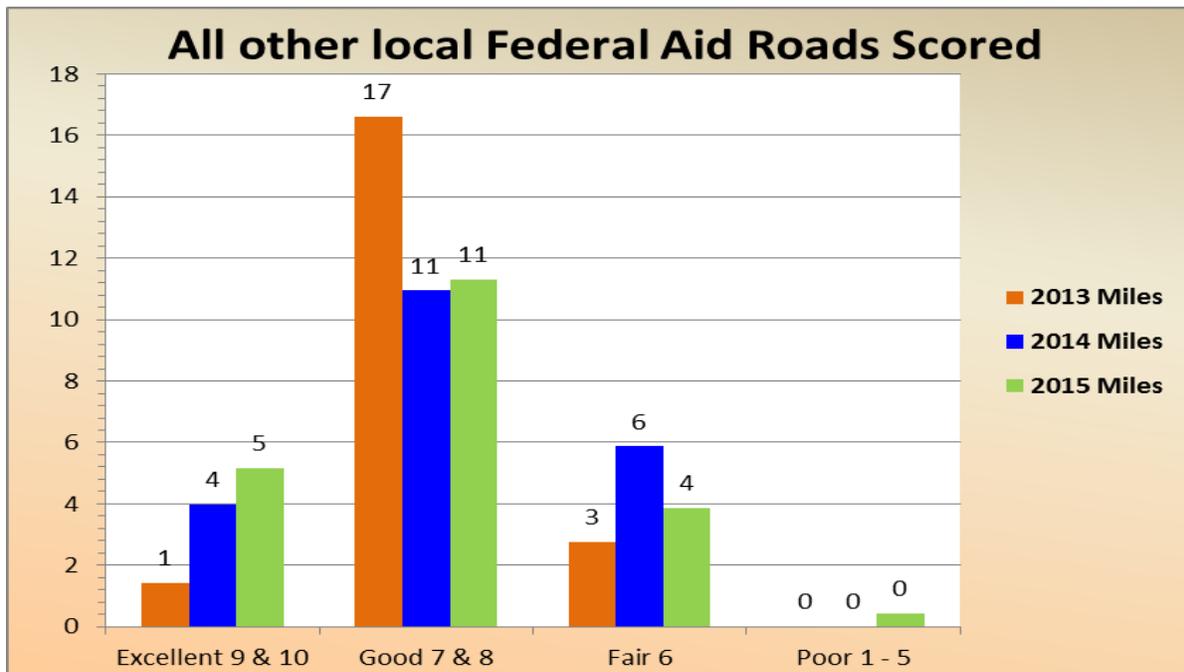
Chart 7



Note: Mileages have been rounded to whole number

Chart 8 is a breakdown of miles by rating for remaining 21 miles of locally owned Federal Aid Eligible roads in Chemung County.

Chart 8



Note: Mileages have been rounded to whole number, * 2015 Poor less than ½ mile



**2014 & 2015 NON-STATE
FEDERAL AID ELIGIBLE
ROAD CONDITIONS
IN THE CITY OF ELMIRA,
VILLAGES OF HORSEHEADS
AND ELMIRA HEIGHTS AND
THE TOWNS OF BIG FLATS,
ELMIRA AND HORSEHEADS**

Legend

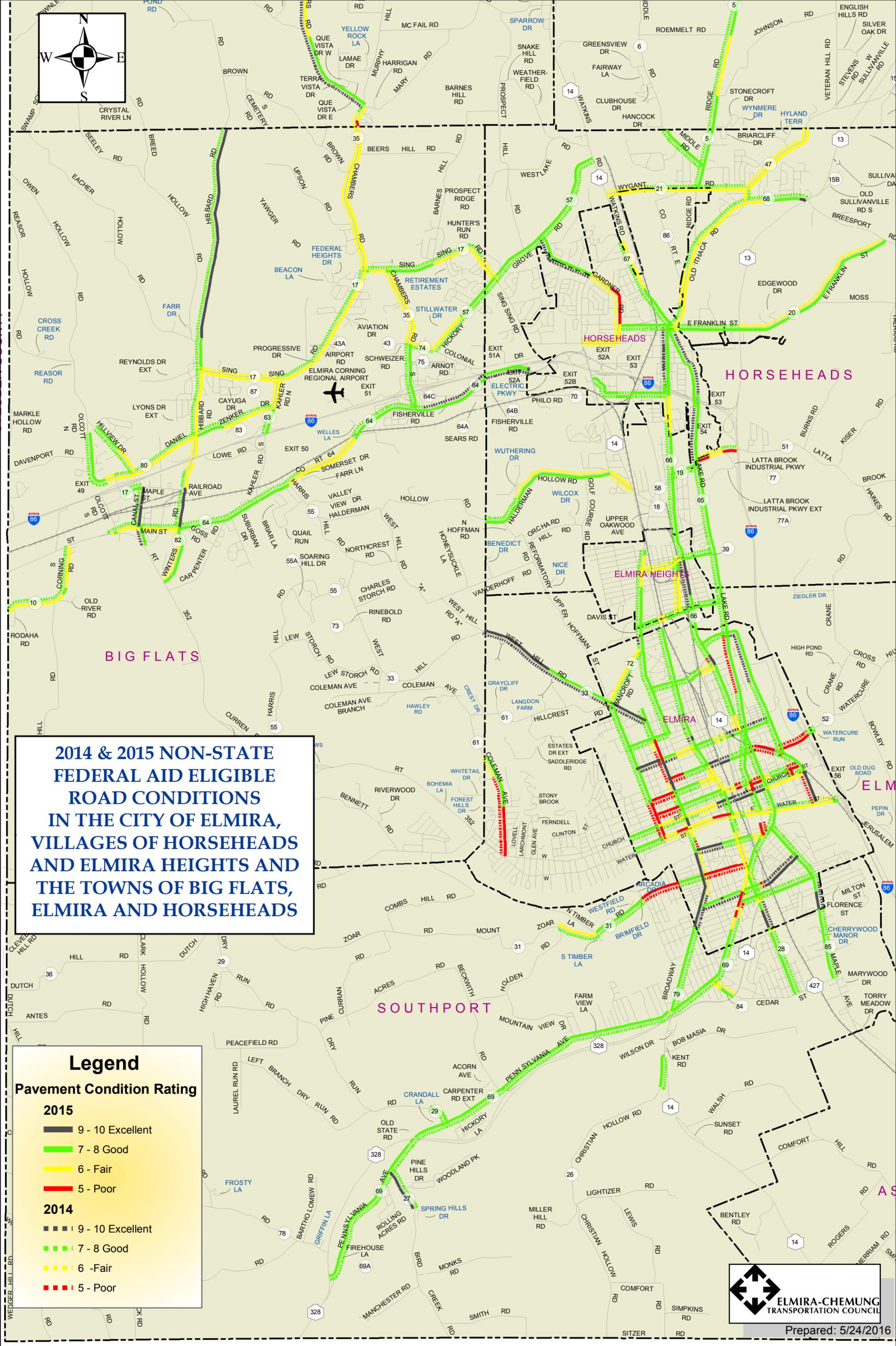
Pavement Condition Rating

2015

- 9 - 10 Excellent
- 7 - 8 Good
- 6 - Fair
- 5 - Poor

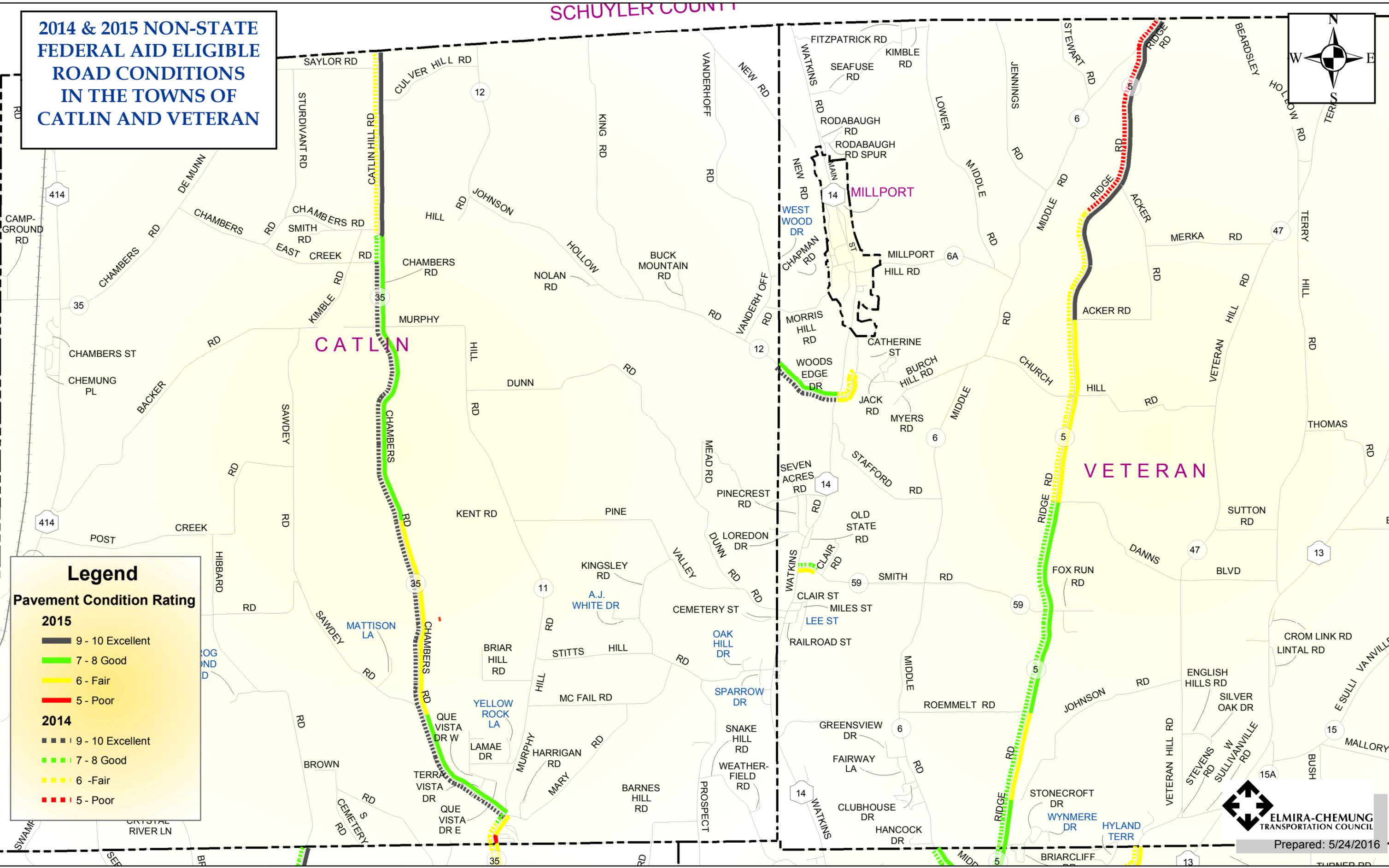
2014

- 9 - 10 Excellent
- 7 - 8 Good
- 6 - Fair
- 5 - Poor



Prepared: 5/24/2016

2014 & 2015 NON-STATE FEDERAL AID ELIGIBLE ROAD CONDITIONS IN THE TOWNS OF CATLIN AND VETERAN



Legend

Pavement Condition Rating

2015

- 9 - 10 Excellent
- 7 - 8 Good
- 6 - Fair
- 5 - Poor

2014

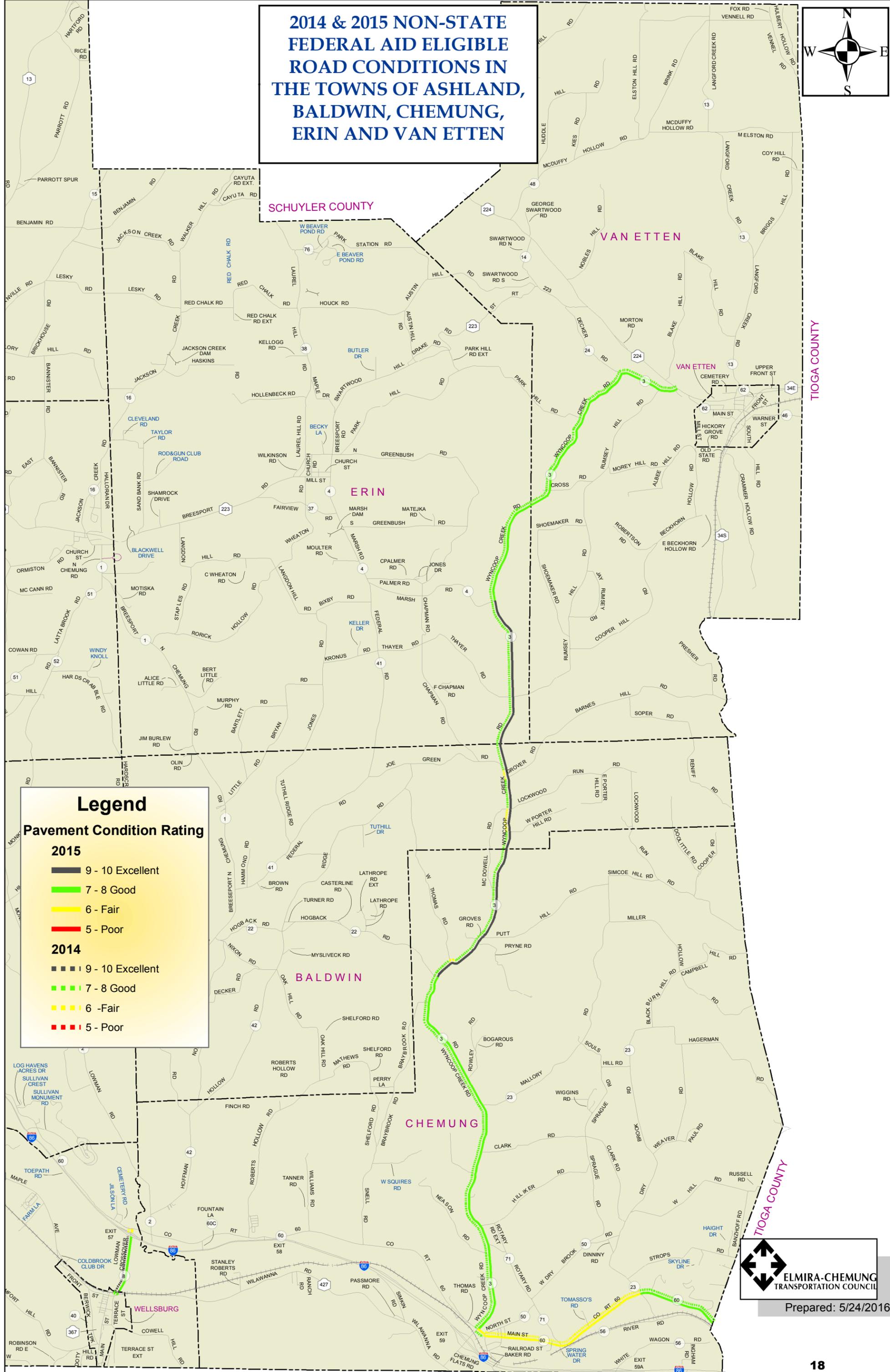
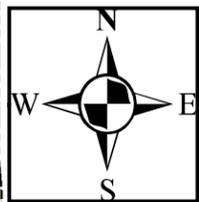
- 9 - 10 Excellent
- 7 - 8 Good
- 6 - Fair
- 5 - Poor



ELMIRA-CHEMUNG TRANSPORTATION COUNCIL

Prepared: 5/24/2016

2014 & 2015 NON-STATE FEDERAL AID ELIGIBLE ROAD CONDITIONS IN THE TOWNS OF ASHLAND, BALDWIN, CHEMUNG, ERIN AND VAN ETTEN



TIOGA COUNTY



Prepared: 5/24/2016

Addendum A

The roadways of the County of Chemung, City of Elmira, Villages of Elmira Heights and Horseheads and the Towns of Elmira and Horseheads in Chemung County, NY

Overall Results

515 miles of roadway were scored in Chemung County, NY in 2015. Of the 515 miles, 246 miles are County roads, 118 miles are City roads, 46 miles are Town of Elmira roads, 63 miles are Town of Horseheads roads, 20 miles are Village of Elmira Heights roads and 32 miles are Village of Horseheads roads.

The Chemung County pavement conditions were as follows: 43 miles or 18% excellent, 119 miles or 49% good, 58 or 24% fair and 25 miles or 10% poor.

The City of Elmira pavement conditions were as follows: 14 miles or 12% excellent, 38 miles or 32% good, 25 miles or 21% fair and 42 miles or 35% poor.

The Town of Elmira conditions were as follows: 2 miles or 4% excellent, 23 miles or 50% good, 13 or 29% fair, 4 miles or 10% poor,

The Town of Horseheads conditions were as follows: 12 miles or 19% excellent, 34 miles or 55% good, 13 or 21% fair and 3 miles or 6% poor.

The Village of Elmira Heights conditions were as follows: 1 mile or 6% excellent, 6 miles or 31% good, 101 or 53% fair and 2 miles or 11% poor.

The Village of Horseheads conditions were as follows: 2 miles or 8% excellent, 16 miles or 49% good, 11 or 33% fair and 3 miles or 10% poor.

NOTE: Mileages and percentages are rounded and are what the ECTC has assessed, for official mileages refer to the NYSDOT Local Highway Inventory.

Chemung County Pavement Assessment Scoring Results

Table 1

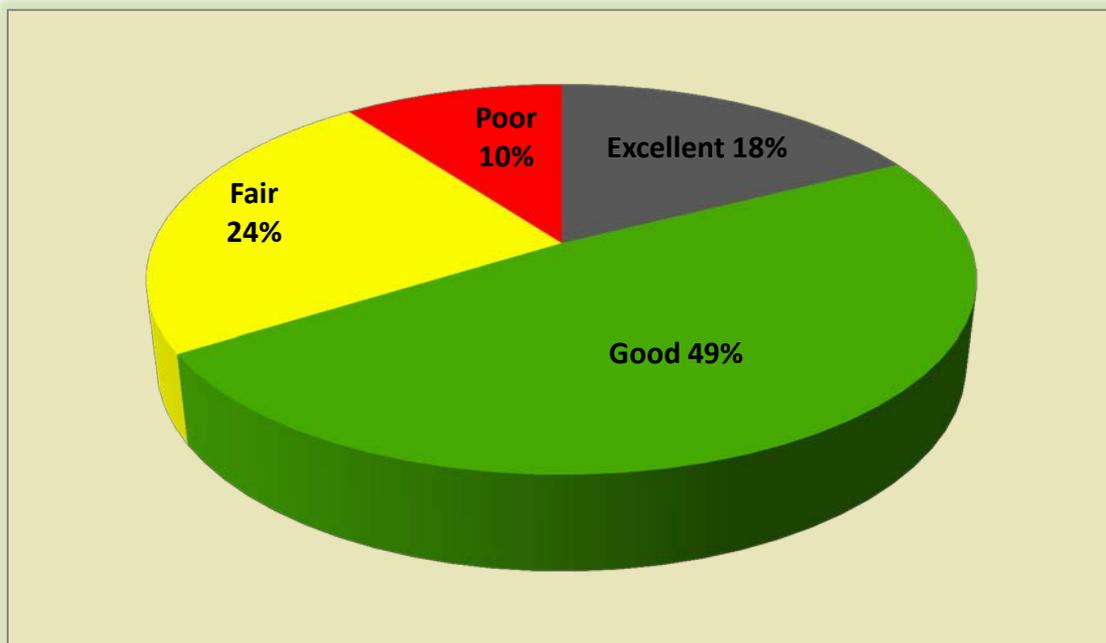
Summary of Miles by Condition 2015

Chemung County Roads		
	Miles	Percentage
Excellent 9 & 10	43	18%
Good 7 & 8	119	48%
Fair 6	58	24%
Poor 5 >	25	10%
Total Roads Scored	246	100%

NOTE: Mileages & percentages have been rounded to whole number.

Chart 1

2015 Chemung County Road Surface Conditions



City of Elmira Pavement Assessment Scoring Results

Table 2

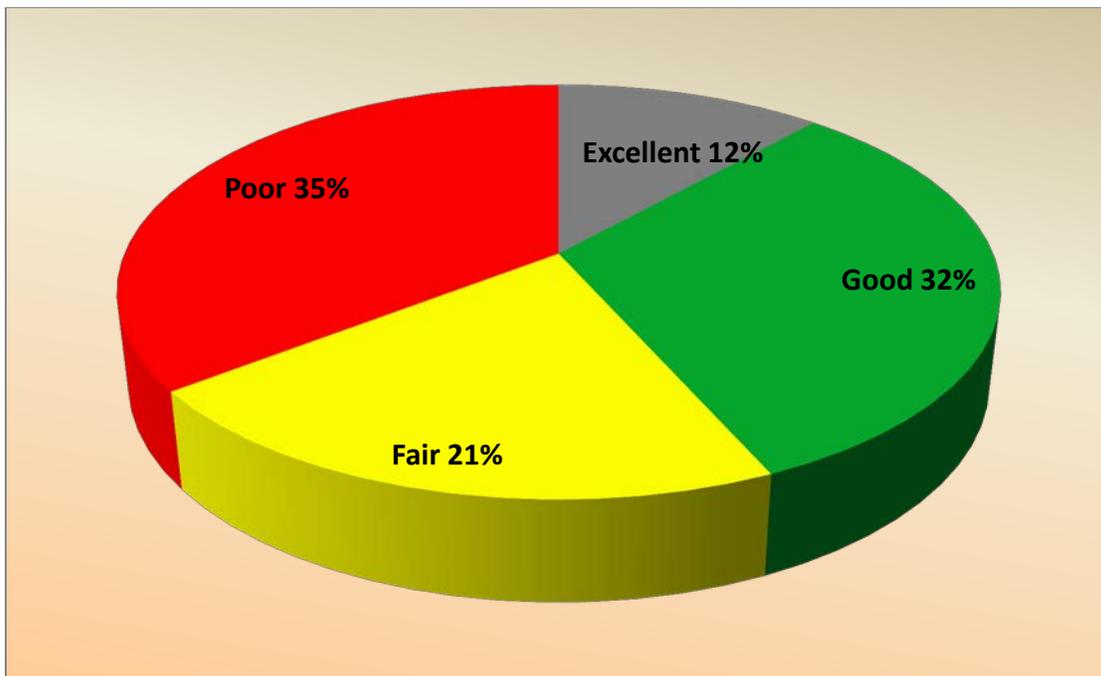
Summary of Miles by Condition 2015

City of Elmira Roads		
	Miles	Percentage
Excellent 9 & 10	14	12%
Good 7 & 8	38	32%
Fair 6	25	21%
Poor 5	42	35%
Total Roads Scored	118	100%

NOTE: Mileages & percentages have been rounded to whole number

Chart 2

2015 City of Elmira Road Surface Conditions



Town of Elmira Pavement Assessment Scoring Results

Table 3

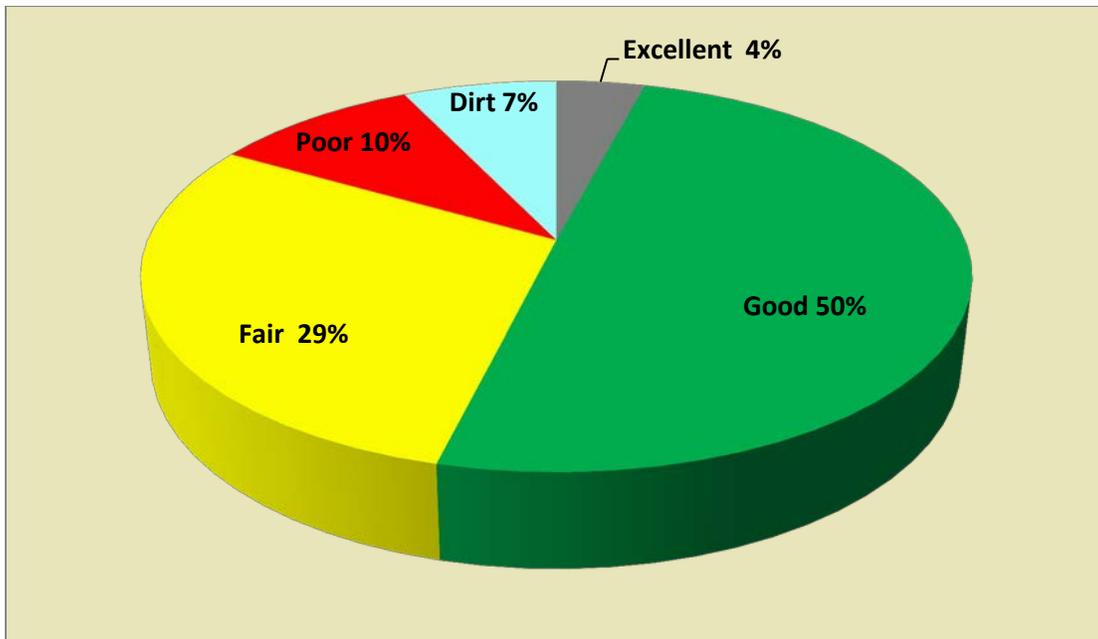
Summary of Miles by Condition 2015

Town of Elmira Roads		
	Miles	Percentage
Excellent 9 & 10	2	4%
Good 7 & 8	23	50%
Fair 6	13	29%
Poor 5 >	4	10%
*Dirt	3	7%
Total Roads Scored	46	10%

NOTE: Mileages & percentages have been rounded to whole number

Chart 3

2015 Town of Elmira Road Surface Conditions



Village of Elmira Heights Pavement Assessment Scoring Results

Table 4

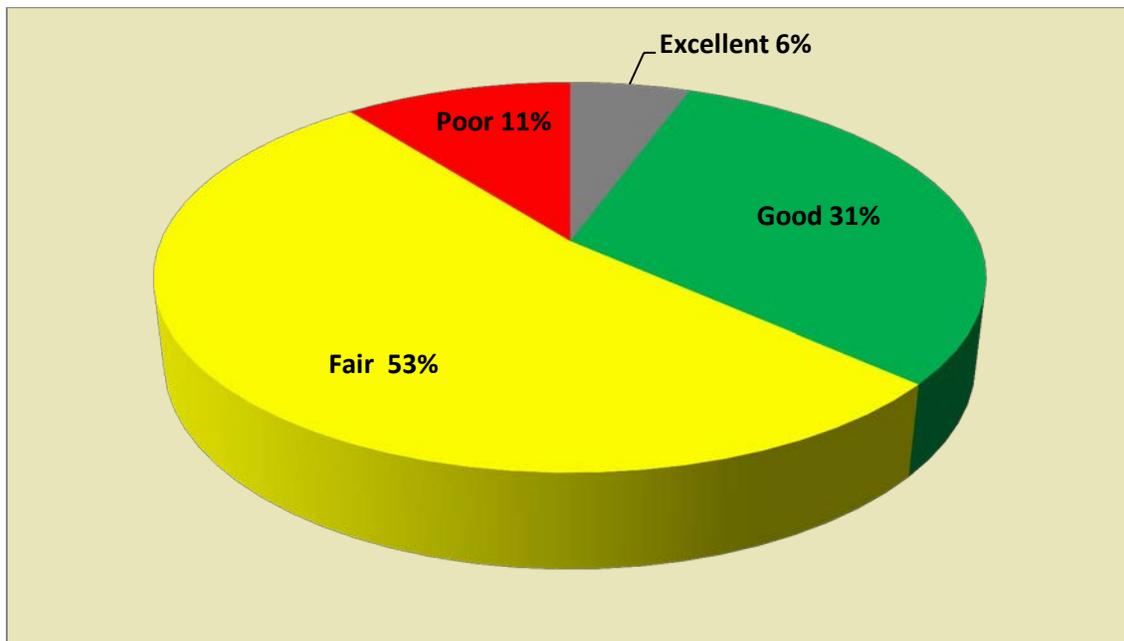
Summary of Miles by Condition 2015

Village of Elmira Heights Roads		
	Miles	Percentage
Excellent 9 & 10	1	6%
Good 7 & 8	6	31%
Fair 6	11	53%
Poor 5 >	2	11%
Total Roads Scored	20	100%

NOTE: Mileages & percentages have been rounded to whole number

Chart 4

2015 Village of Elmira Heights Road Surface Conditions



Town of Horseheads Pavement Assessment Scoring Results

Table 5

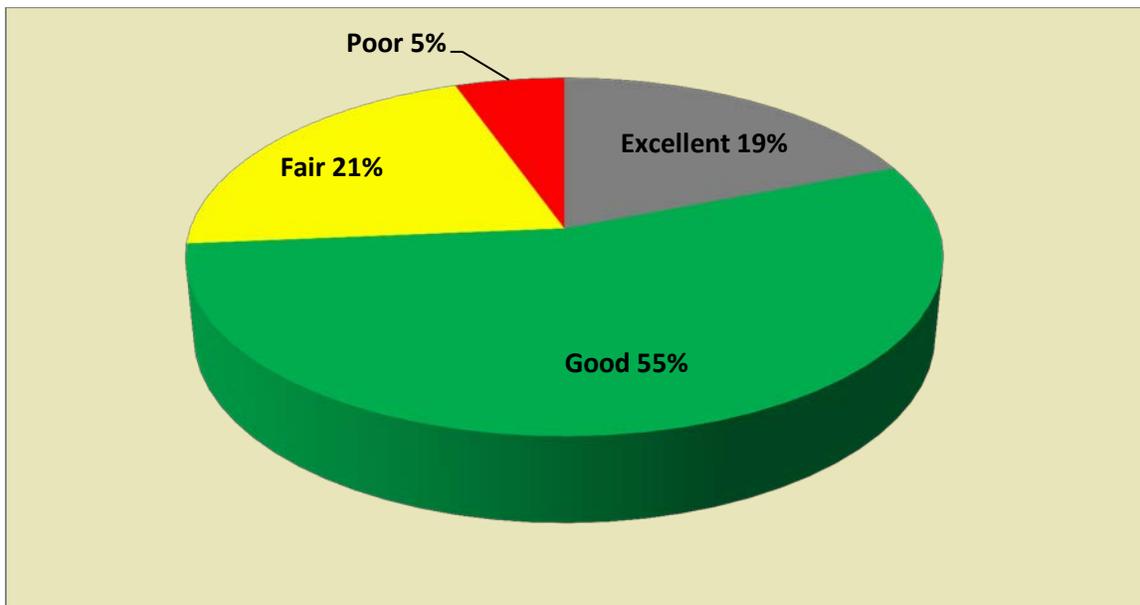
Summary of Miles by Condition 2015

Town of Horseheads Roads		
	Miles	Percentage
Excellent 9 & 10	12	19%
Good 7 & 8	34	55%
Fair 6	13	21%
Poor 5 >	3	10%
Total Roads Scored	63	100%

NOTE: Mileages & percentages have been rounded to whole number

Chart 5

2015 Town of Horseheads Road Surface Conditions



Village of Horseheads Pavement Assessment Scoring Results

Table 6

Summary of Miles by Condition 2015

Village of Horseheads Roads		
	Miles	Percentage
Excellent 9 & 10	2	8%
Good 7 & 8	16	49%
Fair 6	11	33%
Poor 5 >	2	10%
Total Roads Scored	32	100%

NOTE: Mileages & percentages have been rounded to whole number

Chart 6

2015 Village of Horseheads Road Surface Conditions



3 Year Analysis

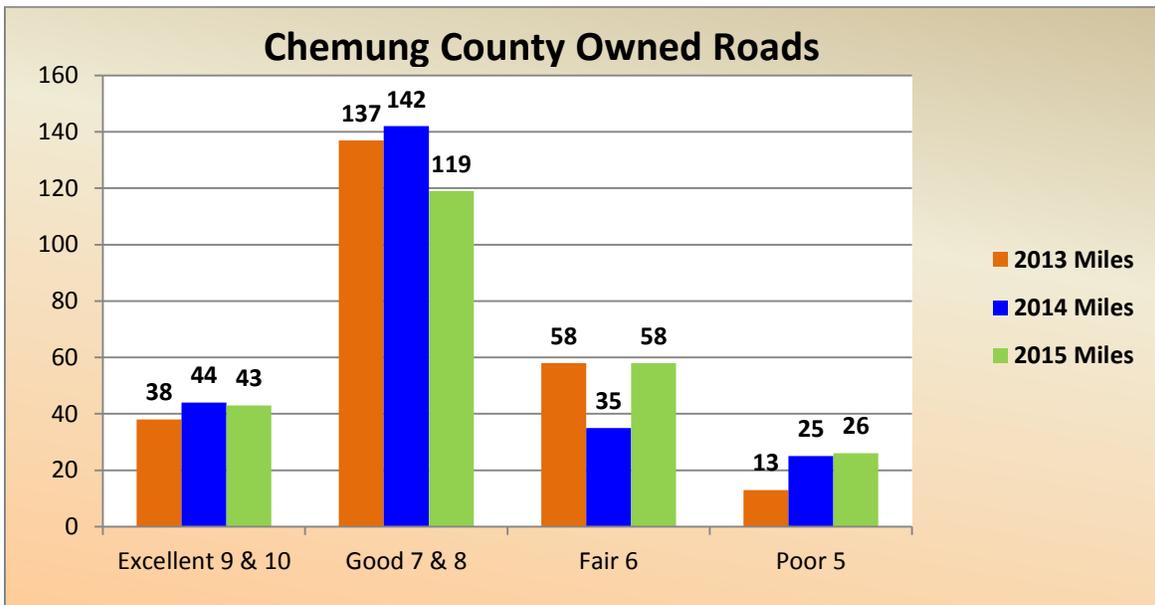
The Elmira-Chemung Transportation Council assesses the pavement condition of all County of Chemung and City of Elmira roadways when the Non-State Federal-Aid Eligible Roadways are assessed. Having 3 consistent years of pavement condition scores allows the opportunity to see how and where the pavement condition is improving and where further analysis of the conditions are needed.

Chart 7 provides a comparison all 246 miles of all Chemung County owned roads from 2013 through 2015. In 2013 there were 38 miles of roads which received an 'Excellent' rating. This number increased 3%, or 6 miles to 44 miles from 2013 to 2014. From 2014 to 2015 that rating dropped less than 1% from 44 miles to 43 miles, a 1 mile change. The number of roads rated as 'Good' in 2013 was 137 miles. The number increased in 2014 by 2% or 5 miles to 142 miles and decreased in 2015 by 9% or 23 miles to 119 total miles. The number of roads rated as 'Fair' was 58 miles in 2013 and decreased in 2014 by 10% to 35 miles. The amount miles rated as Fair rose again in 2015 by 10% to 58 miles. The number of roads rated 'Poor' was 13 miles in 2013 and increased by 12 miles in 2014 or 5% to 25 total miles and increased by 1 mile or less than 1% to 26 miles in 2015.

Chart 8 provides a comparison all 118 miles of City owned roads from 2013 through 2015. In 2013 there were 14 miles of roads which received an 'Excellent' rating. This number increased 4%, or 5 miles to 19 miles from 2013 to 2014 and an additional 1 mile from 2014 to 2015 to 20 total miles. The number of roads rated as 'Good' in 2013 was 92 miles. The number of good miles decreased in 2014 by 4% or 5 miles to 87 miles and decreased again in 2015 by 5% or 8 miles to 79 miles. The number of roads rated as 'Fair' was 28 miles in 2013 and stayed at the level through 2014 and increased 6%, up 8 miles from 2014 to 2015. The number of roads rated 'Poor' was 8 miles in 2013 and 2014 and decreased 1% to 6 miles in 2015.

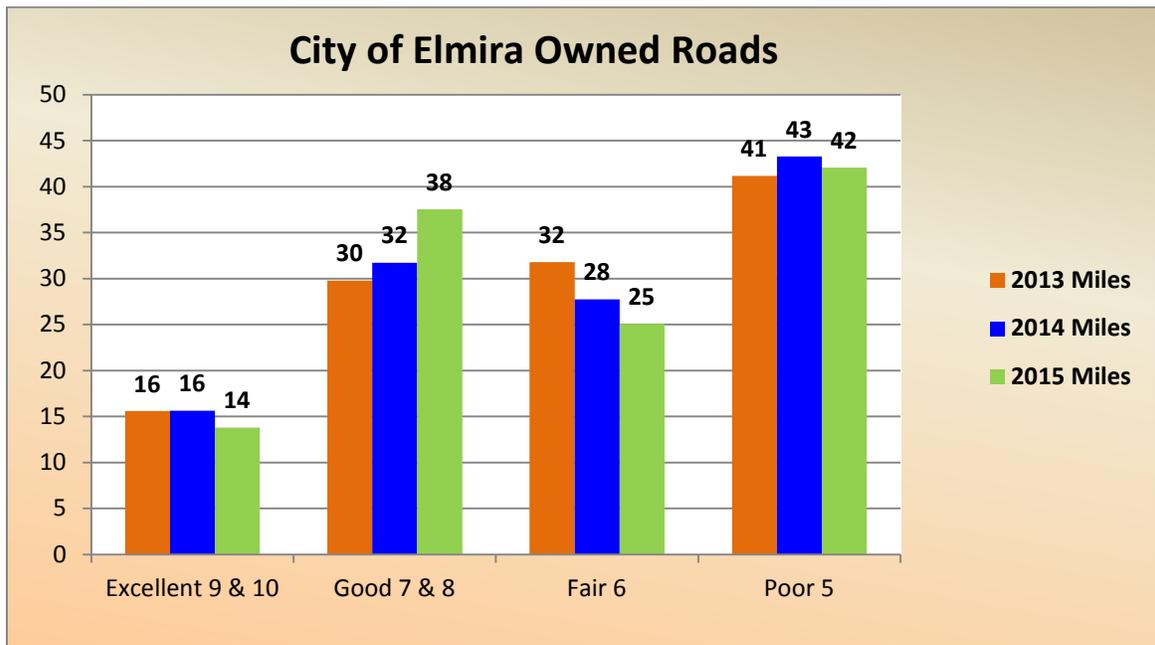
See next page for charts for Chemung County and City of Elmira 2013 – 2015 roadways comparisons

Chart 7



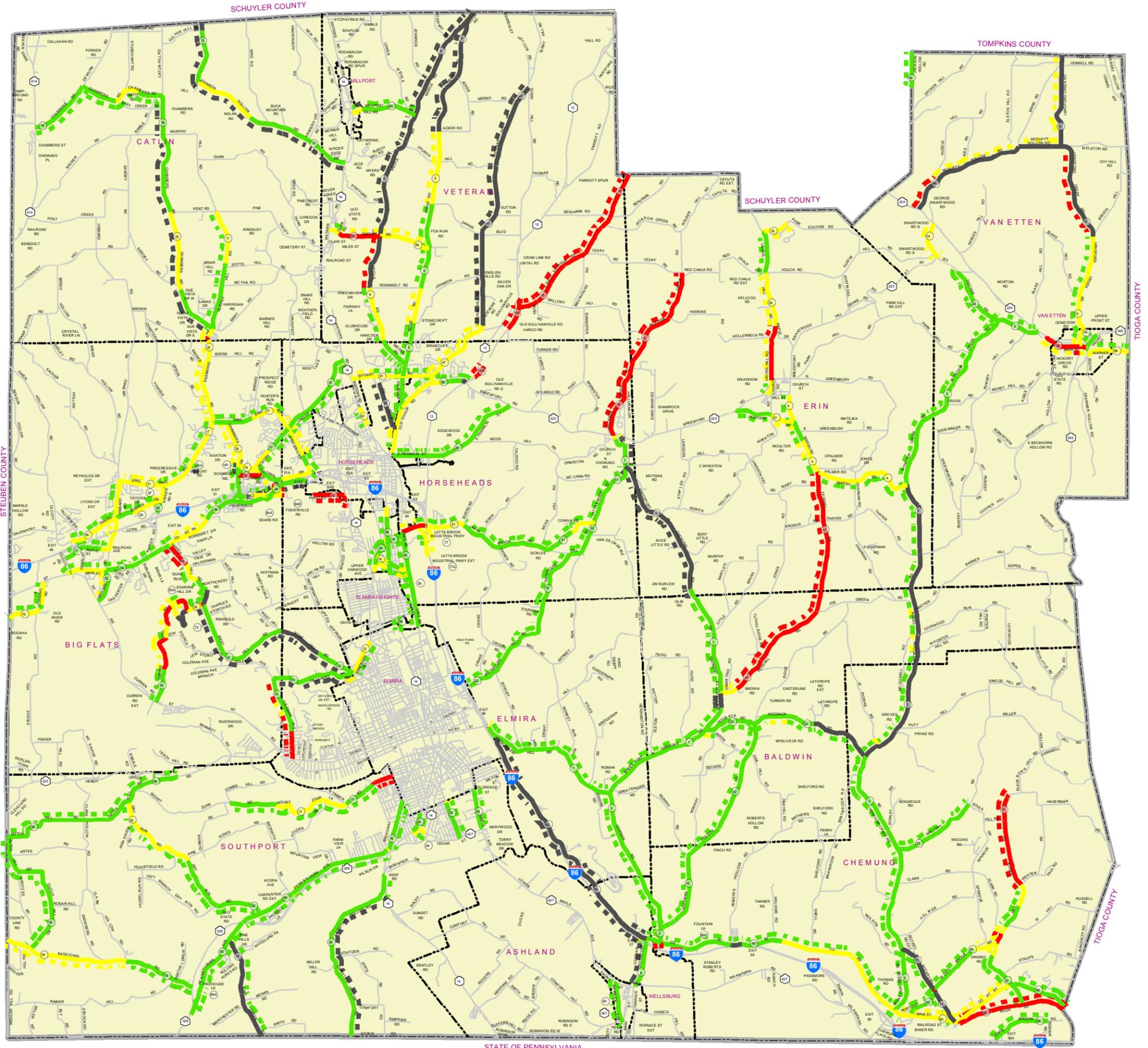
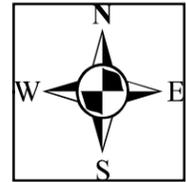
Note: Mileages have been rounded to whole number

Chart 8



Note: Mileages have been rounded to whole number

2014 & 2015 PAVEMENT CONDITIONS for CHEMUNG COUNTY



Legend

County Roads 2015

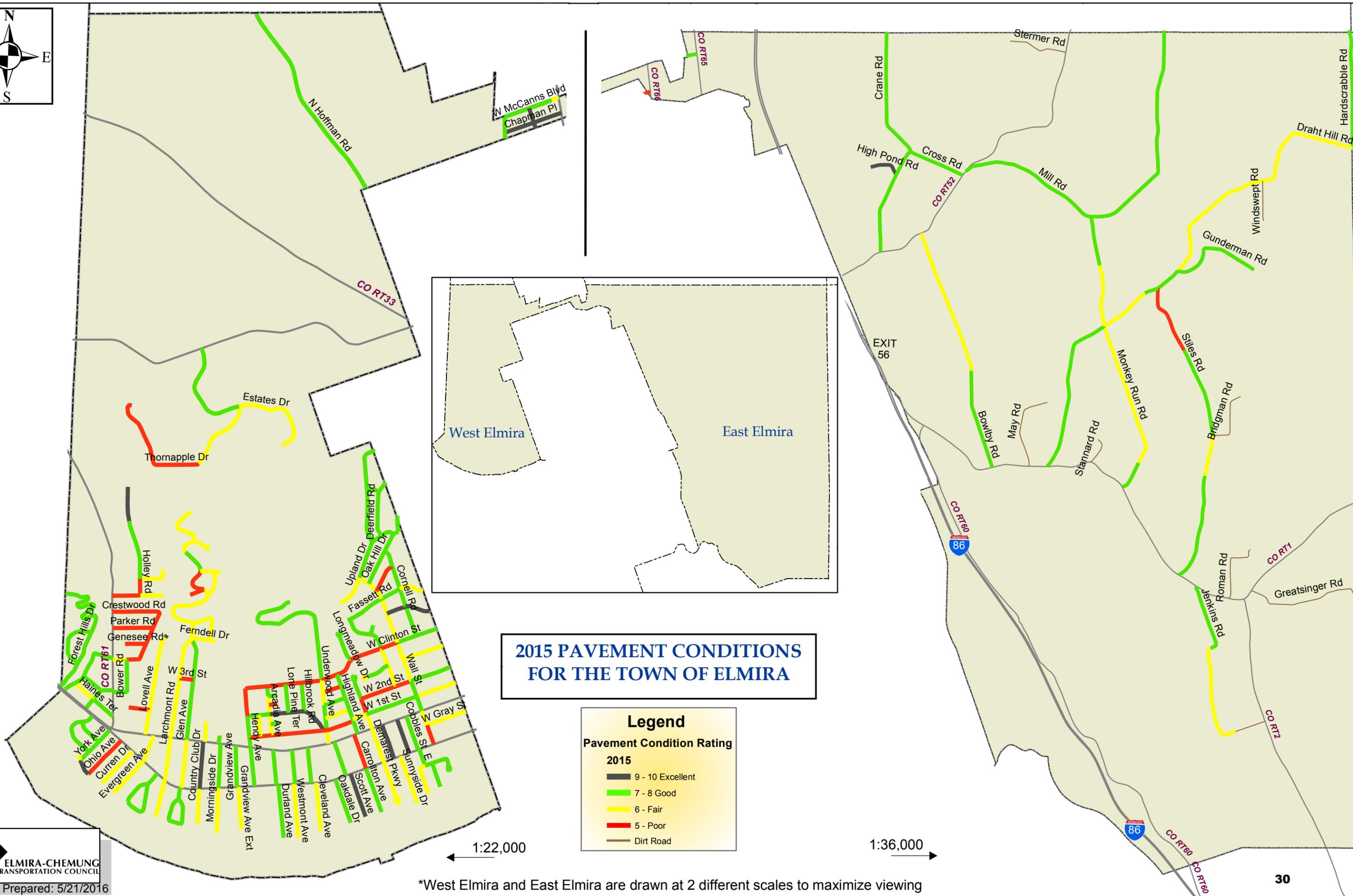
- 9 - 10 Excellent
- 7 - 8 Good
- 6 - Fair
- 5 > Poor

County Roads 2014

- - - 9 - 10 Excellent
- - - 7 - 8 Good
- - - 6 - Fair
- - - 5 > Poor



Prepared: 5/23/2016



2015 PAVEMENT CONDITIONS FOR THE TOWN OF ELMIRA

Legend

Pavement Condition Rating

2015

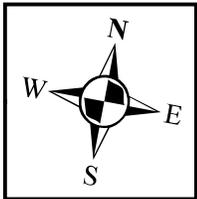
- 9 - 10 Excellent
- 7 - 8 Good
- 6 - Fair
- 5 - Poor
- Dirt Road

1:22,000

1:36,000

*West Elmira and East Elmira are drawn at 2 different scales to maximize viewing

2015 PAVEMENT CONDITIONS FOR THE VILLAGE OF ELMIRA HEIGHTS



Legend

Pavement Condition Rating

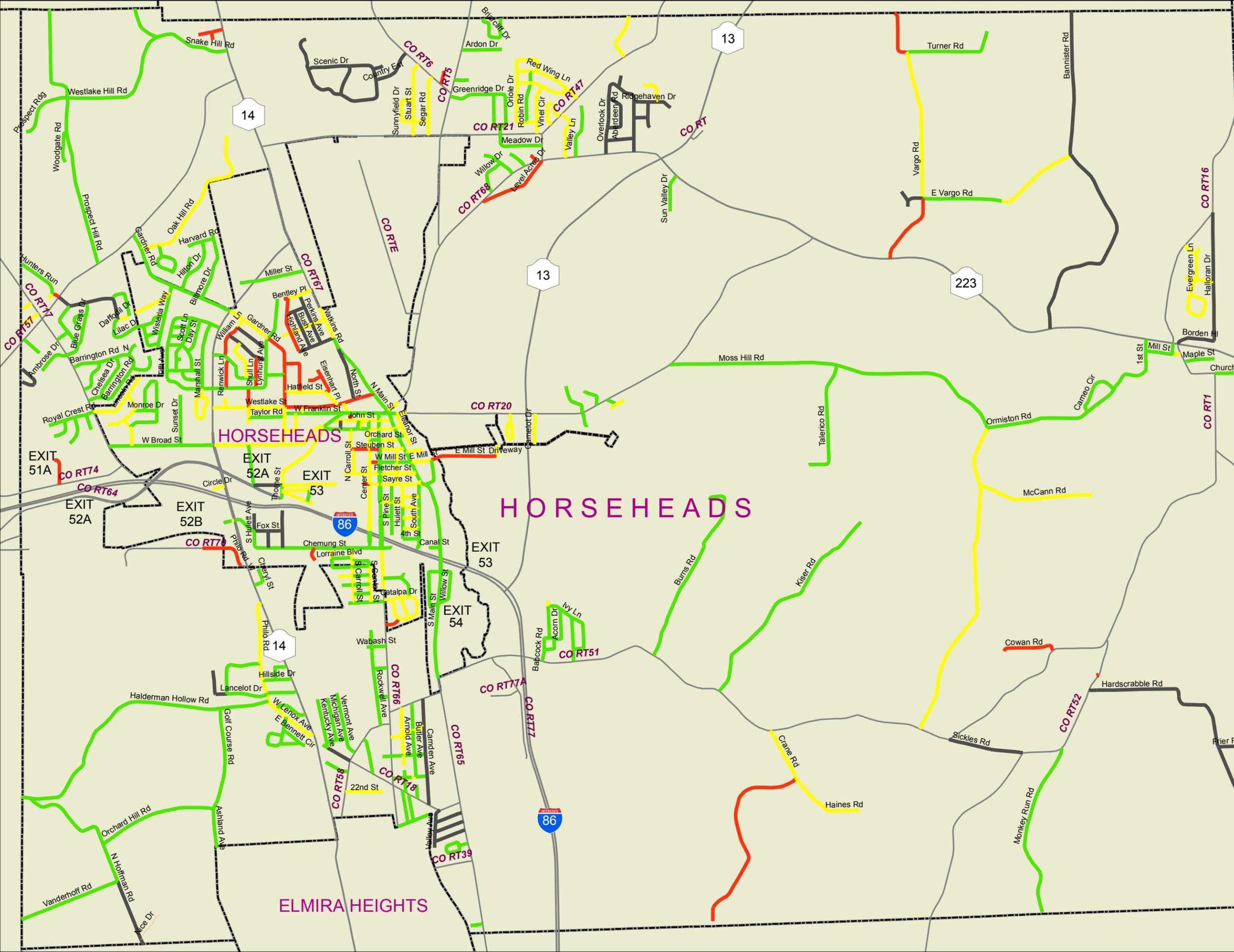
2015

- 9 - 10 Excellent
- 7 - 8 Good
- 6 Fair
- 4 - 5 Poor





2015 PAVEMENT CONDITIONS FOR THE TOWN AND VILLAGE OF HORSEHEADS



Legend

Pavement Condition Rating

2015

- 9 - 10 Excellent
- 7 - 8 Good
- 6 - Fair
- 5 - Poor

