



Street Rehabilitation 2022

Transportation Mapping Focus Areas

8th Ave NE/SE Corridor

The 8th Ave. NE/SE corridor connects major community facilities, including the city swimming pool and Wings Park, Wings Park Elementary, Mercy Hospital, Oelwein High School and the Little Husky Learning Center, Grandview Health Care Center, and Platt Park. It is a minor arterial road. Public meeting participants identified the corridor as a key pedestrian route, and the Charles St. E/8th Ave NE intersection as a key intersection. The following were identified issues/needs for this corridor:

- Sidewalk gaps at the south end of 8th Ave. SE (and going east along 7th St SE), and at the north end of 8th Ave NE (from Wings park Elementary heading north), need to be filled to support connectivity.
- The 8th Ave/2nd St SE, 8th Ave/Charles St E, and 8th Ave/1st St NE intersections all have congestion and pedestrian safety/movement concerns.
- Pedestrian safety concerns were identified on 8th Ave NE at Wings Park Elementary.
- Bicycle routes were recommended from the 8th Ave/1st St SE intersection, north to 6th St NE.
- Pavement condition on 8th Ave between 2nd St SE and 3rd St SE, and between 5th St SE and 7th St SE, *is rated poor*.

12th Ave SE Corridor

The 12th Ave SE corridor connects the community to the Oelwein Middle School and Reidy park. The following were identified issues/needs for this corridor:

- Maintenance concerns were identified along this road segment, and pavement condition *is rated poor*.
- Walking infrastructure was identified as a need along the entire corridor, and pedestrian safety was a concern at the south end near the middle school. Walking infrastructure was also identified as a need on Hillside Dr. E (immediately west of 12th Ave SE)

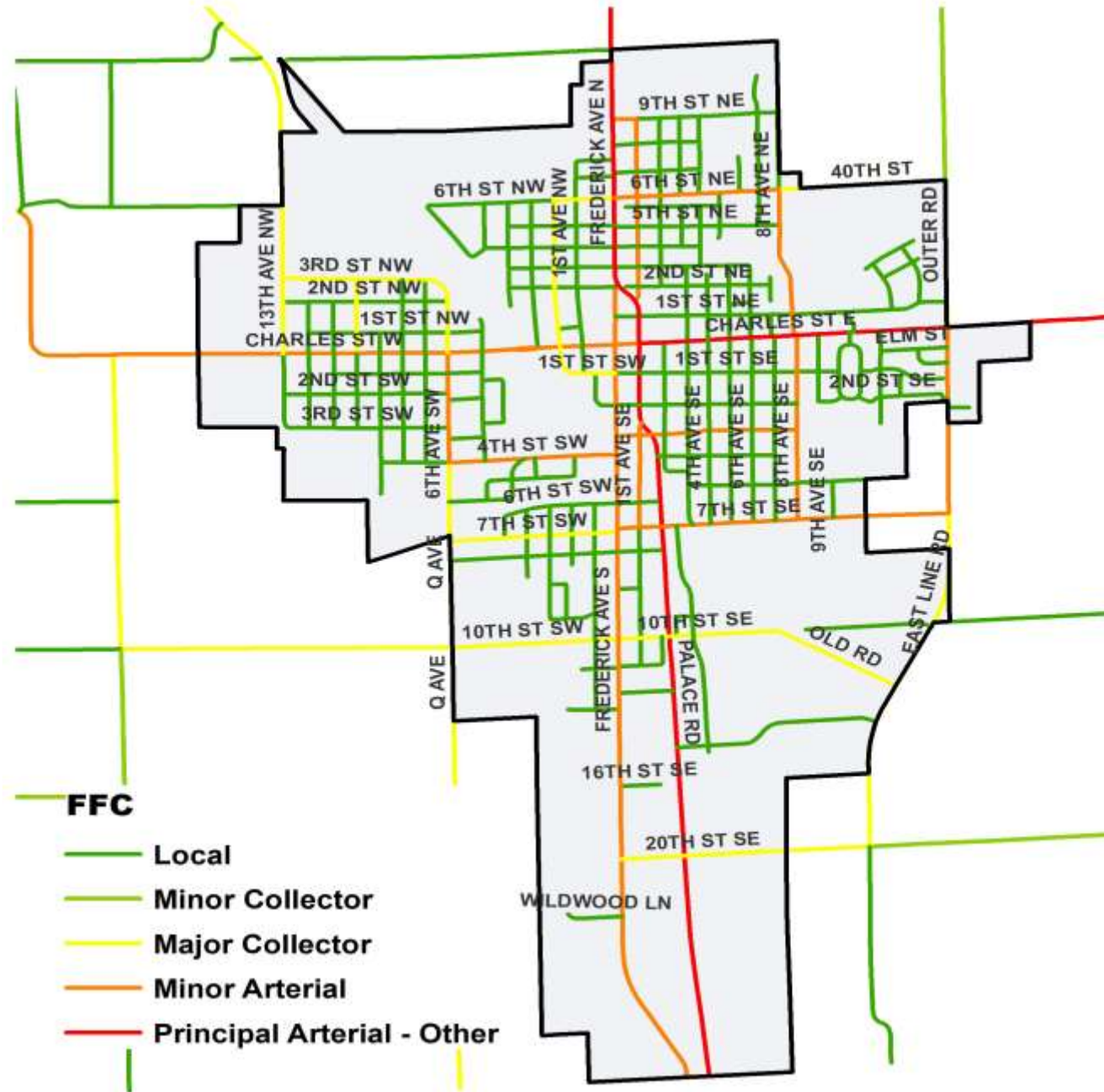
6th St NW/NE Corridor

The 6th Ave NW/NE corridor runs east-west through northern Oelwein. The 6th St NE/Frederick Ave intersection was identified as a key intersection in the community. The following were identified issues/needs for this corridor:

- Maintenance concerns were identified between 8th Ave NE and Frederick Ave N, and pavement condition *is rated poor in several areas* of 6th Ave NE
- Walking infrastructure and bicycle routes were recommended along the entire 6th St NE/NW corridor.

Federal Functional Classification (FFC)

Source: Iowa Dept. of Transportation, Office of Analytics, Roadway Asset Management System (RAMS), Data; Upper Explorerland Regional Planning Commission, Map

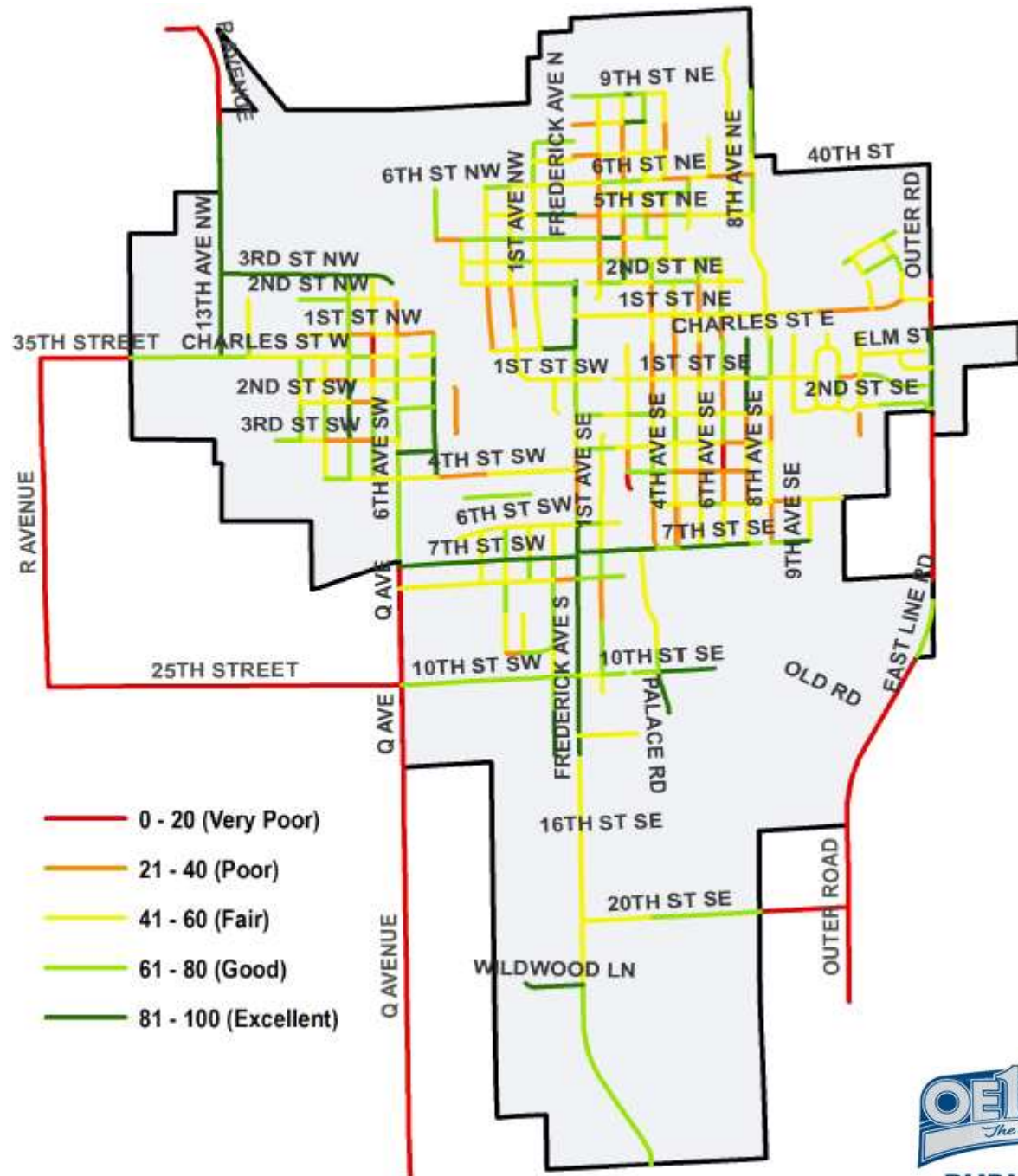


3-1. Pavement Condition Index

Source: Iowa State University, Institute for Transportation, Center for Transportation Research and Education, Iowa Pavement Management Program (IPMP) Data; Upper Explorerland Regional Planning Commission, Map

PCI is Calculated By:

- 1) Identifying thresholds for various asphalt, composite, and concrete road distress types (e.g. International Roughness Index (IRI), cracking, patching, rutting, etc.)
- 2) Reviewing images of road segments to determine whether a distress threshold has been met
- 3) Starting with 100, subtracting a weighted number given to each distress type should the threshold be met. If the threshold is not met, the weighted number for the distress type is not subtracted.
- 4) Creating rating categories based on the final number arrived at after the methodology has been applied, from Very Poor (1 - 20 points) up to Excellent (81 - 100 points).



PASER Asphalt Roads Manual

What is the PASER rating?

- The Pavement Surface and Rating (PASER) system is used to evaluate the condition of road segments. The PASER system rates each segment on a scale of 1-10 with 1 being the worst condition, and 10 being the best condition (new pavement).

RATING
10



RATING
7



RATING
4



RATING
1



Rating Surface conditions of Sealcoated roads



Surface age	Visible distress	General condition, drainage, and recommended improvement	Surface rating
1 year old	No distress. Excellent surface and ride.	New surface condition. Excellent drainage. No maintenance required.	5 Excellent
2-4 years old	Slight surface wear from traffic. Slight loss of surface aggregate. Minor flushing or tracking.	Excellent or good drainage. Little or no maintenance required.	4 Good
3-5 years old	Moderate surface wear and/or flushing. Slight edge cracking. Occasional patch or loss of top layer of sealcoat.	Good or fair drainage. May need spot drainage improvement and/or minor patching. Preventive maintenance sealcoat recommended.	3 Fair
more than 5 years old	Severe wear or flushing. Moderate to severe edge cracking or patching. Potholes or significant loss of surface sealcoat. Alligator cracking.	Fair or poor drainage. Ditching or culvert improvements needed. Patching or surface wedging needed. New surface sealcoat required.	2 Poor
more than 5 years old	Extensive loss of surface sealcoat. Severe edge cracking and/or alligator cracking. Extensive patching in poor condition and/or rutting.	Extensive poor drainage. Needs base improvement and new double sealcoat.	1 Failed

Asphalt Pavement Surface Rating system

Surface rating	Visible distress*	General condition/ treatment measures
10 - Excellent	None.	New construction.
9 - Excellent	None.	Recent overlay. Like new.
8 Very Good	No longitudinal cracks except reflection of paving joints. Occasional transverse cracks, widely spaced (40' or greater). All cracks sealed or tight (open less than 1/4").	Recent sealcoat or new cold mix. Little or no maintenance required.
7 Good	Very slight or no raveling, surface shows some traffic wear. Longitudinal cracks (open 1/4") due to reflection or paving joints. Transverse cracks (open 1/4") spaced 10' or more apart, little or slight crack raveling. No patching or very few patches in excellent condition.	First signs of aging. Maintain with routine crack filling.
6 Good	Slight raveling (loss of fines) and traffic wear. Longitudinal cracks (open 1/4"– 1/2"). Transverse cracks (open 1/4"– 1/2"), some spaced less than 10'. First sign of block cracking. Sight to moderate flushing or polishing. Occasional patching in good condition.	Shows signs of aging. Sound structural condition. Could extend life with sealcoat.
5 Fair	Moderate to severe raveling (loss of fine and coarse aggregate). Longitudinal and transverse cracks (open 1/2" or more) show first signs of slight raveling and secondary cracks. First signs of longitudinal cracks near pavement edge. Block cracking up to 50% of surface. Extensive to severe flushing or polishing. Some patching or edgewedging in good condition.	Surface aging. Sound structural condition. Needs sealcoat or thin non-structural overlay (less than 2")
4 Fair	Severe surface raveling. Multiple longitudinal and transverse cracking with slight raveling. Longitudinal cracking in wheel path. Block cracking (over 50% of surface). Patching in fair condition. Slight rutting or distortions (1/2" deep or less).	Significant aging and first signs of need for strengthening. Would benefit from a structural overlay (2" or more).
3 Poor	Closely spaced longitudinal and transverse cracks often showing raveling and crack erosion. Severe block cracking. Some alligator cracking (less than 25% of surface). Patches in fair to poor condition. Moderate rutting or distortion (greater than 1/2" but less than 2" deep). Occasional potholes.	Needs patching and repair prior to major overlay. Milling and removal of deterioration extends the life of overlay.
2 Very Poor	Alligator cracking (over 25% of surface). Severe rutting or distortions (2" or more deep). Extensive patching in poor condition. Potholes.	Severe deterioration. Needs reconstruction with extensive base repair. Pulverization of old pavement is effective.
1 Failed	Severe distress with extensive loss of surface integrity.	Failed. Needs total reconstruction.

Concrete Pavement Surface Rating system

Surface rating	Visible distress*	General condition/ treatment measures
10 - Excellent	None.	New pavement. No maintenance required.
9 - Excellent	Traffic wear in wheelpath. Slight map cracking or pop-outs.	Recent concrete overlay or joint rehabilitation. Like new condition. No maintenance required.
8 Very Good	Pop-outs, map cracking, or minor surface defects. Slight surface scaling. Partial loss of joint sealant. Isolated meander cracks, tight or well sealed. Isolated cracks at manholes, tight or well sealed.	More surface wear or slight defects. Little or no maintenance required.
7 Good	More extensive surface scaling. Some open joints. Isolated transverse or longitudinal cracks, tight or well sealed. Some manhole displacement and cracking. First utility patch, in good condition. First noticeable settlement or heave area.	First sign of transverse cracks (all tight); first utility patch. More extensive surface scaling. Seal open joints and other routine maintenance.
6 Good	Moderate scaling in several locations. A few isolated surface spalls. Shallow reinforcement causing cracks. Several corner cracks, tight or well sealed. Open (1/4" wide) longitudinal or transverse joints and more frequent transverse cracks (some open 1/4").	First signs of shallow reinforcement or corner cracking. Needs general joint and crack sealing. Scaled areas could be overlaid.
5 Fair	Moderate to severe polishing or scaling over 25% of the surface. High reinforcing steel causing surface spalling. Some joints and cracks have begun spalling. First signs of joint or crack faulting (1/4"). Multiple corner cracks with broken pieces. Moderate settlement or frost heave areas. Patching showing distress.	First signs of joint or crack spalling or faulting. Grind to repair surface defects. Some partial depth patching or joint repairs needed.
4 Fair	Severe polishing, scaling, map cracking, or spalling over 50% of the area. Joints and cracks show moderate to severe spalling. Pumping and faulting of joints (1/2") with fair ride. Several slabs have multiple transverse or meander cracks with moderate spalling. Spalled area broken into several pieces. Corner cracks with missing pieces or patches. Pavement blowups.	Needs some full depth repairs, grinding, and/or asphalt overlay to correct surface defects.
3 Poor	Most joints and cracks are open, with multiple parallel cracks, severe spalling, or faulting. D-cracking is evident. Severe faulting (1") giving poor ride. Extensive patching in fair to poor condition. Many transverse and meander cracks, open and severely spalled.	Needs extensive full depth patching plus some full slab replacement.
2 Very Poor	Extensive slab cracking, severely spalled and patched. Joints failed. Patching in very poor condition. Severe and extensive settlements or frost heaves.	Recycle and/or rebuild pavement.
1 Failed	Restricted speed. Extensive potholes. Almost total loss of pavement integrity.	Total reconstruction.

Gravel Pavement Surface Rating system

Surfacereating	Visible distress*	General condition/ treatment measures
<p>5 Excellent</p>	<p>No distress. Dust controlled. Excellent surface condition and ride.</p>	<p>New construction—or total reconstruction. Excellent drainage. Little or no maintenance needed.</p>
<p>4 Good</p>	<p>Dust under dry conditions. Moderate loose aggregate. Slight washboarding.</p>	<p>Recently regraded. Good crown and drainage throughout. Adequate gravel for traffic. Routine grading and dust control may be needed.</p>
<p>3 Fair</p>	<p>Good crown (3"-6"). Adequate ditches on more than 50% of roadway. Gravel layer mostly adequate but additional aggregate may be needed in some locations to correct washboarding or isolated potholes and ruts. Some culvert cleaning needed. Moderate washboarding (1"-2" deep) over 10%-25% of the area. Moderate dust, partial obstruction of vision. None or slight rutting (less than 1" deep). An occasional small pothole (less than 2" deep). Some loose aggregate (2" deep).</p>	<p>Shows traffic effects. Regrading (reworking) necessary to maintain. Needs some ditch improvement and culvert maintenance. Some areas may need additional gravel.</p>
<p>2 Poor</p>	<p>Little or no roadway crown (less than 3"). Adequate ditches on less than 50% of roadway. Portions of the ditches may be filled, over- grown and/or show erosion. Some areas (25%) with little or no aggregate. Culverts partially full of debris. Moderate to severe washboarding (over 3" deep) over 25% of area. Moderate rutting (1"-3"), over 10%-25% of area. Moderate potholes (2"-4") over 10%-25% of area. Severe loose aggregate (over 4").</p>	<p>Travel at slow speeds (less than 25 mph) is required. Needs additional new aggregate. Major ditch construction and culvert maintenance also required.</p>
<p>1 Failed</p>	<p>No roadway crown or road is bowl shaped with extensive ponding. Little if any ditching. Filled or damaged culverts. Severe rutting (over 3" deep), over 25% of the area. Severe potholes (over 4" deep), over 25% of area. Many areas (over 25%) with little or no aggregate.</p>	<p>Travel is difficult and road may be closed at times. Needs complete rebuilding and/or new culverts.</p>

6th St NE – (2nd Ave to 8th Ave)

*650 linear ft of concrete and 1350 linear ft of Asphalt overlay

*possibly crack and seat and overlay concrete portion

*would need 650 ft of water main replaced and 1280 ft of sewer inspected and possibly rehabbed

\$112,000 -



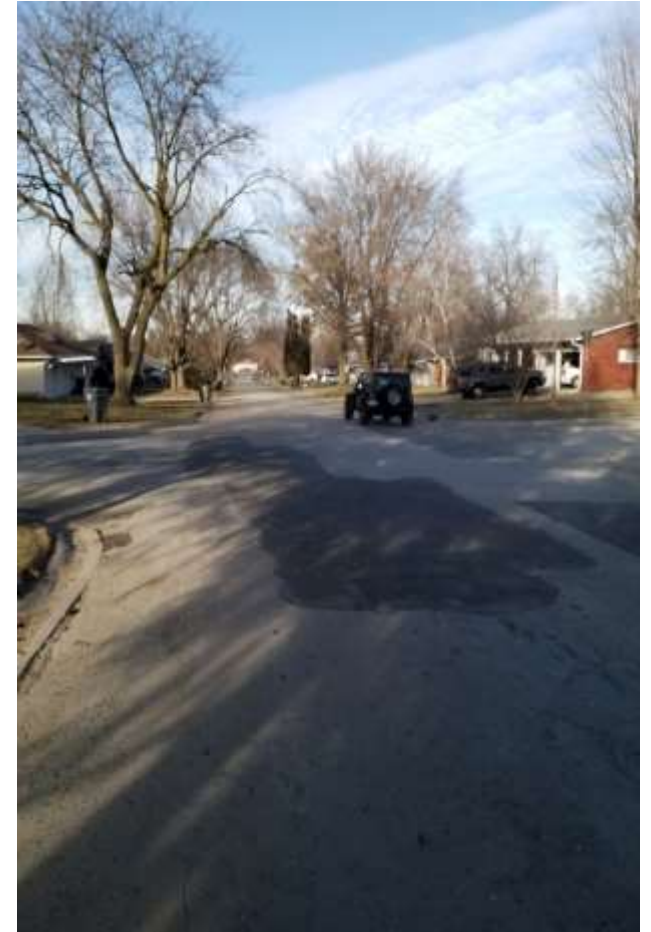
12th Ave SE – (E. Charles to 2nd St)

*1350 Linear feet at 34-ft width Asphalt overlay

*Would need 1500 ft of sanitary sewer inspected for condition

*Asphalt overlay estimate including a 1" leveling course followed by a 2" overlay

\$81,000 -



2nd St SE — (2nd Ave to 8th Ave)

*2150 linear ft at 30-ft width Asphalt overlay and complete curb replacement

*would need to inspect sewer crossings

*water main is back of curb

*Asphalt overlay estimate not including the necessary curb work including a 1" leveling course followed by a 2" overlay

\$166,425 -



3rd Ave NE — (6th St to 8th St)

*950 linear ft at 32-foot

*would need 950 ft of water main replaced and 950 ft of sanitary sewer inspected and possibly rehabbed

\$62,500 -



Oak St. (East Line Rd. to Elm St.)

\$44,500 -

- *636 Linear ft concrete at 34-ft width
- *Would need 562 ft of sanitary sewers that is questionable inspected
- *has 632 ft of 6" water main that has only had one leak in 20+ years and it was a blown-out corporation stop
- *Crack and seat estimate including a 1" leveling course followed by a 2" overlay



8th Ave SE - (2nd St to 5th St)

*1425 linear ft at 45 ft width

*Would need 1200 ft of water main replaced and 300 ft of sanitary sewer inspected and possibly rehabbed

**** Possible collaboration with OCSD**



5th St SE

Proposed Seal Coat List 2022

1st Ave NE 2nd Street to 9th Street 10,050 Sq Yards single seal
2nd Street NW 10th Ave to 13th Ave 2,360 Sq Yards double seal
2nd Street SW 10th Ave to 13th Ave 2,400 Sq Yards double seal
2nd Street SW 10th Ave to 6th Ave 3,200 Sq Yards single seal
12th Ave NW West Charles to 2nd Street NW 2,044 Sq Yards single seal
7th Street NE North Fredrick to 4th Ave NE 3,820 Sq Yards single seal
9th Street NE North Fredrick to 7th Ave NE 5,100 Sq Yards single seal
4th Ave NE 6th Street to 9th Street 3,111 Sq Yards single seal
8th Street SW South Fredrick to 6th Ave SW 7,555 Sq Yards single seal
South Fredrick Fidelity Driveway to 5th Street SE 7,944 Sq Yards single seal
8th Ave NE 6th Street to 9th Street 3,422 Sq Yards single seal
7th Ave NE 6th Street to 9th Street 4,977 Sq Yards single seal
5th Street NE North Fredrick to 4th Ave NE 4,846 Sq Yards single seal
1st Ave NW West Charles to Maplewood Drive 9,951 Sq Yards single seal
2nd Ave NW West Charles to 6th Street NW 8,666 Sq Yards
4th Street NW North Fredrick to 5th Ave NW 6,150 Sq Yards single seal
5th Street NW North Fredrick to 3rd Ave NW 4,533 Sq Yards single seal
West Charles Plaza to Viaduct 4,000 Sq Yards single seal
3rd Street SE Rock Island Road to 7th Ave SE 6,500 Sq Yards single seal
4th Street SE 2nd Ave to 7th Ave 5,688 Sq Yards single seal
5th Street SE 3rd Ave to 8th Ave 8,177 Sq Yards single seal (when and if water main project is completed)
North Parking Lot 8,000 Sq Yards single seal
South Parking Lot 8,800 Sq Yards single seal
Old City Hall parking Lot 950 Sq Yards single seal
Imoehl Parking Lot 3,055 Sq Yards single seal
City Hall Parking Lot 2,333 Sq Yards single seal
Downtown Alleys 7,488 Sq Yards

145,120 Sq. Yards = **\$300,000** –
chip seal and sealcoat

Proposed Seal Coat Option 1

Fidelity
Bank



**South Frederick Fidelity Driveway to 5th Street SE 7,944 Sq Yards 1"
leveling coarse followed by a 2" overlay**

\$120,000



Proposed Seal Coat Option 2

6th Ave SW from West Charles to 4th Street SW 8,888 Sq Yards 1" leveling coarse followed by a 2" overlay

2,000 feet of water main replacement and 2,000 feet of sanitary sewer to be inspected and possibly rehabbed *in addition to* overlay cost below

\$132,000

W. Charles St.



4th St SW

