VILLAGE OF HALES CORNERS

2018-2022 PAVEMENT MANAGEMENT PLAN
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1. 2017 PAVEMENT CONDITION

- Per State Statute, Municipalities SHALL provide a condition rating report on their local roads every two years (odd years)

- PAVement Surface Evaluation and Rating

- PASER quickly and inexpensively provides a basis for comparing the quality of roads and aids in the prioritization and selection process
2017 PASER

- **1 - 3**
  *14.31 Miles (41.9%)*
  *[15.41 Miles (45.2%)]*
  *Reconstruction (@ Min. Pulverization)*

- **4 - 6**
  *9.41 Miles (27.6%)*
  *[9.87 Miles (28.9%)]*
  *Rehabilitation (Mill & Overlay or Pulverization)*

- **7 - 10**
  *10.40 Miles (30.5%)*
  *[8.85 miles (25.9%)]*
  *(Maintenance Only)*

- **7**
  *5.44 Miles (15.94%)*

- **6**
  *0.73 Miles (2.14%)*

- **5**
  *4.49 Miles (13.15%)*

- **4**
  *4.19 Miles (12.28%)*

- **2**
  *5.40 Miles (15.83%)*

- **3**
  *8.73 Miles (25.60%)*
1 - 3
14.31 Miles (41.9 %)
[15.41 Miles (45.2%)]
Reconstruction (@ Min. Pulverization)

4 - 6
9.41 Miles (27.6 %)
[9.87 Miles (28.9%)]
Rehabilitation (M &O or Pulv.)

7 - 10
10.40 Miles (30.5 %)
[8.85 miles (25.9%)]
(Maintenance Only)
<table>
<thead>
<tr>
<th>Age</th>
<th>Miles</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;30 Years</td>
<td>9.30</td>
<td>27%</td>
</tr>
<tr>
<td>16 to 30 Years</td>
<td>15.03</td>
<td>43%</td>
</tr>
<tr>
<td>0 to 15 Years</td>
<td>10.52</td>
<td>30%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification</th>
<th>Avg Age</th>
<th>Miles</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterial</td>
<td>7 Years</td>
<td>3.09</td>
<td>9%</td>
</tr>
<tr>
<td>Collector</td>
<td>23 Years</td>
<td>5.48</td>
<td>16%</td>
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<tr>
<td>Local</td>
<td>27 Years</td>
<td>25.55</td>
<td>75%</td>
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</table>
2. FUNCTIONAL CLASSIFICATION

- The Federal Highway Administration provides a functional classification for all roads based primarily on use and traffic volume.

- Village roads are one of three (3) functional classifications:

  **ARTERIAL, COLLECTOR, and LOCAL**
CAPITAL PROJECTS (BORROWING)

ANNUAL PROGRAM ($415,000 /Yr)

PASER VS FUNCTIONAL CLASS

- Miles
- PASER

ARTERIAL
- Miles: 3.09
- PASER: 7.28

COLLECTOR
- Miles: 5.48
- PASER: 6.47

LOCAL
- Miles: 25.55
- PASER: 4.06
3. 2018-2022 PAVEMENT MANAGEMENT PLAN
3.2 PROJECT CREATION

- 346 road segments combined into 122 Projects

- Segments combined by similar attributes:
  - PASER Rating
  - Pavement Management Priority Classification (PMPC)
  - Pavement Type (Asphalt or Concrete)
  - Engineering Judgement

- For proposed projects with dissimilar attributes; weighted values are calculated

- Average Project Length = 1,508 Feet
3.3 PROJECT COST ESTIMATION

- Review past projects and determine an Average Total Cost ($/Sq. Yd.) including Design, Construction, & Construction Inspection

- Reconstruction/Pulverization
  - $109/Sq. Yd. (PASER 3 or Less)

- Rehabilitation (Mill & Overlay)
  - $40/Sq. Yd. (PASER 4, 5, & 6)
  - **NO DRAINAGE IMPROVEMENTS**

- Maintenance
  - Crack Filling: $2/Lineal Foot (Roads rated 7 or Greater)

  - Infrared Manhole Repairs: $200 per Manhole (All Streets As Needed)
3.3 PROJECT COST ESTIMATION

Estimated Backlog of Local Road Repairs

<table>
<thead>
<tr>
<th>REPAIR STRATEGY</th>
<th>MILES</th>
<th>ESTIMATED COST</th>
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</thead>
<tbody>
<tr>
<td>Reconstruction (1-3)</td>
<td>14.31</td>
<td>$21.5 Million</td>
</tr>
<tr>
<td>Rehabilitation (4-6)</td>
<td>9.41</td>
<td>$4.3 Million</td>
</tr>
<tr>
<td>Crack Filling (≥ 7)</td>
<td>N/A</td>
<td>$48,000</td>
</tr>
<tr>
<td>Infrared Manhole</td>
<td>N/A</td>
<td>$6,000</td>
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</table>

- Reconstruction & Rehabilitation Costs above **DO NOT INCLUDE** Arterial or Collector Streets

- At current annual funding level ($415,000) it will take **63** Years (Does not account for pavement deterioration)
3.4 PROJECT PRIORITIZATION & SELECTION
3.4 PROJECT PRIORITIZATION & SELECTION

- Selection Criteria
  - AVAILABLE BUDGET
  - PASER Rating
  - Pavement Management Priority Classification (PMPC)
    - Major (Arterials & Collectors ONLY)
    - Minor
    - Local
    - Low Use
    - Reviewed and approved by PWC
  - Engineering Judgement
- Infrastructure
  - Sanitary Sewer
  - Storm Sewer
  - Water Main (Public & Private)
3.4 PROJECT PRIORITIZATION & SELECTION

- Selection Criteria (Continued)
  - Special Events
    - Parade Routes
    - Fun Runs
    - Pedestrian or Bicycle Use
    - Elections
  - Crash History
  - Influence of WisDOT, Milwaukee County, or other Municipalities
  - DPW Maintenance History
    - Roads requiring extensive patching or potholes
    - Since 2016 DPW has deposited 181 tons of HMA consuming 1873 man-hours (16% of available hours)
## LOCAL ROAD PRIORITY TABLE

<table>
<thead>
<tr>
<th>PRIORITY</th>
<th>PMPC</th>
<th>PASER</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Minor</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Minor</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
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<td>4</td>
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<td>4</td>
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<tr>
<td>11</td>
<td>Local</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Local</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Low Use</td>
<td>6-1</td>
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</table>
Pavement Management Basics

- Avoid a “worst first” mentality
  - Fewer miles would get done spending large amounts of money reconstructing poor pavements
  - More miles can be rehbabbed for the same budget with roads that are in fair condition
  - We need a mix of preservation, rehabilitation, and reconstruction to keep the overall road network in good condition

A pavement needing reconstruction is not going to get much worse...a pavement in fair condition though, can quickly deteriorate into poor
# 3.5 2018-2022 LOCAL PROGRAM

<table>
<thead>
<tr>
<th>IN</th>
<th>FROM</th>
<th>TO</th>
<th>REPAIR STRATEGY</th>
<th>YEAR</th>
<th>EST. COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>113th</td>
<td>Godsell</td>
<td>Grange</td>
<td>Rehab</td>
<td>2018</td>
<td>$212,000</td>
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<tr>
<td>122nd</td>
<td>Parkview</td>
<td>Janesville</td>
<td>Rehab</td>
<td>2018</td>
<td>$172,000</td>
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<tr>
<td>124th</td>
<td>Kurtz</td>
<td>Terminus</td>
<td>Recon</td>
<td>2019</td>
<td>$435,000</td>
</tr>
<tr>
<td>Luther</td>
<td>111th</td>
<td>108th</td>
<td>Rehab</td>
<td>2020</td>
<td>$80,000</td>
</tr>
<tr>
<td>Seneca</td>
<td>Arrowhead</td>
<td>116th</td>
<td>Rehab</td>
<td>2020</td>
<td>$150,000</td>
</tr>
<tr>
<td>Parkview</td>
<td>123rd</td>
<td>120th</td>
<td>Rehab</td>
<td>2021</td>
<td>$137,000</td>
</tr>
<tr>
<td>98th</td>
<td>Brookside</td>
<td>Ridge</td>
<td>Recon</td>
<td>2021</td>
<td>$364,000</td>
</tr>
<tr>
<td>104th</td>
<td>Scharles</td>
<td>Grange</td>
<td>Recon</td>
<td>2022</td>
<td>$543,000</td>
</tr>
</tbody>
</table>

**TOTAL** $2,093,000

**5 Rehab Projects: 7,293 feet: $751,000**

**3 Recon Projects: 4,294 feet: $1,342,000**

**5-YR BUDGET** $2,109,000

**BALANCE** $16,000
## 3.6 2018-2022 CAPITAL PROGRAM

### SUGGESTED SCHEDULE 2018-2022

<table>
<thead>
<tr>
<th>IN</th>
<th>FROM</th>
<th>TO</th>
<th>REPAIR STRATEGY</th>
<th>SUGGESTED YEAR</th>
<th>EST. COST</th>
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<tr>
<td>College</td>
<td>108th</td>
<td>Whitnall Way</td>
<td>Rehab</td>
<td>2020</td>
<td>$361,000**</td>
</tr>
<tr>
<td>New Berlin</td>
<td>121St</td>
<td>116th</td>
<td>Recon</td>
<td>2021</td>
<td>$1,322,000</td>
</tr>
<tr>
<td>116th</td>
<td>Janesville</td>
<td>Parkview</td>
<td>Recon</td>
<td>2022</td>
<td>$774,000</td>
</tr>
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<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$2,457,000</strong>**</td>
</tr>
</tbody>
</table>
2018-2022 Capital Road Program
4.0 FUNDING

- Local Program
  - Reconstruction, Rehabilitation, and Maintenance of Local Roads are funded as part of the Annual Budget ($415,000/Yr)
  - Local Road Improvement Program (LRIP), administered by WisDOT, provides approximately $34,000 every four years

- Capital Program
  - Reconstruction & Rehabilitation of Arterials & Collectors funded through borrowing
  - Maintenance funded as part of the Annual Budget
  - MSIP-STP Funding (FHA\WisDOT)
    - State\Federal Funded (80/20 Split)
    - Regional Program – Milwaukee Urbanized Area

- Highly Competitive:
4.0 FUNDING

- Capital Program

  - **Highly Competitive:**
    - Based on PASER Rating
    - Traffic Volume per Lane
    - Connectivity (Length)
    - Functional Classification (FHA)
    - MUST follow Strict State\Federal Design Guidelines
    - *Application is No Guarantee of Award*
4. **FUNDING**

- Other Potential Sources
  - Wheel Tax
  - Special Assessments
  - Referendum(s)
- Tax Increases
- **OTHER INFLUENCES**
5. QUESTIONS