



Pavement Condition Update

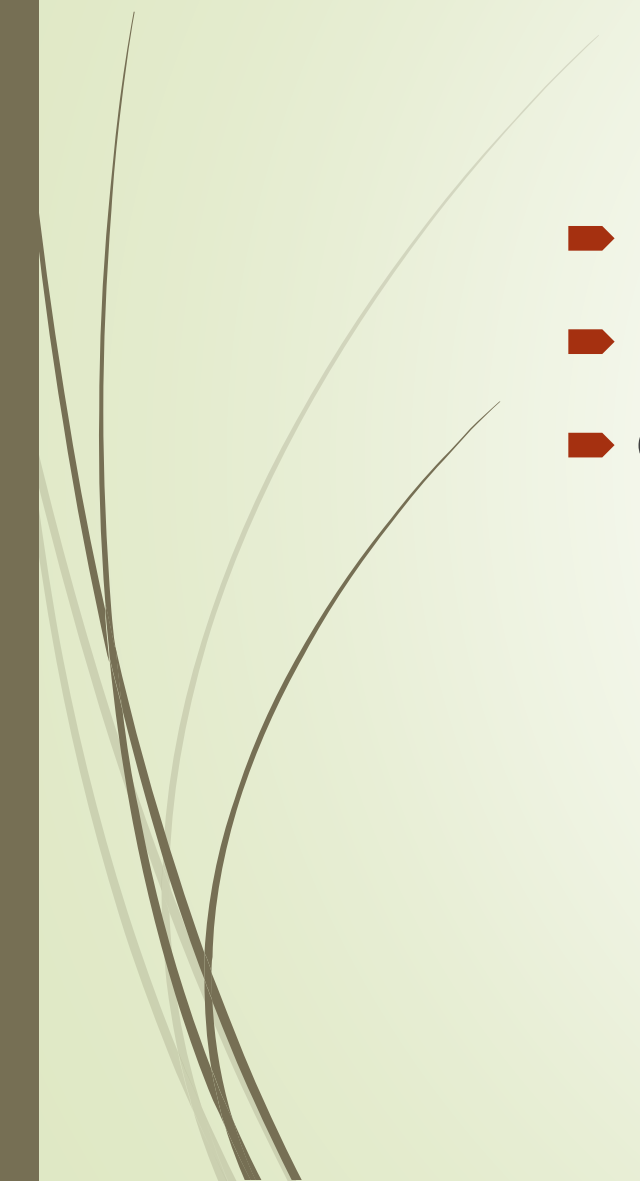


PUBLIC WORKS COMMITTEE

FEBRUARY 13, 2018



Topics To Discuss

- ▶ Pavement Condition Rating
 - ▶ Prioritization of Projects
 - ▶ Other Methods to be considered
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Road Evaluation Process

- *Pavement Condition Rating (PCR)* is a simple, convenient and inexpensive way to monitor the *condition* of the surface of roads.
- Roadways are evaluated and rated Bi-annually or every 2 years
- Evaluations are conducted by employees physically riding each road and giving a score for deficiencies found
- Deficiencies reduce the rated value from 100.

Road Evaluation Process

- ▶ The type and amount of distress observed on each street section is used to obtain a Pavement Condition Rating (PCR). This rating has a scale between 0 and 100. A basic description of each category is as follows:

<u>Rating</u>	<u>General Condition</u>
91-100	Very Good
81-90	Good
66-80	Fair
51-65	Poor
Below 51	Very Poor



Road Evaluation Process

- ▶ TYPES OF PROBLEMS
 - ▶ ALLIGATOR CRACKING
 - ▶ SLIPPAGE CRACKING
 - ▶ SHRINKAGE CRACKING
 - ▶ REFLECTIVE CRACKING
 - ▶ POTHOLES
 - ▶ DEPRESSIONS
 - ▶ RUTTING
 - ▶ RAVELING
- 

Road Evaluation Process

- ▶ ALLIGATOR CRACKING : series of cracks that form a grouping of small pieces resembling an alligator's skin.
- ▶ BLOCK/TRVERSE CRACKING: series of large rectangular cracks typically covering large areas caused by shrinkage of the asphalt pavement due to temperature cycles.



Road Evaluation Process

- **REFLECTIVE CRACKING:** This type of crack occurs in areas that have been resurfaced. The cracks in the original pavement continue to move and eventually reflect upward through the new asphalt layer
- **RIDE QUALITY** is what the general public perceives as the indicator of how well a road is holding up. Pavement dips and patching can significantly affect ride quality. Ride quality is not to take into account rolling or mountainous terrain or curved alignment.



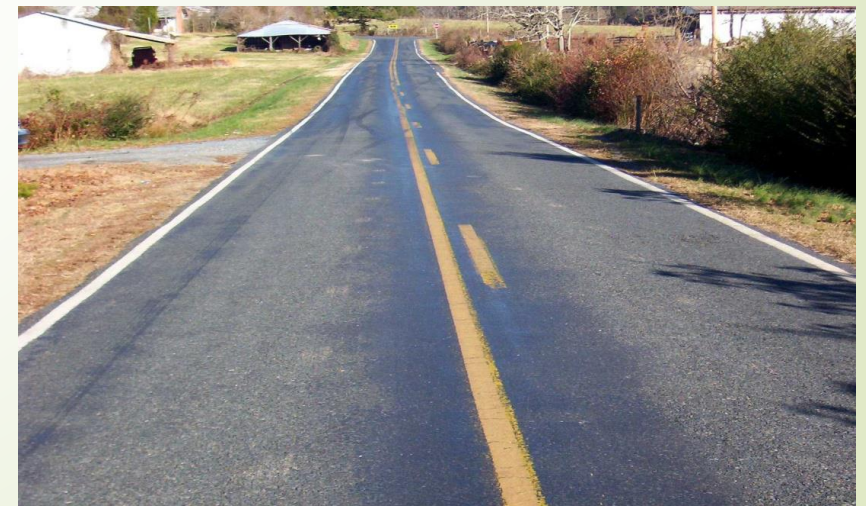
Road Evaluation Process

- **RUTTING:** Pavement depressions in the wheel paths are called rutting. Rutting can be caused by unsuitable material under the final layer of the roadway or by heavy truck traffic.
- **RAVELING:** A separation of the aggregate base (stone) from the pavement surface, giving it a rough texture.



Road Evaluation Process

- ▶ **PATCHING:** Any surface area of the existing pavement that indicates some type of maintenance repair has taken place.
- ▶ **BLEEDING:** A film of bituminous material on the pavement surface that creates a shiny, reflective surface.





Prioritization of Projects

- ▶ City Maintains 1,029 Miles of Roadway
- ▶ The benchmark for city streets is for 85% of the streets to have a PCR 85 or higher.
 - ▶ 494 Miles Rated above 85 (48%)
 - ▶ 535 Miles Rated Below 85 (52%)



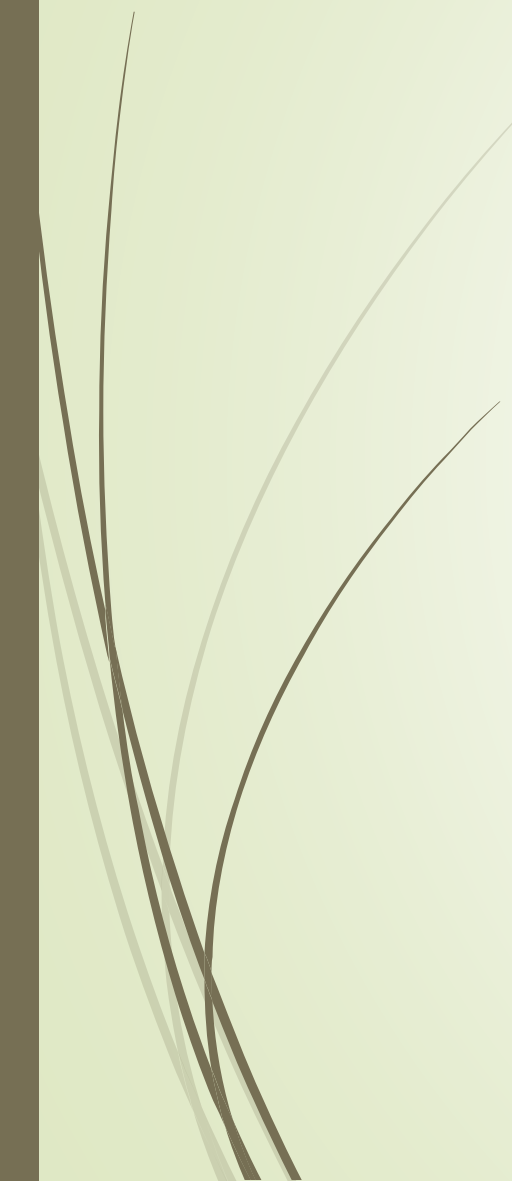
Prioritization of Projects

- ▶ Annual Resurfacing Funds Total:
\$1,137,450 odd year, \$2,637,450 even year
- ▶ Annually each ward receives an approximately equal distribution of funds
\$ 142,180/ Ward odd years
\$ 329,680/Ward even years*

*2/3s Bonds are allocated in these years



Prioritization Process

- Major Roadways and Collectors are given consideration due to higher traffic volumes. Collectors rated below 60 are given higher priority.
 - Residential Collectors with ratings below 60 are given priority. If selected adjoining neighborhood streets are added if funding allows.
 - Neighborhood streets are added to meet available budget
 - Major Roadways which cross Ward lines may be prioritized and grouped together
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Prioritization Process

- Current process does not differentiate between a Very Poor Rating (51 and below) and a Fair to Poor Rating (84-52)
- Cost to repair a Very Poor Road is higher than cost to repair Fair and Poor Rated Road
 - Very Poor Roads typically need Base Repair or other rehab before resurfacing can occur
- 47% of Roads are Rated Good to Very Good (PCR 85 or Above)
- 36% of Roads are Rated Poor to Fair (PCR 52-84)
- 17% of the roadways are Rated Very Poor (PCR 51 and Below)



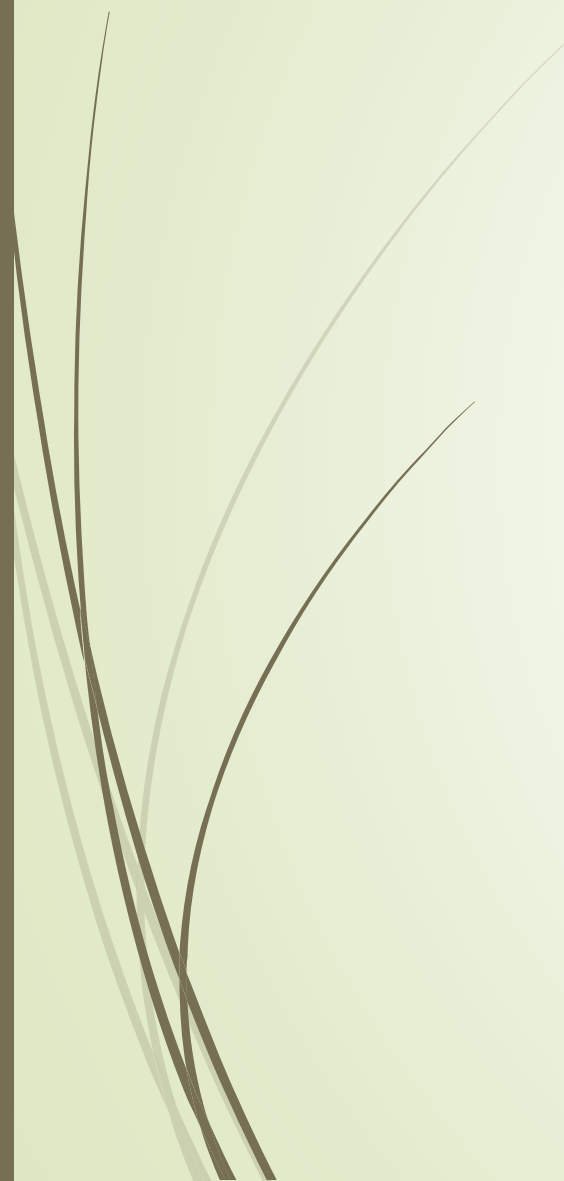
Potential Future Prioritization Process

- ▶ A potential process would consider allocating rated scores to roadways using the following criteria:
 - ▶ Roadway Volumes
 - ▶ Posted Speed Limit
 - ▶ PCR Rating
 - ▶ Years since last resurfaced



Potential Future Prioritization Process

- Final score would be used to select from as funding become available
- Residents could see where their roadway falls on the list and would be able to project when resurfacing will occur
- Roads rated lower with higher volumes would rise to the top
- Over time the number of Very Poor Roads should decrease significantly
- Customer concerns should decrease



Next Steps and Questions