

# PAVEMENT PRESERVATION PROGRAM

BOMA WORK SESSION

OCTOBER 08, 2019





# Meeting Overview

- What is Pavement Preservation
- City's Paving Program History and Overview
- Roadway Analysis
- Report / Methodology
- Example Project
- Considerations and Challenges
- Q&A





# What is Pavement Preservation?

- Pavement Preservation represents a proactive approach in maintaining our existing roads.
- <https://savemyroad.com/pavement-preservation/>





# Paving History / Overview

- Annual Paving Contracts for Mill and Fill/Overlay are EXPENSIVE!
- Worst First! – Roads are touched/paved once or twice in their useful life span.
- Recent Years – Street Dept. began looking in to ways to stretch their paving budget (Capital bonding helped immensely). HA-5 mineral bond (fog seal) for last 3 years.
- Spring 2019 – Streets and Engineering met with pavement professionals to discuss ways to extend the life of our roadway network.
- Civil-Link, LLC – Roadway Analysis, Pavement Preservation Program Plan, and Website Hosting



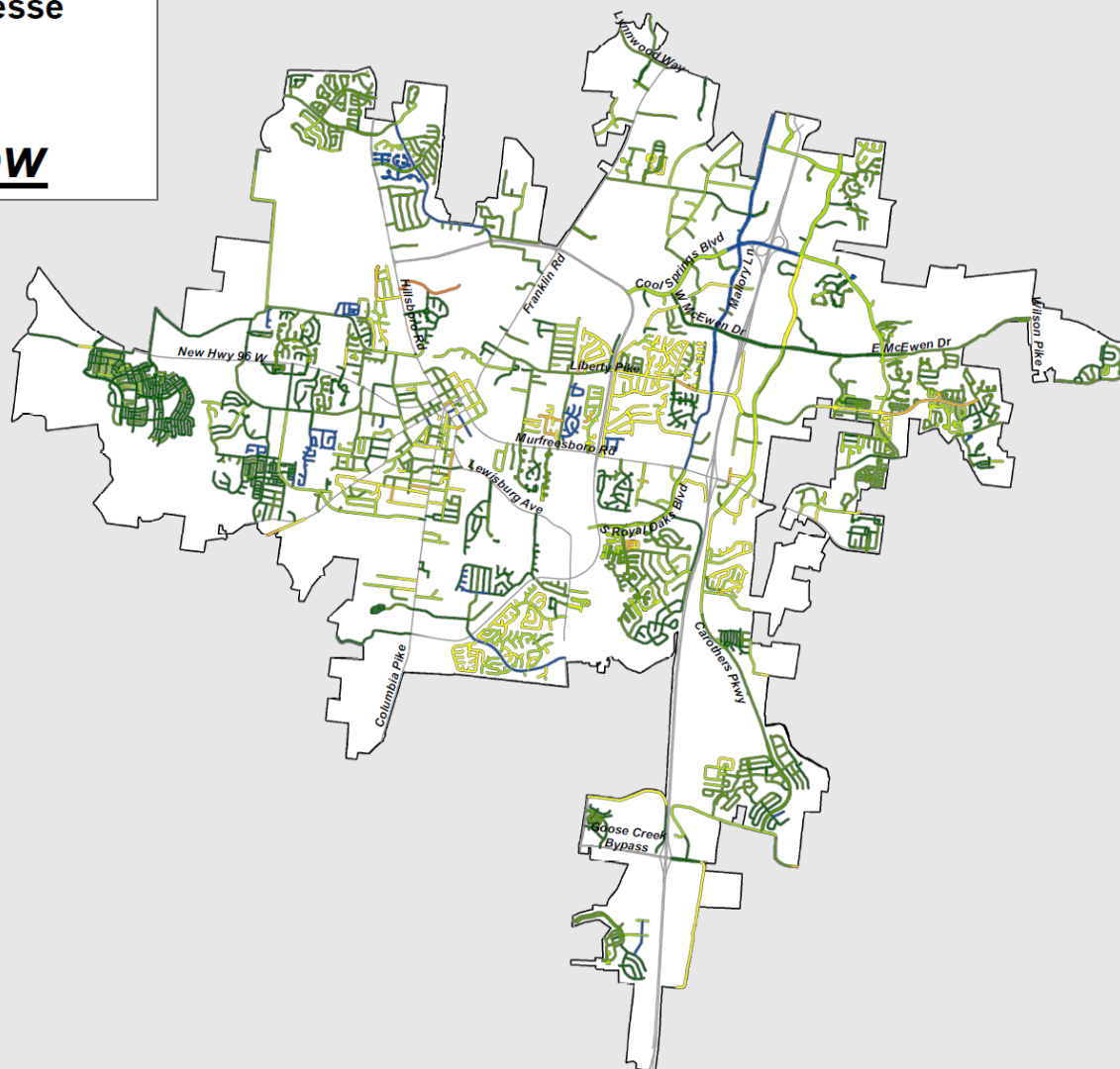


# Roadway Analysis

- <https://app.civil-link.com/franklin/streets>

City of Franklin, Tennessee  
Road Surface Ratings

## Overall View



### RATINGS

Best

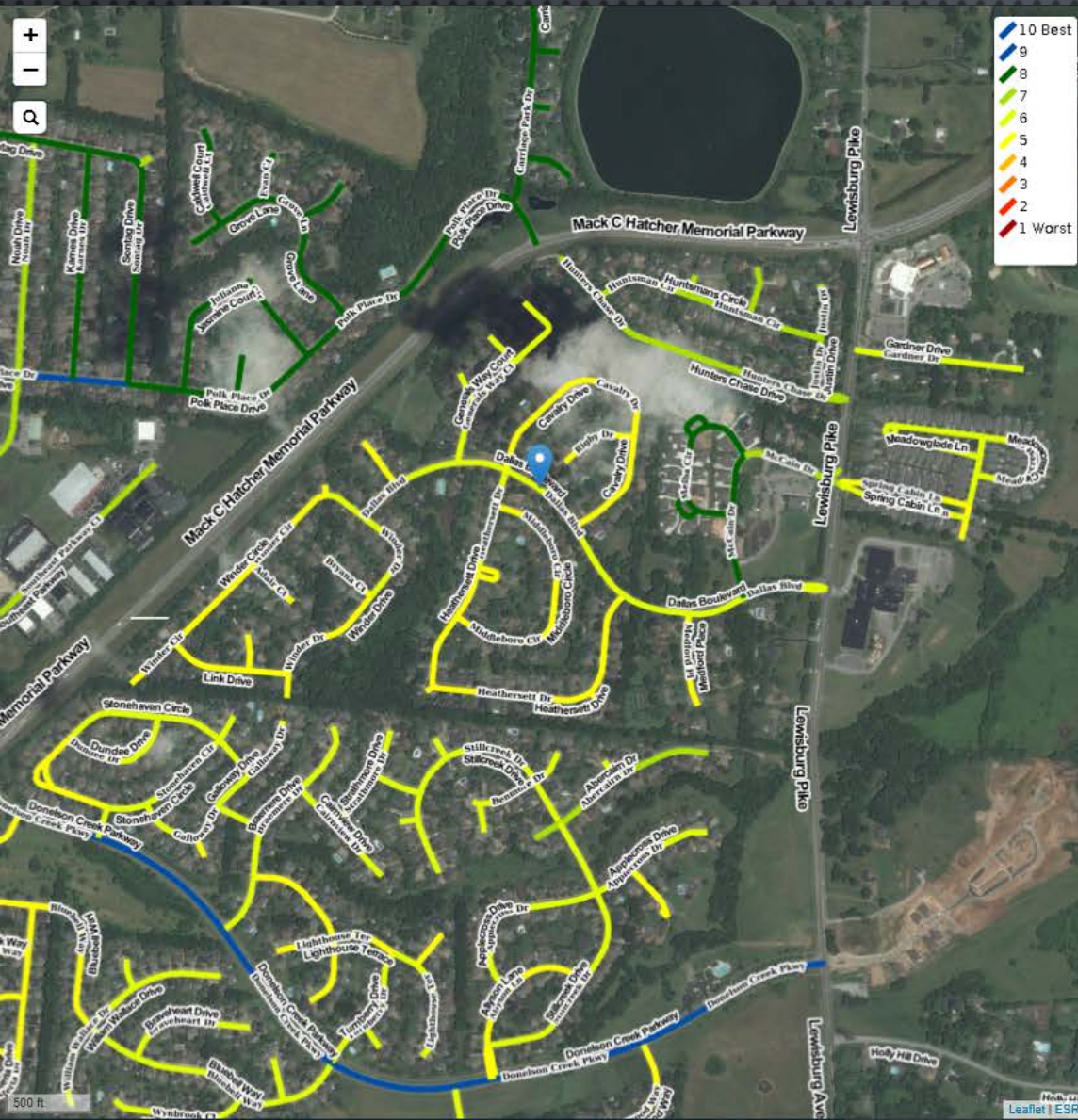


Worst





# Roadway Analysis – Web Hosting





# Report / Methodology



## Road Maintenance and Improvements Plan

City of Franklin, TN

July 2019

Civil-Link, LLC  
5779 Getwell Road, Building B, Southaven, MS 38672  
(662) 510-2169 www.civil-link.com

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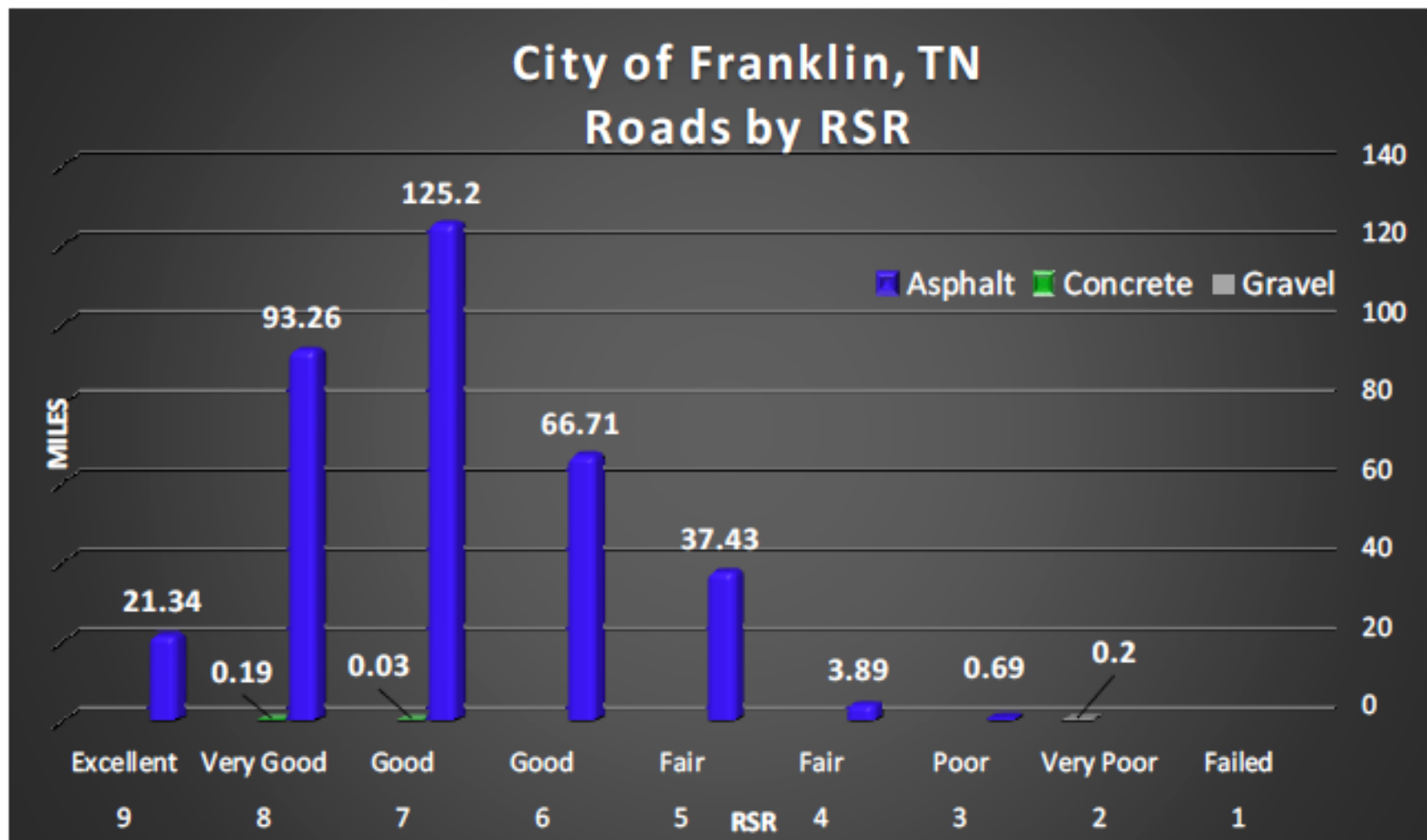
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| Appendix B - Treatment Descriptions |
| Appendix C - Priority Lists         |



# Report / Methodology



A "pavement could last indefinitely without deterioration in the structural elements provided it is not overlooked and the appropriate maintenance is carried out." Ferne 2006





# Example Project

- [https://roadresource.org/network/lc\\_calc](https://roadresource.org/network/lc_calc)

Inflation/CPI

5

%

Interest Rate

2.5

%

Total Paved Area

63330

SY

| CONVENTIONAL PLAN |                              |                            |               |                 |
|-------------------|------------------------------|----------------------------|---------------|-----------------|
| Year ?            | Treatment Type               | Cost in Constant Dollars ? | Future Cost ? | Present Value ? |
| 20                | ▼ Minor Mill & Fill          | 12                         | 31.84         | 19.43           |
| 40                | ▼ Full Depth Remove & Replac | 39.01                      | 274.63        | 102.28          |
|                   | ▼ Select...                  | 0.00                       | 0.00          | 0.00            |
|                   | ▼ Select...                  |                            | 0.00          | 0.00            |
|                   | ▼ Select...                  |                            | 0.00          | 0.00            |
| ADD ROW           |                              | \$51.01                    | \$306.47      | \$121.71        |

Net Present Value: **\$121.71 / SY**

Total Life Cycle Cost: **\$7,707,894**

| OPTIMIZED PLAN |                                |                            |               |                 |
|----------------|--------------------------------|----------------------------|---------------|-----------------|
| Year ?         | Treatment Type                 | Cost in Constant Dollars ? | Future Cost ? | Present Value ? |
| 4              | ▼ Crack Seal                   | 0.48                       | 0.58          | 0.53            |
| 4              | ▼ Fog Seal                     | 0.57                       | 0.69          | 0.63            |
| 10             | ▼ Scrub Seal                   | 2.26                       | 3.68          | 2.88            |
| 10             | ▼ Slurry Seal                  | 2.12                       | 3.45          | 2.70            |
| 17             | ▼ Cape Seal                    | 5.20                       | 11.92         | 7.83            |
| 25             | ▼ Micro Surfacing- Single Lift | 2.77                       | 9.38          | 5.06            |
| 32             | ▼ Micro Surfacing- Single Lift | 2.77                       | 13.20         | 5.99            |
| 40             | ▼ Base Stabilization + 4" HMA  | 25.09                      | 176.63        | 65.78           |
| ADD ROW        |                                | \$41.26                    | \$219.53      | \$91.40         |

Net Present Value: **\$91.40 / SY**

Total Life Cycle Cost: **\$5,788,362**





# Future Pavement Preservation Considerations

- It will be a learning lesson for all of us.
- Weather impacts or unexpected subgrade issues
- Utility Upgrade Work/Coordination
- Future annual paving contracts vs “projects”
- History of HA-5 fog seal
- Church Street thin lift
- Funding history – State Aid Fund and CIP Bonding
- ADA upgrades – Older neighborhoods coming up for paving have non compliant ADA ramps
- CIP funding for neighborhoods with multitude of ADA upgrades?





# QUESTIONS?

THANK YOU FOR YOUR TIME, ATTENTION, AND PARTICIPATION!

