



Richland County Council
Department of Public Works Work Session
AGENDA
May 10th 2022 – 3:00 PM
Council Chambers
2020 Hampton Street Columbia, SC 29204

1. **CALL TO ORDER**

The Honorable Overture Walker, Chair
Richland County Council

2. **ADOPTION OF AGENDA**

3. **INTRODUCTIONS**

Leonardo Brown
Richland County Administrator

- Michael Maloney, PE - Director of Public Works
- Stephen Staley, PE -County Engineer
- Shirani Fuller, PE -Asst. County Engineer
- Ken Burger, PE -Consultant, Weston & Sampson
- Tom Keefer -Consultant, Weston & Sampson

4. **RICHLAND COUNTY ROAD MAINTENANCE SYSTEM (CRMS)**

- a. Paved Roads vs. Unpaved Roads

5. **HOW ROADS ARE SELECTED**

- a. Ordinance 21-21 (pro rate)
- b. Distribution of funds within each District
- c. Road selection based on treatment type

6. **PAVEMENT MANAGEMENT STUDY**

- a. Tasks performed
- b. Data collection
- c. Pavement Condition Index (PCI)
- d. Results - overall and breakdown

7. **FUNDING**

- a. Available vs. Needed
- b. Five-year allocation

8. **NEXT STEPS**

- a. Incorporate paved roads into a five-year plan
- b. Prepared CTIP FY23
- c. Abandoned roads- discuss how they are being handled

9. **QUESTIONS AND DISCUSSION**

10. **ADJOURNMENT**

COUNCIL WORK SESSION PAVEMENT MANAGEMENT STUDY

May 10, 2022

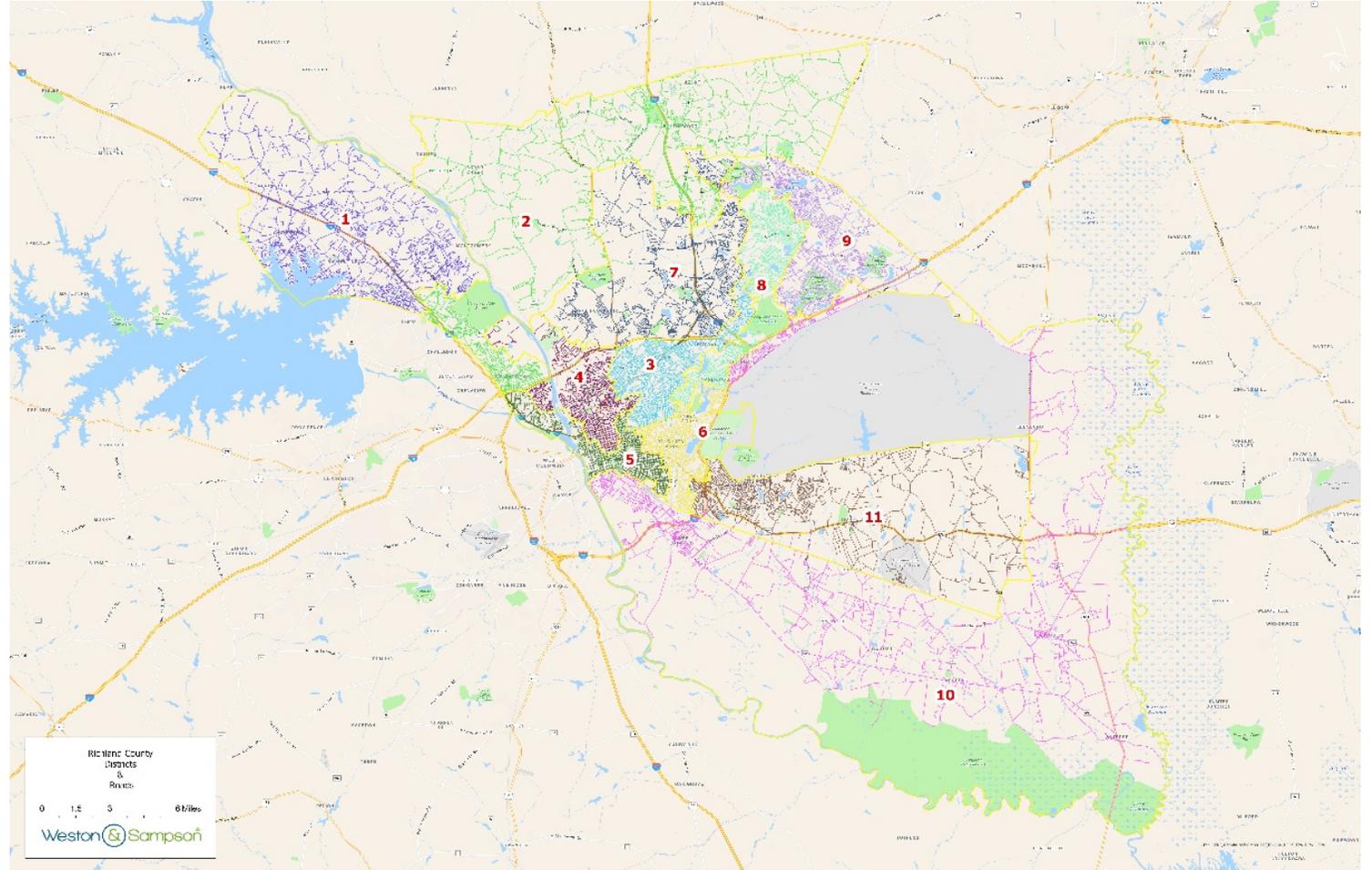
Weston & SampsonSM

Richland County Government



Richland County Road Maintenance System (CRMS)

Total Paved Mileage = 610.05 mi
As of July 2021



How Roads Are Selected: Chapter 21

Sec. 21-21. Transportation improvement program.

(a) All public funds available to the county for transportation system improvements shall be expended in accordance with a comprehensive transportation improvement plan. This would apply to:

- (1) Connector roads;
- (2) Intersection improvements;
- (3) Widening;
- (4) Turn lanes; and
- (5) Alignment improvements.

(b) Road resurfacing funds, for the resurfacing of existing paved roads, will be distributed by county council district based on that district's portion of total county paved road mileage.



How Roads Are Selected: Chapter 21

Pro rata fund distribution will be calculated as follows:

$$\text{District paved road paving funds} = \text{Total paved road resurfacing funds} \times \frac{\text{District paved road mileage}}{\text{Total paved road mileage}}$$

Mileage refers to paved road mileage in the county road maintenance system (i.e. public paved roads that are routinely maintained by county public works forces). Roads will be selected for paving based on distribution/ availability of funds and priority within that council district, as determined by the condition analysis as maintained by public works.



How Roads Are Selected: Chapter 21

<i>Districts</i>		
<i>District #</i>	<i>Mile</i>	<i>Percent</i>
District 1	113.76	18.65%
District 2	71.02	11.64%
District 3	26.85	4.40%
District 4	4.46	0.73%
District 5	1.74	0.28%
District 6	3.40	0.56%
District 7	89.78	14.72%
District 8	93.84	15.38%
District 9	121.09	19.85%
District 10	30.92	5.07%
District 11	53.19	8.72%
<i>Totals</i>	610.05	100%

Funding per District = Total Funds x (% Paved Roads in the District)



How Roads Are Selected: Methodology

How to best distribute funds within each District annually?

How do we chose the roads within each District annually?

How do we chose the treatment type for the road?

Numerous approaches that can be taken. How do we decide?

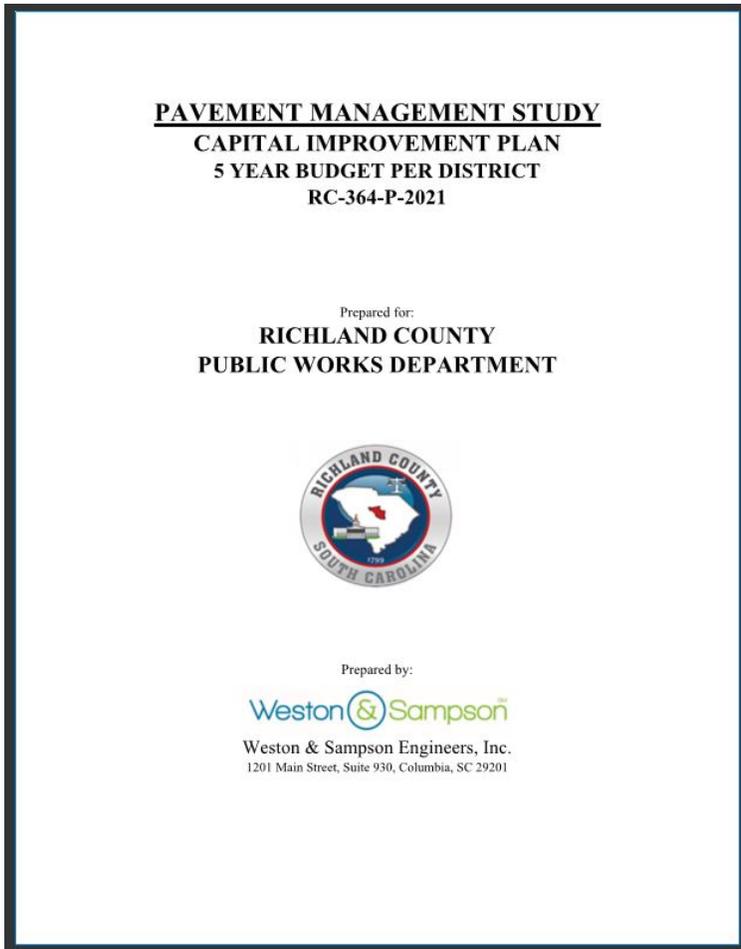
Objective & Analytical method

That can be applied systematically

Determining the condition of every road through a Pavement Management Study



Pavement Management Study (Example)



Richland County has preformed 2 Pavement Management Studies-

2015- Penny Transportation Program
Tolleson Limited Company

2021- Department of Public Work
Weston & Sampson

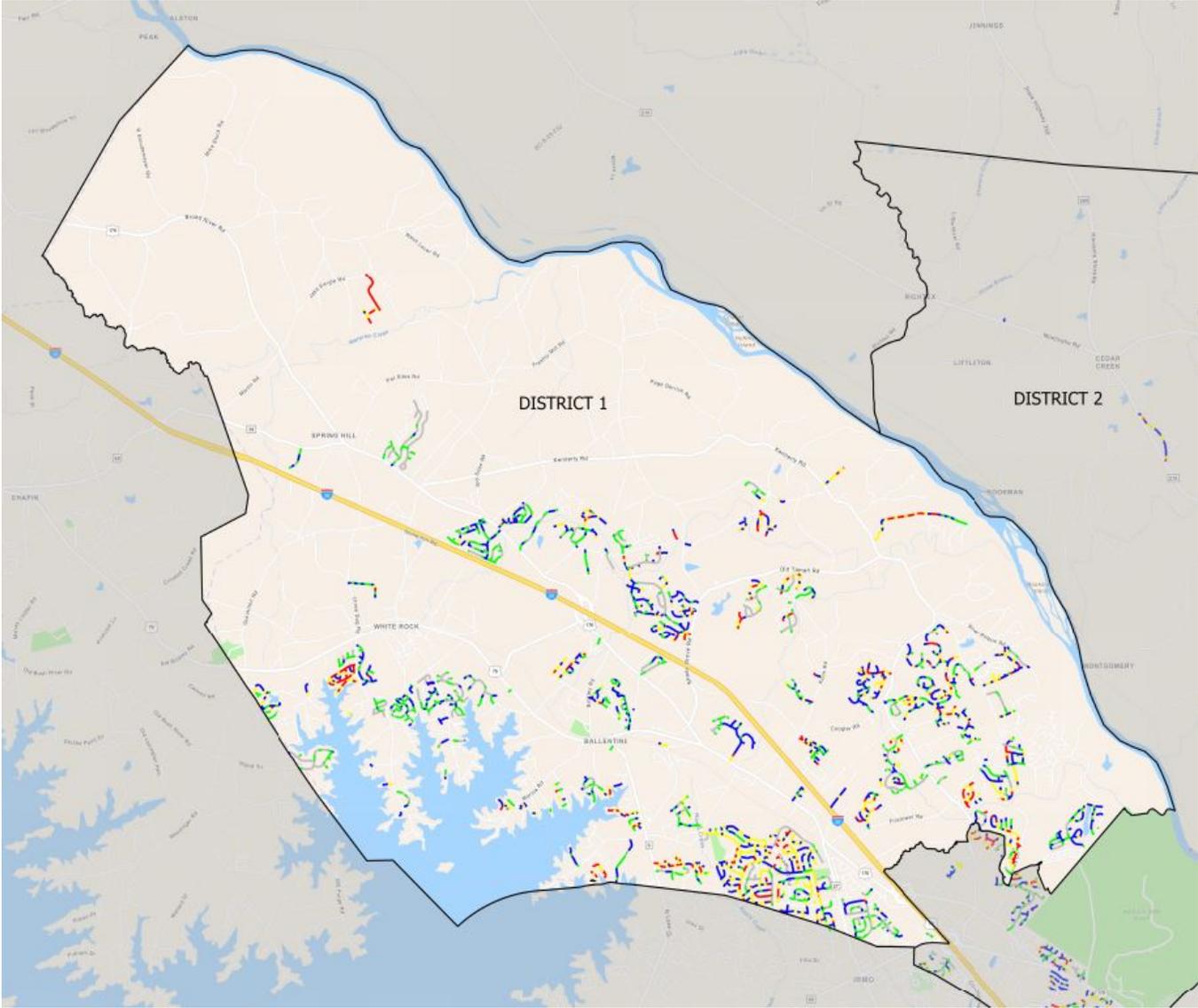


Pavement Management Study (Example)

Road Name	Section ID	PCI	GPS From	Column 1	GPS To	Column 2	Data Collection
AB Cir	400	56.4	34.09570	-80.86758	34.09557	-80.86757	7/12/2021
AB Cir	410	70.2	34.09649	-80.86746	34.09570	-80.86758	7/12/2021
AB Cir	420	96.3	34.09665	-80.86705	34.09649	-80.86746	7/12/2021
AB Cir	430	90.0	34.09346	-80.86712	34.09796	-80.85919	7/12/2021
AB Cir	440	94.4	34.09796	-80.85919	34.09713	-80.86246	7/12/2021



Pavement Management Study (Example)



Pavement Management Study (Example)

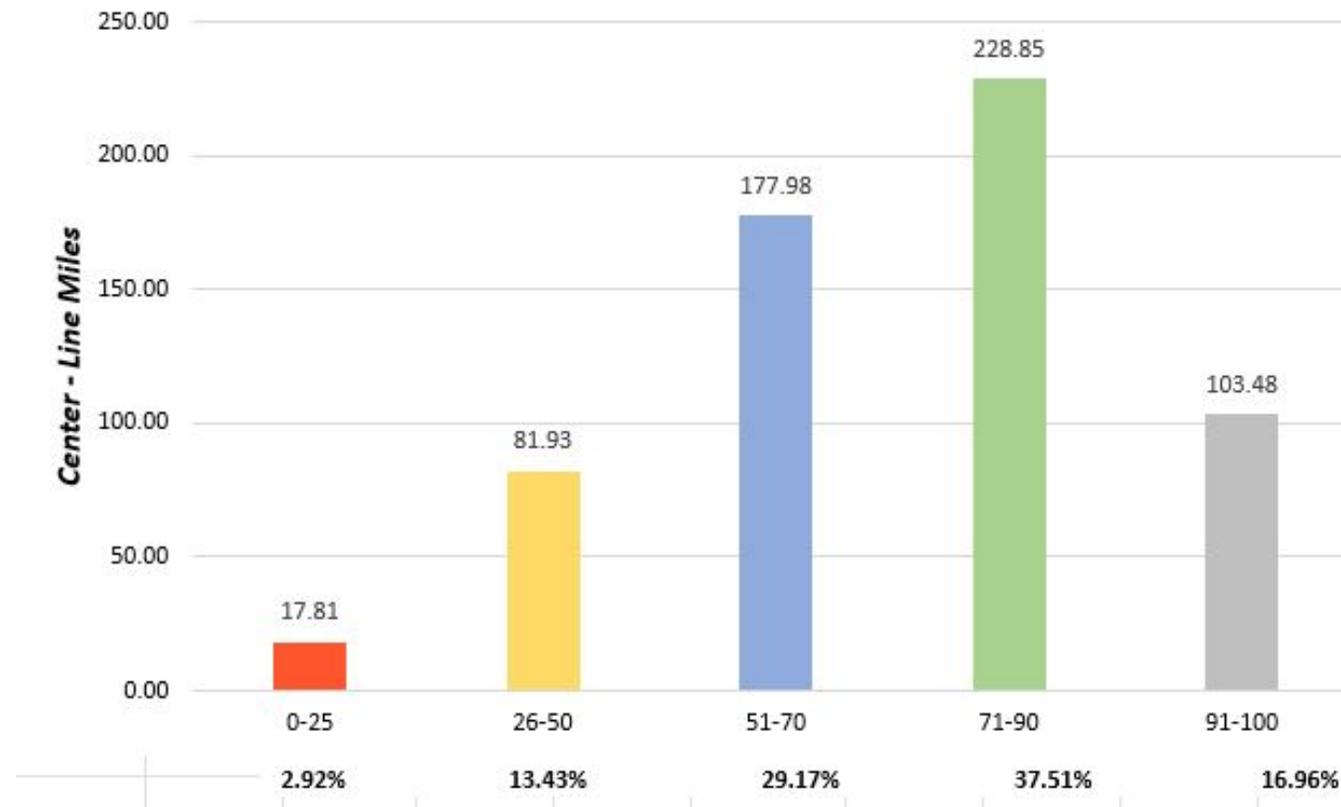


Pavement Management Study



RICHLAND COUNTY PAVEMENT MANAGEMENT STUDY PCI RATING RC-364-P-2021

COMBINED DISTRICTS



Funding: Available vs Needed

Item Description	Proposed Funding Source	Biennium			Biennium		Total
		FY21	FY22	FY23	FY24	FY25	
Unpaved Roadway Repair-Design	RMF	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000
Unpaved Roadway Repair-Construction	RMF	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$2,000,000
Sidewalk Capital Improvement	RMF	\$350,000					\$350,000
Miscellaneous Road Improvements	RMF	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
Road Resurfacing	RMF		\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$4,000,000
Rollover-previous year	RMF	\$1,600,000		unknown	unknown	unknown	\$1,600,000
Pavement Preservation	"C" Funds	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$2,500,000
Resurfacing Roads	"C" Funds	\$1,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$9,000,000
New Sidewalks	"C" Funds	\$1,000,000	\$500,000	\$500,000	\$500,000	\$500,000	\$3,000,000
New Sidewalk-Design	TAP		\$100,000	\$50,000	\$100,000	\$50,000	\$300,000
New Sidewalk-Construction	TAP			\$1,000,000		\$1,000,000	\$2,000,000
Totals		\$5,000,000	\$4,650,000	\$5,600,000	\$4,650,000	\$5,600,000	\$25,500,000

Table of Projected Funding from CTIP FY21 & FY22



Funding: Available vs Needed

Item Description	Proposed Funding Source	FY23
Unpaved Roadway Repair-Design	RMF	\$100,000
Unpaved Roadway Repair-Construction	RMF	\$400,000
Sidewalk Capital Improvement	RMF	
Miscellaneous Road Improvements	RMF	\$50,000
Road Resurfacing	RMF	\$1,000,000
Rollover-previous year	RMF	unknown
Pavement Preservation	"C" Funds	\$500,000
Resurfacing Roads	"C" Funds	\$2,000,000
New Sidewalks	"C" Funds	\$500,000
New Sidewalk-Design	TAP	\$50,000
New Sidewalk-Construction	TAP	\$1,000,000
Totals		\$5,600,000

Resurfacing Funding Summary for FY23:
 RMF= \$1,000,000 (on hold)
 C Fund= \$2,500,000 (not guaranteed)



Funding: Needed



RICHLAND COUNTY 5-YEAR CAPITAL IMPROVEMENT PLAN CURRENT BUDGET FOR COMBINED DISTRICTS

Richland County By Combined District			Yearly Budget					5-Year Plan	Required Budget	
Rehabilitation Method	\$ / Mile	Miles	2023	2024	2025	2026	2027	Current Budget	Required Budget	#/Years
No Action Required	\$0	103.48	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Preservation	\$70,400	228.85	\$3,222,208	\$3,222,208	\$3,222,208	\$3,222,208	\$3,222,208	\$16,111,040	\$16,111,040	5.0
Overlay	\$211,200	177.98	\$7,517,875	\$7,517,875	\$7,517,875	\$7,517,875	\$7,517,875	\$37,589,376	\$37,589,376	5.0
Mill and Fill w/ some Patching	\$352,000	81.93	\$5,767,872	\$5,767,872	\$5,767,872	\$5,767,872	\$5,767,872	\$28,839,360	\$28,839,360	5.0
Full Depth Reconstruction	\$528,000	17.81	\$1,880,736	\$1,880,736	\$1,880,736	\$1,880,736	\$1,880,736	\$9,403,680	\$9,403,680	5.0
Totals		610.04	\$18,388,691	\$18,388,691	\$18,388,691	\$18,388,691	\$18,388,691	\$91,943,456		



Funding: Needed

Districts			Year					5-Year Budget
District #	Mile	Percent	2023	2024	2025	2026	2027	Cost
District 1	113.75	18.65%	\$ 3,429,490.91	\$ 3,429,490.91	\$ 3,429,490.91	\$ 3,429,490.91	\$ 3,429,490.91	\$17,147,454.54
District 2	71.02	11.64%	\$ 2,140,443.66	\$ 2,140,443.66	\$ 2,140,443.66	\$ 2,140,443.66	\$ 2,140,443.66	\$10,702,218.28
District 3	26.85	4.40%	\$ 809,102.41	\$ 809,102.41	\$ 809,102.41	\$ 809,102.41	\$ 809,102.41	\$4,045,512.06
District 4	4.46	0.73%	\$ 134,237.45	\$ 134,237.45	\$ 134,237.45	\$ 134,237.45	\$ 134,237.45	\$671,187.23
District 5	1.74	0.28%	\$ 51,488.34	\$ 51,488.34	\$ 51,488.34	\$ 51,488.34	\$ 51,488.34	\$257,441.68
District 6	3.40	0.56%	\$ 102,976.67	\$ 102,976.67	\$ 102,976.67	\$ 102,976.67	\$ 102,976.67	\$514,883.35
District 7	89.78	14.72%	\$ 2,706,815.34	\$ 2,706,815.34	\$ 2,706,815.34	\$ 2,706,815.34	\$ 2,706,815.34	\$13,534,076.72
District 8	93.84	15.38%	\$ 2,828,180.71	\$ 2,828,180.71	\$ 2,828,180.71	\$ 2,828,180.71	\$ 2,828,180.71	\$14,140,903.53
District 9	121.09	19.85%	\$ 3,650,155.20	\$ 3,650,155.20	\$ 3,650,155.20	\$ 3,650,155.20	\$ 3,650,155.20	\$18,250,776.02
District 10	30.92	5.07%	\$ 932,306.64	\$ 932,306.64	\$ 932,306.64	\$ 932,306.64	\$ 932,306.64	\$4,661,533.22
District 11	53.19	8.72%	\$ 1,603,493.87	\$ 1,603,493.87	\$ 1,603,493.87	\$ 1,603,493.87	\$ 1,603,493.87	\$8,017,469.36
Totals	610.04	100%	\$18,388,691	\$18,388,691	\$18,388,691	\$18,388,691	\$18,388,691	\$91,943,456.00



Funding: Available based on current budget

 RICHLAND COUNTY 5-YEAR CAPITAL IMPROVEMENT PLAN CURRENT BUDGET FOR COMBINED DISTRICTS										
<i>Richland County Ry Combined District</i>			<i>Yearly Budget</i>					<i>5-Year Plan</i>	<i>Required Budget</i>	
<i>Rehabilitation Method</i>	<i>\$ / Mile</i>	<i>Miles</i>	<i>2023</i>	<i>2024</i>	<i>2025</i>	<i>2026</i>	<i>2027</i>	<i>Current Budget</i>	<i>Required Budget</i>	<i>#/Years</i>
No Action Required	\$0	103.48	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Preservation	\$70,400	228.85	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$2,500,000	\$16,111,040	32.2
Overlay	\$211,200	177.98	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$5,000,000	\$37,589,376	37.6
Mill and Fill w/ some Patching	\$352,000	81.93	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$5,000,000	\$28,839,360	28.8
Full Depth Reconstruction	\$528,000	17.81	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$5,000,000	\$9,403,680	9.4
Totals		610.04	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$17,500,000		



Funding: Available based on current budget

Districts			Year					5-Year Budget
District #	Mile	Percent	2023	2024,	2025	2026	2027	Cost
District 1	113.75	18.65%	\$ 652,750.00	\$ 652,750.00	\$ 652,750.00	\$ 652,750.00	\$ 652,750.00	\$3,263,750.00
District 2	71.02	11.64%	\$ 407,400.00	\$ 407,400.00	\$ 407,400.00	\$ 407,400.00	\$ 407,400.00	\$2,037,000.00
District 3	26.85	4.40%	\$ 154,000.00	\$ 154,000.00	\$ 154,000.00	\$ 154,000.00	\$ 154,000.00	\$770,000.00
District 4	4.46	0.73%	\$ 25,550.00	\$ 25,550.00	\$ 25,550.00	\$ 25,550.00	\$ 25,550.00	\$127,750.00
District 5	1.74	0.28%	\$ 9,800.00	\$ 9,800.00	\$ 9,800.00	\$ 9,800.00	\$ 9,800.00	\$49,000.00
District 6	3.40	0.56%	\$ 19,600.00	\$ 19,600.00	\$ 19,600.00	\$ 19,600.00	\$ 19,600.00	\$98,000.00
District 7	89.78	14.72%	\$ 515,200.00	\$ 515,200.00	\$ 515,200.00	\$ 515,200.00	\$ 515,200.00	\$2,576,000.00
District 8	93.84	15.38%	\$ 538,300.00	\$ 538,300.00	\$ 538,300.00	\$ 538,300.00	\$ 538,300.00	\$2,691,500.00
District 9	121.09	19.85%	\$ 694,750.00	\$ 694,750.00	\$ 694,750.00	\$ 694,750.00	\$ 694,750.00	\$3,473,750.00
District 10	30.92	5.07%	\$ 177,450.00	\$ 177,450.00	\$ 177,450.00	\$ 177,450.00	\$ 177,450.00	\$887,250.00
District 11	53.19	8.72%	\$ 305,200.00	\$ 305,200.00	\$ 305,200.00	\$ 305,200.00	\$ 305,200.00	\$1,526,000.00
Totals	610.05	100%	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$17,500,000.00



Funding: Five Year Allocation

Discuss-

Assumptions used

Life cycle

System growth based on development

Budget growth



Next Steps

Secure Funding

Incorporate roads into 5yr plan

Prepared CTIP FY23

Execute



Pavement Study Discussion Complete

QUESTIONS?

Next up Abandoned Roads



Abandoned Roads Program

PRIOR MEETINGS

<u>DATE</u>	<u>MEETING</u>	<u>SUBJECT OF MEETING</u>
• 6/26/2018	Committee Meeting	Using Public Funds on Private Road
• 10/16/2018	Council Work Session	Private Road Repairs
• 10/23/2018	ECT Meeting	Private Road Repairs
• 1/24/2019	Council Retreat	Using Public funds to make improve. to Private Roads
• 6/25/2019	A&F Committee	Department of Public Works – Private Road Takeover
• 9/17/2019	Special Called Council Mtg.	Prelim. Recommendations for Prioritizing Private Roads
• 4/21/2020	Council Meeting	Comprehensive Road Maintenance Program
• 5/4/2020	Council Work Session	Comprehensive Road Maintenance Program



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Abandoned Roads

- What has come into CRMS since inception 2020
 - [Abandoned Roads List](#)
- How are these roads being handled-
 - Short term
 - Long term

