



## Richland County Council

### Transportation Work Session

March 3, 2020 – 2:00 PM  
Council Chambers  
2020 Hampton Street, Columbia, SC 29204

1. **Call to Order**

The Honorable Calvin Jackson, Chair  
Transportation Ad Hoc Committee

2. **Adoption of Agenda**

3. **Opening Remarks**

4. **Presentation of Transportation Staff Findings**

Michael Niermeier, Transportation Director  
Allison Steele, Asst. Transportation Director

5. **Adjournment**

## Transportation Project Summary

### General

Since the implementation of the Penny Tax, the program has experienced a significant amount of cost increases. These increases throughout the last several years are primarily due to the increase in the cost of construction and materials, project overdesigns and also the cost of utility relocations that were not originally included in the Parsons Brinckerhoff study (the study that was the basis for the project list and project costs included in the referendum).

To date, some of the projects whose construction is already complete had costs that were less than their referendum amounts. These remaining funds can be applied to other projects.

In order to bring the program back into the total program budget, all projects that are not currently under construction were re-evaluated to determine a path forward. The two options available to best achieve this goal are:

1. Evaluate the remaining projects in order to de-scope them based on the following criteria:
  - a. Addressing and improving safety issues (based on crash data analysis)
  - b. Addressing and improving traffic capacity\flow issues (traffic study data)
  - c. Economic development
2. Complete projects in each category based on their rank. This will require that some projects not be completed.

### Safety

Currently safety on their roadway system is one of the top goals for the South Carolina Department of Transportation (SCDOT). This is due to South Carolina roadways having such a high fatality rate, including drivers, motorcyclists, and pedestrians. See **Table 1** below for Richland County fatalities from January 1 through December 8 over the last several years. Addressing safety issues should be a top priority for Richland County as well.

**Table 1 – Richland County Fatality Data (SC Dept. of Public Safety)**

<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
46	48	48	62

The following roadways near the proposed project locations had fatalities occurring during their crash data analysis timeframes: Atlas Rd. between Shop Rd and Garners Ferry (1), Broad River Rd. (1), Shop Rd. (2), and Decker Blvd. (1).

Also for the projects where crash data was provided, all had crashes during the analysis timeframe that had injuries as the result of the crashes.

## **Recommendation**

The Transportation Department recommends proceeding with option 1. This will allow at least some portion of every project voted in by Richland County citizens to be completed. It is recommended to evaluate and address any safety issues with each project first. If a project does not have a specific safety issue, it is then recommended to apply the second criteria and address traffic capacity\flow issues. Finally, if a project does not specifically address safety or capacity\flow issues, it will be evaluated to determine any economic development benefits which only applies to three projects.

The remaining projects not under construction have been broken up into two groups: Under Referendum Amount and Over Referendum amount. The above mentioned process has been applied to each group, with the following exceptions:

1. Sidewalks – Council has already approved completing the first 50 out of 56 projects
2. Dirt Road Paving Program – The number of roads completed will automatically be capped at the referendum amount
3. Resurfacing Program - The number of roads completed will automatically be capped at the referendum amount
4. Greenways – Council has already approved changes to the Greenway to stay within the referendum amount
5. Bikeways - The number of bikeways completed will automatically be capped at the referendum amount

See **Table 2** for a list of completed construction projects, their referendum amounts, their original cost estimates, and their final costs.

See **Tables 3.A and 3.B** for a list of remaining projects not under construction, their referendum amounts, their revised cost estimates based on descopes, and their projected cost savings.

**Tables 4.A-D** show how many projects can be completed if no projects are descoped. The projects in each category are listed in ranked order.

**Table 2 – Completed Projects**

<b>Project</b>	<b>District</b>	<b>Referendum</b>	<b>Original Estimate</b>	<b>Final Cost</b>
Bluff Widening Ph. 1	10	\$11,400,000 *	\$9,598,720	\$9,724,498
Clemson\Rhame Int.	8, 9	\$3,500,000	\$4,096,203	\$3,852,225
Broad River\Rushmore	2	\$3,700,000	\$1,213,739	\$1,196,893
Farrow\Pisgah Church	7	\$3,600,000	\$2,243,860	\$2,068,722
N. Springs\Risdon	8, 9	\$1,800,000	1,936,802	\$1,883,943
Summit\Summit Ridge	8, 9	\$500,000	\$1,425,120	\$1,407,819
Kennerly\Coogler	1	\$1,900,000	\$2,736,144	\$2,598,629
Wilson\Pisgah Church **	1	\$3,600,000	\$0	\$405
Wilson\Killian ***	1	\$2,600,000	\$0	\$405
Zoo Ped. Bridge	5	\$4,000,000	\$3,345,525	\$3,345,525
Innovista Ph. 1	5	\$17,897,970	\$18,119,764	\$17,897,970
Shop Ext. Ph. 1	1	\$35,163,888	\$35,163,888	\$32,446,866
Lincoln Tunnel	4, 5	\$892,739	\$1,496,947	\$1,512,061
Ped. Improvements	3-10	\$2,836,080	\$1,136,080	\$802,664
<b>TOTAL</b>		<b>\$93,390,677</b>	<b>\$82,512,792</b>	<b>\$78,738,625</b>

\* Amount from original referendum amount plus \$1.8M from outside funding

\*\*Wilson\Pisgah Church Rd. Intersection was completed by SCDOT.

\*\*\* Wilson\Killian Intersection was completed by SCDOT.

There is approximately \$14,652,052 remaining from these completed projects.

**Table 3.A – Remaining Projects Over Referendum And Not Under Construction**

<b>Project</b>	<b>District</b>	<b>Referendum</b>	<b>Original Estimate</b>	<b>Descope Estimate</b>
Atlas Widening	10,11	\$17,600,000	\$45,308,464	\$36,300,000
Bluff Ph. 2	10	\$8,800,000 *	\$40,341,854	\$3,500,000
Blythewood Widening	2	\$8,000,000	\$13,208,127	\$13,208,127
Broad River Widening	1	\$29,000,000	\$39,663,756	\$30,000,000
Lower Richland Widen.	11	\$6,100,000	\$6,708,092	\$5,000,000
Polo Widening\Bike	8-10	\$13,875,853	\$15,865,241	\$10,600,000
Shop Widening	10	\$33,100,000	\$46,461,612	\$32,000,000
Spears Creek Church	9,10	\$26,600,000	\$49,492,027	\$20,000,000
Pineview Rd.	10,11	\$18,200,000	\$39,927,057	\$8,000,000
Bull\Elmwood Inter.	4	\$2,000,000	\$3,798,911	\$3,798,911
Clemson\Sparkleberry	9,10	\$5,100,000	\$12,780,946	\$12,500,000
Screaming Eagle\Perc.	9,10	\$1,000,000	\$3,105,147	\$1,600,000
<b>TOTAL</b>		<b>\$167,675,853</b>	<b>\$316,661,234</b>	<b>\$176,507,038</b>

\* Amount leftover from combined phases 1 and 2 referendum amount

**Table 3.B – Remaining Projects Under Referendum And Not Under Construction**

<u>Project</u>	<u>District</u>	<u>Referendum</u>	<u>Original Estimate</u>	<u>Descope Estimate</u>
Blythewood Area Impr.	2	\$21,000,000	\$13,000,000	\$13,000,000
Leesburg Widening	10,11	\$4,000,000	\$4,000,000	\$4,000,000
I-20 Interchange	2,4,5	\$52,500,000	\$52,500,000	\$52,500,000
Garners Ferry\Harmon	11	\$2,600,000	\$1,583,878	\$50,000
Shop Ext. Ph. 2	10,11	\$42,300,000 *	\$40,112,788	\$27,000,000
Innovista Ph. 3	5	\$5,700,000 *	\$23,907,450	\$0
Kelly Mill Rd.	2,9	\$4,500,000	\$4,500,000	\$4,500,000
Commerce Dr.	5,10	\$5,000,000	\$5,000,000	\$5,000,000
Broad River Corridor	2,4,5	\$20,435,500	\$21,818,057	\$14,200,000
Crane Creek NIP	4,7	\$14,385,000	\$14,385,000	\$8,000,000
Decker\Woodfield NIP	3,8,10	\$12,343,000	\$13,156,741	\$8,000,000
Trenholm NIP	3	\$5,390,658	\$5,390,658	\$4,900,000
Bikeways	2-11	\$22,008,773	\$22,008,773	\$22,008,773
<b>TOTAL</b>		<b>\$212,162,931</b>	<b>\$221,363,345</b>	<b>\$163,158,773</b>

\* Amounts left over from original referendum amounts after earlier phases were completed.

<b>Total Referendum Amounts</b>	-	<b>\$379,838,784 (Excludes projects under construction)</b>
<b>Total Original Estimates</b>	-	<b>\$528,024,579</b>
<b>Total Descope Estimates</b>	-	<b>\$339,665,811</b>

If descope recommendations are approved, the new estimates will be \$40,172,973 under the referendum amount. Adding this to the approximately \$14,652,052 leftover from completed projects, there is estimated to be roughly \$54,825,025 remaining. Options to use this funding are 1) as a reserve for any needed contingencies if the descope estimates need to be adjusted, 2) put towards completing more Dirt Road Paving or Resurfacing projects, or 3) put towards completing additional sidewalk projects.

However, as shown in the projects highlighted in red in **Tables 3.A-D**, to proceed down the ranked list and complete the projects with their original scopes, four widening projects and one intersection project will not be constructed.

**Table 4.A – Remaining Widening Projects Without Descopes**

Category	Project	Referendum	Original Estimate
Widening	Leesburg Rd.	\$4,000,000	\$4,000,000
Widening	Lower Richland Blvd.	\$6,100,000	\$8,738,400
Widening	Bluff Area Impr.	\$16,700,000	\$40,341,854
Widening	Polo Rd.	\$12,800,000	\$15,865,241
Widening	Pineview Rd.	\$18,200,000	\$39,927,056
Widening	Shop Rd.	\$33,100,000	\$44,011,687
Widening	Atlas Rd.	\$17,600,000	\$44,797,948
Widening	Blythewood Rd.	\$8,000,000	\$14,713,963
Widening	Broad River Rd.	\$29,000,000	\$39,663,756
Widening	Spears Creek Church	\$26,600,000	\$49,492,027
<b>TOTAL</b>		<b>\$172,100,000</b>	<b>\$301,551,932</b>

**Table 4.B – Remaining Intersection Projects Without Descopes**

Category	Project	Referendum	Original Estimate
Intersection	Garners Ferry\Harmon	\$2,600,000	\$1,583,878
Intersection	Clemson\Sparkleberry	\$5,100,000	\$12,780,946
Intersection	Bull\Elmwood	\$2,000,000	\$3,798,811
Intersection	Screaming Eagle\Perc.	\$1,000,000	\$3,107,149
<b>TOTAL</b>		<b>\$10,700,000</b>	<b>\$21,270,784</b>

**Table 4.C – Remaining Special\NIP Projects Without Descopes**

Category	Project	Referendum	Original Estimate
Special	Shop Ext. Ph. 2	\$42,300,000	\$40,112,788
Special	Kelly Mill Rd.	\$4,500,000	\$4,500,000
Special	Innovista Ph. 3	\$5,700,000	\$23,907,450
Special\NIP	Broad River Corridor	\$20,435,500	\$14,200,000 *
Special\NIP	Crane Creek	\$14,385,000	\$8,000,000 *
Special\NIP	Decker\Woodfield	\$12,343,000	\$8,000,000 *
Special\NIP	Trenholm	\$5,390,658	\$4,900,000 *
Special	Commerce Dr.	\$5,000,000	\$5,000,000
<b>TOTAL</b>		<b>\$110,054,158</b>	<b>\$108,620,238</b>

\* NIP project estimates are listed as the revised estimates after the removal of landscaped medians, lighting, mast arms, and undergrounding of utilities.

**Table 4.D – Remaining Other Projects Without Descopes**

Category	Project	Referendum	Original Estimate
Interchange	I-20\Broad River	\$52,500,000	\$52,500,000
Bikeways	Bikeways	\$22,008,773	\$22,008,773

## **BLYTHEWOOD RD. AREA IMPROVEMENTS**

### **Original Project Scope**

- The project scope is for roadway improvements in the area of Blythewood Rd. specific to a prioritized listing provided by the Town of Blythewood. The referendum funding is only sufficient to cover the first two priorities.
  - Priority 1 – Widen\improve McNulty St. from Main St. to Blythewood Rd.
  - Priority 2 – Widen\extend\improve Creech Rd. from Blythewood Rd. to Main St.
  - Priority 3 – Widen\improve Blythewood Rd. from I-77 to Main St.
  - Priority 4 – Widen\improve Blythewood Rd. from Syrup Mill Rd. to Fulmer Rd.

**Referendum Funding** - \$21,000,000.00

**Current Cost Estimate** (for 1 and 2) - \$13,000,000

### **Traffic Analysis and Results**

- McNulty St. – The intersections with Blythewood Rd, US 21, and Boney St. currently all have adequate LOSs (A\C). In the year 2040, the intersections with US 21 and Boney Rd will still be adequate (A\C), however, the intersection with Blythewood Rd. will have an LOS of F. It is proposed to install a traffic circle at McNulty\Boney to improve traffic flow.
- Crash Data between 1/1/14 – 12/31/17 (4 years)
  - **Intersections:** US 21\McNulty – 1 Blythewood\McNulty – 14 McNulty\Boney Rd - 1
  - **Road Section:** Blythewood to US 21 – 7
- Since Creech Rd. is currently a dead-end road that is proposed to be extended to US 21, there is no traffic data for it.

### **Public Input Results**

- McNulty St - The public supports improvements to McNulty to update the existing varied road width to a standard width and to install sidewalks on both sides of the road. A significant number of citizens did not support a traffic circle at McNulty\Boney.
- Creech Rd – No public meeting held yet

### **Right-Of-Way**

- To date, no new ROW has been obtained

### **Possible Design Modifications to Lower Cost**

- The Blythewood Area Improvements project includes 4 projects, ranked in priority by the Town of Blythewood. There will not be enough referendum funding to complete all 4 projects so only the first two projects are being moved forward. After completing the first two projects, there will be approximately \$8,000,000 remaining that would not be sufficient to fund either of the last two projects. If this funding were transferred to the Blythewood Rd. Widening project, it would be sufficient to cover the difference in the referendum and cost estimate amounts.
- The crash data indicates that the number of crashes in a 4-year period is low. This widening project would address **Capacity** issues.

**Note: This option was discussed with the Town of Blythewood. It is not yet in writing.**

### **HARDSCRABBLE RD. WIDENING**

- SCDOT has managed the design and is currently managing the construction of this project. County funding is capped at \$29,860,800 in either a monetary amount to be paid to SCDOT or in-kind inspection services. To date, the County has provided \$28,117,086.

### **LEESBURG RD. WIDENING**

- SCDOT is currently managing the design of this project and will manage the construction. County funding is capped at \$4,000,000 in a monetary amount to be paid to SCDOT. To date, SCDOT has not invoiced the County.

### **I-20\BROAD RIVER RD. INTERCHANGE**

- SCDOT will manage the design and construction of this project. County funding is capped at \$52,500,000 in a monetary amount to be paid to SCDOT. To date, SCDOT has not invoiced the County.

### **DIRT ROAD PAVING PROGRAM**

- \$45M was assigned to this program, and to date approximately \$17.4M has been expended.
- It is recommended that when this funding runs out, C Funds are requested to continue with the program.

### **RESURFACING PROGRAM**

- \$40M was assigned to this program, and to date approximately \$26.6M has been expended.
- It is recommended that when this funding runs out, C Funds are requested to continue with the program.



## GARNERS FERRY RD\HARMON RD. INTERSECTION PROJECT

### Original Project Scope

The proposed scope is to install a dedicated right turn lane from Garners Ferry Rd. onto Harmon Rd. and to install dedicated left and right turning lanes from Harmon Rd. onto Garners Ferry Rd. A new traffic signal will also be installed as part of the project.

**Referendum Funding** - \$2,600,000

**Current Cost Estimate** - \$1,583,877.81

### Traffic Analysis and Results

- Garners Ferry Rd. – The existing LOS for both eastbound and westbound are C in the AM and B in the PM.
  - If no work is performed, the 2040 AM LOS will be C eastbound and E westbound and 2040 PM LOS will be C for eastbound and westbound.
  - After completing this project, the anticipated 2040 AM LOS will be C eastbound and D westbound; the anticipated 2040 PM LOS will be B in both directions.
- Harmon Rd. – The existing AM LOS northbound is D and southbound is F; the existing PM LOS northbound is D and southbound is E.
  - If no work is performed, the 2040 AM LOS will be E northbound and F southbound, and the 2040 PM LOS will be D northbound and F southbound.
  - After completing this project, the anticipated 2040 AM LOS will be E northbound and F southbound; the anticipated 2040 PM LOS will be E in both directions.
- Crash Data between 1/1/13 – 3/31/16 (3 years) shows that there have been 41 crashes in this timeframe at this intersection with the majority being rear-end collisions. None of these crashes occurred on Harmon Rd. and only two appear to be related to traffic turning right from Garners Ferry to Harmon.

**Public Input Results** - No public meetings held to date for this project.

### Right-Of-Way

- ROW Obtained To Date – 4 parcels
- Expended To Date - \$69,663

### Possible Design Modifications to Lower Cost

1. Overall, the proposed scope does not drastically improve safety or capacity at this intersection.
  - a. Option 1 – Only install the Garners Ferry Rd. right turn lane **New Est. \$1.04M (Approx. Savings \$0.54M)**
  - b. Option 2 – Only install the Harmon Rd. turning lanes **New Est. \$1.31M (Approx. Savings \$0.27M)**
  - c. Option 3 – Do not complete the project at this time but proceed with a more detailed traffic study in order to come up with better solutions. One possible future solution could be to widen a portion of Harmon Rd. It is recommended to only perform a detailed traffic study at this time. **Study Estimate \$50,000 (Approx. Savings \$1.53M)**
  - d. Option 4 – Complete the entire project **No Savings**

## **SHOP RD. EXTENSION PH. 2 PROJECT**

### **Original Project Scope**

The proposed scope recommends extending Shop Road from its Phase 1 terminus at Longwood Rd., east and northeasterly to its future terminus at the intersection of Garners Ferry Road\Trotter Rd\Old Hopkins Rd. This new road will consist of a two-lane road with four-foot shoulder and ditch section. Four alternates for the new road have been presented, and Council approved to proceed with Alternate 4.

**Referendum Funding** - \$71,800,000 for Phases 1 and 2

**Current Cost Estimate** - \$40,112,787.51

Approximately \$33M has been spent to date, leaving approximately \$38.8M for Phase 2. The Economic Development Department will reimburse \$3.5M for Phase 1, which will bring the total for Phase 2 up to \$42.3M.

### **Traffic Analysis and Results**

- Traffic analysis was performed along existing Montgomery Lane, which intersects with Lykesland Trail and Pinchusion Rd and then terminates at Old Hopkins Rd. Old Hopkins, which intersects Air Base Rd., Lykesland Trail, and Old Garners Ferry Rd., then conveys traffic to Garners Ferry Rd.
  - Currently all of these intersections function at an LOS of A, B or C except for the intersection of Old Hopkins and Garners Ferry, which functions at levels B, C, D, E and F.
- The design year 2043 was only evaluated for the proposed alternates 1 and 2, which do not have the same intersections that were evaluated for existing conditions; therefore, comparing existing to future is not possible.
- Crash Data between 1/2015 – 12/2017 (3 years) along Old Hopkins Rd. shows that there have been 75 crashes, most being listed as Rear-End Collisions and Not Collision With Motor Vehicle. The intersection of Old Hopkins and Garners Ferry\Old Garners Ferry had the highest number of collisions, accounting for 42 of the 75.

### **Public Input Results**

Public comments from the December 6<sup>th</sup>, 2018 reflect that Alternate 2 is the least favored. Alternates 3 and 4 seemed to have the most support.

**Right-Of-Way** - No ROW has been obtained at this time.

### **Possible Design Modifications to Lower Cost**

1. Proceed with Alternate 4 with no cost savings.
2. Proceed with Alternate 4 from Shop Rd. Ext. Ph. 1 to Montgomery Ln. and then allow traffic to continue on Montgomery. Also, perform any needed intersection improvements along Montgomery\Old Hopkins, and add improve safety at existing railroad crossing. This will eliminate the need for a new railroad crossing, extra wetlands disturbance, and extra ROW acquisition. **New Approx. Estimate: \$27M (Approx. Savings \$13.1M)**

## **INNOVISTA PH. 3 PROJECT**

### **Original Project Scope**

This project, also known as the Williams Street Extension, consists of constructing a new roadway from Blossom Street to Gervais Street, approximately (2,650') and also completing a section of Senate Street from the new roadway to the west.

**Referendum Funding** - \$50,000,000 for 3 phases **Current Cost Estimate** – \$23,907,450

This cost estimate was provided by the City of Columbia in 2014. There is no record of an estimate from the former PDT. Greene St. phases 1 and 2 accounts for approximately \$17.9M and \$26.4M leaving only \$5.7M to complete phase 3.

**Traffic Analysis and Results** – None performed

**Public Input Results** - No public meetings held to date for this project

**Right-Of-Way** - No ROW has been obtained at this time.

### **Possible Design Modifications to Lower Cost**

1. Because the cost estimate is approximately four times the amount remaining for this phase, and because this project does not address safety or capacity issues, it is recommended to not proceed with phase 3. **Savings \$5.7M**

## **KELLY MILL ROAD PROJECT**

### **Original Project Scope**

This project falls within the Special category and is listed as starting at the intersection of Hardscrabble Rd. and ending just past the entrance to Lake Carolina Elementary School. There are no further details on the exact scope of this project.

**Referendum Funding** - \$4,500,000

**Current Cost Estimate** – None – Assume referendum amount

**Traffic Analysis and Results** – None performed. A traffic analysis would provide the means to define a scope of work for this project.

**Public Input Results** - No public meetings held to date for this project

**Right-Of-Way** - No ROW has been obtained at this time.

### **Possible Design Modifications to Lower Cost**

1. It is recommended to proceed with a traffic study to determine what, if any, work should be performed at this location and to create an Engineer's cost estimate for construction.

## **COMMERCE DRIVE IMPROVEMENTS PROJECT**

### **Original Project Scope**

This project consists of relocating a portion of the Commerce Drive alignment to allow for a future extension of Runway 13 at the Owens Field Airport. It is also the intent to have this road be a gateway road leading from the airport to Rosewood Drive, with curb, gutter, planted median, sidewalks and lighting. There are potential economic development impacts related to airport expansion.

**Referendum Funding** - \$5,000,000

**Current Cost Estimate** – None – Assume referendum amount.

**Traffic Analysis and Results** – None performed

**Public Input Results** - No public meetings held to date for this project

**Right-Of-Way** - No ROW has been obtained at this time.

### **Possible Design Modifications to Lower Cost**

1. This project does not address safety or capacity but has the potential to assist with economic growth in the area with the runway extension allowing for larger aircraft to land at the airport. Because Council approved in 2019 to remove landscaped medians and lighting from projects, these items will be removed from this project.

## **BROAD RIVER ROAD CORRIDOR IMPROVEMENTS PROJECT**

### **Original Project Scope**

The concept phase of this project has been completed, and the recommended scope of work has been approved by Council. The scope includes making intersection improvements at Broad River\St Andrews, Broad River\Bush River, and Broad Rive\Greystone. The original scope also recommended landscaped medians, street lighting, and mast arms, all of which Council has since approved to remove from further projects. The final recommendation was to underground utilities; however, this option is being removed because it does not qualify for funding under DOR guidelines.

**Referendum Funding** - \$63,000,000 for all NIPs      **Current Cost Estimate** – \$21,818,057

**Traffic Analysis and Results** – None performed to date

### **Public Input Results**

- The biggest concern voiced was over the possibility of raised concrete medians. Most citizens who provided comments supported flush medians.
- Some citizens requested bike lanes and new signalization at different intersections.
- A few comments requested resurfacing to be performed.

**Right-Of-Way** - No ROW has been obtained at this time.

### **Possible Design Modifications to Lower Cost**

1. The removal of the landscaped medians, street lighting, mast arms, and the undergrounding of utilities will reduce the cost of this project. It is recommended to move forward with a traffic study to determine a detailed scope of work that needs to be included at each intersection. **New Approx. Estimate: \$14.2M (Approx. Savings \$7.6M)**

## **CRANE CREEK IMPROVEMENTS PROJECT**

### **Original Project Scope**

The original scope of this project includes new sidewalk along Blue Ridge Terrace, Heyward Brockington Rd., Crane Church Rd., Dakota Dr., Seagull Ln., Roberson St., and Lincolnshire North Drive. It also includes landscaped medians and streetscaping along Blue Ridge Terrace, Heyward Brockington, Crane Church and portions Monticello Rd. Because Council approved in 2019 to remove landscaping from future projects, landscaping and streetscaping will not be completed for this project.

**Referendum Funding** - \$63,000,000 for all NIPs      **Current Cost Estimate** – \$14,385,000

**Traffic Analysis and Results** – None performed to date

### **Public Input Results**

- There was general support for the sidewalks
- Some citizens requested lighting and sidewalks along additional roads in the community

**Right-Of-Way** - No ROW has been obtained at this time.

### **Possible Design Modifications to Lower Cost**

1. The removal of the landscaping and streetscaping will reduce the cost of this project. It is recommended to move forward with only the sidewalk work. **New Approx. Estimate: \$8M (Approx. Savings \$6.3M)**

## **DECKER\WOODFIELD PARK IMPROVEMENTS PROJECT**

### **Original Project Scope**

This project consists of two phases. Phase 1 proposes sidewalks along Brookfield Rd., Faraway Dr., and the Chatsworth Pedestrian Connector. Phase 2 proposes streetscaping and intersection improvements along a portion of Decker Blvd. Because Council approved in 2019 to remove landscaping from future projects, streetscaping will not be completed for this project.

**Referendum Funding** - \$63,000,000 for all NIPs      **Current Cost Estimate** – \$13,156,740.93

### **Traffic Analysis and Results**

- A traffic study was performed at the intersections of Decker Blvd. with Trenholm Rd., Dent Middle School, Oneil Ct, Joye Cir., Decker Park Rd., and Brookfield Rd.
- The only intersections that are not currently and will not in the design year 2028, function at an adequate LOS are Oneil Ct. and Joye Cir.
- Crash Data between 1/2015 – 3/2018 (3.25 years) shows that there were 175 crashes along Decker Blvd. between Trenholm Rd. and Brookfield Rd. with the majority being angle and rear-end collisions.
- 1 fatality

### **Public Input Results (2 meetings held)**

- The comments showed about the same support and non-support of landscaped medians and burying power lines.
- Some comments requested additional sidewalks on other roads, especially Percival Rd. Percival Rd. will have sidewalks installed on it under a separate project.
- Some comments requested additional street lighting.
- Some comments received at one of the meetings were against the proposed Columbia Mall Greenway.

**Right-Of-Way** - No ROW has been obtained at this time.

### **Possible Design Modifications to Lower Cost**

1. The removal of the landscaping and streetscaping will reduce the cost of this project. It is recommended to move forward with only the sidewalk and intersection improvement work. **New Approx. Estimate: \$8M (Approx. Savings \$6.3M)**



## **TRENHOLM ACRES/NEWCASTLE IMPROVEMENTS PROJECT**

### **Original Project Scope**

The scope of this project includes new sidewalks along Claudia Dr., Humphrey Dr., Nancy Ave., Shakespeare Rd., Sprott St., Warner Dr., and Westmore Dr. It also includes streetscaping along Fontaine Rd., Parklane Rd., and Two Notch Rd. Because Council approved in 2019 to remove landscaping from future projects, streetscaping will not be completed for this project.

**Referendum Funding** - \$63,000,000 for all NIPs

**Current Cost Estimate** – \$5,390,658.00

**Traffic Analysis and Results** – None performed to date

### **Public Input Results**

- There was general support for the new sidewalks; however, a lot of comments requested even more sidewalks on additional roads.
- There was not a lot of support for the landscaped medians/streetscaping.

**Right-Of-Way** - No ROW has been obtained at this time.

### **Possible Design Modifications to Lower Cost**

1. The removal of the landscaping and streetscaping will reduce the cost of this project. It is recommended to move forward with the sidewalk work. **New Approx. Estimate: \$4.9M (Approx. Savings \$0.4M)**

## **BIKEWAYS**

### **Original Project Scope**

The scope of this project includes 87 bikeway projects along various sections of roadways throughout the County. These projects were broken down into categories of Restriping, Road Diets, Sharrows, and Shared Use Paths. Because Council approved in 2019 to remove SUPs from future projects, SUPs will not be completed for this project.

**Referendum Funding** - \$22,008,773    **Current Cost Estimate** – none – assume referendum amount

**Traffic Analysis and Results** – None performed to date

**Public Input Results** - No public meetings held to date for this project

**Right-Of-Way** - No ROW has been obtained at this time.

### **Possible Design Modifications to Lower Cost**

1. Remove any SUP projects.
2. The Columbiana Dr. road diet was denied by SCDOT.
3. Twelve restriping projects were denied by SCDOT due to design restrictions.

The removal of these items will greatly reduce the cost estimate for the bikeway program. Because a cost estimate has not yet been performed on this category, it is unknown at this time how much the estimate will be reduced.

## ATLAS RD. WIDENING

### Original Project Scope

- The project scope for Atlas Road is to widen the two lane roadway to alleviate existing and projected traffic for this travel way. Proposed improvements include widening the road to three lanes between Bluff Road and Shop Road and widening to five lanes between Shop Road and Garners Ferry Road. Additional improvements include two four-foot wide bike lanes and two five-foot wide sidewalks.

**Referendum Funding** - \$17,600,000.00

**Current Cost Estimate** - \$45,308,464.22

### Traffic Analysis and Results

- The traffic analysis report showed that widening the road from two to three lanes between Bluff Road and Shop Road had minimal improvements to the 2040 Level of Service (LOS) for this section of Atlas Road. Both the “build” and “no-build” alternatives provided the same LOS.
- However, the report did show a significant improvement to Atlas Road between Shop Road and Garners Ferry Road in 2040 based on widening the road to five lanes of travel. The Level of Service improves from a D in the “no-build” scenario to an A in the “build” scenario.
- Crash Data between 1/1/12 and 7/14/15 (3.6 years) most crashes were rear-end collisions
  - **Intersections:** Atlas\Bluff – 5 Atlas\Garners Ferry – 107 Atlas\Shop – 50
  - **Road Sections:** Shop to Garners Ferry – 74 Bluff to Shop – 18
  - 1 fatality

### Public Input Results

- While the public was mostly supportive of the proposed improvements, Bible Way Church representatives expressed concerns with pedestrian traffic access to church buildings located on both sides of Atlas Road. Several comments were in opposition of the widening, and several requested a traffic signal at the intersection of Atlas and Richard St.
- Other frequent comments were related to right-of-way acquisition.

### Right-Of-Way

- ROW Obtained To Date – 110 parcels, 7 permissions, 8 condemnations (22 condemnations are outstanding)
- Expended To Date - \$2,977,978.96

### Possible Design Modifications to Lower Cost

- Option #1- Proceed with widening Atlas Road between Shop Road and Garners Ferry Road while including pedestrian improvements between Bluff Road and Shop Road.  
**New Approx. Estimate: \$36.3M (Approx. Savings \$9M)**  
**Note: This is the only option that addresses capacity issues and addresses the greater amount of crashes (safety).**
- Option #2- Proceed with widening Atlas Road between Bluff Road and Shop Road while removing the section between Shop Road and Garners Ferry Road **New Approx. Estimate: \$22.2M (Approx. Savings \$23.1M)**  
**Note: This option could be implemented in Penny 2.0**
- Option #3- No road widening improvements but install sidewalks and bike lanes along full length of road  
**New Approx. Estimate: \$14M (Approx. Savings \$31.3M)**

## **BLUFF ROAD PHASE 2 IMPROVEMENTS**

### **Original Project Scope**

- The original project scope for the Bluff Road Phase 2 Improvements project was to widen Bluff Road to five lanes with bicycle and pedestrian accommodations. On June 05, 2018, Richland County Council approved to revise the project scope to only include constructing shared use paths on both sides of Bluff Road with asphalt resurfacing from National Guard Road/Berea Road to South Beltline Blvd. A second and third reading was not found. The project length is 2.00 miles.

### **Referendum Funding** - \$16.7M for Phases 1 and 2

- Bluff Road Phase 1 (Rosewood Avenue to National Guard Rd) had \$9.6M allocated for it, with additional outside funding in the amount \$1.8M. The final cost to complete Bluff Ph. 1 was \$9,724,498. Therefore, \$8.8M is the remaining allotment for Bluff Road Phase 2.

**Current Cost Estimate:** \$40,341,854.39

### **Traffic Analysis and Results**

- The traffic analysis was conducted at the intersections along the length of this project. Providing turning lanes for these intersections would improve the LOS at each. The intersection of Bluff Road and Bluff Industrial Blvd meets several signalization warrants.
- Crash Data between 1/1/11 and 10/31/14 (3.8 years) shows that there have been 327 crashes in this timeframe between Rosewood Dr. to South Beltline Rd., the majority being rear-end collisions. 98 of these crashes were near intersections, with 49 being near the intersection of Bluff Rd. and Bluff Industrial Blvd.

### **Public Input Results**

- A public hearing was held for the original scope of widening the road. The majority of attendees were in favor of bike lanes adjacent to the travel lanes on both sides of the roadway and sidewalks for pedestrians.

### **Right-Of-Way**

- ROW Obtained To Date – 0      Expended To Date - \$4,500.00

### **Possible Design Modifications to Lower Cost**

- Option # 1 - Remove the ten-foot shared use path, only resurface and construct five foot sidewalks with 4' bike lanes, and shorten the ending termini to Southern Dr., which is the last road with residential use. Install traffic signal at Bluff\Bluff Industrial **New Approx. Estimate: \$8M (Approx. Savings \$33.3M)**
- Option # 2 – Because the intersection of Bluff Rd. and Bluff Industrial Blvd. has a significant number of crashes and warrants a traffic signal, install the traffic signal at this location. Remove the sidewalk and bike lanes from the project, perform intersection improvements as needed at the remaining intersections, and then resurface the road. **New Approx. Estimate: \$3.5M (Approx. Savings \$36.8M)**

**Note: This area is mostly commercial\industrial so except during football games, it is unclear that there would be much pedestrian\cyclist traffic in this area.**

## **BLYTHEWOOD RD WIDENING**

### **Original Project Scope**

- The proposed scope recommends a 5-lane (4 travel lanes with a center turn lane) improvement from I-77 west to Syrup Mill Road. Provisions for bicycle and pedestrian accommodation are proposed through the construction of offset, shared-use paths. This project also includes a double-lane roundabout at the intersection of Community Rd and Blythewood Rd. (as part of Blythewood's Master Plan.) This project has economic development tie-ins with the future Blythewood Industrial Park.

**Referendum Funding** - \$8,000,000.00 **Current Cost Estimate** - \$13,208,127.44

### **Traffic Analysis & Results**

- The traffic analysis was conducted along this road and at the intersections along the length of this project. Widening this roadway greatly increases the LOS both along the roadway and at these intersections.
- A signal warrant analysis performed at the intersection of Syrup Mill Rd. and Blythewood Rd. was performed. Based on warrant analysis results and field reviews a signal is not recommended at this location.
- Crash Data between 1/1/13 and 12/31/15 (3 years) shows that there were 22 crashes between I-77 southbound ramp and Muller Road with the majority being rear-end collisions.

### **Public Input Results**

- Many citizens support the project with the shared-use paths.
- Many citizens do not support the roundabout.
- Many citizens requested a traffic signal at the intersection of Syrup Mill Rd. and Blythewood Rd.

### **Right-Of-Way**

- ROW Obtained To Date– 15 parcels, 7 condemnations (Pending Approval) Expended To Date - \$484,265.00

### **Possible Design Modifications to Lower Cost**

- The Blythewood Area Improvements project includes 4 projects, ranked in priority by the Town of Blythewood by resolution on January 28, 2019. There will not be enough referendum funding to complete all 4 projects so only the first two projects, chosen by the town, are being moved forward. After completing the first two projects, there will be approximately \$8,000,000 remaining that would not be sufficient to fund either of the last two projects. If this funding were transferred to the Blythewood Rd. Widening project, it would be sufficient to cover the difference in the referendum and cost estimate amounts.

**Note: This option was discussed with the Town of Blythewood and is acceptable to them.**

## **BROAD RIVER RD. WIDENING**

### **Original Project Scope**

- The project scope for the Broad River Road Widening Project was to widen the roadway to 5 lanes between Royal Tower Drive and Dutch Fork Road in the Irmo community. In addition, the road was to be widened to 3 lanes between Dutch Fork Road and I-26 (Exit 97).
- (2) 4-foot wide bike lanes and (2) 5-foot wide sidewalks are included in the project scope.

**Revised Project Scope** - Based on traffic volumes, public input, and funding, the PDT recommended to only include the widening from North Royal Tower to Dutch Fork.

**Referendum Funding** - \$29,000,000.00

**Current Cost Estimate**: \$39,663,756.37

### **Traffic Analysis and Results**

- The traffic study evaluated 15 intersections along the length of this project along with the intersections of the off/on ramps of I-26. SCDOT plans to widen I-26 in this area, so the off/on ramps would be addressed with their project.
- The 2043 Level of Service in this corridor has been identified as “Adequate” for the proposed improvements while the 2043 “No- Build” evaluation showed that the majority of the intersections would operate at a “F” Level of Service. The recommended proposed improvements from the traffic study are to improve the intersections by increasing turning bays.
- Crash Data between 1/1/13 and 12/31/15 (3 years) shows that there were 161 crashes near these 15 intersections with the majority being rear-end collisions.
- 1 fatality

### **Public Input Results**

- 185 residents attended the December 15, 2016, Public Meeting
- The design alternative supported by the most residents was a 5 lane travel way that included 2 4-foot wide bike lanes and 2 5-foot wide sidewalks
- Residents agreed that removing the 3 lane section between Dutch Fork Road and I-26 was preferred

### **Right-Of-Way**

- ROW Obtained To Date – 0      Expended To Date - \$0

### **Possible Design Modifications to Lower Cost**

- Widen the road to 3 lanes (2 driving lanes and a median) and also provide turning lanes at the intersections that are missing them at this time. This could improve turning movements in and out of the many businesses in the corridor and decrease the number of rear-end collisions.

**New Approx. Estimate: \$30M (Approx. Savings \$9.6M)**

**Note: This option would not improve capacity but would improve safety and would improve flow since left-turning vehicles would be able to pull into the median instead of block the flow of traffic.**

- The cost estimate includes approximately \$1,150,000 to relocate a 54” waterline at SCDOT’s request. Staff is currently working with SCDOT to possibly have this requirement removed.

## LOWER RICHLAND BOULEVARD WIDENING

### Original Project Scope:

The proposed scope recommends a 5-lane section (4 travel lanes and a center turn lane) between Rabbit Run and Garners Ferry Road and will include bicycle and pedestrian accommodations. Bike lanes and a shared use path are also proposed along both sides of Lower Richland Boulevard.

**Referendum Funding:** \$6,100,000      **Current Cost Estimate:** \$6,708,092

### Traffic Analysis And Results

The intersection of Garners Ferry Rd and Lower Richland Blvd will perform at a LOS of E/D (AM/PM peak hours) in 2042 with no-build scenario. The completed project will bring the LOS up to a C.

The intersection of Lower Richland Blvd and Rabbit Run is currently functioning at an LOS of B and will continue to function at this LOS in year 2042 even with the no-build scenario.

Crash Data between 1/1/15 and 6/30/18 (3.5 years) shows that there were 17 reported crashes with rear-end collisions being the most common.

### Public Input Results

- Only 5 comments were received from the public meeting held for this project. 2 were supportive of the project, 1 was concerned with drainage, 1 was concerned with the intersection of Lower Richland and 378, and 1 was a complaint not specifically pertaining to this project.

### Right-Of-Way

- ROW Obtained To Date – 0      Expended To Date - \$0

### Possible Design Modifications To Lower Cost

1. Do not widen the road or perform any intersection work at Rabbit Run. Perform intersection improvements by installing dedicated left-turn lanes at Garners Ferry and install 5' sidewalks on both sides of the road from Rabbit Run to Garners Ferry. **New Approx. Estimate: \$5M (Approx. Savings \$1.7M)**  
**Note: This option addresses the inadequate LOS and provides pedestrian safety.**
2. Instead of building sidewalk on both sides of Lower Richland, limit sidewalk to the east side and limit it to 5' in width. There will be an existing 10' wide share-use path running along the east side of Lower Richland from Rabbit Run approximately 1800 feet south to Lower Richland stadium entrance. (See SERN plans). **New Approx. Estimate: \$6.6M (Approx. Savings \$0.1M)**
3. If sidewalk on west side of road is kept, reduce the proposed width from 8' down to 5'.  
**New Approx. Estimate: \$6.6M (Approx. Savings \$40,000)**

## **POLO RD. WIDENING**

**Original Project Scope** – Widen Polo Rd. from a 2-lane road to a 3-lane road from Two Notch Rd. to Mallet Hill Rd. and install sidewalks and bikeways from Two Notch Rd. to just south of Mallet Hill Rd.

**Referendum Funding:** Widening - \$12,800,000 Bikeway – \$1,075,853 **TOTAL:** \$13,875,853

**Current Cost Estimate:** \$15,865,240.98

**Traffic Analysis And Results** – The traffic analysis performed mainly looked at the LOS at the intersection of Polo Rd. with Two Notch Rd., Running Fox Rd., Miles Rd., and Mallet Hill Rd.

Because only a median, or third lane is proposed as part of this widening, the LOS of the corridor will not improve because the median will not provide any extra traffic capacity to the overall road.

The proposed median has the potential to improve the LOS at some of the intersections over the next couple of years, but not all intersections. In looking at the 20-year traffic projection, even with the proposed median, most of the intersections will have an LOS of D, E or F.

Crash Data between 1/15 and 9/18 (3.7 years) shows that there were 74 crashes reported with the most common being angle and rear-end collisions.

**Public Input Results** – After reviewing the public comments received through mail, email and public meeting attendance, 66% of these comments were either neutral or opposed the widening of this road. Only 34% supported the widening of the road.

A few of the neutral\opposed were against the widening but okay with SUPs, bikeways and\or sidewalks.

The biggest concern from the comments are that there will be an increase in traffic and also speeding along Polo Road and that the project will damage the wetlands and cause flooding.

### **Right-Of-Way**

- ROW Obtained To Date – 0 Expended To Date - \$0

### **Possible Design Modifications To Lower Cost**

1. Do not widen the entire road but rather provide intersection improvements (turning lanes) at the locations of the four intersections (Polo Rd. with Two Notch Rd., Running Fox Rd., Miles Rd., and Mallet Hill Rd), and then include bikeways and 5' sidewalks.

**New Approx. Estimate: \$10.6 (Approx. savings is \$5.2)**

**Note: This is the most economical solution to address LOS issues and provide pedestrian\bicyclist safety.**

2. Do not widen or complete intersection improvements but do install bikeways and 5' sidewalks.  
**New Approx. Estimate: \$8.6M (Approx. savings is \$7.2M)**



## SHOP ROAD WIDENING

### Original Project Scope:

The proposed scope recommends a 5-lane (4 travel lanes with a center turn lane) widened roadway with offset, shared use paths along both sides of the road (for bicycle and pedestrian accommodations) on Shop Road from George Rogers Blvd. to Mauney Drive.

**Referendum Funding:** \$33,100,000      **Current Cost Estimate:** \$46,461,612

### Traffic Analysis And Results

- For opening year (2022) and design year (2042) “no-build” conditions, most of the intersections within the project limits function at an adequate Level of Service but some are inadequate.
- The analysis shows that the widening project will significantly improve the Levels of Service once the project is completed; however, a few intersections will still function at an inadequate level and in year 2042 more of the intersections will function at an inadequate level.
- Crash Data between 1/1/11 and 10/31/14 (3.9 years) shows that there were 82 reported crashes with rear-end collisions being the most common.
  - 2 fatalities

### Public Input Results

- General support of the project widening and the plans for the addition of bike / pedestrian accommodations.
- Relocations (Residential & Commercial) & R/W issues – many questions relative to the process for relocations and ultimately, compensation.
- Parking / vehicular circulation impacts adjacent to Shop Road (by a few business owners)
- Traffic Signals at Side Roads / Safety –comments relative to adding traffic signals at side roads within Little Camden / Washington Park. The comments received were concerned with safety of crossing the road due to speeding traffic and increased volumes.
- Walcott Drainage - planned improvements to the drainage outfall along Walcott Street; specifically that the outfall needed improvements.

### Right-Of-Way

- ROW Obtained To Date – 5      Expended To Date - \$104,265.00

### Possible Design Modifications To Lower Cost

1. Remove SUPs and buffers from both sides of the road and install 4’ bike lanes with 5’ sidewalks.  
**New Approx. Estimate: \$46M (Approx. savings is \$0.6M)**
2. Currently, a significant portion of this road is 2 lanes with turning lanes at a few intersections. Option 2 would be uniformly widen the road to a 3-lane (2 travel lanes and one median) and include the bike lanes and sidewalks. The median would allow for and improve turning movements in and out of the various roads and driveways. **New Approx. Estimate: \$32M (Approx. savings is \$14.4M)**  
**Note: This option would improve the driver safety along the road since most collisions were rear end. This would also set up to widen the road to a 5-lane road in the future.**

## **SPEARS CREEK CHURCH RD. WIDENING**

**Original Project Scope** – Widen Spears Creek Church Rd. from a 2-lane road to a 5-lane road starting at Two Notch Rd. and ending at Percival Rd.

**Referendum Funding** - \$26,600,000    **Current Cost Estimate** - \$49,492,027.07

### **Traffic Analysis And Results**

- A traffic analysis has not been completed for this project.
- Crash Data between 1/1/15 and 12/31/17 (3 years) shows that there were 129 reported crashes with rear-end collisions being the most common.

**Public Input Results** – To date, no public meetings have been held. The project never progressed to the point of a public meeting.

### **Right-Of-Way**

- ROW Obtained To Date – 0    Expended To Date - \$0

### **Possible Design Modifications To Lower Cost**

1. The average daily traffic on this road is similar in quantity to other two-lane roads in this vicinity of the County such as Bookman Rd., N. Brickyard Rd., Sparkleberry Ln., and Percival Rd. These other roads are not currently scheduled for widening. Widen the road to a 3-lane in order to provide a median from Two Notch Rd. to Jacobs Mill Pond Rd.

**New Approx. Estimate: \$20M (Approx. Savings is \$29.4M)**

**Note: This option would improve the driver safety along the road since most collisions were rear end. This would also set up to widen the road to a 5-lane road in the future Penny 2.0.**

## **PINEVIEW ROAD IMPROVEMENTS**

**Original Project Scope** - Widen Pineview Rd. to three lanes between Bluff Rd. and Shop Rd., widen Pineview Rd to 5 lanes between Shop Rd. and Garners Ferry Rd., pedestrian\bicycle accommodations, and intersection improvements at Shop Rd. This project has economic development tie-ins to the surrounding industrial areas.

**Referendum Funding** - \$18,200,000      **Current Cost Estimate** - \$39,927,056.67  
(Est. based on PDT's last estimate for full project)

### **Traffic Analysis And Results**

#### **Pineview between Bluff Rd. and Shop Rd.**

- Existing conditions is a LOS B both for the current year and year 2041 in the AM. Existing conditions LOS is a C\B (northbound\southbound) in the PM. These LOSs for 2041 are all adequate even if this section of road is not widened. The analysis recommends the third lane in order to remove turning traffic from through lanes.
- Crash Data between 1/1/12 and 2/28/15 (3.2 years) for Pineview between Bluff and Shop shows that there were 7 reported crashes with run-off-road collisions being the most common.

#### **Pineview between Shop Rd. and Garners Ferry Rd.**

- Existing conditions is a LOS D\E for AM\PM both for the current year and year 2041. Widening this section to 5 lanes will bring the LOS to A\B in the AM\PM for year 2041.
- Crash Data between 1/1/12 and 2/28/15 (3.2 years) for Pineview between Shop and Garners Ferry shows that there were 54 reported crashes with rear-end collisions being the most common.

### **Public Input Results**

- The majority of the public comments from the first public meeting were against widening Pineview between Bluff and Shop Roads. This widening would eliminate all of the parking for the Pine Bluff Baptist Church; however, the majority of these parking spaces are in the current road ROW. The comments for and against bike lanes\sidewalks were evenly split.
- The majority of the comments received at the second public meeting did not specifically mention the widening but were supportive of bike lanes. There were also several requests to include a traffic light at the intersection of Pineview and American Italian Way.

**Right-Of-Way**              ROW Obtained To Date – 0      Expended To Date - \$0

### **Possible Design Modifications To Lower Cost**

1. According to SCDOT, Pineview between Bluff and Shop was resurfaced in 2015 so it would not need resurfacing at this time. Due to the construction of the Shop Road Extension, it is anticipated that traffic along Pineview between Shop and Garners Ferry will most likely decrease, which would improve the future LOS. This section of road was resurfaced over 10 years ago. Most of the development along this road is light industrial\commercial so pedestrian and bicycle accommodations are not recommended. It is recommended to widen Pineview between Shop and Garners Ferry to a 3 lane, which would improve safety and address rear-end collisions.

**New Approx. Estimate: \$8M (Approx. Savings is \$31.9M)**

## **BULL\ELMWOOD INTERSECTION**

**Original Project Scope** – Construct an additional lane on the southside of Elmwood Avenue beginning at Marion Street and ending at the Bull Street Intersection to provide eight lanes and a raised concrete median. The existing southbound right-turn lane from Bull Street to Elmwood Avenue is proposed to be converted to a channelized free-flow movement. Bull Street is proposed to be restriped to add an additional northbound through lane and remove the southbound dedicated right turn onto Calhoun Street. The leg of Elmwood Avenue that is used as the entrance to the old Department of Mental Health Facility will retain the existing lane configurations.

**Referendum Funding:** \$2,000,000      **Current Cost Estimate:** \$3,798,911.02

**Traffic Analysis And Results** – The traffic study performed at this intersection was part of an overall study to evaluate traffic related to the BullStreet mixed-use development.

At the time of the traffic analysis in 2016, this intersection functioned at a LOS of D in the AM peak and LOS of F in the PM peak.

Once the development is completed, the intersection is expected to function at LOS of E in the AM and F in the PM. The proposed scope of work will improve these levels back to a D in the AM and a D in the PM.

Crash Data between 2015 and 2017 (3 years) shows that there were 73 reported crashes at this intersection with sideswipe collisions being the most common.

**Public Input Results** - No public input information was found for this project.

### **Right-Of-Way**

- ROW Obtained To Date – 5 permissions, 3 parcels      Expended To Date - \$222,535 (Est.)

### **Possible Design Modifications To Lower Cost**

There does not appear to be another cost-saving option for this project that would address capacity or safety issues.

## CLEMSON\SPARKLEBERRY INTERSECTION

**Original Project Scope** – Improvements to the intersection of Clemson Rd. and Sparkleberry Ln. and surrounding area to increase intersection capacity. The initial design also included 10' SUPs on both sides of the roads leading up to the intersection.

**Referendum Funding:** \$5,100,000

**Current Cost Estimate (Alt. 3):** \$15,751,126.37 **Current Cost Estimate (Alt. 4):** \$12,780,946.12

**Traffic Analysis And Results** – The traffic analysis performed mainly looked at the LOS at the intersection of Clemson Rd. and Sparkleberry Ln., although any improvements made to this intersection will also affect the surrounding intersections. The existing LOS for the AM and PM peak hours is D/E, and the proposed 20-year LOS is F in the AM and the PM.

Based on the traffic analysis, the OET presented three intersection improvement alternates. The first two alternatives offered no real improvement to the capacity of the intersection. The third alternate keeps the 20-year LOS at a C. The cost estimate for this alternative, called a double crossover or diverging intersection, is roughly 3 times the referendum amount.

In 2019 the PDT performed an independent study to evaluate a fourth alternate called a modified quadrant. This alternative will provide a LOS of C\B for the AM\PM peak hour, and it brings the cost estimate of the project down to roughly 2.5 times the referendum amount.

Crash Data between 1/2011 and 12/2014 (4 years) shows that there were 69 reported crashes at this intersection with angle collisions being the most common.

**Public Input Results** – A public meeting was held in December 2015, and citizens were given the option to vote on Alternates 1, 2, or 3. Out of the 26 comments received, 20 selected alternate 3. A second public meeting was held in April 2018 to review updated plans for alternate 3.

There has not yet been a public meeting to unveil alternate 4 that was completed by the PDT in 2019.

### **Right-Of-Way**

- ROW Obtained To Date – 1 Expended To Date - \$3,229,910.40

### **Possible Design Modifications To Lower Cost**

1. Remove SUPs and/or sidewalks along Sparkleberry Ln. and Sparkleberry Crossing from the design. There are no current sidewalks or SUPs along Sparkleberry in this area to tie any of these new features into. Proceed with the Alternate 4 design. **New Approx. Estimate: \$12.5M (Approx. savings is \$0.2M)**

**Note: There does not appear to be another cost-saving option for this project that would address capacity or safety issues.**

## **SCREAMING EAGLE/PERCIVAL INTERSECTION PROJECT**

### **Original Project Scope**

The proposed scope recommends realigning Screaming Eagle Road to bring the angle of the intersection closer to a right angle as well as widening Screaming Eagle Road to provide left and right turn lanes, which will improve capacity. Percival Road is also proposed be widened to provide a left turn lane onto Screaming Eagle Road. The project also includes installing a new traffic signal at the intersection.

**Referendum Funding:** \$1,000,000.00    **Current Cost Estimate:** \$3,105,147.46

### **Traffic Analysis & Results**

The traffic results show that at the time of the study in 2016, 3 out of the 4 legs of this intersection were functioning at a Level of Service A and even if no work is performed at the intersection, these same 3 legs will continue to function at an A in year 2040. In 2016, the 4<sup>th</sup> leg was functioning at an LOS of D. This leg, is proposed to function at a C if the improvements are made in 2020, and will function at a D in year 2040.

Crash Data between 1/2013 and 3/31/16 (3.2 years) shows that there were 5 reported crashes at this intersection with run-off-road being the most common.

**Public Input Result:** No public meetings held for this intersection

### **Right-Of-Way**

- ROW Obtained To Date – 2 parcels, 4 permissions      Expended To Date - \$22,525.00

### **Possible Design Modifications to Lower Cost**

1. Instead of shifting this intersection and providing turning lanes in all directions, leave it in its current location and improve the current intersection by adding a turning lane to address the LOS at the 4<sup>th</sup> leg, which is the only one with capacity issues. Install the traffic signal as planned.

**New Approx. Estimate: \$1.6M (Approx. savings is \$1.5M)**

**Note: This option will address the capacity issue now at the 4<sup>th</sup> leg of the intersection.**