

Definition and Weighting of Criteria for Prioritization of Transportation Penny Projects

Richland County Council approved the following 13 criteria for prioritizing the roadway widenings, intersections and special projects for their Transportation Penny Program. The criteria were utilized to rank the projects within each category of the program. The first five criteria are to be considered "Top Priority".

- o Public Safety
- o Potential for Economic Development
- o Right of Way Obtained
- o Design Work Completed
- o Dedicated Funds
- o Traffic Volume and Congestion
- o Truck Traffic
- o Pavement Quality Index
- o Environmental Impact
- o Alternative Transportation Solutions
- o Consistency with Local Land Use Plans and Neighborhood Improvement Plans
- o Sequencing / Practicality
- o Connectivity

Weighting of Criteria

Since the first five criteria are considered "Top Priority", their total weight equaled a maximum of 60% out of a possible 100. The individual weights of these five are as follows:

- o Public Safety - 15%
- o Potential for Economic Development - 10%
- o Right of Way Obtained - 15%
- o Design Work Completed - 10%
- o Dedicated Funds - 10%

The remaining eight criteria carried the following weights:

- o Traffic Volume and Congestion - 7%
- o Truck Traffic - 5%
- o Pavement Quality Index - 4%
- o Environmental Impact - 5%
- o Alternative Transportation Solutions - 4%
- o Consistency with Local Land Use Plans and Neighborhood Improvement Plans - 5%
- o Sequencing / Practicality - 4%
- o Connectivity - 6%

Definition of Criteria

Public Safety (15 Points) - Accident data obtained through SCDOT was utilized and considered accidents/mile and fatalities/mile. The data was scored on a sliding scale of 0-7.5 for each of the data sets. The highest value of each data set was divided by 7.5, which created a denominator. This

denominator was used to determine the weighted scores. Those two values were combined to determine the total project Safety score.

The following is an example of how the weighted scores are calculated:

	Criteria	Data	Weighted Score		Total
	Acc./Mile	Fatal./Mile	Acc./Mile	Fatal./Mile	Score
Atlas Rd.	31.87	0.00	1.92	0.00	1.92
Bluff Rd.	124.54	0.38	7.50	4.50	12.00
Blythewood	45.33	0.00	2.73	0.00	2.73
Blythewood	4.73	0.00	0.29	0.00	0.29
Broad River	3.85	0.00	0.23	0.00	0.23
Clemson Rd.	46.68	0.45	2.81	5.35	8.16
Lower Richland	36.98	0.00	2.23	0.00	2.23
Pineview Rd.	31.00	0.00	1.87	0.00	1.87
Polo Rd.	8.49	0.00	0.51	0.00	0.51
Shop Rd.	25.40	0.64	1.53	7.50	9.03
Spears Creek Church Rd.	34.06	0.00	2.05	0.00	2.05
	16.61	0.08			

Calculations of all criteria are provided at the end of each project category.

Potential for Economic Development (10 Points) - Projects were evaluated to determine the potential Short-Term, Intermediate, and Long- Term Development base on the County's 12/15/2009 Future Land Use Map. Projects scores were distributed as follows:

- Short Term - Within Priority Investment or Suburban Boundaries - 10 points
- Intermediate - Within Urban Village, Urban or Municipal limits - 6.5 points
- Long Term - All other areas - 3.25 points

Right of Way Obtained (15 Points) - ROW status was obtained from SCDOT or other project participants to determine the percentage of ROW obtained to date based on dollars expended vs. dollars budgeted for ROW. The ROW scores were distributed based on a sliding scale of 0-15. The highest percentage of ROW obtained was divided by 15, which created a denominator. This denominator was used to determine the weighted scores for ROW.

Design Work Completed (10 Points) - Design status was obtained from SCDOT or other project participants to determine the percentage of design completed to date based on Preliminary Engineering dollars expended vs. dollars budgeted for Preliminary Engineering. The Design scores were distributed based on a sliding scale of 0-10. The highest percentage of Design completed was divided by 10, which created a denominator. The denominator was used to determine the weighted scores Design.

Dedicated Funds (10 Points) - Funding status was obtained from SCDOT or other project participants to determine the percentage of funds that had been dedicated to date based on the estimated costs for the project as a whole. The Funding scores were distributed based on a sliding scale of 0-10. The highest percentage of Funding dedicated was divided by 10, which created a denominator. This denominator was used to determine the weighted scores for Funding.

Traffic Volume and Congestion (7 Points) - Current Traffic Volumes were obtained from SCDOT and the Level-of-Service (LOS) was determined based on the current volumes and SCDOT's Travel Demand Models. The Traffic scores were distributed based on a sliding scale of 0-6. The highest value of Traffic was divided by 6, which created a denominator. This denominator was used to determine the weighted scores for Traffic. Each Traffic score received an additional point if the project was considered congested (LOS = D, E or F).

Truck Traffic (5 Points) - Current Truck Traffic Volumes were obtained from SCDOT. The Truck scores were distributed based on a sliding scale of 0-5. The highest value of Trucks was divided by 5, which created a denominator. This denominator was used to determine the weighted scores for Truck Traffic.

Pavement Quality Index (4 Points) - Current Pavement Quality Indexes (PQI) were obtained from SCDOT. The PQI scores were distributed based on a sliding scale of 0-4. The highest value of PQI was divided by 4, which created a denominator. This denominator was used to determine the weighted scores for PQI. This value was then subtracted from 4 to determine the project PQI score.

Environmental Impact (5 Points) - Projects were assessed on the potential conflicts with wetlands, cultural/natural resources via RC GIS website. The scoring was distributed in the following manner:

	Conflict	Potential Conflict	No Conflict
Wetlands	0	1.25	2.5
Cultural/Natural	0	1.25	2.5

The above values were summed to produce the overall Environmental score.

Alternative Transportation Solutions (4 Points) - Projects were compared to the current COMET routes. Those that were within current routes received a full 4 points.

Consistency with Local Land Use Plans and Neighborhood Improvement Plans (5 Points) - Scores were utilized from the previous study for Richland County. The highest point total for Land Use was divided by 5, which created a denominator. This denominator was used to determine the weighted scores for Land Use.

Sequencing / Practicality (4 Points) - Projects were reviewed to see if they fell within the limits of other project types. Those that fell in other project limits received an additional point for each project overlapped. The highest point total for Sequencing was divided by 4, which created a denominator. This denominator was used to determine the weighted scores for Sequencing.

Connectivity (6 Points) - Projects were reviewed for connectivity of like project type (i.e. if a 5 lane project connects two existing 5 lane sections, it will receive points). The highest point total for Connectivity was divided by 6, which created a denominator. This denominator was used to determine the weighted scores for Connectivity.



Prioritization of Widening Projects

<u>Ranking</u>	<u>Total Score</u>	<u>Council District</u>	<u>Project Names</u>	<u>Begin Location</u>	<u>End Location</u>	<u>Length</u>	<u>Special Typical</u>	<u>2012 Original Budget</u>
1	73.73	7, 8, 9	Hardscrabble	SC 555 Farrow Rd.	Lake Carolina Blvd.	6.15	5-lane	\$ 29,860,800
2	47.62	9, 10	Clemson Rd.	Old Clemson Rd.	Sparkleberry Crossing	2.21	5-lane	\$ 23,400,000
3	47.34	11	Leesburg Rd.	Fairmont Rd	Lower Richland	3.75	5-lane	\$ 4,000,000
4	45.66	4	N. Main St.	Anthony Avenue	Fuller Avenue	1.50	4-lane	\$ 30,000,000
5	43.86	10	Bluff Rd.	I-77	Rosewood Dr.	2.63	5-lane	\$ 16,700,000
6	40.94	10	Shop Rd.	I-77	George Rogers Blvd.	3.15	5-lane	\$ 33,100,000
7	37.01	10, 11	Atlas Rd.	Bluff Rd.	Garners Ferry Rd.	2.82	3/5-lane	\$ 17,600,000
8	32.93	10, 11	Pineview Rd.	Bluff Rd.	Garners Ferry Rd.	2.94	3/5-lane	\$ 18,200,000
9	29.90	2, 7	Blythewood	Syrup Mill Rd.	I-77	0.75	5-lane	\$ 8,000,000
10	29.72	1	Broad River	Royal Tower Rd.	Peak Interchange	4.67	5/3-lane	\$ 29,000,000
11	28.14	9, 10	Spears Creek Church Rd.	Two Notch Rd	Percival Rd	2.53	5-lane	\$ 26,600,000
12	23.82	11	Lower Richland	Rabbit Run Rd.	Garners Ferry Rd.	0.54	5-lane	\$ 6,100,000
13	21.37	8, 9, 10	Polo Rd.	Mallet Hill Rd.	Two Notch Rd.	2.00	3-lane	\$ 12,800,000
14	14.29	2, 7	Blythewood	Syrup Mill Rd.	Winnsboro Rd.	3.38	3-lane	\$ 21,000,000