



RSTP Project Profile – Candidate Project #6

1. **Project Sponsor(s):** Roanoke County
2. **Proposed Implementing Agency:** Roanoke County
3. **Project Description and Attached Aerial Showing Proposed Improvement Location:**

The Plantation Road Bicycle, Pedestrian and Streetscape Improvement project (Plantation Road Project) encompasses the length of Plantation Road (Route 115) from Interstate 81 to Williamson Road (Route 11), a distance of about one mile. Proposed improvements include sidewalks, shared use paths, pedestrian crosswalks and signals, street trees, pedestrian-scaled lighting, a Hollins community identification sign, landscaping and drainage improvements. One of the primary goals of constructing the shared use paths is to connect Walrond Park with the Tinker Creek Greenway which then intersects with an extensive network of trails at Carvins Cove Natural Reserve (see attached Tinker Creek Greenway map).

The overall project cost increased due to unforeseen utility conflicts and necessary relocations, implementing new stormwater management requirements, relocating a signal arm in a difficult location and adjusting an existing retaining wall.

Phase One will utilize the current project funds with a construction advertisement date of October, 2015. Planned improvements include a shared use path from Williamson Road to Walrond Drive and sidewalk from Walrond Drive to Gander Way on the west side of Plantation Road; sidewalks from Williamson Road to Friendship Lane along the east side of Plantation Road; curb, gutter, street trees and pedestrian-scaled lighting along the shared use path and sidewalk and pedestrian signals and crosswalks for two legs of the Gander Way/Friendship Lane traffic signal.

Phase Two is the subject of this application. Phase Two extends the Phase One improvements to the north along Plantation Road with sidewalk, curb, gutter, street trees and pedestrian-scaled lighting extending from Gander Way and Friendship Lane to Days Inn and McDonald’s. The remaining two legs of crosswalks and pedestrian signals will be installed at the Gander Way/Friendship Lane intersection. A sidewalk connection to Walrond Park is also included with accompanying shared use paths on Carvin Street and Gander Way to connect to Plantation Road at the Gander Way/Friendship Lane intersection.

The project qualifies for the Regional Surface Transportation Program under the following eligibility categories:

Pedestrian and/or Bicycle Improvements:

- Shared use paths connecting Walrond Park to the Tinker Creek Greenway and Carvins Cove;
- Sidewalks with crosswalks, pedestrian signalization and ADA ramps;
- Bicycle accommodations; and
- Streetscaping with street trees and pedestrian-scaled lighting.

Highway Capacity, Accessibility, and Operational Improvements: Access management improvements including constructing right turn lanes and realigning/reconstructing/combining commercial entrances.

Transportation Demand Management Projects: Potential Park and Ride lot

Transit Projects: Potential expansion of existing Valley Metro and/or Smart Way bus service

4. **Detailed Scope of Work, proposed Schedule and Relation to Other Projects or Project Phases, Project Status and Other Funding Sources:**

Detailed Scope of Work and Proposed Schedule

Tentative Date	Activity
Summer, 2015	Award Notification
Winter, 2015/2016	Final Design
Spring, 2016	Right-of-Way Acquisition
Fall, 2016	Construction Advertisement
Spring/Summer, 2017	Construction

Relation to Other Projects or Project

Phases



The Plantation Road Bicycle, Pedestrian and Streetscape Improvement Project was conceived in 2009 as a means to begin implementing several strategies included in the Hollins Area Plan which was adopted by the Roanoke County Board of Supervisors in November, 2008, as a component of the Roanoke County Comprehensive Plan. The Plantation Road Project has received about \$3.8 million (including matching funds) in funding from the Revenue Sharing Program, the Transportation Enhancement Program, the Transportation Alternatives Program and the Regional Surface Transportation Program.

Roanoke County contracted with Whitman, Requardt and Associates in August, 2013, to begin preliminary engineering of the project. Outreach to area businesses, organizations and other stakeholders started in September and continued into December, 2013. Substantial feedback was received from a Citizen Information Meeting held in January, 2014, where conceptual project plans were presented to the public. In June, 2014, the project was broken into phases due to funding constraints. 60 percent plans for Phase One were submitted in September, 2014, and a Design Public Hearing for this phase will be held in November, 2014. The construction advertisement date for Phase One is October, 2015.

Phase Two Project Status

- Surveying and Preliminary Engineering – Complete
- Army Corps of Engineers Jurisdictional Waters Determination Request – Submitted
- Programmatic Categorical Exclusion – Submitted
- Design Public Hearing, Right-of-Way, Final Design – Needed and dependent upon funding

Other Funding Sources

No other sources of funding are available at this time.

5. **Functional Classification:** Urban Principal Arterial

6. **Existing Traffic Volume and Level of Service with Improvement:**

2010 Existing Level of Service (2012 Plantation Road Corridor Study)				
Direction	Plantation Road Cross Street	AM	Midday	PM
Northbound	Williamson Road	F	F	F
	Friendship Lane/Gander Way	B	A	B
	Overall	D	C	D
Southbound	Williamson Road	C	C	D
	Friendship Lane/Gander Way	B	C	D
	Overall	C	C	D

7. **Existing Volume/Capacity:**

Plantation Road Segment	Average Daily Traffic (2012 Plantation Road Corridor Study)	Annual Average Daily Traffic Volume Estimates (2013 VDOT)
Interstate 81 to Friendship Lane/Gander Way	16,327	12,000 (I-81 to Indian Road)
Friendship Lane/Gander Way to Walrond Drive	15,642	
Hitech Road to Milk-A-Way Drive	17,609	
Indian Road to Williamson Road (Route 11)		15,000

8. **Future Traffic Volume or Projected Ridership with Service Implementation:** Additional bicyclists and pedestrians will safely utilize planned bicycle and pedestrian accommodations along Plantation Road.

9. **Future Volume/Capacity and Level of Service:** Additional bicyclists and pedestrians will safely utilize planned bicycle and pedestrian accommodations along Plantation Road.

10. **Estimated Project Cost by Phase:** (see attached Project Budget for additional detail)

Phase Two	Total
Preliminary Engineering	\$193,300
Right-of-Way	Unknown
Construction	\$2,162,900
Total Cost	\$2,356,200
Total RSTP Request	\$2,356,200



11. RSTP Candidate Project Rating Factors

A. Regional Project Consideration

While the Plantation Road Project is located within and sponsored by Roanoke County, its benefits and impacts will reach far beyond the jurisdictional line.

Gateway to the Roanoke Valley: The Plantation Road exit off of Interstate 81 is the first entrance into the Roanoke Valley from the north. This important commercial and tourism corridor should present a safe and welcoming gateway to visitors.

Regional Employee Distribution and Mass Transit Opportunities: Hundreds of employees headed to Plantation-area businesses use Exit 146 and Plantation Road every day; thousands more leave Hollins using Plantation Road to access other parts of the Roanoke Valley and beyond. Several Plantation Road businesses have asked for bus service to the area and a park and ride has also been discussed as a need.

Regional Greenway Network: One of the primary goals of the overall Plantation Road Project is to connect Walrond Park to the Tinker Creek Greenway which leads north to Carvins Cove Natural Reserve and will intersect to the south with the Roanoke River Greenway. The localities and organizations involved in these resources include Botetourt County, the City of Roanoke, the Town of Vinton, the City of Salem and the Western Virginia Water Authority.

B. Support the Economic Vitality of the Metropolitan Area

All of the proposed improvements will not only help Roanoke County to retain existing Plantation Road-area businesses, but will also encourage new businesses to locate on this corridor. This project is fully expected to encourage new commercial and industrial development in the Plantation Road area, thus providing new tax revenue and new jobs.

Plantation Road is unique to Roanoke County as it is developed by industrial uses, several different types of commercial businesses and private residences. Recreational facilities such as Walrond Park, Carvins Cove Natural Reserve and a segment of the Tinker Creek Greenway are also located in the vicinity of Plantation Road. The planned access management improvements will significantly reduce conflict points and will improve traffic flow. Sidewalks, shared use paths, pedestrian signals, crosswalks and bicycle accommodations will provide new and safe facilities for both pedestrians and bicyclists. These facilities will also connect Roanoke County’s Walrond Park to the Tinker Creek Greenway and the Carvins Cove Natural Reserve. When the Plantation Road Project was discussed with area businesses, the following guest amenities and features for were discussed:

- Camping World will send their customers on foot or by bicycle to Walrond Park, to the Tinker Creek Greenway and to Carvins Cove while their vehicles are being serviced;
- Hotels will endorse easy exercise opportunities accessible from their front doors; currently, guests are advised to drive to Walrond Park to walk or jog; and
- Connections to Walrond Park will allow youth sports teams in town for tournaments to easily walk to the park and to nearby businesses.

C. Increase the Safety and Security of the Transportation System

Source	Identified Safety Issues	Proposed Safety Improvements
<i>Plantation Road Corridor Study (2012)</i>	8 crashes (no fatalities, 5 injuries) Lila Drive/Plantation Road intersection; sight distance inadequate	New traffic signal with pedestrian signalization and crosswalks at Lila Drive/Plantation Road intersection (to be privately funded)
	12 crashes (no fatalities, 4 injuries) end of the Interstate 81 northbound off-ramp at McDonald’s and Shell station property	Access management changes: <ul style="list-style-type: none"> • Replacement of TWLTL with raised medians and left turn lanes; • Construct right turn lanes approaching intersections; and • Realign/reconstruct/combine commercial entrances.
	2 crashes (no fatalities or injuries) Walrond Drive/Plantation Road intersection	
	Pedestrian traffic without accommodations	Construct sidewalks, shared use paths, pedestrian signals and crosswalks with pedestrian-scaled lighting

Plantation Road Safety Issues and Challenges (not included above):

- Heavy traffic volume with a (mostly) undivided, five-lane, shoulder and ditch section with some



- wide, paved shoulders and only one traffic signal at Friendship Lane/Gander Way;
- Heavy truck traffic due to the proximity of the interstate and business deliveries; and
 - Left turn movements onto Plantation Road frequently utilize the center lane to merge into traffic.

Resulting Behaviors:

- Exelis employees traveling between the Plantation Road and Hitech Road buildings are told to drive;
- Pedestrians walk along the paved, gravel or grass shoulders;
- Employees leaving and retrieving cars at Sunnybrook Garage run across Plantation Road; and
- Bicyclists riding with traffic are challenged by heavy automobile and truck traffic volumes and frequent commercial entrances.

Anticipated Changes due to Proposed Safety Improvements listed above:

- Exelis employees will safely walk between buildings;
- Employees will safely cross Plantation Road to walk to area businesses and recreational facilities at lunchtime; and
- Bicycle travel will be safer when the shared use path and signalized crosswalk are used.

D. Increase the Accessibility and Mobility Options Available to People and/or Freight

Bus Service: Bus service via either Valley Metro and/or by the Smart Way bus has been considered for this area. Hollins University, Exelis, Wells Fargo and area hotels have expressed interest in extending bus service to the Hollins area for students, employees and tourists to utilize.

Park and Ride Lot: It has been noted that parking lots at both Gander Mountain and Walrond Park have been utilized as informal Park and Rides in this area. A formal park and ride would be a welcome improvement in this area.

Bicycle and Pedestrian Accommodations meeting ADA Standards: The pedestrian network of sidewalks, shared use paths and pedestrian crossings will be designed and constructed to ADA standards with accessibility ramps where the sidewalks and trails cross side streets and business entrances. Two accessible pedestrian crossings are also planned and new crosswalks and pedestrian signals are active at the intersection of Williamson Road and Plantation Road. Area employees, residents, students, customers and visitors of all abilities will utilize the new accommodations.

E. Protect and Enhance the Environment, Promote Energy Conservation, and Improve Quality of Life

When the proposed sidewalks, shared use paths, pedestrian signalization and crosswalks are complete, reduced vehicle trips and therefore reduced fuel consumption and vehicle emissions are anticipated due to the expected increase in pedestrian and bicycle trips. Reduced vehicle emissions will lead to air quality improvements. These proposed improvements will promote healthy habits by permitting employees, residents, visitors and others to walk and bike for recreation, to walk and bike to restaurants for lunch and to walk and bike to and from work.

F. Enhance the Integration and Connectivity of the Transportation System, Across and Between Modes, for People and/or Freight

Bus Service: Refer to the above Bus Service potential under D.

Park and Ride Lot: The project area is ideal for a new Park and Ride lot. Refer to the above Park and Ride Lot potential under D.

Bicycle and Pedestrian Accommodations: The combination of proposed sidewalks, shared use paths and pedestrian crossings will locally connect bicyclists and pedestrians to Walrond Park, to surrounding residential neighborhoods, to Plantation Road businesses and to the Hollins University segment of the Tinker Creek Greenway. The new pedestrian signalization at the Williamson Road intersection also provides a connection to existing sidewalks located along portions of Williamson Road.

G. Promote Efficient System Management and Operation

The *Plantation Road Corridor Study* includes the following recommendations to improve the functionality of



Plantation Road:

- Install a traffic signal at Lila Drive and connect it with the Friendship Lane/Gander Way signal;
- Construct right turn lanes approaching signalized and unsignalized intersections; and
- Realign/reconstruct/combine several commercial entrances.

All of these recommendations are proposed for the Plantation Road Project.

H. Emphasize the Preservation of Existing Transportation System

Improvements mentioned above, combined with other multi-modal accommodations should extend the life of the existing transportation facility and will reduce the future need to widen Plantation Road to six lanes.

I. Cost/Benefit Considerations

The completion of the overall Plantation Road Project will result in numerous and incalculable safety benefits for bicycle, pedestrian and vehicular users of the Plantation Road corridor. While also providing safety improvements, the overall Plantation Road Project is also anticipated to increase economic development opportunities, expand transportation options, improve environmental quality and enhance overall quality of life for users.

J. Projects included in previous plans that had a public input process associated with the plan:

Roanoke County Comprehensive Plan (2005)

Hollins Area Plan: Adopted by the Board of Supervisors in 2008 as a component of the Comprehensive Plan; the Plantation Road Project begins to implement the Hollins Area Plan

Constrained Long Range Transportation Plan (CL RTP) 2035: Primary System, Vision List

Bikeway Plan for the Roanoke Valley Area MPO – 2012 Update: Priority alignment: Plantation Road; Vision alignments: Walrond Drive, Enon Drive, Williamson Road

2013 Virginia Outdoors Plan: “Develop the Tinker Creek-Carvin Creek trail to connect Carvins Cove with the Roanoke River Greenway and eventually with the Appalachian Trail.” (page 10.58)

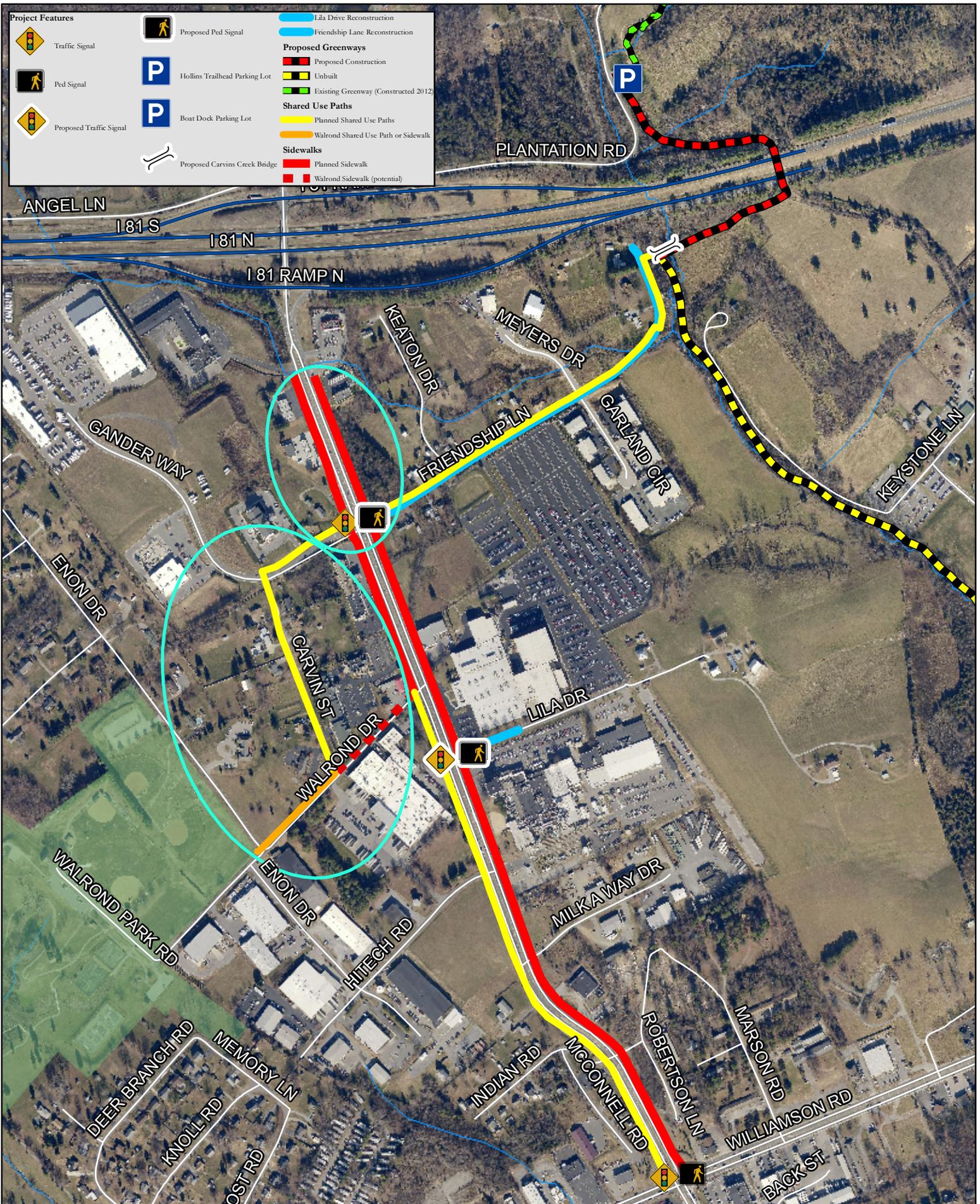
VDOT Policy for Integrating Bicycle and Pedestrian Accommodations: Endorses bicycling and walking as fundamental travel modes and integral components of an efficient transportation network.

2007 Update to the Roanoke Valley Greenway Plan: The planned shared use path network will connect to the Tinker Creek Greenway (Priority #2 in the Plan) located on Hollins University’s campus. The Tinker Creek Greenway will ultimately connect the Roanoke River Greenway to the extensive network of established trails at Carvins Cove Natural Reserve.

2004 Hollins University Master Plan: References and endorses the proposed regional greenway connection through Hollins University property.

Attachments:

1. Map – Plantation Road Project
2. Project Budget
3. Resolution of Support – Roanoke County Board of Supervisors



Plantation Road Project - Phase 2, Remaining Improvements
 FY 2016 Regional Surface Transportation Program



The Project Budget for Phase 2, Remaining Improvements, was broken down into four sub-projects that could be constructed individually. As a result, the \$140,000 line item for Traffic and Pedestrian Signals, which pertains to part of the Plantation Road/Friendship Lane/Gander Way pedestrian signals and crosswalks, is included in both the “Plantation Road Improvement Extension (Gander Way to Days Inn/McDonalds)” and “Traffic & Pedestrian Signal Improvements” sub-projects.

This amount was not counted twice so adding up all four phases will not equal the Total Cost and Total RSTP Request of \$2,356,200.

Plantation Road Improvement Extension (Gander Way to Days Inn/McDonalds)	
Project Division	Cost
Grading (Earthwork)	\$ 30,000.00
Pavement Items (Asphalt Concrete, Etc.)	\$ 16,600.00
Incidental Items (Curb & Gutter, Sidewalk, Guardrail, Etc.)	\$ 99,900.00
Drainage Items (Storm Sewer Pipe, Drop Inlets, Etc.)	\$ 158,200.00
Erosion & Sediment Control Items (Silt Fence, Inlet Protection, Etc)	\$ 16,800.00
Maintenance of Traffic (Channelizing Devices, Construction Signs, Etc.)	\$ 30,500.00
Utility Relocation (Utility Poles, Water, Sewer, Etc.)	\$ 38,000.00
Landscaping (Lighting, Street Trees, Etc.)	\$ 200,000.00
Traffic & Pedestrian Signal Improvements	\$ 140,000.00
Project Miscellaneous Costs (Mobilization, Construction Survey, Etc.)	\$ 70,400.00
Project Design (10%)	\$ 71,600.00
Project Construction Contingency (15%)	\$ 93,400.00
Plantation Road Improvements Total	\$ 965,400.00

* Traffic/Pedestrian Signal Improvements to be constructed concurrent with, or prior to Plantation Road Improvement Extension.

Note: Total cost excludes costs for right-of-way acquisition.

Traffic & Pedestrian Signal Improvements	
Project Division	Cost
Grading (Earthwork)	\$ 27,000.00
Incidental Items (Curb & Gutter, Sidewalk, Guardrail, Etc.)	\$ 15,100.00
Drainage Items (Storm Sewer Pipe, Drop Inlets, Etc.)	\$ 14,000.00
Erosion & Sediment Control Items (Silt Fence, Inlet Protection, Etc)	\$ 12,500.00
Maintenance of Traffic (Channelizing Devices, Construction Signs, Etc.)	\$ 22,700.00
Utility Relocation (Utility Poles, Water, Sewer, Etc.)	\$ 30,000.00
Traffic & Pedestrian Signals	\$ 140,000.00
Project Miscellaneous Costs (Mobilization, Construction Survey, Etc.)	\$ 18,300.00
Project Design (10%)	\$ 12,600.00
Project Construction Contingency (15%)	\$ 16,400.00
Plantation Road Improvements Total	\$ 308,600.00

Note: Total cost excludes costs for right-of-way acquisition.

Carvin Street and Gander Way Shared Use Path	
Project Division	Cost
Grading (Earthwork)	\$ 40,000.00
Pavement Items (Asphalt Concrete, Etc.)	\$ 81,900.00
Incidental Items (Curb & Gutter, Trail, Retaining Wall, Etc.)	\$ 308,100.00
Drainage Items (Storm Sewer Pipe, Drop Inlets, Etc.)	\$ 55,000.00
Erosion & Sediment Control Items (Silt Fence, Inlet Protection, Etc)	\$ 26,700.00
Maintenance of Traffic (Channelizing Devices, Construction Signs, Etc.)	\$ 48,500.00
Utility Relocation (Utility Poles, Water, Sewer, Etc.)	\$ 22,500.00
Project Miscellaneous Costs (Mobilization, Construction Survey, Etc.)	\$ 112,100.00
Project Design (10%)	\$ 77,300.00
Project Construction Contingency (15%)	\$ 100,900.00
Plantation Road Improvements Total	\$ 873,000.00

Note: Total cost excludes costs for right-of-way acquisition.

Walrond Drive Improvements	
Project Division	Cost
Grading (Earthwork)	\$ 10,000.00
Pavement Items (Asphalt Concrete, Etc.)	\$ 38,100.00
Incidental Items (Curb & Gutter, Sidewalk, Guardrail, Etc.)	\$ 54,300.00
Drainage Items (Storm Sewer Pipe, Drop Inlets, Etc.)	\$ 70,700.00
Erosion & Sediment Control Items (Silt Fence, Inlet Protection, Etc)	\$ 9,600.00
Maintenance of Traffic (Channelizing Devices, Construction Signs, Etc.)	\$ 17,300.00
Utility Relocation (Utility Poles, Water, Sewer, Etc.)	\$ 30,000.00
Project Miscellaneous Costs (Mobilization, Construction Survey, Etc.)	\$ 46,000.00
Project Design (10%)	\$ 31,800.00
Project Construction Contingency (15%)	\$ 41,400.00
Plantation Road Improvements Total	\$ 349,200.00

Note: Total cost excludes costs for right-of-way acquisition.

AT A REGULAR MEETING OF THE BOARD OF SUPERVISORS OF ROANOKE COUNTY, VIRGINIA, HELD AT THE ROANOKE COUNTY ADMINISTRATION CENTER, ON TUESDAY, SEPTEMBER 23, 2014

RESOLUTION 092314-4.f REQUESTING THE ROANOKE VALLEY AREA METROPOLITAN PLANNING ORGANIZATION FUND A LIST OF PROJECTS FOR THE FISCAL YEAR 2016-2021 REGIONAL SURFACE TRANSPORTATION PROGRAM

WHEREAS, the Roanoke Valley Area Metropolitan Planning Organization reviews applications for funding through the Regional Surface Transportation Program and makes recommendations for project funding to the Commonwealth Transportation Board; and

WHEREAS, the Roanoke County Board of Supervisors reviewed a list of six (6) projects for Regional Surface Transportation Program funding at a work session on September 9, 2014; and

WHEREAS, the Roanoke County Board of Supervisors supports the list of six (6) projects for Regional Surface Transportation Program funding.

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of Roanoke County, Virginia requests the Roanoke Valley Area Metropolitan Planning Organization fund the following list of projects for the fiscal year 2016-2021 Regional Surface Transportation Program:

1. Plantation Road Project – Lila Drive Intersection
2. Plantation Road Project – Friendship / Carvin's Creek Bridge Replacement
3. Plantation Road Project – Friendship Lane Reconstruction
4. Plantation Road Project – Phase 2
5. Exit 140 Park and Ride

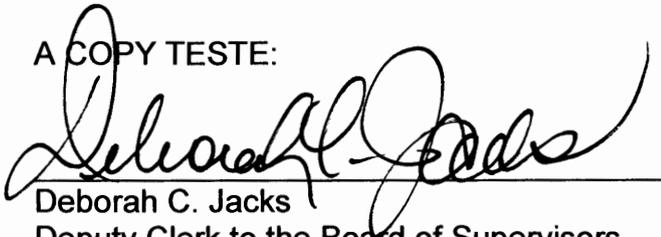
6. West Main Street Pedestrian Improvements – Phase 2

On motion of Supervisor McNamara to adopt the resolution, and carried by the following recorded vote:

AYES: Supervisors Moore, Bedrosian, Church, Peters, McNamara

NAYS: None

A COPY TESTE:



Deborah C. Jacks
Deputy Clerk to the Board of Supervisors

cc: David Holladay, Planning Administrator
Roanoke Valley Area Metropolitan Planning Organization