



Photo 1: Compaction continues.

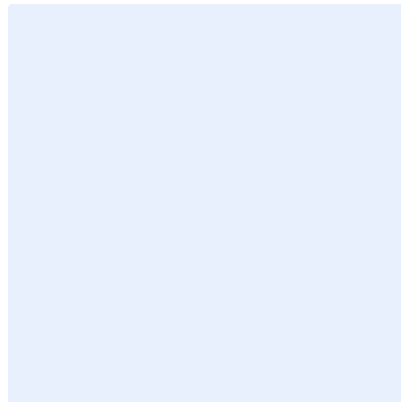




Photo 1: Backfilling and compaction continues. Compaction test completed.



Photo 2: Riprap delivered for upcoming placement at culvert inlet and outlet.



Photo 1: Backfilling and compaction in progress.



Photo 2: Backfilling and compaction in progress.



Photo 1: Crews were on-site August 8 and 9, 2018 for dewatering after rain event.



Photo 2: Backfilling began on August 10, 2018.



Photo 1: Rebar has been placed in the void around the waterline for the concrete block.



Photo 2: Rebar has been placed around the waterline for the concrete block.



Photo 1: Rod installation is complete. The area for 24" waterline concrete blocking has been excavated.



Photo 2: Rod installation is complete. The area for 24" waterline concrete blocking has been excavated.



Photo 1: Site cleanup continues.



Photo 2: Rod installation at 24" waterline.



Photo 1: View of completed culvert top.



Photo 2: Loading and removing construction material and equipment from work site.



Photo 1: Apron at culvert outlet has been constructed and concrete placed.



Photo 2: Apron at culvert outlet has been constructed and concrete placed.



Photo 1: Culvert construction is complete. Site cleaning is underway.



Photo 2: Culvert construction is complete. Site cleaning is underway.



Photo 1: Concrete has been placed for second half of culvert walls, top, and wing walls.



Photo 2: Concrete has been placed for second half of culvert walls, top, and wing walls. Forms are being removed.



Photo 1: Continue constructing forms and placing rebar for second half of culvert walls, top, and wing walls.



Photo 2: Continue constructing forms and placing rebar for second half of culvert walls, top, and wing walls.



Photo 1: Removing forms from the 07/13/2018 concrete pour on the first half of the culvert.



Photo 2: Constructing forms for the second half of culvert walls, top, and wing walls.



Photo 1: Concrete pouring for the first half of culvert walls and top.



Photo 2: Concrete pouring for the first half of culvert wing walls.



Photo 1: Construction continues on the forms for the culvert walls, top and wing walls.



Photo 2: Construction continues on the forms for the culvert walls, top and wing walls.



Photo 1: Forms and rebar for the second half of culvert base and wing wall base are under construction.



Photo 2: Gravel, forms, and rebar for the second half of culvert base are under construction.



Photo 1: Concrete has been placed for 32 ft. of the culvert bottom slab.



Photo 2: Concrete has been placed for upstream wing wall base.



Photo 1: Gravel has been placed in the culvert base. Forms and rebar for 32 ft. on the upstream side of the culvert bottom slab have been placed. Concrete is expected to be poured today.



Photo 2: Forms and rebar for the upstream wing walls of the culvert bottom slab have been placed. Concrete is expected to be poured today.



Photo 1: Water diversion has begun at project location. A dam has been built in the creek and water is being pumped over Rising Star Road to the downstream side of the creek.



Photo 2: Downstream view of the creek.



Project: 121 Rising Star Road – 2017 SPLOST

Date: July 2, 2018



Photo 1: Pooled water continues to be pumped from excavated area.



Photo 2: First round of soil and gravel base testing completed.



Photo 1: Pooled water continues to be pumped from excavated area. (06/20/2018)



Photo 2: Recent storm events continue to bring excessive water into excavated area. Water must be pumped to allow construction to continue. (06/18/2018)



Photo 1: Gravel for the culvert base has been delivered. (06/14/2018)



Photo 2: Demolition of existing box culvert and Rising Star Road has begun. (06/13/2018)



Photo 1: The 24" waterline installation is complete and the trenches have been backfilled.



Photo 2: The 12" waterline valve box with collar and marker has been installed at both water connections.



Photo 1: The contactor is installing the 24" waterline pipe and pipe flange.



Photo 2: The contactor is installing the 24" waterline pipe and pipe flange.



Photo 1: During excavation in mid-May, rock was discovered beneath the existing 24" Raw waterline on the downstream end. The County explored more time-conservative options prior to approving blasting, however other options required additional time and money. Blasting was scheduled and completed as promptly as time allowed. On June 5, 2018, the blasting company was on site and rock blasting was completed.



Photo 2: Since blasting, construction activities related to the installation of the new box culverts have begun and are scheduled to be complete by mid-July, followed by paving, guardrail, and shoulder construction. Final completion has been extended from June 2018 to August 2018.



Photo 1: During excavation, rock was located in the area where the 24" waterline is to be installed. Installation is delayed until rock blasting is completed. (05/18/2018)



Photo 2: Soil and debris is being removed from road after 12" pipe installation. (05/17/2018)



Photo 1: Installation of the 12" waterline.



Photo 2: The 12" waterline is ready for installation.



Photo 1: Preparing 24" waterline for installation.



Photo 2: Preparing 12" waterline for installation.



Photo 1: Existing 24" waterline pipe is being drained. (05/09/2018)



Photo 2: The new 12" waterline pipe and casing is on site and existing pipe is being excavated. (05/08/2018)



Photo 1: Existing 12" potable waterline running along the south side of Rising Star Road. The line has been exposed and will be relocated soon.



Photo 2: Existing 24" raw waterline running along the north side of Rising Star Road. The line has been exposed and will be relocated soon.



Photo 1: The waterline at the project site must be relocated. Additional materials for the waterline have been delivered. (04/25/18)



Photo 2: The waterline at the project site must be relocated. A portion of the materials for the waterline have been delivered. (04/20/18)



Photo 1: Double row silt fence installed near creek for erosion control.



Photo 2: Double row silt fence installed near creek for erosion control.



Photo 1: Site clearing is in progress.



Photo 2: Site clearing is in progress.



Photo 1: Utility relocation has begun. The utilities at the project site have been located, marked, and excavated.



Photo 2: Rising Star Road was closed to thru traffic from Old Greenville Road to Brooks Woolsey Road.

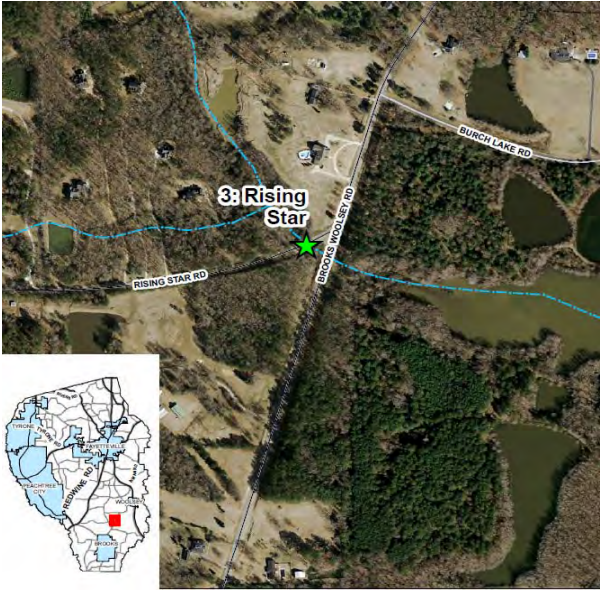
General Information		Map	
Project ID			
Street Name	Rising Star Rd		
Site Visit Date			
Road Classification	Rural		
Project Notes			
Culvert replacement alternatives to provide flow capacity for the 100 year storm peak runoff.			
Field Notes			
Design (Existing Site Features)			
Existing Road Laneage	2-12'		
Existing Shld Width (paved and grass) (feet)			
Existing Side Slopes			
Existing Guardrail	No		
Depth fm Pavement to Top of Culvert (ft):	(+/-) 3.5'		
Pipe Type and Size	2- 72" CMP		
Pipe Condition (1-5) (1 is new)	3-4		
Condition Notes: Two 72" culverts – left one collapsed, right one has approx. 6" dip in last joint.			
Pavement Type/Condition	Asphalt/Good		
Environmental Features		Stage Construction Options	
Wetlands	TBD	Close Location to Traffic	X
Ditches	YES	Maintain One Lane - No Temp Pavement	
State Waters	YES (ASSUMED)	Maintain One Lane - Temp Pavement	
		Stage Construction Notes:	
		Assumed road closure	
Utilities (Visual Inspection)			
Electric	Aerial		
Cable	Unknown		
Phone	Unknown		
Gas	Unknown		
Water	Underground		
Sewer	Underground		
Other			
Proposed Design			
Roadway Section	Typical		
Culvert Size & Material	2 - 84" round RCP with end treatment		
Utility Relocations	To be verify, (20" DIP or PVC mains)		
Guardrail Replacement			
Miscellaneous Features			
Planning Cost Estimate			
Type	Notes	Total	
Design	Actual Cost including Environmental Permitting and Engineer of Record Administrative Fee	\$54,005	
Right of Way Cost	Assuming UPS/DWS ends extends past ROW 1/20 acre	\$17,424	
Utility Relocation Cost	Assuming no relocation	\$212,535	
Construction Cost	Includes 1/8 acre clearing and grubbing	\$165,180	
Total Planning Estimate		\$449,143	



Photo 1:



Photo 2:

Rising Star Road

Photo Date:

4/14/2016

Taken By:

Tony Hicks

Page:

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2-84" Culvert Construction and ROW Quantity Calculations

Roadway Construction	Removal Unit Cost	Installation Unit Cost	Amount	Total Cost
Pavement (SF)	\$ 0.73	\$ 4.87	1200.00	\$ 6,726.40
Curb and Gutter (LF)	\$ -	\$ 18.42	0.00	-
4" Sidewalk (SY)	\$ -	\$ 36.90	0.00	0
Guardrail (LF)	\$ -	\$ 49.09	0.00	0
End Anchorage (EA)		\$ 1,380.00	0.00	0
Subtotal			\$	6,726.40
Grading Complete (5% of Rwy Items & Drng Total \$)			\$	5,352.94
Roadway Total			\$	12,079.34

Drainage	Removal Unit Cost	Installation Unit Cost	Amount	Total Cost
Trench Excavation (CY)		\$ 10.38	523.72	\$ 5,436.20
72" CMP (LF)	\$ 54.00		116.00	\$ 6,264.00
84" RCP (LF)		\$ 350.00	116.00	\$ 40,600.00
Class A Conc (CY)		\$ 892.19	48.37	\$ 43,155.13
Steel (lb)		\$ 1.42	0.00	-
Pipe Bedding (CY)		\$ 48.60	49.41	\$ 2,401.20
Trench Backfill (CY)		\$ 2.99	306.57	\$ 916.02
Trench Compaction (CY)		\$ 6.36	245.25	\$ 1,559.81
Drainage Total			\$	100,332.36

Signing and Marking	Installation Unit Cost	Amount	Total Cost
Permanent Striping (LF)	\$ 0.71	50	\$ 35.40
Signing and Marking Total		\$	35.40

Staging	Installation Unit Cost	Amount	Total Cost
Clearing and Grubbing (Acre)	\$ 10,260.00	0.13	\$ 1,282.50
Temporary Pavement		0.00	0
Temporary Drainage (Stream Pump Around)	\$ 30,000.00	1.00	\$ 30,000.00
Staging Total		\$	31,317.90

Erosion Control	Installation Unit Cost	Amount	Total Cost
Fine Grading and Seeding (SY)	\$ 4.39	188.89	\$ 829.60
Temporary Grassing (AC)	\$ 855.60	0.00	-
Type C Silt Fence (LF)	\$ 4.24	232.00	\$ 982.75
Check Dam Type C Silt Fence (LF)	\$ 6.79	0.00	-
Erosion Control Mats (SY)	\$ 1.87	0.00	-
Landscape Mulch (SY)	\$ 3.58	0.00	-
Perm Grassing (AC)	\$ 1,402.20	0.00	-
Rip Rap Type 3 12" (SY)	\$ 60.98	66.67	\$ 4,065.60
Plastic Filter Fabric (SY)	\$ 5.72	66.67	\$ 381.60
4" Ditch Paving (SY)	\$ 54.65	0.00	-

Erosion Control Total \$ 6,259.55

Construction Cost Total \$ 150,024.55

Traffic Control (8% of Construction Total \$) \$ 12,001.96

Construction Cost Grand Total \$ 162,026.52

Public Works 3,153

Utility Relocation	Removal Unit Cost	Installation Unit Cost	Amount	Total Cost
Electric				
Aerial	\$ 11.00	\$ 55.00	0.00	\$ -
Buried	\$ 16.50	\$ 82.50	0.00	\$ -
Wooden Pole	\$ 82.50	\$ 605.00	0.00	\$ -
Phone				
Aerial	\$ 11.00	\$ 27.50	0.00	\$ -
Buried	\$ 16.50	\$ 55.00	0.00	\$ -
Wooden Pole	\$ 82.50	\$ 605.00	0.00	\$ -
Cable				
Aerial	\$ 11.00	\$ 27.50	0.00	\$ -
Buried	\$ 16.50	\$ 55.00	0.00	\$ -
Wooden Pole	\$ 82.50	\$ 605.00	0.00	\$ -
Gas				
4" main	\$ 16.50	\$ 66.00	0.00	\$ -
Water				
Cap and Remove (EA)		\$ 3,780.00	1.00	\$ 3,780.00
24" Watermain (LF)		\$ 296.00	150.00	\$ 44,400.00
24" Gate Valve (EA)		\$ 15,120.00	2.00	\$ 30,240.00
36" Steel Casing (LF)		\$ 185.00	100.00	\$ 18,500.00
36" Jack and Bore (LF)		\$ 396.00	100.00	\$ 39,600.00
24" 45 degree MJ Bend (EA)		\$ 2,779.00	4.00	\$ 11,116.00
10" Watermain (EA)		\$ 53.00	150.00	\$ 7,950.00
10" Gate Valve (EA)		\$ 2,430.79	2.00	\$ 4,861.58
10" Steel Casing (LF)		\$ 97.83	100.00	\$ 9,783.00
10" Jack and Bore (LF)		\$ 396.00	100.00	\$ 39,600.00
10" 45 degree MJ Bend (EA)		\$ 676.00	4.00	\$ 2,704.00
Utility Relocation Total			\$	212,534.58

Right of Way (Sq Ft)	Cost/ Sq Ft	Sq Ft	Total Cost
Permanent Easement	\$ 4.00	4,356.00	\$ 17,424.00
ROW Total			\$ 17,424.00