

General Information		Map	
<b>Project ID</b>			
<b>Street Name</b>	<b>287 Graves Road</b>		
<b>Site Visit Date</b>	1/05/16		
<b>Road Classification</b>	Minor arterial		
<b>Project Notes</b>			
Rural Typical Section			
<b>Field Notes</b>			
<b>Design (Existing Site Features)</b>			
<b>Existing Road Laneage</b>	2-12'		
<b>Existing Shld Width (paved and grass) (feet)</b>	2'		
<b>Existing Side Slopes</b>	2:1 - 4:1		
<b>Existing Guardrail</b>	None		
<b>Depth fm Pavement to Top of Culvert (ft):</b>	6		
<b>Pipe Type and Size</b>	60" CMP		
<b>Pipe Condition (1-5) (1 is new)</b>	5		
Condition Notes: No headwall; debris US, signs of rusting, DS bottom of pipe damaged, no significant structural loss			
<b>Pavement Type/Condition</b>	Asphalt/Good		
<b>Environmental Features</b>			
<b>Wetlands</b>	None		
<b>Ditches</b>	Noted		
<b>Utilities (Visual Inspection)</b>			
<b>Electric</b>	Aerial		
<b>Cable</b>	Aerial		
<b>Phone</b>	Aerial		
<b>Gas</b>			
<b>Water</b>	Buried		
<b>Sewer</b>			
<b>Other</b>			
<b>Stage Construction Options</b>			
<b>Close Location to Traffic</b>		X	
<b>Maintain One Lane - No Temp Pavement</b>			
<b>Maintain One Lane - Temp Pavement</b>			
Stage Construction Notes: If cannot close then have one lane open; two driveways near culvert			
<b>Proposed Design</b>			
<b>Roadway Section</b>	Typical		
<b>Culvert Size &amp; Material</b>	10' x 5' box, concrete, 70' length		
<b>Utility Relocations</b>	Electric, cable, phone, water		
<b>Guardrail Replacement</b>			
<b>Miscellaneous Features</b>			
<b>Planning Cost Estimate</b>			
<b>Type</b>	<b>Notes</b>	<b>Total</b>	
<b>Design</b>	Includes 10% Construction Cost and surveying needs	\$28,319	
<b>Right of Way Cost</b>	Assuming project extends 2,000 sf beyond ROW	\$8,000	
<b>Utility Relocation Cost</b>	Aerial and buried utilities	\$14,025	
<b>Construction Cost</b>	Assuming 1/10 acre clearing and grubbing	\$233,193	
<b>Environmental Permits</b>	Assuming minimal environmental permitting required	\$10,000	
<b>Total Planning Estimate</b>		<b>\$293,538</b>	



**Photo 1:**



**Photo 2:**

**287 Graves Road**

**Photo Date:**

12/29/2015

**Taken By:**

V.T. Birrell

**Page:**

**1**

**Roadway Construction, Utility Relocation and ROW Quantity Calculations**

Roadway Construction	Removal Unit Cost	Installation Unit Cost	Amount	Total Cost
Pavement (SF)	\$ 0.73	\$ 4.87	288.00	\$ 1,614.34
Curb and Gutter (LF)	\$ 28.56	\$ 30.60	0.00	\$ -
Drain Inlet (EA)		\$ 3,000.00	0.00	\$ -
4" Sidewalk (SY)	\$ 13.56	\$ 36.90	0.00	\$ -
Guardrail (LF)	\$ 4.88	\$ 49.09	0.00	\$ -
End Anchorage (EA)		\$ 1,380.00	0.00	\$ -
Subtotal				\$ 1,614.34

Grading Complete (5% of Rwy Items & Drng Total \$) \$ 9,731.59

Roadway Total \$ 11,345.93

Drainage	\$ 5.00	Installation Unit Cost	Amount	Total Cost
Trench Excavation (CY)		\$ 10.38	373.33	\$ 3,875.20
60" CMP (LF)	\$ 24.60		70.00	\$ 5,166.00
60" RCP (LF)		\$ 259.20	0.00	\$ -
Class A Conc (CY)		\$ 892.19	172.26	\$ 153,688.30
Steel (lb)		\$ 1.42	17,995.00	\$ 25,480.92
Pipe Bedding (CY)		\$ 48.60	32.00	\$ 1,555.20
Trench Backfill (CY)		\$ 2.99	402.67	\$ 1,203.17
Trench Compaction (CY)		\$ 6.36	322.13	\$ 2,048.77

Drainage Total \$ 193,017.56

Signing and Marking	Installation Unit Cost	Amount	Total Cost
Permanent Striping (LF)	\$ 0.71	48.00	\$ 33.98
Signing and Marking Total			\$ 33.98

Staging	Installation Unit Cost	Amount	Total Cost
Clearing and Grubbing (Acre)	\$ 10,260.00	0.10	\$ 1,026.00
Temporary Pavement			\$ -
Temporary Drainage (Stream Diversion)	\$ 4,428.00	1.00	\$ 4,428.00
Staging Total			\$ 5,521.97

Erosion Control	Installation Unit Cost	Amount	Total Cost
Fine Grading and Seeding (SY)	\$ 4.39	61.33	\$ 269.38
Temporary Grassing (AC)	\$ 855.60	0.00	\$ -
Type C Silt Fence (LF)	\$ 4.24	280.00	\$ 1,186.08
Check Dam Type C Silt Fence (LF)	\$ 6.79	280.00	\$ 1,901.76
Erosion Control Mats (SY)	\$ 1.87	93.33	\$ 174.72
Landscape Mulch (SY)	\$ 3.58	93.33	\$ 333.76
Perm Grassing (AC)	\$ 1,402.20	0.00	\$ -
Rip Rap Type 3 12" (SY)	\$ 60.98	32.00	\$ 1,951.49
Plastic Filter Fabric (SY)	\$ 5.72	32.00	\$ 183.17
4" Ditch Paving (SY)	\$ 54.65	0.00	\$ -

**Erosion Control Total \$ 6,000.35**

**Construction Cost Total \$ 215,919.80**

**Traffic Control (8% of Construction Total \$) \$ 17,273.58**

**Construction Cost Grand Total \$ 233,193.38**

Utility Relocation	Removal Unit Cost	Installation Unit Cost	Amount	Total Cost
Electric				
Aerial	\$ 11.00	\$ 55.00	50.00	\$ 3,300.00
Buried	\$ 16.50	\$ 82.50	0.00	\$ -
Wooden Pole	\$ 82.50	\$ 605.00	2.00	\$ 1,375.00
Phone				
Aerial	\$ 11.00	\$ 27.50	50.00	\$ 1,925.00
Buried	\$ 16.50	\$ 55.00	0.00	\$ -
Wooden Pole	\$ 82.50	\$ 605.00		\$ -
Cable				
Aerial	\$ 11.00	\$ 27.50	50.00	\$ 1,925.00
Buried	\$ 16.50	\$ 55.00	0.00	\$ -
Wooden Pole	\$ 82.50	\$ 605.00		\$ -
Gas				
4" main	\$ 16.50	\$ 66.00		\$ -
Water				
8" main	\$ 16.50	\$ 93.50	50.00	\$ 5,500.00
Relocate Fire Hydrant (EA)		\$ 2,609.22		\$ -
Sewer			0.00	\$ -
12" main	\$ 16.50	\$ 82.50	0.00	\$ -
Utility Relocation Total				\$ 14,025.00

Right of Way (Sq Ft)	Cost/ Sq Ft	Sq Ft	Total Cost
Permanent Easement	\$ 4.00	2,000.00	\$ 8,000.00
<b>ROW Total</b>			<b>\$ 8,000.00</b>