



Stormwater pipe has joint separation and corrosion. The pipe is out of round and shows signs of failure under the road. The road side inlet is damaged.

Details:



Details:

60" metal pipe

Project:	110 Mark Lane	Page 1
Date:	July 17, 2018	

General Information		Map	
Project ID			
Street Name	115 Mark Lane		
Site Visit Date	5/22/13		
Road Classification	Minor road		
Project Notes			
Urban typical with Curb and Gutter			
Field Notes			
Design (Existing Site Features)			
Existing Road Laneage	2 - 10'		
Existing Shld Width (paved and grass) (feet)	4'		
Existing Side Slopes	Flat		
Existing Guardrail	None		
Depth fm Pavement to Top of Culvert (ft):	5		
Pipe Type and Size	60" CMP		
Pipe Condition (1-5) (1 is new)	4		
Condition Notes: Not straight, joint damage; downstream sediment (1/2' of sediment 90' length)			
Pavement Type/Condition	Asphalt/Good		
Environmental Features			
Wetlands	X (Upstream)		
Ditches	None		
Utilities (Visual Inspection)			
Electric	Buried		
Cable	Buried		
Phone	Buried		
Gas			
Water	Buried		
Sewer			
Other			
Stage Construction Options			
Close Location to Traffic			
Maintain One Lane - No Temp Pavement		X	
Maintain One Lane - Temp Pavement			
Stage Construction Notes:			
Proposed Design			
Roadway Section			
Culvert Size & Material	Double 6x4' box, concrete, 90'		
Utility Relocations	Electric, cable, phone, water		
Guardrail Replacement			
Miscellaneous Features			
Planning Cost Estimate			
Type	Notes	Total	
Design	Includes 10% Construction Cost and surveying needs	\$30,040	
Right of Way Cost	Assuming project extends 4,000 sf beyond ROW	\$16,000	
Utility Relocation Cost	Buried utilities	\$17,600	
Construction Cost	Assuming 1/10 acre clearing and grubbing	\$175,397	
Environmental Permits	Assuming minimal environmental permitting required	\$10,000	
Total Planning Estimate		\$249,037	



Photo 1:

Mark Lane



Photo 2:

Photo Date:

5/21/2013

Taken By:

David King

Page:

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Photo 3:



Photo 4:

Mark Lane

Photo Date:

5/21/2013

Taken By:

David King

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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	280.00	\$ 1,569.49
Curb and Gutter (LF)	\$ 28.56	\$ 30.60	56.00	\$ 3,312.96
Drain Inlet (EA)		\$ 3,000.00	2.00	\$ 6,000.00
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				\$ 10,882.45

Grading Complete (5% of Rwy Items & Drng Total \$) \$ 7,106.65

Roadway Total \$ 17,989.10

Drainage	Removal Unit Cost	Installation Unit Cost	Amount	Total Cost
Trench Excavation (CY)		\$ 10.38	513.33	\$ 5,328.40
60" CMP (LF)	\$ 24.60		90.00	\$ 6,642.00
60" RCP		\$ 259.20	0.00	\$ -
Class A Conc (CY)		\$ 892.19	107.46	\$ 95,874.52
Steel (lb)		\$ 1.42	11,682.00	\$ 16,541.71
Pipe Bedding (CY)		\$ 48.60	47.70	\$ 2,318.22
Trench Backfill (CY)		\$ 2.99	562.86	\$ 1,681.81
Trench Compaction (CY)		\$ 6.36	450.28	\$ 2,863.81

Drainage Total \$ 131,250.48

Signing and Marking	Installation Unit Cost	Amount	Total Cost
Permanent Striping (LF)	\$ 0.71	56.00	\$ 39.65

Signing and Marking Total \$ 39.65

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 \$ 5,533.30

Erosion Control	Installation Unit Cost	Amount	Total Cost
Fine Grading and Seeding (SY)	\$ 4.39	108.89	\$ 478.24
Temporary Grassing (AC)	\$ 855.60	0.00	\$ -
Type C Silt Fence (LF)	\$ 4.24	360.00	\$ 1,524.96
Check Dam Type C Silt Fence (LF)	\$ 6.79	360.00	\$ 2,445.12
Erosion Control Mats (SY)	\$ 1.87	120.00	\$ 224.64
Landscape Mulch (SY)	\$ 3.58	120.00	\$ 429.12
Perm Grassing (AC)	\$ 1,402.20	0.00	\$ -
Rip Rap Type 3 12" (SY)	\$ 60.98	37.33	\$ 2,276.74
Plastic Filter Fabric (SY)	\$ 5.72	37.33	\$ 213.70
4" Ditch Paving (SY)	\$ 54.65	0.00	\$ -

Erosion Control Total \$ 7,592.51

Construction Cost Total \$ 162,405.03

Traffic Control (8% of Construction Total \$) \$ 12,992.40

Construction Cost Grand Total \$ 175,397.43

Utility Relocation	Removal Unit Cost	Installation Unit Cost	Amount	Total Cost
Electric				
Aerial	\$ 11.00	\$ 55.00		\$ -
Buried	\$ 16.50	\$ 82.50	50.00	\$ 4,950.00
Wooden Pole	\$ 82.50	\$ 605.00		\$ -
Phone				
Aerial	\$ 11.00	\$ 27.50		\$ -
Buried	\$ 16.50	\$ 55.00	50.00	\$ 3,575.00
Wooden Pole	\$ 82.50	\$ 605.00		\$ -
Cable				
Aerial	\$ 11.00	\$ 27.50		\$ -
Buried	\$ 16.50	\$ 55.00	50.00	\$ 3,575.00
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				\$ 17,600.00

Right of Way (Sq Ft)	Cost/ Sq Ft	Sq Ft	Total Cost
Permanent Easement	\$ 4.00	4,000.00	\$ 16,000.00
ROW Total			\$ 16,000.00