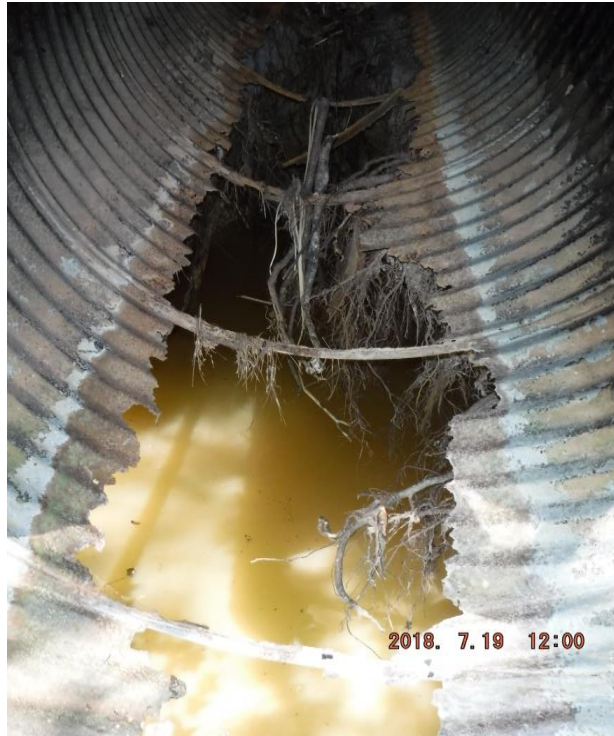




Details: Stormwater pipe is scoured and undercut.



Details: 42" metal pipe



Details: Corrosion failure.



Details: Pipe is out of round and heavy corrosion is present.

General Information		Map	
Project ID			
Street Name	170 Ridge Way		
Site Visit Date	1/20/2016		
Road Classification	Minor road		
Project Notes			
Water meter and gazebo near culvert path on downstream side.			
Field Notes			
Design (Existing Site Features)			
Existing Road Laneage	2-13'		
Existing Shld Width (paved and grass) (feet)	100'		
Existing Side Slopes	20:1		
Existing Guardrail	None		
Depth fm Pavement to Top of Culvert (ft):	4.5'		
Pipe Type and Size	36" CMP		
Pipe Condition (1-5) (1 is new)	4-5		
Condition Notes: Rusted out bottom on downstream side. No headwall. MAJOR streambed blowout.			
Pavement Type/Condition	Asphalt/Good		
Environmental Features		Stage Construction Options	
Wetlands		Close Location to Traffic	
Ditches		Maintain One Lane - No Temp Pavement	X
State Waters		Maintain One Lane - Temp Pavement	
		Stage Construction Notes:	
Utilities (Visual Inspection)			
Electric	Aerial		
Cable	Unknown		
Phone	Aerial		
Gas	Unknown		
Water	Buried		
Sewer	Unknown		
Other			
Proposed Design			
Roadway Section	Typical		
Culvert Size & Material	48" round RCP with straight headwalls		
Utility Relocations	Utility pole and aerial wires need relocating. Possible water main relocation.		
Guardrail Replacement			
Miscellaneous Features			
Planning Cost Estimate			
Type	Notes	Total	
Design	Includes 10% of Construction Cost and surveying needs	\$18,959	
Right of Way Cost	Assume project extends past ROW, 1/4 acre	\$43,560	
Utility Relocation Cost	Utility pole and aerial wires, potential water main	\$16,638	
Construction Cost		\$139,586	
Environmental Permits	Assuming minimal environmental permitting required	\$10,000	
Total Planning Estimate		\$228,742	



Photo 1: Upstream end of culvert.



Photo 2: Downstream end of culvert looking east towards Ridge Way.

170 Ridge Way

Photo Date:

1/20/2016

Taken By:

David Gibbs

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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	156.00	\$ 874.43
Curb and Gutter (LF)	\$ 28.56	\$ 30.60	52.00	\$ 3,076.32
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				\$ 9,950.75
Grading Complete (5% of Rwy Items & Drng Total \$)				\$ 5,367.75
Roadway Total				\$ 15,318.50
Drainage	Removal Unit Cost	Installation Unit Cost	Amount	Total Cost
Trench Excavation (CY)		\$ 10.38	615.78	\$ 6,391.77
36" CMP (LF)	\$ 24.60		326.00	\$ 8,019.60
48" RCP (LF)		\$ 193.20	326.00	\$ 62,983.20
Class A Conc (CY)		\$ 892.19	13.70	\$ 12,222.98
Steel (lb)		\$ 1.42	0.00	\$ -
Pipe Bedding (CY)		\$ 48.60	72.44	\$ 3,520.80
Trench Backfill (CY)		\$ 2.99	528.22	\$ 1,578.31
Trench Compaction (CY)		\$ 6.36	422.57	\$ 2,687.57
Drainage Total				\$ 97,404.23
Signing and Marking		Installation Unit Cost	Amount	Total Cost
Permanent Striping (LF)		\$ 0.71		\$ -
Signing and Marking Total				\$ -
Staging		Installation Unit Cost	Amount	Total Cost
Clearing and Grubbing (Acre)		\$ 10,260.00	0.25	\$ 2,565.00
Temporary Pavement				\$ -
Temporary Drainage (Stream Diversion)		\$ 4,428.00	1.00	\$ 4,428.00
Staging Total				\$ 6,993.00
Erosion Control		Installation Unit Cost	Amount	Total Cost
Fine Grading and Seeding (SY)		\$ 4.39	200.00	\$ 878.40
Temporary Grassing (AC)		\$ 855.60	0.00	\$ -
Type C Silt Fence (LF)		\$ 4.24	652.00	\$ 2,761.87
Check Dam Type C Silt Fence (LF)		\$ 6.79	652.00	\$ 4,428.38
Erosion Control Mats (SY)		\$ 1.87	72.44	\$ 135.62
Landscape Mulch (SY)		\$ 3.58	72.44	\$ 259.06
Perm Grassing (AC)		\$ 1,402.20	0.00	\$ -
Rip Rap Type 3 12" (SY)		\$ 60.98	16.00	\$ 975.74
Plastic Filter Fabric (SY)		\$ 5.72	16.00	\$ 91.58
4" Ditch Paving (SY)		\$ 54.65	0.00	\$ -
Erosion Control Total				\$ 9,530.66
Construction Cost Total				\$ 129,246.39
Traffic Control (8% of Construction Total \$)				\$ 10,339.71
Construction Cost Grand Total				\$ 139,586.10
Utility Relocation	Removal Unit Cost	Installation Unit Cost	Amount	Total Cost
Electric				
Aerial	\$ 11.00	\$ 55.00	100.00	\$ 6,600.00
Buried	\$ 16.50	\$ 82.50	0.00	\$ -
Wooden Pole	\$ 82.50	\$ 605.00	1.00	\$ 687.50
Phone				
Aerial	\$ 11.00	\$ 27.50	100.00	\$ 3,850.00
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				
8" main	\$ 16.50	\$ 93.50	50.00	\$ 5,500.00
Sewer				
12" main	\$ 16.50	\$ 82.50	0.00	\$ -
Utility Relocation Total				\$ 16,637.50
Right of Way (Sq Ft)		Cost/ Sq Ft	Sq Ft	Total Cost
Permanent Easement		\$ 4.00	10890.00	\$ 43,560.00
ROW Total				\$ 43,560.00