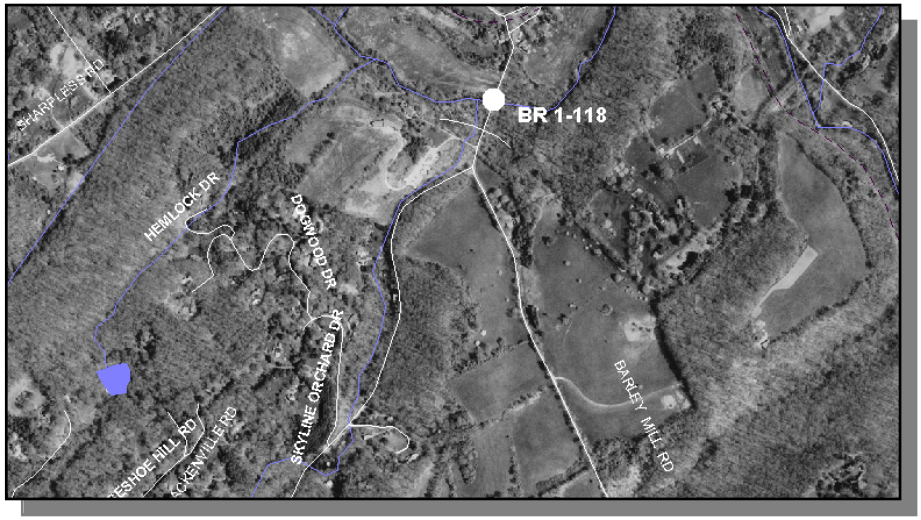
BR 1-118 ON BARLEY MILL ROAD AT ASHLAND AND BR 1-137 ON MILL ROAD OVER RED CLAY CREEK

PROJECT SCOPE/DESCRIPTION:

Bridge 1-118 on Barley Mill Road (N158) at Ashland is one of the last historic covered bridges located on a state-maintained road. Under the federal Historic Covered Bridge Preservation Program, this bridge will be rehabilitated. The work to be included under the project is replacement of roof shingles, timber decking, and some timber siding; cleaning and painting of the interior and exterior siding; painting of the top flanges of the steel support girders; placement of scour protection; replacement of the alarm system; and mill and overlay of the approaches with new hot-mix pavement.

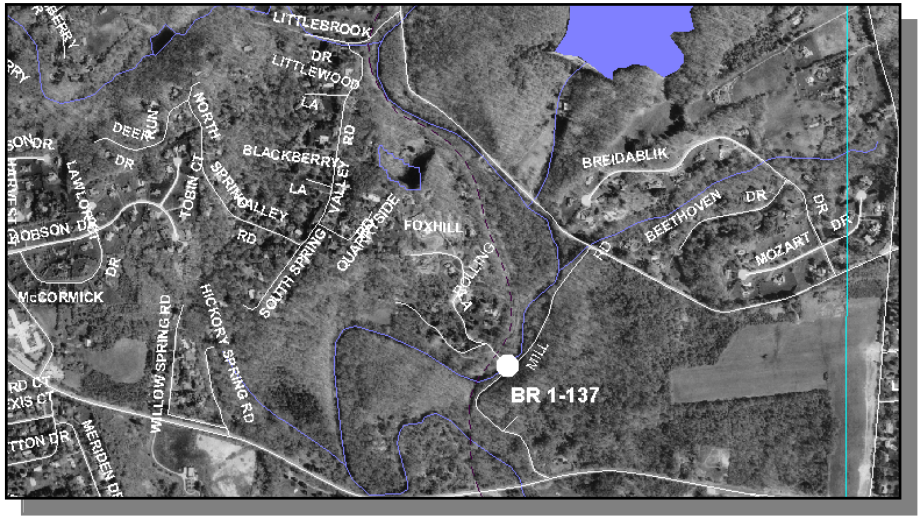


Bridge 1-118

BR 1-118 ON BARLEY MILL ROAD AT ASHLAND AND BR 1-137 ON MILL ROAD OVER RED CLAY CREEK (CONTINUED)

Bridge 1-137 on Fox Hill Lane (N263A) was another of the last historic covered bridges located on state-maintained roads. The bridge was destroyed during a flood in September 2003. The covered bridge will be reconstructed. The approach alignment will be raised to accommodate higher flooding and riprap will be installed for scour protection.

The section of Rolling Mill Road (N263) adjacent to Bridge 1-137 will be raised to tie in the alignment. A retaining wall will be constructed to retain and stabilize the proposed roadway. The slope will be stabilized with riprap.



Bridge 1-137

BR 1-118 ON BARLEY MILL ROAD AT ASHLAND AND BR 1-137 ON MILL ROAD OVER RED CLAY CREEK (CONTINUED)

Side View of Bridge 1-137

Retaining Wall at Rolling Mill Road and Bridge 1-137

PROJECT JUSTIFICATION: These bridges were selected for special funding under the Historic Covered Bridge Preservation Program to maintain their historic integrity and structural capacity. Bridge 1-118 is currently ranked 188th out of 1,399 on the department's bridge deficiency list (via the bridge management program). Bridge 1-137 is currently washed out and is therefore a high priority to replace. Rolling Mill Road in the area of the proposed retaining wall is failing due to the very steep slope at the edge of the roadway where the Red Clay Creek is encroaching.

County:	New Castle
Municipality:	
Funding Program:	Road System – Bridges
Functional Category:	Preservation
Representative District:	12
Senatorial District:	4

BR 1-118 ON BARLEY MILL ROAD AT ASHLAND AND BR 1-137 ON MILL ROAD OVER RED CLAY CREEK (CONTINUED)

PROJECT FUNDING INFORMATION

Project	Funding Type	Original Estimate	Current Estimate	Authorization	Committed as of 12/31/03	Expended as of 12/31/03	Committed Unexpended as of 12/31/03	Authorization Available
BR 1-118 on Barley Mill Road at Ashland and BR 1-137 on Mill Road over Red Clay Creek		$ 2,036.8						
Prior Years	State			$ 21.0	$ 17.0	$ 4.4	$ 12.6	$ 4.0
	Federal			$ 83.8	$ 68.0	$ 1.8	$ 66.2	$ 15.8
	Other			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
FY 2004	State		$ 2,036.8	$ 105.0	$ 0.0	$ 0.0	$ 0.0	$ 109.0
	Federal			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 15.8
	Other			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
FY 2005 Request	State			$ 365.4				$ 474.4
	Federal			$ 1,461.6				$ 1,477.4
	Other			$ 0.0				$ 0.0
FY 2006 Projected	State			$ 0.0				$ 474.4
	Federal			$ 0.0				$ 1,477.4
	Other			$ 0.0				$ 0.0
FY 2007 Projected	State			$ 0.0				$ 474.4
	Federal			$ 0.0				$ 1,477.4
	Other			$ 0.0				$ 0.0
FY 2008-2010 Projected	State			$ 0.0				$ 474.4
	Federal			$ 0.0				$ 1,477.4
	Other			$ 0.0				$ 0.0
Total Projected	State			$ 491.4	$ 17.0			$ 474.4
	Federal			$ 1,545.4	$ 68.0			$ 1,477.4
	Other			$ 0.0	$ 0.0			$ 0.0
Total All Funds		$ 2,036.8	$ 2,036.8	$ 2,036.8	$ 85.0	$ 6.2	$ 78.8	$ 1,951.8

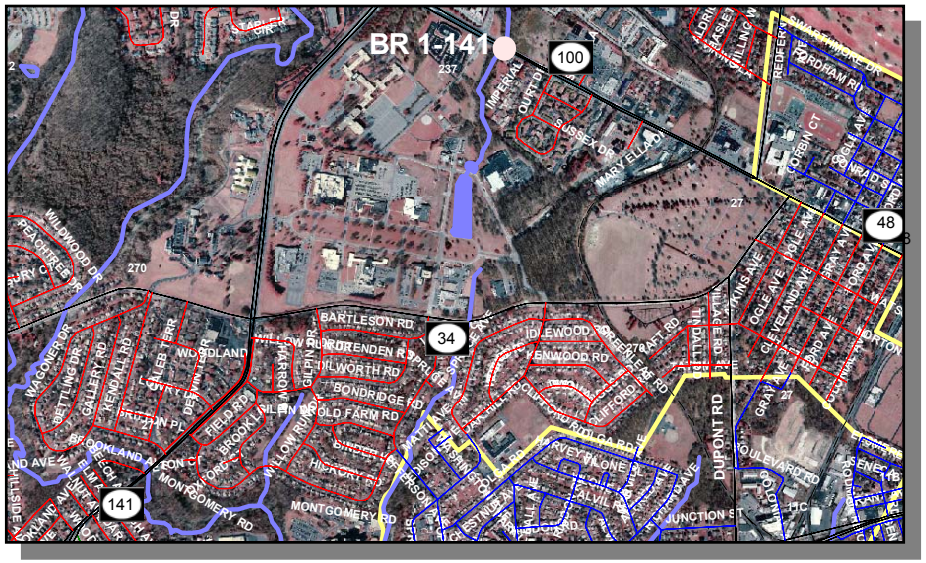
BR 1-118 ON BARLEY MILL ROAD AT ASHLAND AND BR 1-137 ON MILL ROAD OVER RED CLAY CREEK (CONTINUED)

PROJECT TIMELINE INFORMATION

Project #	Description	Phase	Funding Schedule	Current Estimate	Prior Years	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008 -2010
22-074-14	**BR 1-118 on Barley Mill Road at Ashland and BR 1-137 on Mill Road over Red Clay Creek**	PE	80% FHWA	$ 85.0	$ 85.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
		RW	80% FHWA	19.8	19.8	0.0	0.0	0.0	0.0	0.0
		C	80% FHWA	1,300.0	0.0	0.0	1,300.0	0.0	0.0	0.0
	Rolling Mill Road Retaining Wall	PE	100% ST	80.0	0.0	80.0	0.0	0.0	0.0	0.0
		RW	100% ST	25.0	0.0	25.0	0.0	0.0	0.0	0.0
		C	80% FHWA	527.0	0.0	0.0	527.0	0.0	0.0	0.0
	Total All Funds			$ 2,036.8	$ 104.8	$ 105.0	$ 1,827.0	$ 0.0	$ 0.0	$ 0.0

BR 1-141 ON SR 48 OVER CHESTNUT RUN

PROJECT SCOPE/DESCRIPTION: The proposed work on Bridge 1-141, which carries SR 48 over Chestnut Run, consists of replacing the existing reinforced concrete pipe with a precast concrete box culvert. The new section will meet current acceptable design criteria. Additional work to be included will be placement of riprap for scour protection, reconstruction of roadway approaches, and placement of guardrail as needed.



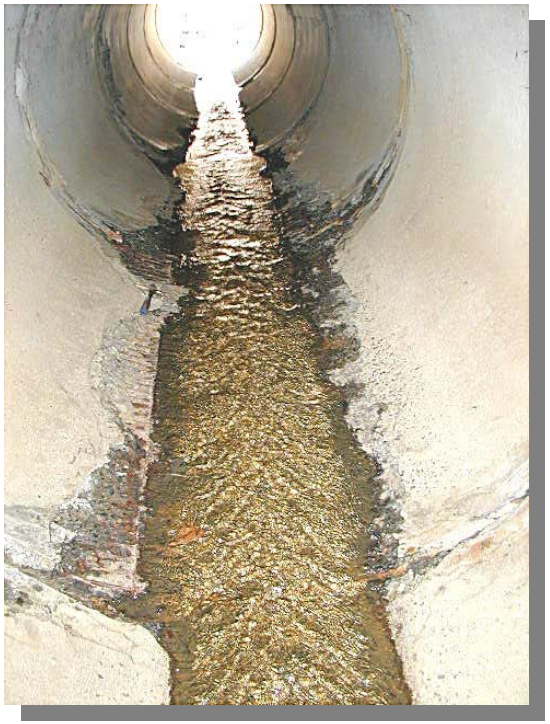
PROJECT JUSTIFICATION: The existing reinforced concrete pipe is in poor condition. The severe spalling of the concrete has caused the reinforcing bars in many places to become excessively corroded. The spalling and delamination of the concrete bottom points to even more corrosion of the reinforcement in the future. The bridge currently ranks 119th on the department's bridge deficiency list (via the bridge management program).

County: New Castle
Municipality:
Funding Program: Road System – Bridges
Functional Category: Preservation
Representative District: 5, 13
Senatorial District: 3, 7

BR 1-141 ON SR 48 OVER CHESTNUT RUN (CONTINUED)

Bridge 1-141

Inside Bridge 1-141



BR 1-141 ON SR 48 OVER CHESTNUT RUN (CONTINUED)

PROJECT FUNDING INFORMATION

Project	Funding Type	Original Estimate	Current Estimate	Authorization	Committed as of 12/31/03	Expended as of 12/31/03	Committed Unexpended as of 12/31/03	Authorization Available
BR 1-141 on SR 48 over Chestnut Run		$ 1,041.0						
Prior Years	State			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
	Federal			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
	Other			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
FY 2004	State		$ 1,041.0	$ 139.2	$ 139.2	$ 0.0	$ 139.2	$ 0.0
	Federal			$ 92.8	$ 92.8	$ 0.0	$ 92.8	$ 0.0
	Other			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
FY 2005 Request	State			$ 161.8				$ 161.8
	Federal			$ 647.2				$ 647.2
	Other			$ 0.0				$ 0.0
FY 2006 Projected	State			$ 0.0				$ 161.8
	Federal			$ 0.0				$ 647.2
	Other			$ 0.0				$ 0.0
FY 2007 Projected	State			$ 0.0				$ 161.8
	Federal			$ 0.0				$ 647.2
	Other			$ 0.0				$ 0.0
FY 2008-2010 Projected	State			$ 0.0				$ 161.8
	Federal			$ 0.0				$ 647.2
	Other			$ 0.0				$ 0.0
Total Projected	State			$ 301.0	$ 139.2			$ 161.8
	Federal			$ 740.0	$ 92.8			$ 647.2
	Other			$ 0.0	$ 0.0			$ 0.0
Total All Funds		$ 1,041.0	$ 1,041.0	$ 1,041.0	$ 232.0	$ 0.0	$ 232.0	$ 809.0

BR 1-141 ON SR 48 OVER CHESTNUT RUN (CONTINUED)

PROJECT TIMELINE INFORMATION

Project #	Description	Phase	Funding Schedule	Current Estimate	Prior Years	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008 -2010
23-071-03	**BR 1-141 on SR 48 over Chestnut Run**	PE	100% ST	$ 116.0	$ 0.0	$ 116.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
		RW	80% FHWA	148.0	0.0	116.0	32.0	0.0	0.0	0.0
		C	80% FHWA	777.0	0.0	0.0	777.0	0.0	0.0	0.0
	Total All Funds			$ 1,041.0	$ 0.0	$ 232.0	$ 809.0	$ 0.0	$ 0.0	$ 0.0

BR 1-155 ON OLD CAPITOL TRAIL AND BR 1-193 ON NEWPORT ROAD OVER RED CLAY CREEK

PROJECT SCOPE/DESCRIPTION: These bridges are located within proximity of each other in the Marshallton area. Bridge 1-155 on Old Capitol Trail (N012) is a historic bridge. In order to maintain and extend the life of this bridge, improvements to Bridge 1-155 include: painting of the steel; replacement of timber sidewalk boards; placing scour protection; repairs to the substructure; application of a protective coating to the concrete; and roadway drainage improvements. Bridge 1-193 on Newport Road (N332) located just around the corner will require the following repairs: place high performance concrete on the top of slab; rehabilitation of the substructure; placement of scour protection; and sidewalk construction. This project was advertised for construction bids in December 2003. Construction should begin in spring/summer 2004.

PROJECT JUSTIFICATION: Bridge 1-155 is classified as eligible for the National Register of Historic Places. Repairs are needed to maintain its historic integrity. Bridge 1-193 is located nearby. Bridge 1-155 is currently ranked 122nd and Bridge 1-193 is currently ranked 156th out of 1,399 on the department's bridge deficiency list (via the bridge management program).

County:	New Castle
Municipality:	
Funding Program:	Road System – Bridges
Functional Category:	Preservation
Representative District:	12
Senatorial District:	7

BR 1-155 ON OLD CAPITOL TRAIL AND BR 1-193 ON NEWPORT ROAD OVER RED CLAY CREEK (CONTINUED)

Bridge 1-155

Bridge 1-193

BR 1-155 ON OLD CAPITOL TRAIL AND BR 1-193 ON NEWPORT ROAD OVER RED CLAY CREEK (CONTINUED)

PROJECT FUNDING INFORMATION

Project	Funding Type	Original Estimate	Current Estimate	Authorization	Committed as of 12/31/03	Expended as of 12/31/03	Committed Unexpended as of 12/31/03	Authorization Available
BR 1-155 on Old Capitol Trail and BR 1-193 on Newport Road over Red Clay Creek		$ 1,353.5						
Prior Years	State			$ 65.7	$ 45.9	$ 45.9	$ 0.0	$ 19.8
	Federal			$ 117.7	$ 117.7	$ 48.0	$ 69.7	$ 0.0
	Other			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
FY 2004	State		$ 1,353.5	$ 234.0	$ 253.8	$ 124.9	$ 129.0	$ 0.0
	Federal			$ 936.1	$ 861.5	$ 48.0	$ 813.5	$ 74.6
	Other			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
FY 2005 Request	State			$ 0.0				$ 0.0
	Federal			$ 0.0				$ 74.6
	Other			$ 0.0				$ 0.0
FY 2006 Projected	State			$ 0.0				$ 0.0
	Federal			$ 0.0				$ 74.6
	Other			$ 0.0				$ 0.0
FY 2007 Projected	State			$ 0.0				$ 0.0
	Federal			$ 0.0				$ 74.6
	Other			$ 0.0				$ 0.0
FY 2008-2010 Projected	State			$ 0.0				$ 0.0
	Federal			$ 0.0				$ 74.6
	Other			$ 0.0				$ 0.0
Total Projected	State			$ 299.7	$ 299.7			$ 0.0
	Federal			$ 1,053.8	$ 979.2			$ 74.6
	Other			$ 0.0	$ 0.0			$ 0.0
Total All Funds		$ 1,353.5	$ 1,353.5	$ 1,353.5	$ 1,278.9	$ 266.8	$ 1,012.1	$ 74.6

BR 1-155 ON OLD CAPITOL TRAIL AND BR 1-193 ON NEWPORT ROAD OVER RED CLAY CREEK (CONTINUED)

PROJECT TIMELINE INFORMATION

Project #	Description	Phase	Funding Schedule	Current Estimate	Prior Years	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008 -2010
22-074-02	**BR 1-155 on Old Capitol Trail and BR 1-193 on Newport Road over Red Clay Creek**	PE	80% FHWA	$ 147.1	$ 147.1	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
		RW	100% ST	36.3	36.3	0.0	0.0	0.0	0.0	0.0
		C	80% FHWA	1,170.1	0.0	1,170.1	0.0	0.0	0.0	0.0
	Total All Funds			$ 1,353.5	$ 183.4	$ 1,170.1	$ 0.0	$ 0.0	$ 0.0	$ 0.0

BR 1-160 ON MARYLAND AVENUE OVER LITTLE MILL CREEK, NEXT TO CANBY PARK

PROJECT SCOPE/DESCRIPTION: Bridge 1-160 on Maryland Avenue (SR 4) is a historic bridge of reinforced concrete arch construction. In order to maintain and extend the life of this bridge, improvements include: rehabilitation, partial replacement and widening of the existing concrete arch, overlay of roadway approaches, application of concrete protective coating, and placement of scour protection. Traffic will be maintained during construction.

PROJECT JUSTIFICATION: Bridge 1-160 is classified as eligible for the National Register of Historic Places. Repairs are needed to maintain its historic integrity. The bridge is currently ranked 169th out of 1,399 on the department's bridge deficiency list (via the bridge management program).

County:	New Castle
Municipality:	Wilmington
Funding Program:	Road System – Bridges
Functional Category:	Preservation
Representative District:	13
Senatorial District:	3, 7

Bridge 1-160

BR 1-160 ON MARYLAND AVENUE OVER LITTLE MILL CREEK, NEXT TO CANBY PARK (CONTINUED)

PROJECT FUNDING INFORMATION

Project	Funding Type	Original Estimate	Current Estimate	Authorization	Committed as of 12/31/03	Expended as of 12/31/03	Committed Unexpended as of 12/31/03	Authorization Available
BR 1-160 on Maryland Avenue over Little Mill Creek, Next to Canby Park		$ 1,520.9						
Prior Years	State			$ 230.8	$ 230.8	$ 10.2	$ 220.6	$ 0.0
	Federal			$ 120.0	$ 120.0	$ 40.8	$ 79.2	$ 0.0
	Other			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
FY 2004	State		$ 1,520.9	$ 234.0	$ 234.0	$ 0.0	$ 234.0	$ 0.0
	Federal			$ 936.1	$ 0.0	$ 0.0	$ 0.0	$ 936.1
	Other			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
FY 2005 Request	State			$ 0.0				$ 0.0
	Federal			$ 0.0				$ 936.1
	Other			$ 0.0				$ 0.0
FY 2006 Projected	State			$ 0.0				$ 0.0
	Federal			$ 0.0				$ 936.1
	Other			$ 0.0				$ 0.0
FY 2007 Projected	State			$ 0.0				$ 0.0
	Federal			$ 0.0				$ 936.1
	Other			$ 0.0				$ 0.0
FY 2008-2010 Projected	State			$ 0.0				$ 0.0
	Federal			$ 0.0				$ 936.1
	Other			$ 0.0				$ 0.0
Total Projected	State			$ 464.8	$ 464.8			$ 0.0
	Federal			$ 1,056.1	$ 120.0			$ 936.1
	Other			$ 0.0	$ 0.0			$ 0.0
Total All Funds		$ 1,520.9	$ 1,520.9	$ 1,520.9	$ 584.8	$ 51.0	$ 533.8	$ 936.1

BR 1-160 ON MARYLAND AVENUE OVER LITTLE MILL CREEK, NEXT TO CANBY PARK (CONTINUED)

PROJECT TIMELINE INFORMATION

Project #	Description	Phase	Funding Schedule	Current Estimate	Prior Years	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008 -2010
22-074-01	**BR 1-160 on Maryland Avenue over Little Mill Creek, Next to Canby Park**	PE	80% FHWA	$ 150.0	$ 150.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
		RW	100% ST	200.8	200.8	0.0	0.0	0.0	0.0	0.0
		C	80% FHWA	1,170.1	0.0	1,170.1	0.0	0.0	0.0	0.0
	Total All Funds			$ 1,520.9	$ 350.8	$ 1,170.1	$ 0.0	$ 0.0	$ 0.0	$ 0.0

BR 1-201 ON BEECH HILL DRIVE OVER PIKE CREEK

PROJECT SCOPE/DESCRIPTION: The proposed work on Bridge 1-201 will consist of replacing the existing corrugated steel pipes with a precast concrete rigid frame using current acceptable roadway and bridge design criteria. Riprap will be placed in the stream to protect the new structure from scour, and the existing roadway approaches will be reconstructed. At least one lane of traffic will be maintained at all times during construction.

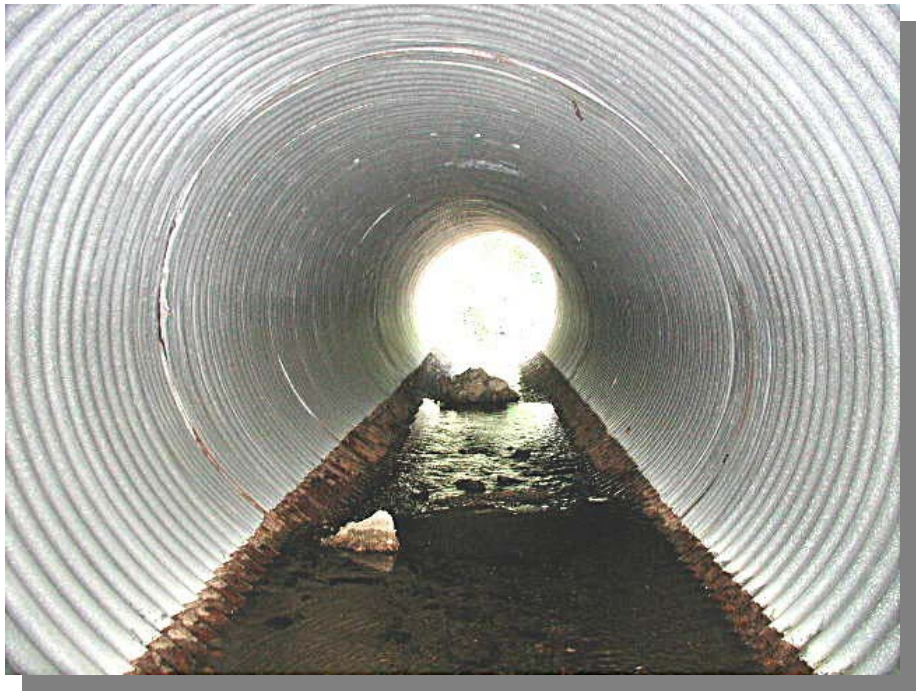
PROJECT JUSTIFICATION: The existing steel pipes are in poor condition. There are deformations of the pipe, corrosion at the waterline, and undermining of the inlet. The four-foot scour hole at the outlet is also a defect that must be addressed. The bridge currently ranks 96th out of 1,399 on the department's bridge deficiency list (via the bridge management program).

County:	New Castle
Municipality:	
Funding Program:	Road System – Bridges
Functional Category:	Preservation
Representative District:	22
Senatorial District:	8

BR 1-201 ON BEECH HILL DRIVE OVER PIKE CREEK (CONTINUED)

Bridge 1-201 on Beech Hill Drive

Inside Bridge 1-201



BR 1-201 ON BEECH HILL DRIVE OVER PIKE CREEK (CONTINUED)

PROJECT FUNDING INFORMATION

Project	Funding Type	Original Estimate	Current Estimate	Authorization	Committed as of 12/31/03	Expended as of 12/31/03	Committed Unexpended as of 12/31/03	Authorization Available
BR 1-201 on Beech Hill Drive over Pike Creek		$ 707.0						
Prior Years	State			$ 21.2	$ 21.2	$ 0.9	$ 20.3	$ 0.0
	Federal			$ 72.8	$ 69.6	$ 3.5	$ 66.1	$ 3.2
	Other			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
FY 2004	State		$ 707.0	$ 19.0	$ 0.0	$ 0.0	$ 0.0	$ 19.0
	Federal			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 3.2
	Other			$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
FY 2005 Request	State			$ 118.8				$ 137.8
	Federal			$ 475.2				$ 478.4
	Other			$ 0.0				$ 0.0
FY 2006 Projected	State			$ 0.0				$ 137.8
	Federal			$ 0.0				$ 478.4
	Other			$ 0.0				$ 0.0
FY 2007 Projected	State			$ 0.0				$ 137.8
	Federal			$ 0.0				$ 478.4
	Other			$ 0.0				$ 0.0
FY 2008-2010 Projected	State			$ 0.0				$ 137.8
	Federal			$ 0.0				$ 478.4
	Other			$ 0.0				$ 0.0
Total Projected	State			$ 159.0	$ 21.2			$ 137.8
	Federal			$ 548.0	$ 69.6			$ 478.4
	Other			$ 0.0	$ 0.0			$ 0.0
Total All Funds		$ 707.0	$ 707.0	$ 707.0	$ 90.8	$ 4.4	$ 86.4	$ 616.2

BR 1-201 ON BEECH HILL DRIVE OVER PIKE CREEK (CONTINUED)

PROJECT TIMELINE INFORMATION

Project #	Description	Phase	Funding Schedule	Current Estimate	Prior Years	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008 -2010
23-071-04	**BR 1-201 on Beech Hill Drive over Pike Creek**	PE	80% FHWA	$ 91.0	$ 91.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
		RW	100% ST	22.0	3.0	19.0	0.0	0.0	0.0	0.0
		C	80% FHWA	594.0	0.0	0.0	594.0	0.0	0.0	0.0
	Total All Funds			$ 707.0	$ 94.0	$ 19.0	$ 594.0	$ 0.0	$ 0.0	$ 0.0