



Delaware River
Joint Toll Bridge
Commission

Preserving Our Past, Enhancing Our Future

ANNUAL INSPECTION REPORT 2010 TOLL-SUPPORTED BRIDGE NOVEMBER 2010



TOLL BRIDGES

Trenton-Morrisville	Portland-Columbia
New Hope-Lambertville	Delaware Water Gap
Interstate 78	Milford-Montague
Easton-Phillipsburg	

TOLL-SUPPORTED BRIDGES

Lower Trenton	Uhlerstown-Frenchtown
Calhoun Street	Upper Black Eddy-Milford
Scudder Falls	Riegelsville
Washington Crossing	Northampton Street
New Hope-Lambertville	Riverton-Belvidere
Centre Bridge-Stockton	Portland-Columbia
Lumberville-Raven Rock	

Prepared by

Tran Systems

**TranSystems**

45 Eisenhower Drive
Suite 250
Paramus, NJ 07652
Tel 201-368-0400
Fax 201-368-7740

www.transystems.com

November 16, 2010

Mr. Frank G. McCartney
Executive Director
Delaware River Joint Toll Bridge Commission
2492 River Road
New Hope, PA 18938-9519

**RE: DRJTBC Contract No. C-09-02B; Capital Project 0814A
General Engineering Consultant – 2010 Annual Inspections
2010 Toll-Supported Bridge Inspections – Annual Inspection Report
Our Project Number 708100013**

Dear Mr. McCartney:

It is with great pleasure that we are submitting the Consulting Engineer's 2010 Annual Inspection Report (2010 Toll-Supported Bridge Inspections) for the Commission's following facilities:

- A. The Thirteen (13) Toll-Supported (Non-Toll) Bridges
- B. The Seven (7) Toll Bridges
- C. The Thirty-Six (36) approach bridges and roadways serving the above bridges
- D. The Commission's buildings and grounds
- E. The Commission's vehicles and equipment

This Annual Inspection Report summarizes our findings and recommendations based upon the 2010 inspection of the Toll-Supported Bridge Facilities. An update of the 2009 inspection of the Toll Bridge Facilities was completed to indicate any material changes in the conclusion and recommendation report sections. All facilities are in operating condition.

The 2010 Annual Maintenance Report which defines activities to be undertaken by the Commission's maintenance staff is published separately.

The report identifies certain ongoing capital projects and their estimated costs for 2011 and 2012. The estimated expenditure for capital projects in 2011 is \$83,611,000. In addition, an estimated expenditure of \$768,000 is recommended for new vehicle and equipment purchases in 2011. Therefore, the total amount of ongoing capital projects and vehicle and equipment expenditures in 2011 is estimated to be \$84,379,000. The estimated expenditure for ongoing capital projects and vehicle and equipment expenditures for 2012 is \$92,755,000.



I, William Clark, P.E., do hereby certify to the best of my knowledge, information, and belief that the information contained in the accompanying inspection report has been prepared in accordance with accepted engineering practice. This inspection and report conform to applicable requirements, criteria, guidelines, and standards as stated in the "Bridge Inspectors Reference Manual", FHWA NHI 03-001 – 2002, "Inspection of Fracture Critical Bridge Members" – 1986, as published by FHWA and the AASHTO "Manual for Condition Evaluation of Bridges" – 1994, including all interims and is true and correct at the time of the inspection. This report has been reviewed using appropriate Quality Assurance guidelines in accordance with generally accepted engineering practice.

It has been a pleasure to serve the Commission. Please contact us if you require any additional information.

Very truly yours,

TranSystems Corporation

A handwritten signature in dark ink, appearing to read "William Clark", with a stylized flourish at the end.

William Clark, P.E.
Project Manager/Associate

TABLE OF CONTENTS

I.	Letter of Transmittal	
II.	Table of Contents	i
III.	Members of the Commission	iii
IV.	Introduction	vi
V.	Key Sheet	xi
VI.	Commission Initiatives	1
VII.	Annual Inspection Reports	

TOLL-SUPPORTED BRIDGES

Lower Trenton Toll-Supported Bridge (<i>Structure No. 40</i>)	9
Calhoun Street Toll-Supported Bridge (<i>Structure No. 60</i>)	14
Scudder Falls Toll-Supported Bridges (<i>Structure No. 80</i>)	19
Washington Crossing Toll-Supported Bridge (<i>Structure No. 100</i>)	26
New Hope-Lambertville Toll-Supported Bridge (<i>Structure No. 120</i>)	31
Centre Bridge-Stockton Toll-Supported Bridges (<i>Structure No. 160</i>)	36
Lumberville-Raven Rock Pedestrian Bridge (<i>Structure No. 180</i>)	42
Uhlerstown-Frenchtown Toll-Supported Bridge (<i>Structure No. 220</i>)	47
Upper Black Eddy-Milford Toll-Supported Bridge (<i>Structure No. 240</i>)	52
Riegelsville Toll-Supported Bridge (<i>Structure No. 260</i>)	57
Northampton Street Toll-Supported Bridge (<i>Structure No. 280</i>)	63
Riverton-Belvidere Toll-Supported Bridge (<i>Structure No. 320</i>)	68
Portland-Columbia Pedestrian Bridge (<i>Structure No. 360</i>)	73

TOLL BRIDGE FACILITIES

	Trenton-Morrisville Toll Bridge Facility (<i>Structure No. 20</i>).....	79
	New Hope-Lambertville Toll Bridge Facility (<i>Structure No. 140</i>)	88
	Interstate 78 Toll Bridge Facility (<i>Structure Nos. 270 & 275</i>)	95
	Easton-Phillipsburg Toll Bridge Facility (<i>Structure No. 300</i>).....	106
	Portland-Columbia Toll Bridge Facility (<i>Structure No. 340</i>).....	115
	Delaware Water Gap Toll Bridge Facility (<i>Structure Nos. 380 & 390</i>)	122
	Milford-Montague Toll Bridge Facility (<i>Structure No. 400</i>).....	130
VIII.	Vehicles and Equipment	VE-1
IX.	Estimated Expenditures	EE-1
X.	Schedule of Insurance	SI-1
XI.	Glossary of Terms	G-1
XII.	Appendix A: Bridge Listing.....	A-1

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

MEMBERS OF THE COMMISSION

NEW JERSEY

HONORABLE DAVID R. DEGEROLAMO
Chairman

HONORABLE DONALD HART

HONORABLE HARRY ZIKAS, JR.

HONORABLE WILLIAM J. HODAS

HONORABLE YUKI MOORE LAURENTI

PENNSYLVANIA

HONORABLE GAETAN J. ALFANO
Vice Chairman

HONORABLE MELISSA HELLER

HONORABLE JAMES L. BROUGHAL
Secretary-Treasurer

HONORABLE BERNARD A. GRIGGS, JR.

HONORABLE JOHN PREVOZNIK

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

PROFESSIONAL ASSOCIATES

CONSULTING ENGINEERS

TRANSSYSTEMS
Paramus, New Jersey

LEGAL COUNSEL

FOX ROTHSCHILD, LLP
Philadelphia, Pennsylvania

FLORIO, PERRUCCI, STEINHARDT & FADER
Phillipsburg, New Jersey

EMPLOYMENT COUNSEL

STRADLEY, RONON, STEVENS & YOUNG
Philadelphia, Pennsylvania

WOLFF & SAMSON
West Orange, New Jersey

AUDITORS

BOWMAN & COMPANY
Voorhees, New Jersey

FINANCIAL ADVISOR

NW FINANCIAL GROUP
Jersey City, New Jersey

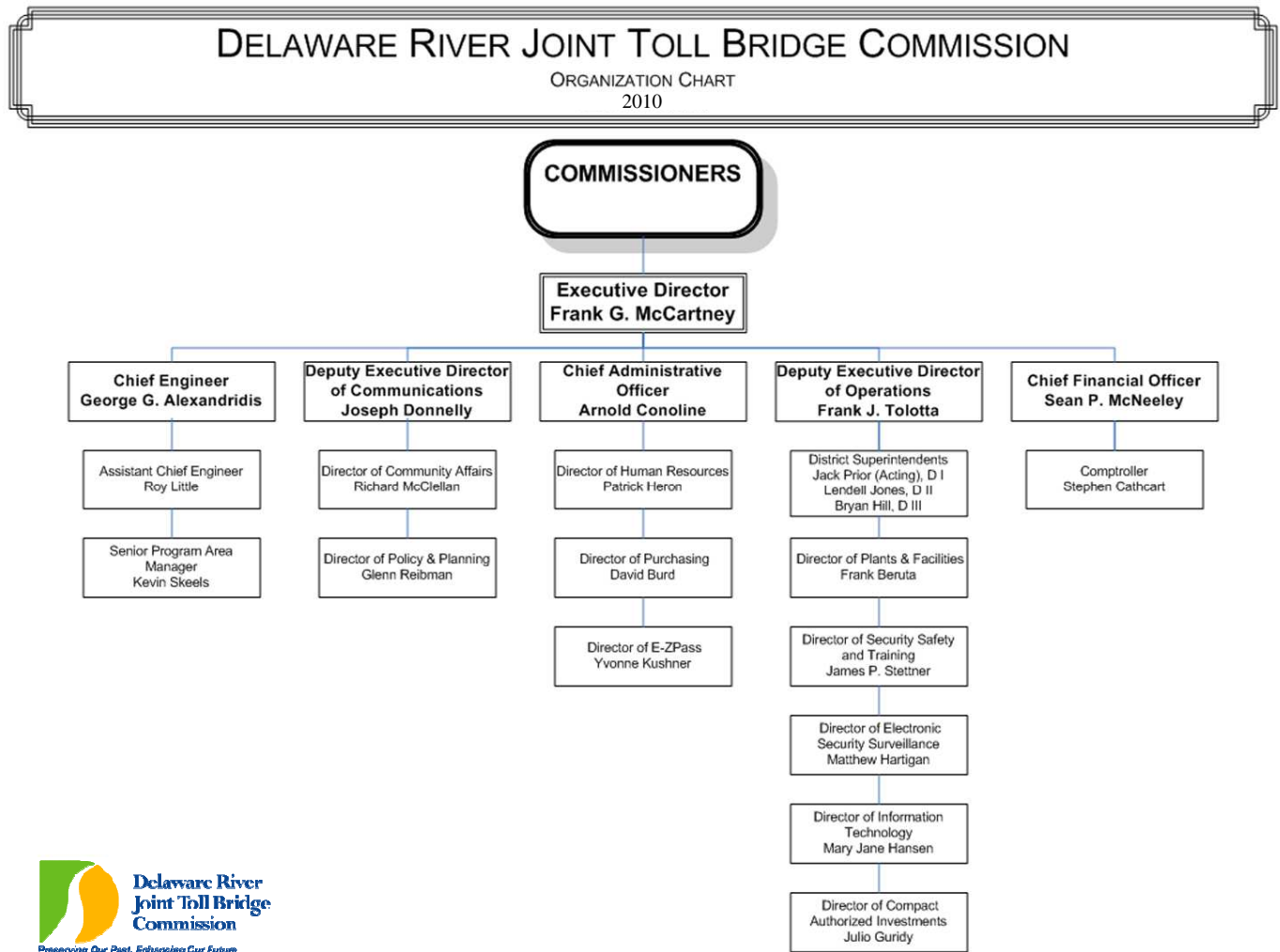
COMMUNICATIONS CONSULTANT

BELLEVUE COMMUNICATIONS
Philadelphia, Pennsylvania

INVESTMENT ADVISOR

TD BANK
Philadelphia, Pennsylvania

COMMISSION STAFF



INTRODUCTION

In accordance with Federal Highway Administration (FHWA) regulations, all bridges must be inspected at least once every two (2) years, more often if warranted, due to condition. Under Section 705 of the Commission's Bridge System Revenue Bonds, Series 2007, all bridges and toll facilities are to be inspected once every two (2) years. The Commission will inspect its Toll-Supported Bridges in even years (2010, 2012, etc.) and the Toll Bridges in odd years (2009, 2011, etc.). The associated facilities and grounds will be inspected in the year the bridge is inspected.

This 2010 Toll-Supported Bridge Annual Inspection Report of bridges and facilities owned and operated by the Delaware River Joint Toll Bridge Commission contains the findings of the 2010 inspections of the Toll-Supported Bridges. This year's inspections consisted of thirteen (13) Toll-Supported Bridges and any accompanying facilities and approach structures. The conclusions and recommendations concerning the Toll Bridges are based on the 2009 inspections. Any changes to the 2009 conclusions or recommendations for the Toll Bridges are indicated by text that is ***bold and italicized***. The inspection findings shown for the Toll Bridges is for informational purposes.

Commission District foremen and maintenance personnel provided our inspection crew with support services and access equipment necessary for performing the inspections. Several maintenance personnel also assisted in providing a valuable 'walk through' of the bridges, prior to beginning the inspections, highlighting the major areas of concern and any previous work done on the structure.

The equipment used to access the majority of the bridges (underdeck) consisted of various length ladders, Commission-owned lift trucks, an under-bridge unit called The Bridgemaster, and rigging.

The following report highlights the significant findings observed during the inspections, including recommended measures of repairing or improving noted deficiencies, either by Commission maintenance forces or by a future contract. This report, however, does not discuss routine preventative maintenance items regularly performed by maintenance forces. Any maintenance force level deficiencies which have been identified during the annual inspection can be found in the *2010 Annual Maintenance Report*, published under a separate cover, which has been prepared to expedite communication of repair work to the maintenance staff. In general these maintenance tasks include, but are not limited to, the following:

- Removal of accumulated debris from the deck, deck joints, inlets, catch basins, and drainage pipes
- Annual cleaning of structures (bridge flushing)
- Monitoring and repair of lighting and electrical work
- Removal of vegetation from substructures
- Removal of graffiti from bridges and retaining walls
- Patching concrete spalls and asphalt potholes
- Sealing roadway and bridge deck cracks
- Localized cleaning and painting of rusted steel/bearings
- Deck joint rehabilitation
- Guide rail repairs
- Miscellaneous steel repairs

A consistent numbering system was used to identify the bridge spans. Span numbering generally begins at the westernmost location of the bridge and increases to the east. However, a specific numbering system was not utilized for the individual structural members. The locations for individual members (stringers, floorbeams, etc.) are referenced by their relationship to known fixed points, such as bridge fascias and piers.

Several capital improvement projects were completed since the inception of the Program in 2001. Among these projects are the following:

PROJECTS COMPLETED 2001 - 2010 (> \$25,000)	PROGRAM COST
Trenton - Morrisville TB Rehab + One Aux. NB Lane	\$ 104,419,623
I-78 Roadway Rehabilitation	\$ 51,007,737
Electronic Surveillance/Detection System	\$ 21,778,695
Milford - Montague TB Rehabilitation	\$ 19,075,486
E-ZPass Implementation	\$ 18,023,146
Calhoun Street TSB Rehabilitation	\$ 11,151,480
I-78 Open Road Tolling (ORT) Lanes	\$ 10,250,074
Centre Bridge - Stockton TSB Rehabilitation	\$ 9,730,805
New Hope - Lambertville TB Plaza & Bridge Rehab	\$ 9,671,373
Riverton - Belvidere TSB Rehabilitation	\$ 9,258,099
New Hope - Lambertville TSB Rehabilitation	\$ 7,700,991
Northampton Street Bridge Rehabilitation	\$ 7,364,066
Uhlerstown - Frenchtown TSB Rehabilitation	\$ 5,779,187
New Hope - Lambertville TB Administration Building Additions & Renovations	\$ 5,767,617
Power Upgrades - All facilities+Struct Wiring+Telephone	\$ 4,760,754
Cleaning & Painting of the Lower Trenton TSB & Sign Replacement	\$ 4,567,205
Phase 1 Rehabilitation & Concept Study for the Washington Crossing TSB	\$ 3,757,000
New Hope - Lambertville TB - Floorbeam Bracket Improvements	\$ 2,970,972
Easton - Phillipsburg TB Sign Structure Replacements, Repair & Signage Upgrades	\$ 2,681,981
Portland - Columbia TB Facility Improvements	\$ 2,110,039
Easton - Phillipsburg TB Sidewalk Replacement	\$ 1,705,247
Scudder Falls TSB Deck Joint Replacement	\$ 1,446,418
Financial Management System	\$ 1,380,180
High Priority Structural Steel Repairs at the SFTSB	\$ 968,625
I-78 Expansion Dam Replacement	\$ 867,788
District 3 Roof Replacements	\$ 781,634
Emergency and Priority Repair Contract (all Bridges) -T/TS 389	\$ 749,233
IT Network Systems & Telephone Upgrades	\$ 702,485
New Hope - Lambertville TB Terne Roof Replacement	\$ 685,101
Milford - Montague TB Water Supply Upgrade	\$ 657,289
Northerly Corridor Congestion Mitigation Study	\$ 647,376
Easton - Phillipsburg TB Replace Roof System on Admin Bldg and Garage	\$ 599,782
I-80 NJ Repaving (NJDOT)	\$ 581,442

Riegelsville TSB End Floorbeam Bearings	\$	565,563
Southerly Crossing Corridor Study	\$	544,643
Easton - Phillipsburg Pavement of Bridge Approaches (PennDOT)	\$	517,090
Interstate 78 Salt Storage Bldg	\$	485,681
Substructure & Scour Remediation	\$	482,299
Trenton - Morrisville TB Adm. Bldg. Elevator Modernization Phase II	\$	436,706
Calhoun Street TSB Interim Repair Contract (Structural Steel Repairs)	\$	445,913
Washington Crossing TSB Deck Joint Replacement @ Pier 1,2,4 & 5	\$	407,885
Phase 1 Delaware Water Gap TB ORT Study	\$	405,011
Emergency and Priority Repair Contract (all Bridges) -I-80/NHTSB	\$	367,116
Portland - Columbia TSB Handicap Accessible Ramp	\$	305,656
Portland - Columbia TSB Deck Repairs and Drainage Modifications	\$	290,998
New Hope - Lambertville TB Electrical Improvements	\$	289,680
2008 Long Term Traffic Projections	\$	249,998
I-80 NJ Service Road Repair & Repaving	\$	239,885
Replace Overhead Sign on I-80 (by NJDOT)	\$	230,309
Northampton Street TSB Inspection/Access Cable/Lifeline	\$	222,044
Furnishings and Equipment for New Hope Addition and Renovation	\$	207,389
Alternative Analysis Study - Additional Capacity at Calhoun Street	\$	200,343
Wide Area Network (WAN)	\$	192,957
Interstate 78 Roadway Restriping	\$	184,898
Emergency Management Studies (Phase 1 & 2)	\$	184,000
Riegelsville TSB Pier Apron Repair	\$	166,755
New Hope - Lambertville TSB Emergency Sidewalk Repair	\$	156,083
IT Digital Paperless Project	\$	150,000
I-95/Scudder Falls TSB Bridge Lighting Upgrade	\$	126,131
NJDEP & PADEP Municipal Stormwater Regulation Compliance at Toll Facilities	\$	122,971
Easton - Phillipsburg Aboveground Storage Tank Diesel Fuel Storage Tank Replacement	\$	110,097
Trenton - Morrisville TB Administration Building Elevator Modernization Phase 1	\$	106,455
I-95/Scudder Falls TSB Guiderail Replacement (By NJDOT)	\$	103,000
Portland - Columbia Pedestrian Bridge, PA Approach Vehicle Access	\$	26,672
Construction Safety Audit	\$	79,022
5 Projects (fall below threshold to be included in this list)	\$	67,245
Delaware Water Gap (I-80) Impact Attenuators Design (see 438, Constr. Cost included in 440)	\$	64,092
Trenton - Morrisville Admin Building Space Plan	\$	56,544
Community Involvement Guidelines	\$	52,264
Milford - Montague TB Impact Attenuators Design, see 438 (Constr. cost incl. in 430)	\$	32,046
Reimbursement Agmt for Northampton Street TSB PA Shelter Sewer System Connection	\$	30,000
Portland - Columbia TB Impact Attenuators Design, see 438 (Constr. cost incl. in 441)	\$	27,116

TOTAL	\$	332,531,489
--------------	-----------	--------------------

The capital improvement projects shown below are underway and are either being developed, studied, designed, or constructed:

PROJECTS UNDERWAY (> \$25,000)	PROGRAM COST
I-95/Scudder Falls Improvement Project	\$ 321,897,423
Compact Authorized Investments (CAI)	\$ 45,945,000
E-P TB Rehabilitation	\$ 28,123,923
I-80/Delaware Water Gap Toll Bridge Rehabilitation	\$ 18,800,759
District 1, 2 & 3 Substructure & Scour Remediation	\$ 12,113,220
Upper Black Eddy - Milford TSB Rehabilitation	\$ 10,348,000
In-Lane System Integrator	\$ 8,897,596
Riegelsville TSB Rehabilitation	\$ 8,043,560
I-80/Delaware Water Gap Toll Bridge Open Road Tolling	\$ 7,316,805
DWG Maintenance Garage Improvements	\$ 2,960,104
New Hope - Lambertville TB PA Roadway Repaving, PA Outfall and NJ Route 29	
Overpass Bearing Seat Replacement	\$ 2,060,000
Compact Authorized Investment Consultants	\$ 2,000,000
TM Buildings HVAC Upgrade	\$ 1,911,797
Facility Stormwater & Drain Investigations	\$ 1,640,000
Riverton - Belvidere TSB Water Street Repaving & Improvements	\$ 1,401,029
E-ZPass Customer Service Center / Violations Processing Center	\$ 1,091,651
NH-L TB Equipment and Salt Storage Building Replacement	\$ 958,750
Fire Protection Systems at All Critical Equipment Spaces	\$ 890,374
Trenton - Morrisville TB Buildings Roof Replacement	\$ 857,316
Level 3 – Investment Grade Traffic and Revenue Forecasts	\$ 575,000
E-Zpass ETC Technical Consultant	\$ 500,000
Electronic Surveillance/Detection System (ESS) Technical Consultant	\$ 500,000
Radio System Enhancements	\$ 200,000
Traffic Count Program Upgrade	\$ 206,876
TOTAL	\$ 479,239,184
FUTURE PROJECTS	PROGRAM COST
Delaware Water Gap TB Improvements	\$ 179,523,700
E-ZPass ETC System Wide Replacement	\$ 20,750,000
I-78 Parapet Upgrades on various structures & Crossover Median Protection	\$ 10,920,524
Broadband Communications System	\$ 10,755,625
I-78 PA Approach Repaving & Welcome Center Improvements	\$ 10,096,464
District 3 Bridge Repairs	\$ 6,123,215
District 2 Bridge Repairs	\$ 5,890,203
Cleaning & Painting of I-78 Bridges (Edge, Carpentersville, Main River, etc)	\$ 7,275,388
Washington Crossing TSB Phase 2 Rehabilitation	\$ 10,132,266
District 1 Bridge Repairs	\$ 5,647,836

I-78 Maintenance Garage Improvements	\$	3,069,981
Lumberville - Raven Rock TSB Rehabilitation & Retaining Wall Reconstruction	\$	2,901,365
Easton - Phillipsburg HVAC Upgrade	\$	1,736,955
E-ZPass Toll Lanes Treadle Frame Replacement at Toll Bridges	\$	1,680,000
Delaware Water Gap HVAC Upgrade	\$	1,675,857
Trenton - Morrisville TB Admin Building Renovations	\$	1,309,920
Milford - Montague TB HVAC Upgrade (incl. Emerg. Gen. Relocation)	\$	1,179,465
I-78 HVAC Upgrade	\$	1,157,970
Portland - Columbia TB HVAC Upgrade	\$	1,116,525
Bridge Monitoring System Study for 17 Vehicular Bridges (E-P not incl.)	\$	1,000,000
Easton - Phillipsburg TB Elevator Modernization	\$	644,325
Intelligent Transportation Systems (ITS) Improvement Study	\$	596,344
Cashless Tolling Strategy Study	\$	575,000
Asset Management System Enhancements	\$	316,910
Commission-Wide Paint System Analysis	\$	100,000
TOTAL	\$	286,175,838

VEHICLES & EQUIPMENT, LABOR AND UNPLANNED PROJECTS (2001-2020)

	PROGRAM COST
Vehicles & Equipment	\$ 25,713,896
Capitalized Capital Prgm Mgmt Consultant Expenditures	\$ 15,485,964
Capitalized Engineering Department Labor	\$ 12,961,345
Unplanned Projects (all bridges)	\$ 12,084,955
TOTAL	\$ 66,246,160

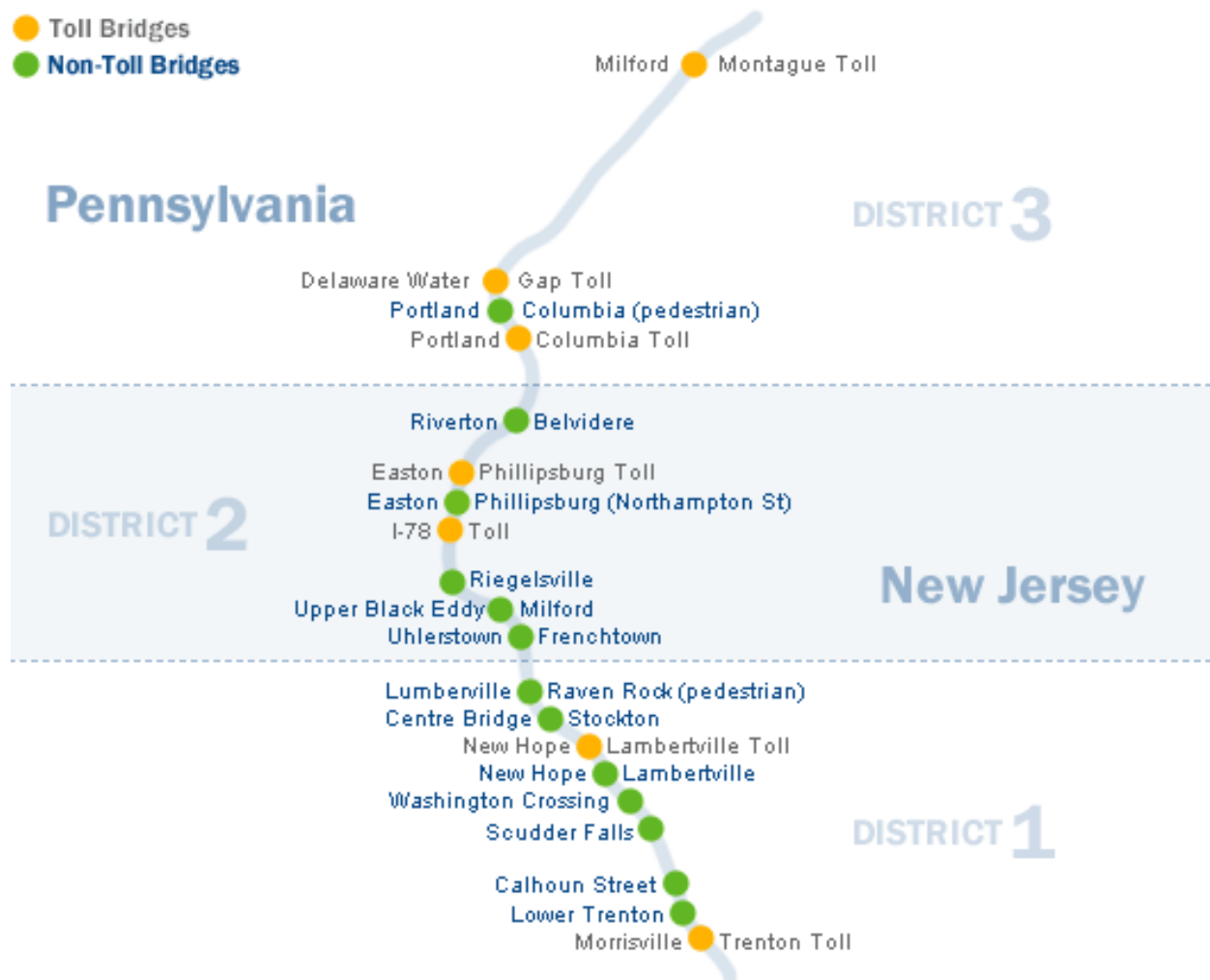
In 2000 the Commission adopted a “fix it right” philosophy for its Capital Program as compared to the previous “fix what’s broken” approach. The “fix it right” approach is based on the premise that whenever a project requires a bridge closure for implementation, that project must be designed so that no additional repair projects requiring a closure will be necessary for a subsequent period of at least 15 years. The estimated costs of the recommended improvements included in this report account for all costs of design, construction, construction management and inspection, and contract administration, are consistent with the Commission’s “fix it right” approach. It is also noted that the general findings and estimated repair costs developed in the 2006 & 2008 Underwater Inspection Reports, have been included in this report.

The format of the cost sheets for the 2010 Annual Inspection Report reflects the estimated cost of recommended improvements funded by the General Reserve in 2011 and 2012. Cost sheets for the Toll Bridges have been updated to reflect anticipated costs in 2011 and 2012. In addition the cost sheets provide the total program cost of the projects (Design, CMCI and Construction). The total in each section does not include the cost of completed projects.

The following report will summarize significant findings, recommendations, and associated estimated costs at the end of each section for each structure. Following the main reports are the recommendations for equipment and vehicle inspections and their associated repair/replacement costs. Finally, the Schedule of Insurance is provided towards the end of this report.

KEY SHEET

- Toll Bridges
● Non-Toll Bridges



***COMMISSION INITIATIVES
AND SYSTEM-WIDE PROJECTS***

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

In addition to addressing the findings of the 2010 annual inspection, the Commission has instituted in its Capital Program a number of "Commission Initiatives and System-Wide Projects". These initiatives increase the safety and security of patrons, increase the Commission's responsiveness to emergencies, identify needed future capacity improvements, and allow for increased control of projects and equipment.

The following is a partial listing of Commission Initiatives and System-Wide Projects that have begun or will begin in the near future:

COMMISSION INITIATIVES & SYSTEM-WIDE PROJECTS

Project Description	* Program Cost	General Reserve Fund	
		2011	2012
<u>Electronic Surveillance/Detection System</u>	\$21,779,000	\$1,904,000	\$0
This project involves the planning, design, installation and maintenance of an electronic surveillance and detection system to provide for the security of the Commission's bridges, roadways, toll plazas, and support facilities. The program will also include upgrades to the Commission's existing radio communications system. A consulting firm will be responsible for program management including the administration, planning, development, and coordination of the implementation of an electronic system designed to deter and detect impacts of threats to Commission assets. The project was completed in 2009, but final payment will be made in 2010.			
<u>Compact Authorized Investments</u>	\$45,945,000	\$18,044,000	\$0
<u>Compact Authorized Investment Consultants</u>	\$2,000,000	\$211,000	\$0
In order to maintain and enhance the bridge infrastructure the Commission has programmed projects to include Compact Authorized Expenditures for host community transportation infrastructure improvements. These expenditures will be geared toward improving throughout at the Commission's facilities. This initiative is currently ongoing.			
<u>Capitalized Engineering Department Labor</u>	\$12,962,000	\$800,000	\$830,000
This Commission initiative will track the in-house engineering department's efforts on all capital projects. The total programmed amount is shown as well as the expected expenditures in the next two years. All capitalized labor is then removed from the Commission's Operating Budget.			
<u>Capitalized Capital Prgm Mgmt Consultant Expenditures</u>	\$15,486,000	\$1,260,000	\$519,000
The Capital Program Management Consultant has enabled the Commission to continue to move the Capital Program forward by managing design, construction and construction management contracts associated with the capital program. Additional project managers have been provided under this contract and this cost is being tracked as a capital expense.			

*The Program Cost includes the costs from 2001- 2020

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

COMMISSION INITIATIVES & SYSTEM-WIDE PROJECTS

Project Description	* Program Cost	General Reserve Fund	
		2011	2012
<u>Traffic Count Program Upgrade</u>	\$207,000	\$207,000	\$0
The work includes the development and installation of new telemetry software to communicate to the existing traffic count stations located at all vehicular Toll Supported Bridges and the free direction of all Toll Bridges. The installation of a new database program to manage the traffic data is also included in this effort. Also included is the replacement of the traffic counters and modems.			
<u>District 1, 2 & 3 Substructure & Scour Remediation</u>	\$12,114,000	\$6,540,000	\$16,000
This project will include riprap placement, spall patching and crack sealing, masonry repairs and debris removal, pier and apron repair.			
<u>Traffic Count Program Upgrade</u>	\$207,000	\$207,000	\$0
The work includes the development and installation of new telemetry software to communicate to the existing traffic count stations located at all vehicular Toll Supported Bridges and the free direction of all Toll Bridges. The installation of a new database program to manage the traffic data is also included in this effort. Also included is the replacement of the traffic counters and modems.			
<u>Intelligent Transportation Systems (ITS) Improvement Study</u>	\$597,000	\$0	\$597,000
This work will includes conducting a feasibility study to evaluate ITS needs, opportunities and select system components to be installed at the Delaware Water Gap, Easton-Phillipsburg, Interstate 78, Trenton-Morrisville & Interstate 95 Bridges.			
<u>Fire Protection Systems at All Critical Equipment Spaces</u>	\$891,000	\$464,000	\$402,000
The design and installation of fire protection/suppression systems in the spaces that house Commission critical electronic equipment which include, Telecommunication, IT, ESS, ETC, ORT, VES, at all Commission Toll Bridge facilities.			
<u>Bridge Management System</u>	\$306,000	\$150,000	\$156,000
Maintenance Management Tracking and Bridge Management modules to be developed for the asset management system. As part of the ESS project, the Commission has purchased the software modules from Cartegraph. These include maintenance management and bridge management modules. The purpose of this project is to populate these modules with historic data and update them as needed to provide maintenance with a means of tracking their activities and the engineering department with a means to track bridge management data.			

*The Program Cost includes the costs from 2001- 2020

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

COMMISSION INITIATIVES & SYSTEM-WIDE PROJECTS

Project Description	* Program Cost	General Reserve Fund 2011	2012
<u>Financial Management System</u>	\$1,381,000	\$56,000	\$0
This project will consist of the purchase of software and implementation services, including training, for a financial management software system by Tyler Technologies. The project also includes owner's representation/project management support services by SMART Business Consultants.			
<u>Broadband Communications System</u>	\$9,369,000	\$70,000	\$5,409,000
The goal of the Broadband Communication System is to reduce the Commission's dependency upon leased line services as the primary communication infrastructure supporting electronic toll collection, electronic surveillance / detection system, wide area network, telecommunications, etc. Through the use of a Commission owned and operated hybrid communication network consisting of but not limited to current wireless technologies and hardwire infrastructure, a Broadband Communication System could allow for substantial reductions in the need for leased line services and the recurring operating costs associated with the same as well as provide for increased capacity.			
<u>District 1 Bridge Repairs</u>	\$1,494,000	\$0	\$0
District 1 multi-bridge improvements -- 1 contract in 5 years.			
<u>District 2 Bridge Repairs</u>	\$2,946,000	\$0	\$156,000
District 2 multi-bridge improvements -- 1 contract every 5 years.			
<u>District 3 Bridge Repairs</u>	\$2,926,000	\$0	\$0
District 3 multi-bridge improvements -- 1 contract every 5 years.			
<u>Electronic Surveillance/Detection System (ESS) Technical Consultant</u>	\$500,000	\$260,000	\$200,000
ESS Technical Consultant - \$500,000 Task Order Assignment for various ESS related projects.			
<u>Facility Stormwater & Drain Improvements</u>	\$1,640,000	\$576,000	\$90,000
Investigate facility storm water systems and floor drains to determine if any illicit connections exist. Develop conceptual plans to remove any illicit connection.			

*The Program Cost includes the costs from 2001- 2020

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

COMMISSION INITIATIVES & SYSTEM-WIDE PROJECTS

Project Description	* Program Cost	General Reserve Fund	
		2011	2012
<u>E-ZPass ETC System Wide Replacement w/ IAG Next Generation</u>	\$37,930,000	\$0	\$2,790,000
This project includes conducting a preliminary study regarding the system wide replacement of the existing ETC System in both the Conventional Toll Plaza Lanes and the ORT Lanes, also included is replacement of the VES. Upon completion of the study, this project includes the replacement of the existing system which has a 10 to 12 year life and includes upgrading the system to the E-ZPass Group's Next Generation Technology.			
<u>Cashless Tolling Strategy Study</u>	\$575,000	\$575,000	\$0
This study includes the investigation of Cashless Tolling Technologies and policies implemented throughout the region and how best to incorporate within the Commission's toll facilities.			
<u>Commission-Wide Paint System Analysis</u>	\$100,000	\$100,000	\$0
In recent years the Commission has undertaken program to blast clean & paint it's lead-based inventory of bridges to comply with lead abatement regulations. This work is normally performed as part of an overall bridge rehabilitation project. In general, the bridges have been painted with a moisture cured urethane system which allows the Commission to perform the painting at lower temperatures and in an environment which is generally more humid due to location over the river. The first bridges to be painted with moisture cured urethane was U-F TSB in 2002, NHS TSB in 2003 and NH-L TSB in 2004. The majority of the subsequent rehabilitations have used this same method/system with the 2 most recent bridges, Calhoun and Reigelsville, utilizing a organic zinc, epoxy, urethane NEPCOAT B paint system.			
This study will evaluate these paint systems to determine their longevity and			
<u>E-ZPass ETC Technical Consultant</u>	\$550,000	\$275,000	\$138,000
ETC Tehnical Consultant - \$500,000 for 2 years Task Order Assignment for various ETC related projects.			
<u>Radio System Enhancements</u>	\$200,000	\$90,000	\$0
The radio project consists of constructing and continually enhancing the DRJTBC 800 MHz radio system that extends from Trenton-Morrisville to Milford-Montague. The new radio system enables inter-district communications as well as interoperability with the Pennsylvania and New Jersey State Police. Future enhancements are planned to enable the Commission to speak directly to PennDot and NJDOT to coordinate highway incidents, snow plowing operations, and other roadway issues.			

*The Program Cost includes the costs from 2001- 2020

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

COMMISSION INITIATIVES & SYSTEM-WIDE PROJECTS

Project Description	* Program Cost	General Reserve Fund	
		2011	2012
<u>Level 3 – Investment Grade Traffic and Revenue Forecasts</u>	\$863,000	\$863,000	\$0
This project includes developing a complete financial grade traffic and revenue study for the Commission's Seven Toll Bridges, including multiple scenarios with and without tolling of the Scudder Falls Bridge. This project will continue where the 2009 Traffic and Revenue Projections Study (C-501A) by Jacobs Engineering left off.			
<u>Bridge Monitoring System Study for 17 Vehicular Bridges (E-P not</u>	\$1,000,000	\$250,000	\$750,000
This project includes a needs assessment study to determine the feasibility of implementing a Bridge Monitoring System (SMART technology) at 17 of the Commission's vehicular bridges. Since E-P TB Rehabilitation design will begin shortly, it will be studied separately. The Commission anticipated issuing an RFLOI for the Rehabilitation of the E-P TB and as an option, including the option for a feasibility study to use SMART technology. The Commission has previously received an unsolicited proposal to perform this study for \$363,000 on the E-P TB.			
<u>System Wide Sign Study</u>	\$2,711,000	\$738,000	\$1,973,000
This project will consist of an in-depth inspection, inventory and preliminary design of the signage at the Commission's 20 Toll and Toll Supported Bridges.			
<u>ESS System Enhancements</u>	\$3,269,000	\$1,126,000	\$406,000
This project will consist of an in-depth ESS system up grade to include updated software, firmware, operating platforms, integration of the access control system and Mate analytics. Additionally, the project will provide for the survey, procurement, and installation of infrared lighting to illuminate critical areas of infrastructure that are currently not adequately viewable during the hours of darkness. Furthermore, the project will include the projection and viewing of DRJTBC cameras on the "big wall" of the NJ State Police Regional Operations Intelligence Center during major incidents involving DRJTBC property.			
<u>Generator Upgrades at E-P, I-78 & P-C</u>	\$519,000	\$519,000	\$0
Task Order Assignment C-450A-10 provided study reports for the Emergency Standby Generators at I-78, E-P and P-C. This capital project is the next step to upgrade/repalce the Emergency Standby Generators at these three toll bridge facilities.			

*The Program Cost includes the costs from 2001- 2020

G:\PR10\0013\Bridge\Annual Report\2011_CIP_v16.xlsx

Page 5 of 7

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

COMMISSION INITIATIVES & SYSTEM-WIDE PROJECTS

Project Description	* Program Cost	General Reserve Fund	
		2011	2012
<u>Toll Supported Bridge Shelter Improvements</u>	\$840,000	\$0	\$0
This project will include the system-wide replacement of all toll-supported bridge officer's shelters throughout the Commission, creating a standardized officer shelter to be used at each location. Costs are estimated based on \$50,000 construction cost estimate for each shelter.			
<u>Development of Standard MPT Plans for Highway Speed Bridges</u>	\$72,000	\$36,000	\$0
This project will consist of engineering services to develop site specific standard MPT plans for the use of Commission maintenance personnel, consultant engineers, and contractors performing work on or near the Trenton-Morrisville Toll Bridge, Scudder Falls Toll Supported Bridge, New Hope-Lambertville Toll Bridge, Interstate 78 Toll Bridge, Easton-Phillipsburg Toll Bridge, and Delaware Water Gap Toll Bridge.			
<u>Substructure & Scour Remediation at Four District One Bridges</u>	\$4,731,000	\$1,519,000	\$3,213,000
This project will consist of scour remediation and substructure repair work to include riprap placement, spall patching / crack sealing, masonry repairs / debris removal, and pier/ apron repair items at the Lower Trenton, Calhoun Street, Washington Crossing and Lumberville-Raven Rock Toll Supported Bridges as identified the findings of the 2005 & 2006 underwater inspections. The Concept Study portion of this assignment includes In-Depth inspections of each bridge substructure to determine appropriate repairs. The results of the Concept Study will be used to develop the PS&E's needed to perform the repairs in 2010.			
<u>Substructure & Scour Remediation at Districts Two & Three Bridges</u>	\$5,655,000	\$0	\$1,857,000
This project will consist of installing standard preventative type scour countermeasures at the Interstate 78, Portland-Columbia, and Delaware Water Gap Toll Bridge facilities with the intention of improving the existing scour rating of the structures as well as scour remediation and substructure repair work to include spall patching / crack sealing, masonry repairs / debris removal, and pier/ apron repair items.			
<u>Cartegraph Upgrades</u>	\$200,000	\$200,000	\$0
This project will provide for the implementation of Cartegraph's SIGNview, SIGNALview, LIGHTview, STORMview and VERSAtools for radios and computers into the same database that currently contains WORKdirector and VERSA tools for ESS. The budgetary estimate also includes GIS and mobile computing.			

*The Program Cost includes the costs from 2001- 2020

G:\PR10\0013\Bridge\Annual Report\2011_CIP_v16.xlsx

Page 6 of 7

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

COMMISSION INITIATIVES & SYSTEM-WIDE PROJECTS

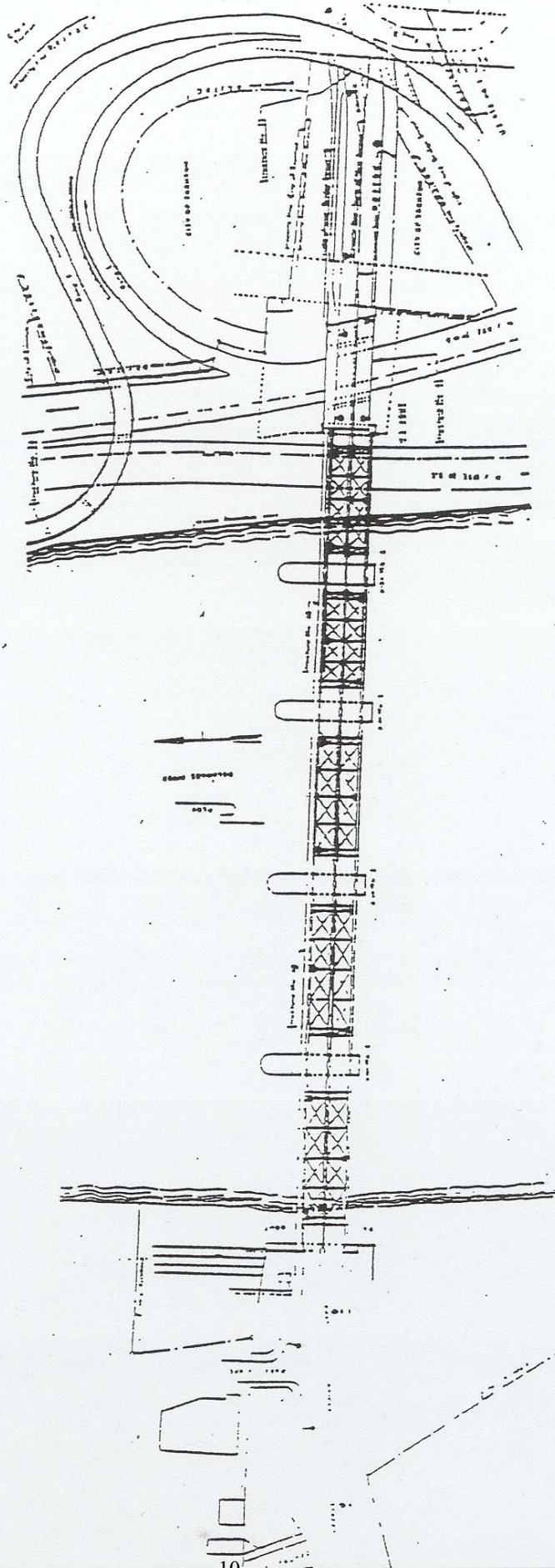
Project Description	* Program Cost	General Reserve Fund	
		2011	2012
<u>Customer Service Center / Violations Processing Center</u>	\$1,614,000	\$736,000	\$879,000
To design, build, maintenance and operations of the E-ZPass Customer Service Center / Violation Processing Center. Prepare software/backoffice to convert existing Electronic Toll Collection (ETC) CSC/VPC from ETCC to a new vendor.			
<u>Commission Network Switches Upgrades (IT DEPT)</u>	\$100,000	\$100,000	\$0
Replacement of the core network switch and all commission network switches.			
<u>SAN ARRAY Upgrade (IT DEPT)</u>	\$50,000	\$50,000	\$0
Additional hard drive space, for storage of electronic documents, to commission SAN ARRAY for paperless green initiative.			
<u>Installation of Electronic Time Card System at All Commission</u>	\$200,000	\$200,000	\$0
Installation of electronic time card system at all commission facilities			
<u>Toll-Supported Bridges – Oversize Vehicle Violation Remediation</u>	\$3,536,000	\$30,000	\$624,000
Installation of electronic time card system at all commission facilities			
<u>Commission wide Facility Property Survey</u>	\$1,650,000	\$825,000	\$825,000
Installation of electronic time card system at all commission facilities			
	* Program Cost	2011	2012
Total for all of the above Commission Initiatives and System-wide Projects:	\$199,115,000	\$38,981,000	\$21,830,000

*The Program Cost includes the costs from 2001- 2020

LOWER TRENTON
TOLL-SUPPORTED BRIDGE
(Structure No. 40)

STATE OF NEW JERSEY
COUNTY OF MERCER
CITY OF TRENTON

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
BOROUGH OF MORRISVILLE



LOWER TRENTON TOLL SUPPORTED BRIDGE

GENERAL

LOWER TRENTON TOLL-SUPPORTED BRIDGE

(5 span, subdivided warren truss)

The Lower Trenton Toll-Supported Bridge (Structure No. 40), also known as the “Trenton Makes” Bridge, carries Bridge Street traffic from Trenton, New Jersey to Morrisville, Pennsylvania; one of three bridges connecting these two towns.

The structure is a five span subdivided Warren Truss built in 1928, with a total length of approximately 1,022 feet. The roadway consists of two lanes, one lane in each direction separated by a center truss. The curb to curb width of each lane is approximately 19 feet, 5 inches. The substructure, originally built in 1804, widened and raised in 1874, consists of stone masonry.

The structure is currently posted for a 5 ton weight limit restriction and a 25 mph speed limit. The structure is also posted for a 10 foot vertical clearance.

The downriver truss displays the “TRENTON MAKES THE WORLD TAKES” sign which is mounted to the truss members; hence, the nickname ‘The Trenton Makes Bridge’. The original sign was erected in 1935 and replaced in 1981. A new sign was installed in 2005 under Contract TS-398C.

The structure was cleaned and painted under Contract No. TS-398A in 2005. The officer's shelter located on the Pennsylvania side of the bridge was replaced in 2006.

The east approach bridge is NJDOT owned and was not part of the inspection.

LOWER TRENTON TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

At the northwest Pennsylvania approach of the Lower Trenton Toll-Supported Bridge is a Commission owned officer shelter.

SIGNIFICANT FINDINGS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

LOWER TRENTON TOLL-SUPPORTED BRIDGE

(5 span, subdivided warren truss)

The structure is in overall satisfactory condition due to the superstructure and substructure.

The deck and west approach roadway (adjacent structure at east) are in good condition.

The superstructure is in satisfactory condition. Several gusset plates at the lower chord of the south and center trusses of Spans 1, 2 and 5 exhibit pitting up to 1/4”. Lower chord members at

the south truss exhibit material losses up to 3/16". All areas of material loss have been cleaned and painted with no areas of active corrosion.

The substructure is in satisfactory condition. The abutments and piers exhibit numerous areas of cracked and missing mortar. A few piers also exhibit loose and missing stones in isolated areas. Heavy scaling with exposed rebar is present at the Pier 4 concrete apron.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure units below the waterline were found to be in fair condition due to undermining of the concrete aprons at Piers 1 through 4, and deterioration of the timber crib foundation at Pier 3.

LOWER TRENTON TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall satisfactory condition. There are two small holes (1" diameter each) in the back siding. The siding is cracked around the base of the window at the south side. The concrete foundation exhibits minor cracks below the window. The concrete pad below the exterior steps has settled and slopes toward the shelter. The concrete sidewalk is in poor condition with spalls at the south side and around the manhole cover.

CONCLUSIONS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

LOWER TRENTON TOLL-SUPPORTED BRIDGE

The structure is in overall satisfactory condition due to minor deterioration of structural elements.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

Contract No. T/TS-476A-1 Substructure Repair & Scour Remediation - District 1, includes repairs to this bridge.

LOWER TRENTON TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall satisfactory condition.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Lower Trenton Toll-Supported Bridge

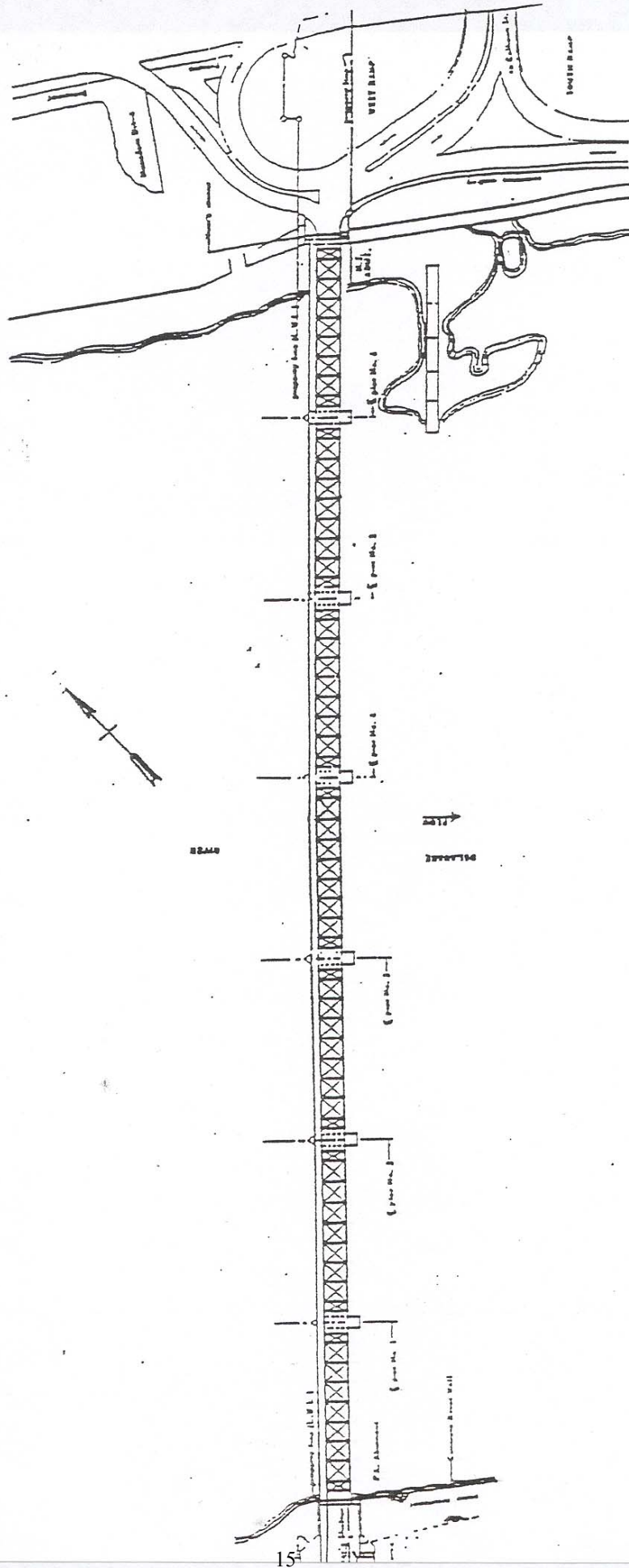
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
In 1997 this bridge was rehabilitated. In 2005, cleaning and painting were performed and the "TRENTON MAKES" sign was replaced.				
BRIDGES SUB TOTAL		\$0	\$0	\$0
<u>Facilities and Grounds</u>				
LTTSB	Unplanned Projects	\$370,000	\$25,000	\$26,000
FACILITIES AND GROUNDS SUB TOTAL		\$370,000	\$25,000	\$26,000
TOTAL COST		\$370,000	\$25,000	\$26,000

CALHOUN STREET
TOLL-SUPPORTED BRIDGE
(Structure No. 60)

STATE OF NEW JERSEY
COUNTY OF MERCER
CITY OF TRENTON

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
BOROUGH OF MORRISVILLE



CALHOUN STREET TOLL SUPPORTED BRIDGE

GENERAL

CALHOUN STREET TOLL-SUPPORTED BRIDGE

(7 span, wrought iron phoenix truss)

The Calhoun Street Toll-Supported Bridge (Structure No. 60) is one of three bridges constructed to connect Trenton, New Jersey and Morrisville, Pennsylvania. The truss was built in 1884 and the stone masonry substructure was built in 1859.

The structure is a seven span, wrought iron, pin connected Phoenix Pratt Truss with a total length of approximately 1,274 feet. The open steel grid deck provides a curb to curb width of 18 feet, 6 inches. A timber plank sidewalk is supported by the upriver truss on steel cantilever brackets.

The structure is currently posted for a 3 ton weight limit restriction and a 15 mph speed limit. The structure is also posted for an 8 foot vertical clearance.

A comprehensive rehabilitation of the structure was recently completed under Contract TS-447B. The rehabilitation was completed and the bridge re-opened to traffic on September 24, 2010.

CALHOUN STREET TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

At the southwest and southeast approach corners of the Calhoun Street Toll-Supported Bridge are Commission owned Pennsylvania and New Jersey officer shelters.

SIGNIFICANT FINDINGS

A comprehensive rehabilitation of the structure was completed on September 24, 2010 under Contract TS-447B. Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

CALHOUN STREET TOLL-SUPPORTED BRIDGE

(7 span, wrought iron phoenix truss)

The structure is in overall very good condition.

The deck and approach roadway are in very good condition.

The superstructure and substructure are in very good condition.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure units below the waterline were found to be in satisfactory condition with deteriorated concrete and exposed pier footings.

CALHOUN STREET TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall satisfactory condition. The northwest corner of the foundation exhibits cracks. The concrete steps at the entrance door are cracked along the base of the shelter. The wood frame at the basement door exhibits weathering and insulation was noted to be missing below the floor. There is a hole in the siding on the right side of the entrance door at the west side.

The New Jersey officer shelter is in overall good condition.

CONCLUSIONS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

CALHOUN STREET TOLL-SUPPORTED BRIDGE

The structure is in overall very good condition. Place riprap channel protection around the west abutment and at all the piers (470 CY). Repair the areas of missing stones in the masonry of Piers 1, 2 and 6 (5 SY). Patch the spalls and deteriorated concrete throughout the abutments and piers with an epoxy material (75 SF). Repoint the mortar joints in the west abutment and at all the piers (225 LF).

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

Contract No. T/TS-476A-1 Substructure Repair & Scour Remediation - District 1, includes repairs to this bridge.

CALHOUN STREET TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall satisfactory condition.

The New Jersey officer shelter is in overall good condition.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Calhoun Street Toll-Supported Bridge

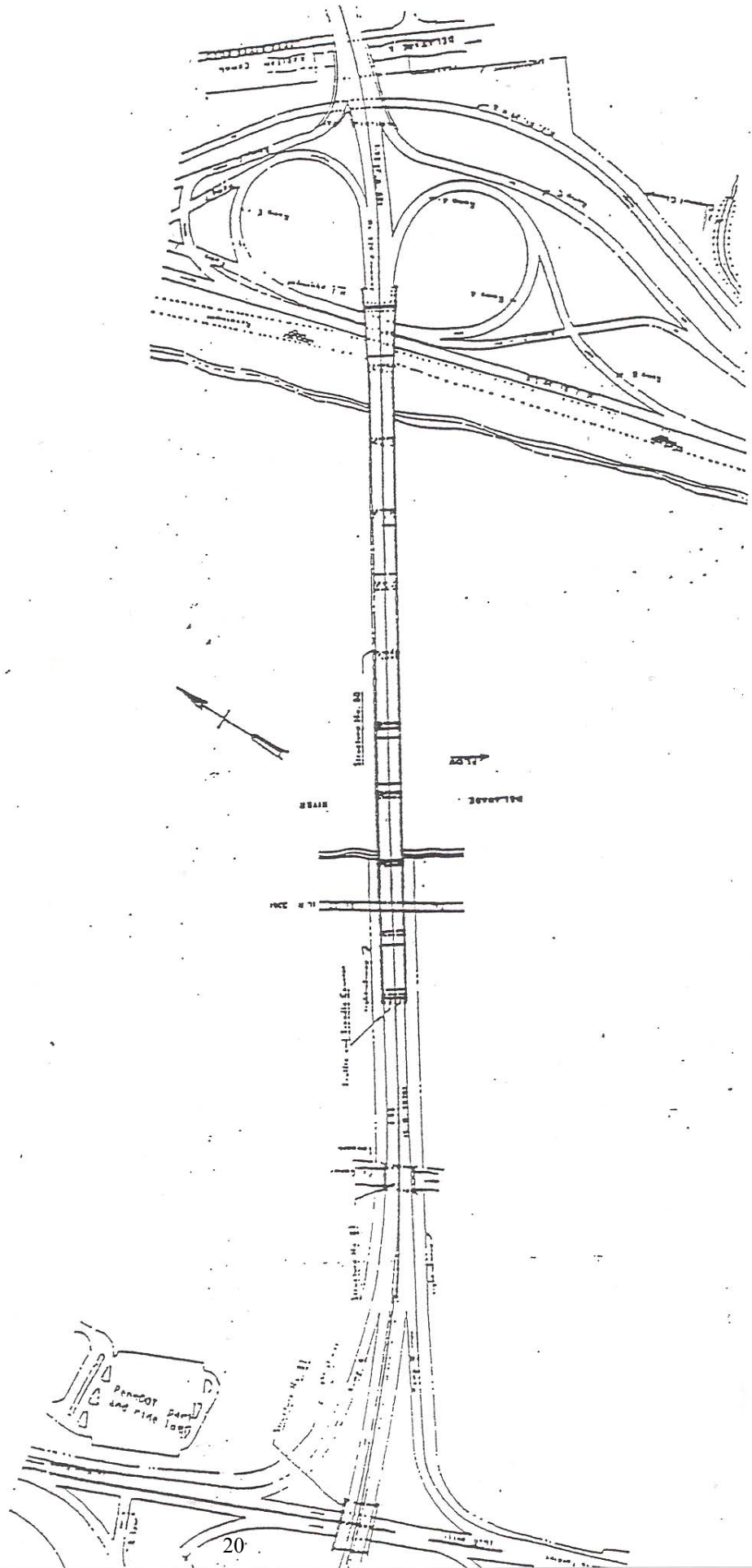
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
447	CS TSB Rehabilitation	\$11,152,000	\$0	\$0
BRIDGES SUB TOTAL		\$11,152,000	\$0	\$0
<u>Facilities and Grounds</u>				
CSTSB	Unplanned Projects	\$217,000	\$15,000	\$16,000
FACILITIES AND GROUNDS SUB TOTAL		\$217,000	\$15,000	\$16,000
TOTAL COST		\$11,369,000	\$15,000	\$16,000

SCUDDER FALLS
TOLL-SUPPORTED BRIDGES
(Structure Nos. 80, 81 & 82)

STATE OF NEW JERSEY
COUNTY OF MERCER
TOWNSHIP OF EWING

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
TOWNSHIP OF LOWER MAKEFIELD



SCUDDER FALLS TOLL SUPPORTED BRIDGE

GENERAL

SCUDDER FALLS TOLL-SUPPORTED BRIDGE

(10 span, riveted steel plate girder)

The Scudder Falls Toll-Supported Bridge (Structure No. 80) carries Interstate 95 over the Delaware River from Lower Makefield Township, Pennsylvania to Ewing Township, New Jersey.

The main river bridge is a ten span, riveted plate girder structure consisting of two span continuous deck girders and alternating cantilever spans. Built by the Commission in 1959 and opened to traffic on June 22, 1961, the bridge carries two dual roadways each having a curb to curb width of 27 feet with a concrete median barrier, and flanked by an upstream and downstream safety walk. The total length of the bridge is 1,740 feet. The substructure units are reinforced concrete, with stone facing on the piers.

The posted speed limit on the bridge approach roadways is 55 mph. The Commission's jurisdiction at this crossing also includes two Pennsylvania approach overpasses, one at the Pennsylvania Canal and the other at Taylorsville Road.

The Commission is moving forward with plans to replace the Scudder Falls Bridge based on conclusions contained in its Southerly Crossings Corridor Study.

The bridge replacement project is projected to be the largest single capital undertaking in the Commission's history -- \$310 million -- providing new capacity and new safety upgrades to meet both current and future traffic demands along I-95 in Pennsylvania, at the bridge's two adjoining interchanges in New Jersey and Pennsylvania, and on the bridge itself. The current four-lane bridge with no breakdown shoulders ranks as the most heavily travelled river crossings among the 20 bridges in the Commission's system.

The proposed project area would extend 4.4 miles along I-95 -- from the Route 332 interchange in Bucks County, Pa. to the Bear Tavern Road interchange in Mercer County, N.J. It would be the largest single construction project in the Commission's nearly 75-year history. The work would include a complete replacement of the existing four-lane Scudder Falls Bridge over the Delaware River with six lanes of through traffic (three in each direction), two auxiliary northbound lanes for entry/exit travel, and one auxiliary southbound lane for entry/exit travel.

Other major components of the project include:

- Widening of I-95 from the Route 332 exit in Pennsylvania to the bridge by adding an additional lane in each direction (widening to the inside of the highway).
- Reconfiguration of the I-95/Taylorsville Road Interchange in Lower Makefield Twp., Pa. by eliminating the existing eastern southbound off-ramp from I-95 and combining it with the existing western southbound off-ramp.
- Reconstruct and reconfigure the Route 29 interchange through the use of roundabouts. This option would avoid traffic signals, resulting in a folded diamond interchange with two roundabout intersections at the ramps with I-95.
- Addition of a bicycle and pedestrian facility on the southbound side of the bridge

- \$7.5 million of noise-abatement walls along the approach roadways leading to and from the bridge.

To finance the multi-faceted project, the Commission has decided to implement cashless tolling at the facility due to the absence of federal and state transportation funding. The Commission committed to cashless tolling because it would have been unfair to apply the financial burden to motorists at its seven existing toll bridges, most notably customers who use the I-78, and Delaware Water Gap (I-80) Toll Bridges.

The Commission is currently seeking to acquire the services of a Financial Advisor in association with an Independent Legal Counsel who, collectively, are familiar with Alternative Program Delivery Strategies such as: Public Private Partnerships (P3's) to provide financial advisory services and legal counsel as to how to leverage the toll revenue stream to finance and complete the project in a timely basis in accordance with authority vested in the Commission by its Compact.

PENNSYLVANIA CANAL OVERPASS

(1 span, simply supported, steel multi-stringer)

The Pennsylvania Canal Overpass (Structure No. 81) carries Interstate Route 95 over the Pennsylvania Canal in Lower Makefield Township, Pennsylvania. The structure is an approach bridge to the main Scudder Falls Toll-Supported Bridge that crosses the Delaware River.

The Pennsylvania Canal Overpass is a simple span, concrete deck, multi-stringer structure founded on reinforced concrete abutments on footings, which are supported by steel bearing piles. Opened to traffic on June 22, 1961, the bridge carries two dual roadways each with a curb to curb width of 37 feet with a concrete median barrier and shoulders. The total span length of the bridge is 61 feet, 4 inches.

TAYLORSVILLE ROAD OVERPASS

(3 span, steel multi-stringer)

Taylorville Road Overpass (Structure No. 82) carries Interstate 95 over Taylorville Road in Lower Makefield Township, Pennsylvania and provides access to the main Scudder Falls Toll-Supported Bridge over the Delaware River. The bridge was built in 1959 and opened to traffic on June 22, 1961.

The structure is a three span, concrete deck, multi-stringer structure founded on reinforced concrete abutments and piers on footings that are supported by cast in place concrete piles. The bridge carries two dual roadways each with a curb to curb width of 44 feet with a concrete median barrier and shoulders. The total span length of the bridge is 134 feet.

SIGNIFICANT FINDINGS

Based on the findings of the 2010 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

SCUDDER FALLS TOLL-SUPPORTED BRIDGE

(10 span, riveted steel plate girder)

The structure is in overall satisfactory condition due the superstructure.

The deck is in good condition.

The approach roadways and associated ramps are in satisfactory condition. Deteriorated asphalt was noted at numerous locations more prevalent adjacent to the concrete headers. The approach roadways and ramps exhibit several small potholes and spalls.

The superstructure is in satisfactory condition. Several stringers exhibit horizontal cracks in the web and material losses at the bottom flange. The 2nd floorbeam from Pier 5 exhibits a crack in the tie plate over the south girder. Sheared anchor bolts are present in the north tie plate at Pier 3 over the north girder, the Floorbeam 6 tie plate over the north girder in Span 5, the Floorbeam 2 tie plate over the north girder in Span 6 and the Floorbeam 2 tie plate over the north girder in Span 9. Both girders exhibit large areas of peeling paint and surface rust in the web plates with minor material losses.

The substructure is in good condition.

An underwater inspection was performed in 2006 under Contract No. C-467D. The substructure units below the waterline were found to be in good condition with only minor spalls and minor exposure of the Pier 3 footing.

PENNSYLVANIA CANAL OVERPASS

(1 span, simply supported, steel multi-stringer)

The structure is in overall satisfactory condition due to the superstructure.

The deck and approach roadway is in good condition.

The superstructure is in satisfactory condition. Heavy laminar rust is typical at the stringer ends and bearings with minor material losses.

The substructure is in good condition.

An underwater inspection was performed in 2006 under Contract No. C-467D. The substructure units below the waterline were found to be in good condition with only fine random cracks throughout.

TAYLORSVILLE ROAD OVERPASS

(3 span, steel multi-stringer)

The structure is in overall fair condition due the superstructure.

The deck is in satisfactory condition. The underside of deck exhibits areas of fine mapcracking with efflorescence and water stains in all spans.

The approach roadway is in good condition.

The superstructure is in fair condition. Stringers exhibit moderate to heavy laminar rust with material losses up to 1/8" at the bottom flange and lower web. Stringer 14 exhibits moderate impact damage at the bottom flange over the right northbound lane. Heavy laminar rust is typical at the bearings with heavy debris accumulation surrounding the bearing seats.

The substructure is in satisfactory condition. The east abutment backwall exhibits a spall with exposed rebar at the north end. Medium vertical cracks are typical throughout. Several previous concrete patches have failed at Pier 2.

CONCLUSIONS

Based on the findings of the 2010 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

SCUDDER FALLS TOLL-SUPPORTED BRIDGE

The structure is in overall satisfactory condition due to minor deterioration of structural elements. The Commission is currently in the Environmental Assessment phase of moving forward with plans to replace the Scudder Falls Bridge and approach roadways from Route 332 in Pennsylvania to Bear Tavern Road in New Jersey.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

PENNSYLVANIA CANAL OVERPASS

The structure is in overall satisfactory condition due to minor deterioration of structural elements. The Commission is currently in the Environmental Assessment phase of moving forward with plans to replace the Scudder Falls Bridge and approach roadways from Route 332 in Pennsylvania to Bear Tavern Road in New Jersey. .

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

TAYLORSVILLE ROAD OVERPASS

The structure is in overall fair condition due to minor deterioration of primary structural elements. The Commission is currently in the Environmental Assessment phase of moving forward with plans to replace the Scudder Falls Bridge and approach roadways from Route 332 in Pennsylvania to Bear Tavern Road in New Jersey. .

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Scudder Falls Toll-Supported Bridge

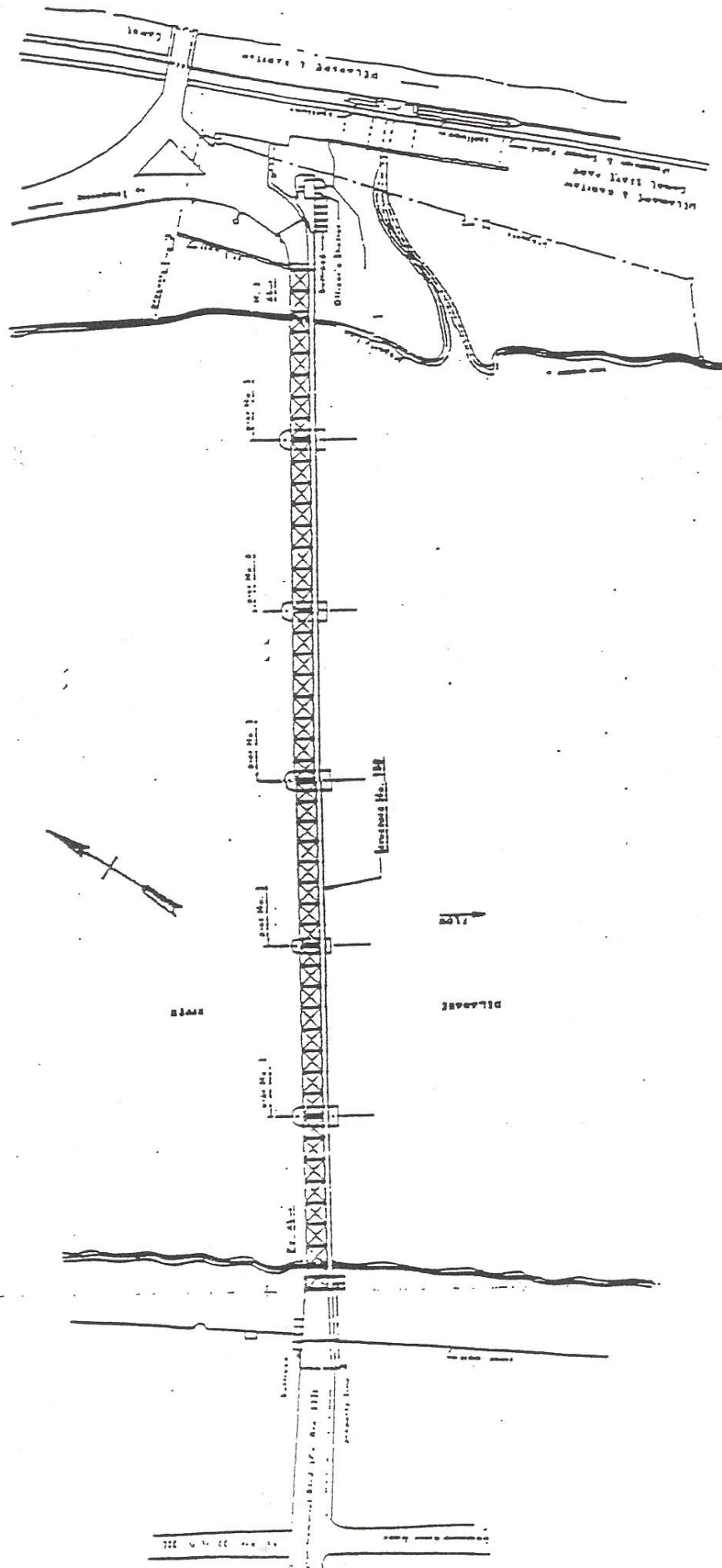
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
393	I-95 / SF Replacement Project	\$321,898,000	\$9,186,000	\$23,748,000
BRIDGES SUB TOTAL		\$321,898,000	\$9,186,000	\$23,748,000
<u>Facilities and Grounds</u>				
SFTSB	Unplanned Projects	\$1,013,000	\$75,000	\$78,000
FACILITIES AND GROUNDS SUB TOTAL		\$1,013,000	\$75,000	\$78,000
TOTAL COST		\$322,911,000	\$9,261,000	\$23,826,000

WASHINGTON CROSSING
TOLL-SUPPORTED BRIDGE
(Structure No. 100)

STATE OF NEW JERSEY
COUNTY OF MERCER
TOWNSHIP OF HOPEWELL
WASHINGTON CROSSING

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
TOWNSHIP OF UPPER MAKEFIELD
WASHINGTON CROSSING



WASHINGTON CROSSING TOLL SUPPORTED BRIDGE

GENERAL

WASHINGTON CROSSING TOLL-SUPPORTED BRIDGE

(6 span, double warren truss)

The Washington Crossing Toll-Supported Bridge (Structure No. 100) connects Mercer County Route 546 in Hopewell Township, New Jersey with PA Route 532 (George Washington Memorial Boulevard) in the Township of Taylorsville in Upper Makefield, Pennsylvania.

The structure is a six span double Warren Truss, with a total length of approximately 877 feet. The steel superstructure was built in 1904. The substructures, composed of rubble stone faced masonry, are from the original construction in 1831. The open steel grid deck provides a curb to curb width of 15 feet. The downstream side of the truss supports a cantilevered, wood planked sidewalk.

The structure is currently posted for a 3 ton weight limit restriction and a 15 mph speed limit. The structure is also posted for an 8 foot vertical clearance.

The deck joint support system was repaired under Contract No. TS-428A in 2005. This Contract consisted of repairing and replacing riser beams. High priority substructure repairs were also completed under this contract during 2005 due to post flood damage.

The structure was rehabilitated under Contract No. TS-442A in 2010.

WASHINGTON CROSSING TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

At the southeast approach corner of the Washington Crossing Toll-Supported Bridge is a Commission owned New Jersey officer shelter.

SIGNIFICANT FINDINGS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

WASHINGTON CROSSING TOLL-SUPPORTED BRIDGE

(6 span, double warren truss)

The structure is in overall fair condition due to the superstructure.

The deck is in good condition.

The approach roadway is in good condition.

The superstructure is in fair condition. The lower chord exhibits impact damage at the north truss from panel points L2 to L4, and L7 to L8 in Span 3, L7 to L8 in Span 4, L1 to L5 in Span 5 and L1 to L3 in Span 6. The south tie rod at Span 2, the south tie rod at Span 3, the north tie rod

at Span 4, the north tie rod at Span 5 and the north tie rod at Span 6 have been removed. Light to moderate rust with minor section losses is typical throughout the floorsystem.

The substructure is in good condition. The west abutment was reconstructed under Contract TS-442A.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure units below the waterline were noted to be in satisfactory condition due to minor deterioration and undermining of the pier aprons and loss of pointing and cracks in the west abutment and wingwalls.

WASHINGTON CROSSING TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall good condition.

CONCLUSIONS

The structure was rehabilitated under Contract No. TS-442A in 2010. Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

WASHINGTON CROSSING TOLL-SUPPORTED BRIDGE

The structure is in overall fair condition due to the condition of the superstructure.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

WASHINGTON CROSSING TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall good condition.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Washington Crossing Toll-Supported Bridge

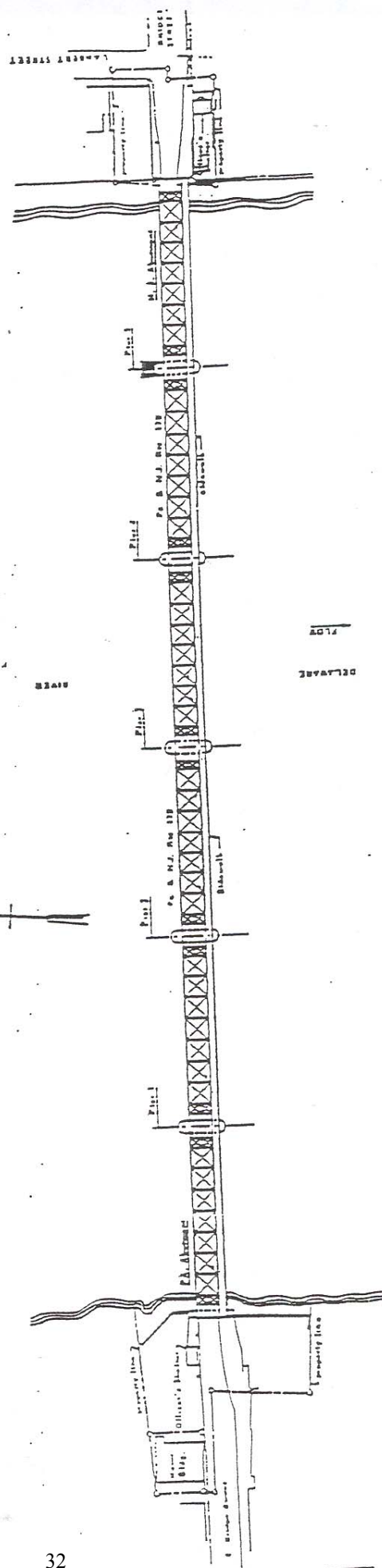
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
442A	Phase 1 Rehabilitation & Concept Study for the Washington Crossing TSB	\$3,757,000	\$388,000	\$0
442B	Washington Crossing TSB Phase 2 Rehabilitation	\$9,770,000	\$0	\$0
BRIDGES SUB TOTAL		\$13,527,000	\$388,000	\$0
<u>Facilities and Grounds</u>				
WCTSB	Unplanned Projects	\$193,000	\$15,000	\$16,000
FACILITIES AND GROUNDS SUB TOTAL		\$193,000	\$15,000	\$16,000
TOTAL COST		\$13,720,000	\$403,000	\$16,000

NEW HOPE-LAMBERTVILLE
TOLL-SUPPORTED BRIDGE
(Structure No. 120)

STATE OF NEW JERSEY
COUNTY OF HUNTERDON
CITY OF LAMBERTVILLE

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF DUCKS
BOROUGH OF NEW HOPE



NEW HOPE - LAMBERTVILLE TOLL SUPPORTED BRIDGE

GENERAL

NEW HOPE-LAMBERTVILLE TOLL-SUPPORTED BRIDGE

(6 span, pin connected pratt truss)

The New Hope-Lambertville Toll-Supported Bridge (Structure No. 120) connects Bridge Street in New Hope, Pennsylvania to Lambertville, New Jersey.

The structure, constructed in 1904, is a six span pin connected Pratt Truss with a total length of approximately 1,046 feet. The open steel grid deck provides a curb to curb width of 20 feet 7 inches. A timber plank sidewalk, installed in 1982, and replaced in 2004 with fiberglass panels, is supported on the downstream side by steel cantilever brackets. Abutments, wingwalls and piers are ashlar faced masonry; the piers are stone filled. All substructure units are from original construction in 1814.

The structure is currently posted for a 4 ton weight limit restriction and a 15 mph speed limit.

The structure was rehabilitated under Contract No. TS-370A in 2004. Priority repairs to Pier 2 were completed in 2007 under Contract No. DB-457B.

NEW HOPE-LAMBERTVILLE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

At the northwest and southeast approach corners of the New Hope-Lambertville Toll-Supported Bridge are Commission owned Pennsylvania and New Jersey officer shelters. At the Pennsylvania side of the bridge is a Commission owned former firehouse that primarily functions as a storage facility for the Commission.

SIGNIFICANT FINDINGS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

NEW HOPE-LAMBERTVILLE TOLL-SUPPORTED BRIDGE

(6 span, pin connected pratt truss)

The structure is in overall satisfactory condition due to the superstructure.

The deck and approach roadway are in good condition.

The superstructure is in satisfactory condition. Several north and south truss lower chord member's exhibit impact damage in Spans 1 through 5. Many truss member's exhibit minor section losses that have been arrested by the recoating completed under Contract TS-370A.

The substructure is in good condition.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure units below the waterline were found to be in satisfactory condition due to undermining of the pier aprons.

NEW HOPE-LAMBERTVILLE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania and New Jersey officer shelters are in overall good condition.

The firehouse is in overall fair condition. The exterior exhibits cracks in the brick around the windows and corners due to rusting/expansion of the shelf angles and lintels above the windows. The eaves at the roof are rotting and vegetation is growing penetrating the firehouse interior. The interior exhibits cracks in the walls around the windows, water damage and rotting door frames.

CONCLUSIONS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

NEW HOPE-LAMBERTVILLE TOLL-SUPPORTED BRIDGE

The structure is in overall satisfactory condition due to minor deterioration of structural elements. Areas of cracked and missing mortar at substructure units should be repaired (± 200 LF). Cracks should be repaired at substructure units (± 200 LF). Areas of cracked and missing stone masonry should be replaced (± 230 SF).

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

Contract No. T/TS-476A-1 Substructure Repair & Scour Remediation - District 1, includes repairs to this bridge.

NEW HOPE-LAMBERTVILLE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania and New Jersey officer shelters are in overall good condition.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

The firehouse is in overall fair condition. Consideration should be given to renovating the Firehouse to meet current code.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

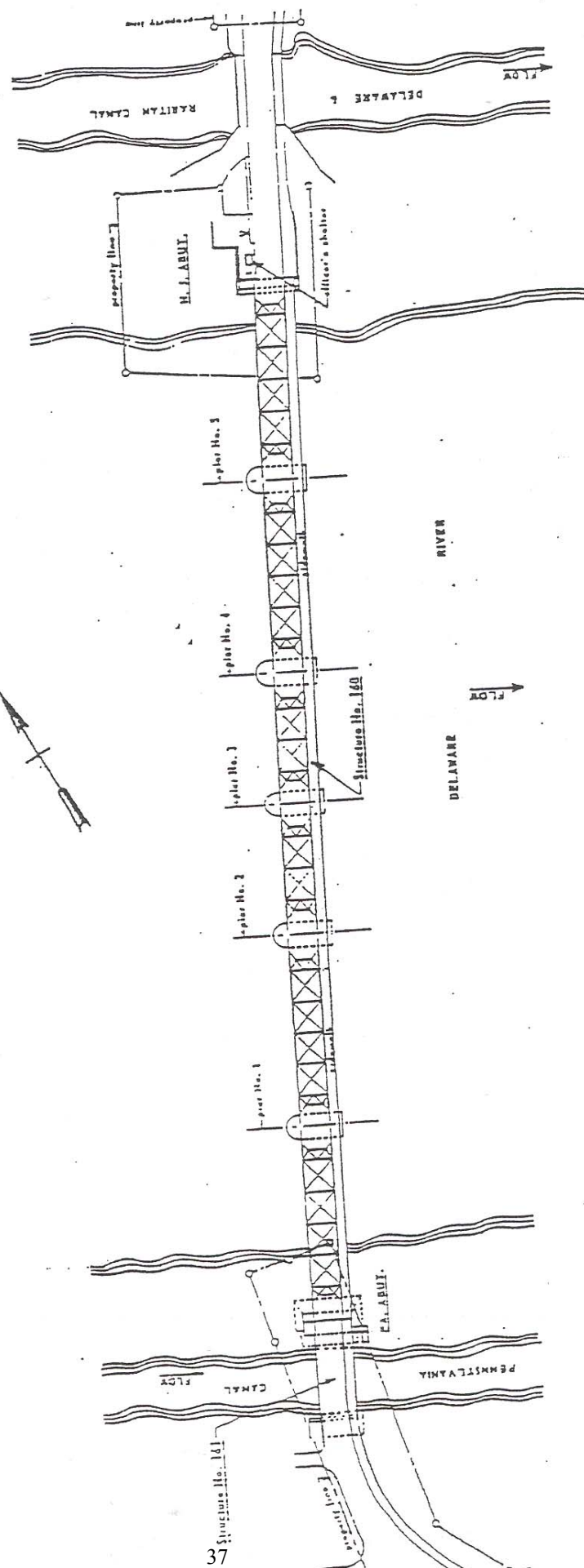
New Hope-Lambertville Toll-Supported Bridge

ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
The bridge was rehabilitated in 2004				
BRIDGES SUB TOTAL		\$0	\$0	\$0
<u>Facilities and Grounds</u>				
NHLTSB	Unplanned Projects	\$322,000	\$25,000	\$26,000
FACILITIES AND GROUNDS SUB TOTAL		\$322,000	\$25,000	\$26,000
TOTAL COST		\$322,000	\$25,000	\$26,000

CENTRE BRIDGE-STOCKTON
TOLL-SUPPORTED BRIDGES
(Structure Nos. 160 & 161)

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF WICKS
TOWNSHIP OF SOLEBURY
CENTRE BRIDGE



CENTRE BRIDGE - STOCKTON TOLL SUPPORTED BRIDGE

GENERAL

CENTRE BRIDGE-STOCKTON TOLL-SUPPORTED BRIDGE

(6 span, riveted steel warren truss)

The Centre Bridge-Stockton Toll-Supported Bridge (Structure No. 160) connects PA Route 32 in Solebury Township, Pennsylvania to NJ Route 29 in Stockton, New Jersey.

The bridge, opened to traffic in 1927, is a six span, riveted steel Warren Truss structure, with a total length of approximately 825 feet. The open steel grid deck provides a curb to curb width of 20 feet. In addition, a six foot timber plank sidewalk is supported on the downriver truss on steel cantilever brackets. The piers and abutments originally constructed in 1814 from random ashlar masonry are stone filled and rest upon timber crib foundations. In 1926 portions of the piers were encased with reinforced concrete.

The structure is currently posted for a 5 ton weight limit restriction and a 25 mph speed limit. The structure is also posted for a 12 feet vertical clearance.

A comprehensive rehabilitation of the Centre Bridge-Stockton Toll-Supported Bridge was completed in 2007 under Contract No. TS-429A.

CENTRE BRIDGE-STOCKTON TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

At the northeast approach corner of the Centre Bridge-Stockton Toll-Supported Bridge is a Commission owned New Jersey officer shelter.

PENNSYLVANIA CANAL OVERPASS

(1 span, prestressed concrete adjacent box beams)

The Pennsylvania Canal Overpass (Structure No. 161) carries traffic over the Pennsylvania Canal in Solebury Township, PA. The structure is an approach bridge to the main Centre Bridge-Stockton Toll-Supported Bridge that crosses the Delaware River.

The Pennsylvania Canal Overpass is a simple span, prestressed concrete adjacent box beam structure. The curb to curb width is 20 feet and the span length is 63 feet.

A comprehensive rehabilitation of the Pennsylvania Canal Overpass was completed in 2007 under Contract TS-429A.

SIGNIFICANT FINDINGS

Based on the findings of the 2010 inspections, the main river bridge and approach structure is capable of safely supporting the posted load.

CENTRE BRIDGE-STOCKTON TOLL-SUPPORTED BRIDGE

(6 span, riveted steel warren truss)

The structure is in overall good condition.

The deck, approach roadway, superstructure and substructure are in good condition.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure units below the waterline were found to be in fair condition due to the undermining of the footing at Piers 2 to 5.

CENTRE BRIDGE-STOCKTON TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall good condition.

PENNSYLVANIA CANAL OVERPASS

(1 span, prestressed concrete adjacent box beams)

The structure is in overall good condition.

The deck, approach roadway and substructure are in good condition.

The superstructure is in very good condition.

An underwater inspection was performed in 2006 under Contract No. C-467D. The substructure units below the waterline were found to be in good condition with only minor spalls and cracks.

CONCLUSIONS

Based on the findings of the 2010 inspections, the main river bridge and approach structure is capable of safely supporting the posted load.

CENTRE BRIDGE-STOCKTON TOLL-SUPPORTED BRIDGE

The structure is in overall good condition due to some minor problems. Concrete should be repaired at substructure units (± 475 SF). Debris should be removed at substructure units (± 5 CY).

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

Contract No. T/TS-476A-1 Substructure Repair & Scour Remediation - District 1, includes repairs to this bridge.

CENTRE BRIDGE-STOCKTON TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall good condition.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

PENNSYLVANIA CANAL OVERPASS

The structure is in overall good condition.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Centre Bridge-Stockton Toll-Supported Bridge

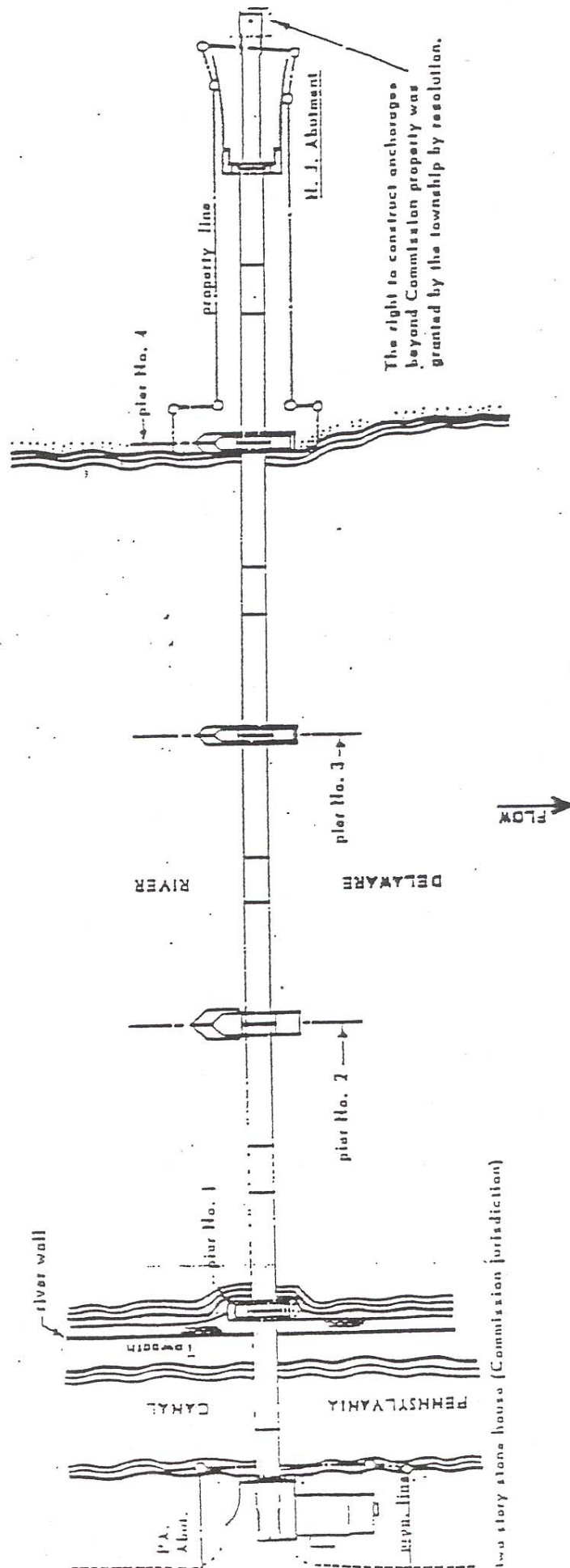
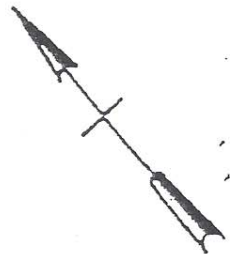
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
The bridge was rehabilitated in 2007				
BRIDGES SUB TOTAL		\$0	\$0	\$0
<u>Facilities and Grounds</u>				
CBSTSB	Unplanned Projects	\$322,000	\$25,000	\$26,000
FACILITIES AND GROUNDS SUB TOTAL		\$322,000	\$25,000	\$26,000
TOTAL COST		\$322,000	\$25,000	\$26,000

LUMBERVILLE-RAVEN ROCK
TOLL-SUPPORTED BRIDGE
(Structure No. 180)

STATE OF NEW JERSEY
COUNTY OF HUNTERDON
TOWNSHIP OF DELAWARE
RAVEN ROCK

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
TOWNSHIP OF SOLEBURY
LUMBERVILLE



LUMBERVILLE - RAVEN ROCK TOLL SUPPORTED BRIDGE

GENERAL

LUMBERVILLE-RAVEN ROCK TOLL-SUPPORTED BRIDGE

(5 span, suspension)

The Lumberville-Raven Rock Toll-Supported Bridge (Structure No. 180) connects Solebury Township (Lumberville) in Pennsylvania with Delaware Township (Raven Rock) in New Jersey.

This pedestrian bridge is a five span suspension bridge with straight backstays and a precast waffle style concrete slab held together by longitudinal post tensioning web cables. The floor system is strengthened by cable trusses along each suspension cable. The width of the walkway is 7 feet, 7 inches and the structure length is approximately 688 feet.

The bridge was closed to vehicular traffic in February of 1944. In 1947, the superstructure was re-built on the original 1856 masonry substructure.

A major rehabilitation contract was completed in 1993 that included a new deck slab, pier and abutment repointing, approach sidewalks and bridge lighting. The entire bridge was last painted in 1980 by Maintenance forces and the towers were again painted in 1990.

LUMBERVILLE-RAVEN ROCK TOLL-SUPPORTED BRIDGE FACILITY AND GROUNDS

At the southwest corner of the Lumberville-Raven Rock Toll-Supported Bridge is a Commission owned house. Adjacent to this Commission owned house and property is a retaining wall along the Pennsylvania Canal.

SIGNIFICANT FINDINGS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting all legal loads.

LUMBERVILLE-RAVEN ROCK TOLL-SUPPORTED BRIDGE

(5 span, suspension)

The structure is in overall poor condition due to the substructure.

The deck and approach walkways are in good condition.

The superstructure is in fair condition. Both fascia girders exhibit areas of light to moderate surface rust at the bottom flange more prevalent adjacent to the bridge scuppers due to water infiltration. Struts exhibit light to moderate pack rust at the fascia ends. Pitting with areas of up to 50% material loss is present at the steel rod cross bracing. The suspension towers exhibit areas of moderate to severe pack rust at the tower base.

The substructure is in poor condition. The concrete aprons at Piers 1 and 4 exhibit random wide cracks. The concrete aprons at Piers 2 and 3 are missing several sections exposing the timber cribbing pier foundations. The remaining sections exhibit wide cracks and undermining.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure units below the waterline were found to be in poor condition due to undermining and deteriorated concrete aprons at Piers 2 and 3.

LUMBERVILLE-RAVEN ROCK TOLL-SUPPORTED BRIDGE FACILITY AND GROUNDS

The house is in overall poor condition and exhibits exterior and interior paint peeling, deteriorated wood porch framing, broken and missing roof shingles, failed window sealers and a leaning oil tank foundation.

The southwest retaining wall along the Pennsylvania Canal is partially collapsed and leaning. The stones have become loose throughout.

CONCLUSIONS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting all legal loads.

LUMBERVILLE-RAVEN ROCK TOLL-SUPPORTED BRIDGE

The structure is in overall poor condition due to advance section loss of primary structural elements. The bridge should be blast cleaned and painted due to paint peeling and rust throughout both girders, strut connectors, cross bracing, suspension towers and bearings. Areas of cracked and missing mortar should be repointed at substructure units (± 690 LF). Cracks at substructure units should be repaired (± 90 LF). Areas of cracked and missing stone masonry should be replaced (± 18 SF). Spalled concrete should be repaired at substructure units (± 25 SF). Debris should be removed at substructure units (± 6 CY).

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

LUMBERVILLE-RAVEN ROCK TOLL-SUPPORTED BRIDGE FACILITY AND GROUNDS

The house and retaining wall are in overall poor condition. The oil tank located behind the house is on a slab which settled and is no longer level due to erosion. The tank should be moved to a more stable location. A complete rehabilitation of the Commission owned house should be considered. The southwest retaining wall along the Pennsylvania Canal adjacent to the Commission owned house should be reconstructed.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Lumberville-Raven Rock Pedestrian Bridge

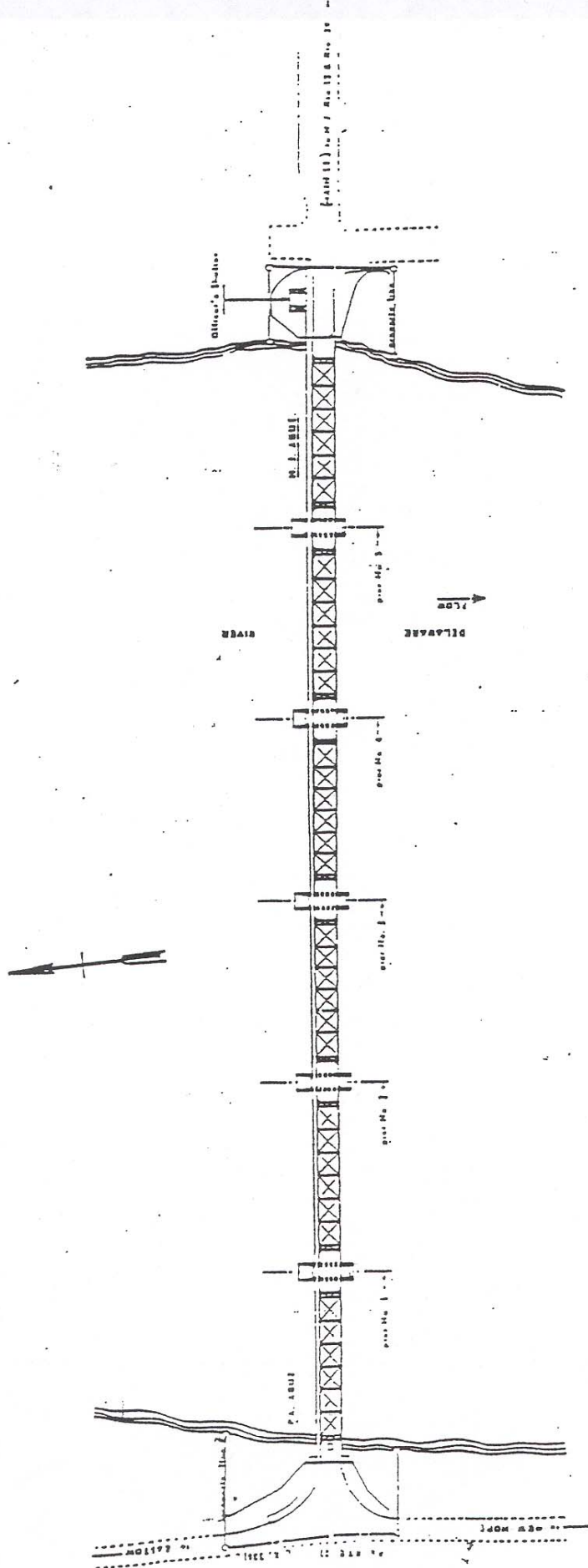
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
443	L-RR TSB Rehabilitation & Retaining Wall Reconstruction	\$3,015,000	\$367,000	\$2,648,000
525	L-RR TSB Bridge House Rehabilitation	\$199,000	\$0	\$6,000
BRIDGES SUB TOTAL		\$3,214,000	\$367,000	\$2,654,000
<u>Facilities and Grounds</u>				
LRRTSB	Unplanned Projects	\$129,000	\$10,000	\$11,000
FACILITIES AND GROUNDS SUB TOTAL		\$129,000	\$10,000	\$11,000
TOTAL COST		\$3,343,000	\$377,000	\$2,665,000

UHLERSTOWN-FRENCHTOWN
TOLL-SUPPORTED BRIDGE
(Structure No. 220)

STATE OF NEW JERSEY
COUNTY OF HUNTERDON
BOROUGH OF FRENCHTOWN

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
TOWNSHIP OF TINTICUM
UHLERSTOWN



UHLERSTOWN - FRENCHTOWN TOLL SUPPORTED BRIDGE

GENERAL

UHLERSTOWN-FRENCHTOWN TOLL-SUPPORTED BRIDGE

(6 span, riveted steel warren truss)

The Uhlerstown-Frenchtown Toll-Supported Bridge (Structure No. 220) carries Bridge Street traffic from Uhlerstown, Tinicum Township in Pennsylvania to Frenchtown, New Jersey.

The bridge, which rests on the original masonry substructure built in 1843, consists of a six span riveted steel Warren Truss structure, built in 1931. The open steel grid deck, added in 1949, provides a curb to curb width of 16 feet 6 inches. The structure is approximately 950 feet in length. A concrete filled steel grid sidewalk is supported by the upstream truss on steel cantilever brackets.

The structure is currently posted for a 15 ton weight limit restriction and a 15 mph speed limit. The structure is also posted for a 12 foot 6 inch vertical clearance.

The structure was rehabilitated in 2001 under Contract No. TS-363.

UHLERSTOWN-FRENCHTOWN TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

At the northeast approach corner of the Uhlerstown-Frenchtown Toll-Supported Bridge is a Commission owned New Jersey officer shelter.

SIGNIFICANT FINDINGS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

UHLERSTOWN-FRENCHTOWN TOLL-SUPPORTED BRIDGE

(6 span, riveted steel warren truss)

The structure is in overall good condition.

The deck, approach roadway, superstructure and substructure are in good condition.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure units below the waterline were found to be in satisfactory condition due to undermining of the concrete aprons at the piers.

UHLERSTOWN-FRENCHTOWN TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall good condition.

CONCLUSIONS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

UHLERSTOWN-FRENCHTOWN TOLL-SUPPORTED BRIDGE

The structure is in overall good condition due to minor problems. Debris should be removed at substructure units (± 18 CY).

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

Contract No. T/TS-476A-2 Substructure Repair & Scour Remediation - Districts 2 & 3, includes repairs to this bridge.

UHLERSTOWN-FRENCHTOWN TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall good condition.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Uhlerstown-Frenchtown Toll-Supported Bridge

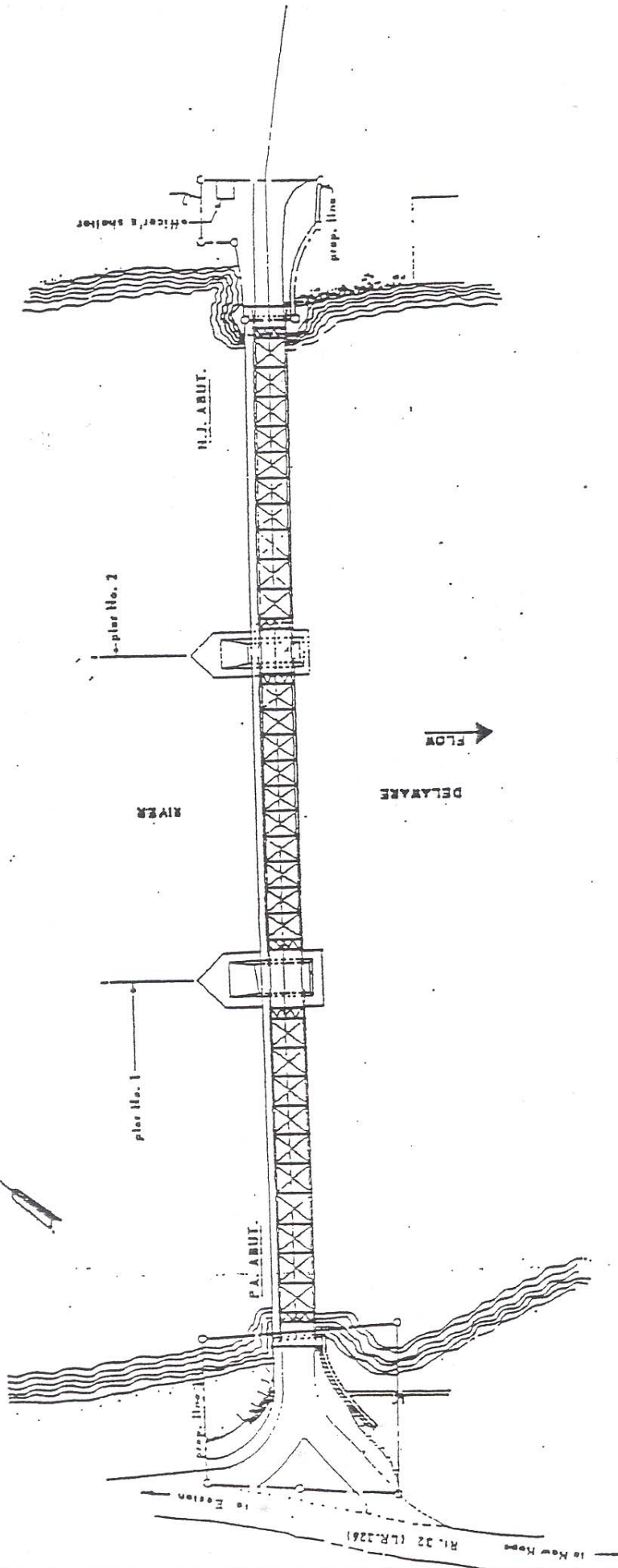
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
The bridge was rehabilitated in 2001.				
BRIDGES SUB TOTAL		\$0	\$0	\$0
<u>Facilities and Grounds</u>				
UFTSB	Unplanned Projects	\$322,000	\$25,000	\$26,000
FACILITIES AND GROUNDS SUB TOTAL		\$322,000	\$25,000	\$26,000
TOTAL COST		\$322,000	\$25,000	\$26,000

UPPER BLACK EDDY-MILFORD
TOLL-SUPPORTED BRIDGE
(Structure No. 240)

STATE OF NEW JERSEY
COUNTY OF HUNTERDON
BOROUGH OF MILFORD

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
TOWNSHIP OF BRIDGETON
UPPER BLACK EDDY



UPPER BLACK EDDY - MILFORD TOLL SUPPORTED BRIDGE

GENERAL

UPPER BLACK EDDY-MILFORD TOLL-SUPPORTED BRIDGE

(3 span, warren truss)

The Upper Black Eddy-Milford Toll-Supported Bridge (Structure No. 240) extends over the Delaware River and connects PA Route 32 and Hunterdon County Route 619 via Bridge Street from Upper Black Eddy, Bridgeton Township, Pennsylvania to Milford Borough, New Jersey.

The bridge, constructed in 1933, is a three span Warren Truss structure, with a total length of approximately 700 feet. The deck consists of concrete filled steel inverted “T’s” and provides a curb to curb width of 20 feet. Both abutments, recapped with reinforced concrete following flood damage, were originally built in 1842 with rubble faced masonry. The piers, built in 1842, are stone filled having also been recapped with reinforced concrete.

The structure is posted for a 15 mph speed limit.

In 1996 a new galvanized plate sidewalk was added to the bridge and is supported on the upriver truss on steel cantilever brackets. Substructure units were repointed in 1998 under Contract 347.

The structure is scheduled for a comprehensive rehabilitation in late 2010 or early 2011 under Contract No. TS-444A.

UPPER BLACK EDDY-MILFORD TOLL-SUPPORTED BRIDGE FACILITIES AND GROUND

At the northeast approach corner of the Upper Black Eddy-Milford Toll-Supported Bridge is a Commission owned New Jersey officer shelter.

SIGNIFICANT FINDINGS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting all legal loads.

UPPER BLACK EDDY-MILFORD TOLL-SUPPORTED BRIDGE

(3 span, warren truss)

The structure is in overall fair condition due to the substructure.

The deck is in satisfactory condition. The top of deck exhibits light to moderate wearing throughout all spans. The underside of the steel grid deck typically exhibits light to moderate rust with moderate to heavy rust below the deck joints and fascia stringers. The steel curbs exhibit light to moderate rust with heavy rust noted at the curb support angles.

The approach roadway is in satisfactory condition. The New Jersey approach roadway exhibits medium transverse and longitudinal cracks throughout. Steel plating is exposed adjacent to the east abutment deck joint due to deteriorated asphalt.

The superstructure is in satisfactory condition. The steel floorbeams and stringers typically exhibit light to moderate rust and peeling paint with areas of minor section losses. The top flange of the roadway stringers typically exhibit severe rust due to water leakage through the steel grid deck. Severe rust and significant pack rust build up is typical at the fascia stringer bearings. Random areas of severe rust with minor section losses exist on several truss members; however no significant material loss was noted. The paint is in overall moderate to poor condition throughout the structure. The truss rocker bearings are in minor expansion with moderate to severe rust throughout.

The substructure is in fair condition. The east and west abutments exhibit cracked and missing mortar and a few missing stones. The two piers exhibit random areas of missing mortar. Severe scaling and hollow sounding areas is typical at the concrete pier caps.

An underwater inspection was performed in 2008 under Contract No. C-444A. The substructure units below the waterline were found to be in good condition with some areas of spalling, cracking, corrosion and joint mortar loss.

UPPER BLACK EDDY-MILFORD TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall good condition.

CONCLUSIONS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting all legal loads.

UPPER BLACK EDDY-MILFORD TOLL-SUPPORTED BRIDGE

The structure is in overall fair condition due to minor deterioration of primary structural elements. The structure is scheduled for a comprehensive rehabilitation under Contract No. TS-444A.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

UPPER BLACK EDDY-MILFORD TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall good condition.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Upper Black Eddy-Milford Toll-Supported Bridge

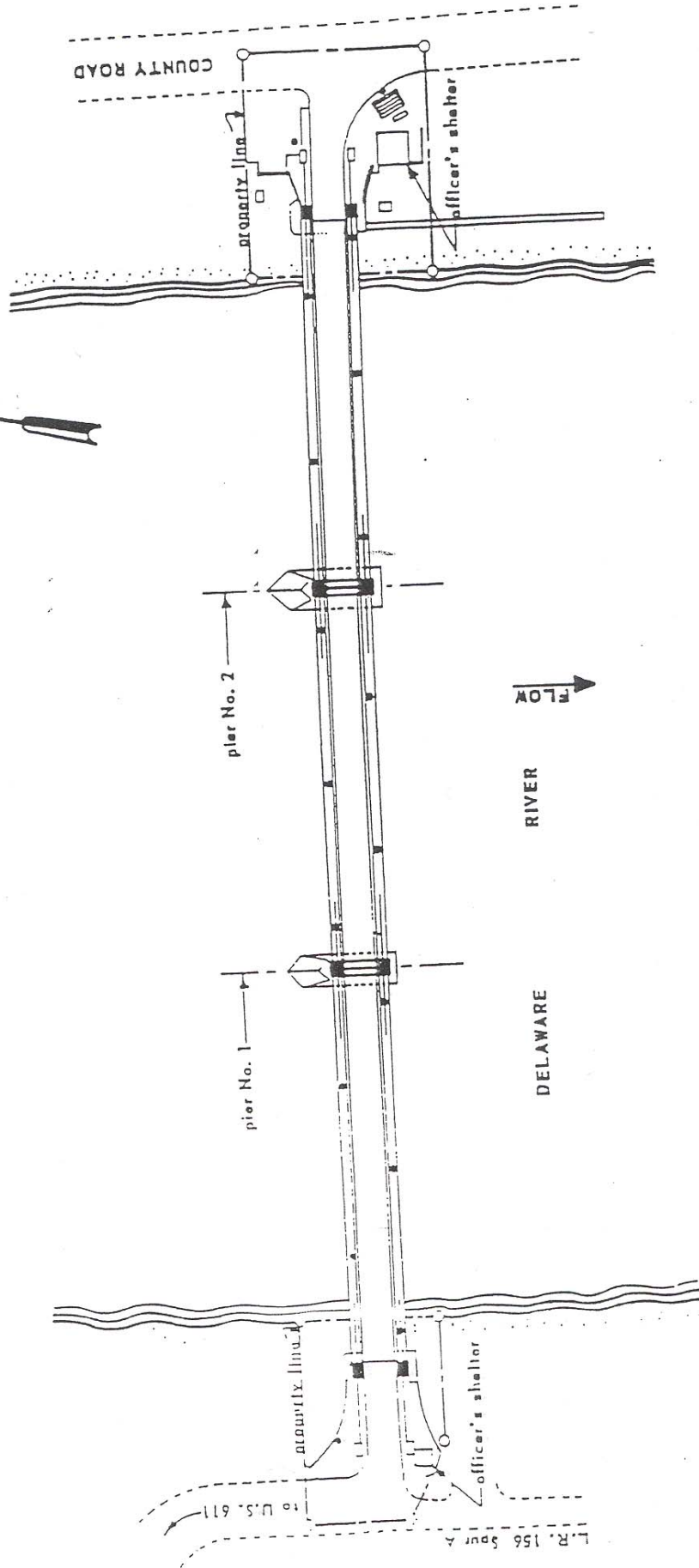
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
444	Upper Black Eddy - Milford TSB Rehabilitation	\$10,348,000	\$9,012,000	\$0
BRIDGES SUB TOTAL		\$10,348,000	\$9,012,000	\$0
<u>Facilities and Grounds</u>				
UBEMTSB	Unplanned Projects	\$193,000	\$15,000	\$16,000
FACILITIES AND GROUNDS SUB TOTAL		\$193,000	\$15,000	\$16,000
TOTAL COST		\$10,541,000	\$9,027,000	\$16,000

RIEGELSVILLE
TOLL-SUPPORTED BRIDGE
(Structure No. 260)

STATE OF NEW JERSEY
COUNTY OF WARREN
BOROUGH OF RIEGELSVILLE

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
BOROUGH OF RIEGELSVILLE



RIEGELSVILLE TOLL SUPPORTED BRIDGE

GENERAL

RIEGELSVILLE TOLL-SUPPORTED BRIDGE

(3 span, suspension)

The Riegelsville Toll-Supported Bridge (Structure No. 260) connects Durham Township in Pennsylvania with Pohatcong Township in New Jersey.

The bridge, constructed in 1904, is a three span Cable Suspension bridge with straight backstays and a total length of approximately 577 feet. The open steel grid deck, supported by a king post floorbeam system, provides a curb to curb width of 15 feet 11 inches. A timber plank sidewalk rests on floorbeam cantilevers on both fascias. The sidewalk railing is actually a double Warren Truss, assisting in strengthening the bridge roadway. The substructure, originally built in 1835, was raised and built up in 1904.

The structure is currently posted for a 2 1/2 ton weight limit restriction and a 15 mph speed limit.

Under Contract TS-391, bridge repairs were completed on this structure. Work consisted of strengthening towers on the river piers, replacement of hanger blocks connecting vertical hangers to the floorbeams, repair of floorbeam bearings at each end of the floorbeams of the three spans, concrete repair on pier two and concrete crack repairs at the anchorages. The bridge was last painted by contract in 1985. A cleaning and pointing contract was completed for the substructure in 1998. Contract TS-461A repaired the damaged concrete aprons and additional damage from the Flood of June 2006.

The structure is currently undergoing a comprehensive rehabilitation under Contract No. TS-445.

RIEGELSVILLE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

At the southwest and southeast approach corners of the Riegelsville Toll-Supported Bridge are Commission owned Pennsylvania and New Jersey officer shelters.

SIGNIFICANT FINDINGS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

RIEGELSVILLE TOLL-SUPPORTED BRIDGE

(3 span, suspension)

The structure is in overall poor condition due to the condition of the superstructure.

The deck is in good condition.

The approach roadway is in fair condition. The west approach roadway exhibits a large asphalt patch area that is settled and spalled at the eastbound roadway with areas of fractured concrete at the north curb.

The superstructure is in poor condition. The steel floorbeams exhibit severe corrosion. Approximately 40 percent of all floorbeams exhibit numerous web holes (up to full height of web). Heavy to severe rust with minor material losses is typical at the bottom flange of the floorbeams. Severe corrosion and material losses is typical at the cross bracing members. U-bolt connecting cables typically exhibit minor material losses.

The substructure is in satisfactory condition. The abutments exhibit several wide random cracks. Heavy scaling is typical at the east abutment and the Pier 1 and 2 bridge seats.

An underwater inspection was performed in 2008 by under Contract No. C-476A. The substructure units below the waterline were found to be in fair condition due the condition of the abutments and pier aprons.

RIEGELSVILLE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall good condition.

The New Jersey officer shelter is in overall fair to poor condition. Several of the roof shingles are cracked. The wood trim around the roof is rotting. The interior floor is sagging due to the rotting of the floor joists. There are areas of interior water damage.

CONCLUSIONS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

RIEGELSVILLE TOLL-SUPPORTED BRIDGE

The structure is in overall poor condition due advance section loss of primary structural elements. The structure is currently undergoing a comprehensive rehabilitation under Contract No. TS-445.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

Contract No. T/TS-476A-2 Substructure Repair & Scour Remediation - Districts 2 & 3, includes repairs to this bridge.

RIEGELSVILLE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall good condition.

The New Jersey officer shelter is in overall fair to poor condition. The Commission should consider replacement of the officer shelter.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Riegelsville Toll-Supported Bridge

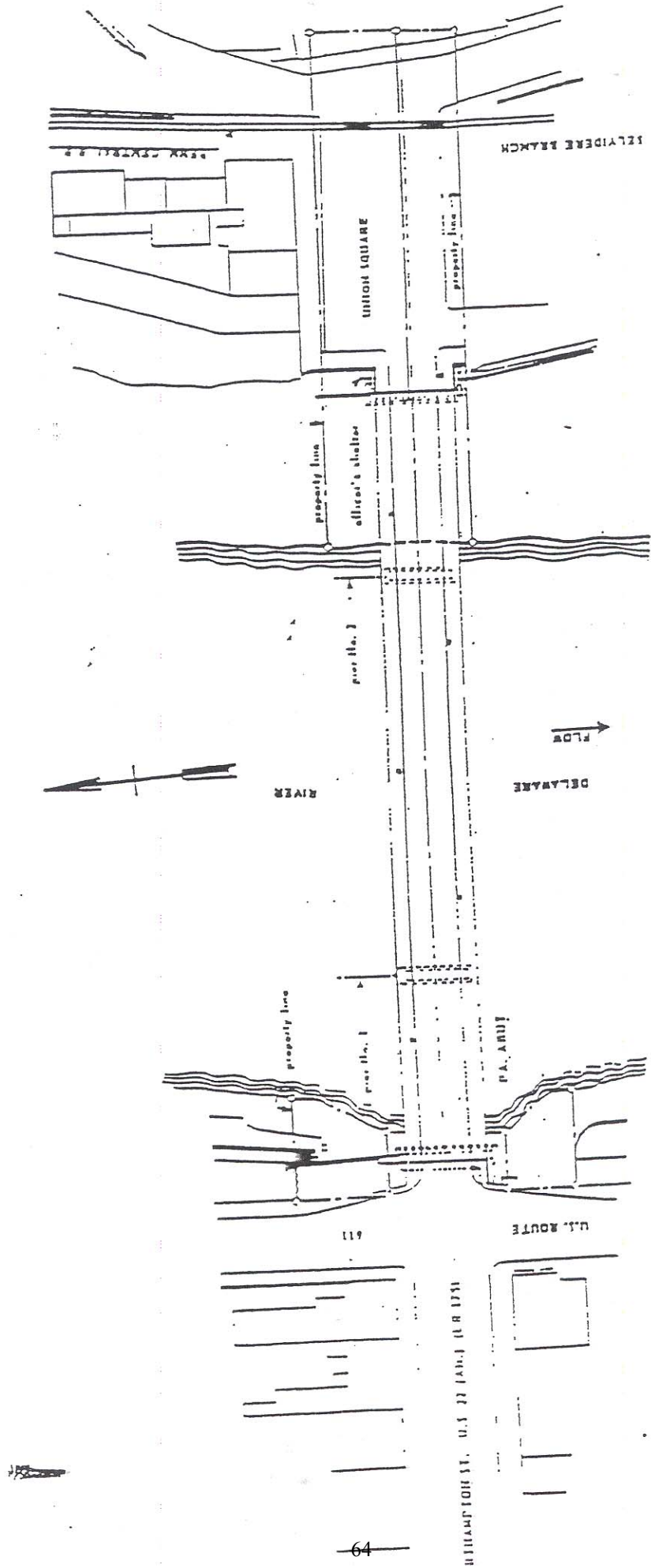
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
445	RGL Rehabilitation	\$8,044,000	\$156,000	\$0
BRIDGES SUB TOTAL		\$8,044,000	\$156,000	\$0
<u>Facilities and Grounds</u>				
RTSB	Unplanned Projects	\$193,000	\$15,000	\$16,000
FACILITIES AND GROUNDS SUB TOTAL		\$193,000	\$15,000	\$16,000
TOTAL COST		\$8,237,000	\$171,000	\$16,000

NORTHAMPTON STREET
TOLL-SUPPORTED BRIDGE
(Structure No. 280)

STATE OF NEW JERSEY
COUNTY OF WARREN
TOWN OF PHILLIPSBURG

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF NORTHAMPTON
CITY OF EASTON



NORTHAMPTON STREET TOLL SUPPORTED BRIDGE

GENERAL

NORTHAMPTON STREET TOLL-SUPPORTED BRIDGE

(3 span, cantilevered truss)

The Northampton Street Toll-Supported Bridge (Structure No. 280), just south of the Easton-Phillipsburg Toll Bridge, connects Easton, Pennsylvania to Phillipsburg, New Jersey.

The bridge, although aesthetically resembling a suspension bridge, is a double cantilever truss structure, adjoined by a center (main) suspended span. The three lane open steel grid deck provides a curb to curb width of 32 feet and a total bridge length of 550 feet.

The current bridge was constructed in 1895, with a major rehabilitation in 2001 under Contract No. TS-365. Repairs were completed due to flood damages in 2005 and 2006.

The structure is currently posted for a 3 ton weight limit restriction and a 15 mph speed limit.

NORTHAMPTON STREET TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

At the southwest and northeast approach corners of the Northampton Street Toll-Supported Bridge are Commission owned Pennsylvania and New Jersey officer shelters.

SIGNIFICANT FINDINGS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

NORTHAMPTON STREET TOLL-SUPPORTED BRIDGE

(3 span, cantilevered truss)

The structure is in overall satisfactory condition due to the superstructure.

The deck and substructure are in good condition.

The approach roadway is in very good condition.

The superstructure is in satisfactory condition. The floorbeams and stringers typically exhibit minor section losses. Several stringers exhibit minor impact damage. Stringer 9 at L9L10 is bent 5" to the south due to impact damage, and the 3rd riser beam from the west exhibits a 2 1/2" cracked weld at the east side with 3 of 4 connection bolts missing. Impact damage is present at the lower chord in several locations. The eyebars and pin nuts at the suspended portion of Span 2 exhibit movement and the eyebars are loose. There has been no change in movement since the previous inspection. The horizontal lifeline cables exhibit no significant deficiencies.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure units below the waterline were found to be in satisfactory condition due to deteriorated mortar joints at the west abutment.

NORTHAMPTON STREET TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall fair condition. The brick veneer at the corners above the windows exhibits cracks due to expansion and contraction of the framing. Water is penetrating the brick veneer and causing the relief angles to rust and expand damaging the brick. There is evidence of water penetration through the windows and the walls.

The New Jersey officer shelter is in overall good condition.

CONCLUSIONS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

NORTHAMPTON STREET TOLL-SUPPORTED BRIDGE

The structure is in overall satisfactory condition due to minor deterioration in structural elements. Replace the loose and out of plane stones at the substructure masonry (50 SF). Repair the concrete spalls at the substructure units (20 SF).

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

Contract No. T/TS-476A-2 Substructure Repair & Scour Remediation - Districts 2 & 3, includes repairs to this bridge.

NORTHAMPTON STREET TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall fair condition. The Commission should consider reconstructing or rebuilding the shelter.

The New Jersey officer shelter is in overall good condition.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Northampton Street Toll-Supported Bridge

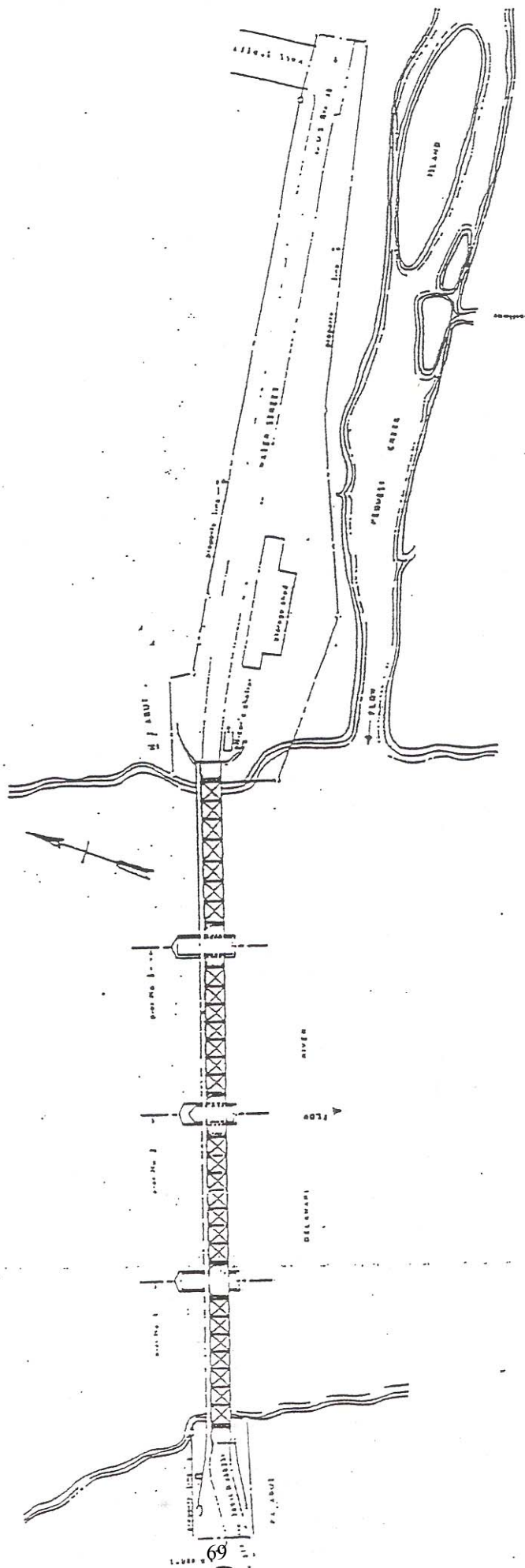
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
The bridge was rehabilitated in 2002.				
BRIDGES SUB TOTAL		\$0	\$0	\$0
<u>Facilities and Grounds</u>				
NHSTSB	Unplanned Projects	\$335,000	\$25,000	\$26,000
FACILITIES AND GROUNDS SUB TOTAL		\$335,000	\$25,000	\$26,000
TOTAL COST		\$335,000	\$25,000	\$26,000

RIVERTON-BELVIDERE
TOLL-SUPPORTED BRIDGE
(Structure No. 320)

STATE OF NEW JERSEY
COUNTY OF WARREN
TOWN OF BELVIDERE

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF NORTHAMPTON
TOWNSHIP OF LOWER MOUNT BETHEL
RIVERTON



RIVERTON - BELVIDERE TOLL SUPPORTED BRIDGE

GENERAL

RIVERTON-BELVIDERE TOLL-SUPPORTED BRIDGE

(4 span, riveted steel, double warren truss)

The Riverton-Belvidere Toll-Supported Bridge (Structure No. 320) carries Water Street across the Delaware River and connects Riverton, Lower Mount Bethel Township, Pennsylvania with the Town of Belvidere, New Jersey.

The bridge, constructed in 1904, is a four span, riveted steel, double Warren Truss structure, with a total length of approximately 653 feet. The open steel grid deck provides a curb to curb width of 16 feet, 4 inches. In addition, a concrete filled steel grid sidewalk is supported on the upriver truss with steel cantilever brackets.

The piers and the Pennsylvania abutment are rough ashlar faced masonry and stone filled. The piers are supported on timber cribs and lower portions are concrete filled steel sheet piling (1929-32). The New Jersey abutment, including its wingwalls, is constructed of concrete on timber piles.

The bridge is currently posted for an 8 ton weight limit restriction and a 15 mph speed limit.

A comprehensive bridge rehabilitation was completed under Contract No. TS-371A in 2007.

RIVERTON-BELVIDERE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

At the southeast approach corner of the Riverton-Belvidere Toll-Supported Bridge is a Commission owned New Jersey officer shelter. A commission owned storage garage is also at the southeast end of the bridge.

SIGNIFICANT FINDINGS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

RIVERTON-BELVIDERE TOLL-SUPPORTED BRIDGE

(4 span, riveted steel, double warren truss)

The structure is in overall good condition.

The deck, approach roadway, superstructure and substructure are in good condition.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure units below the waterline were found to be in satisfactory condition due to concrete cracks at the abutments and piers with undermining at Pier 2.

RIVERTON-BELVIDERE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall poor condition. There is a 1/2" diameter hole in the siding at the north side. The wood entrance door frame is rotting. The entire shelter floor is sloped downstream.

The storage garage is in overall poor condition. The roof of the storage garage is in poor condition. There are numerous holes and broken panels with vegetation growth throughout.

CONCLUSIONS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the posted load.

RIVERTON-BELVIDERE TOLL-SUPPORTED BRIDGE

The structure is in overall good condition with some minor problems noted. Areas of cracked and missing mortar should be repointed at substructure units (± 20 LF). Cracks at substructure units should be repaired (± 52 LF). Spalled concrete should be repaired at substructure units (± 410 SF). Debris should be removed at substructure units (± 12 CY).

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

Contract No. T/TS-476A-2 Substructure Repair & Scour Remediation - Districts 2 & 3, includes repairs to this bridge.

RIVERTON-BELVIDERE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall poor condition. The Commission should consider replacing the floor joist of the New Jersey officer shelter due to the sloping of the interior floor. The shelter is currently scheduled to be replaced under Contract No. 505: Riverton – Belvidere Water Street Repairs.

The storage garage is in overall poor condition. The Commission should consider undertaking a study to repair and upgrade the condition of the storage shelter roof. This work is currently scheduled to be included under Contract No. 505: Riverton – Belvidere Water Street Repairs.

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Riverton-Belvidere Toll-Supported Bridge

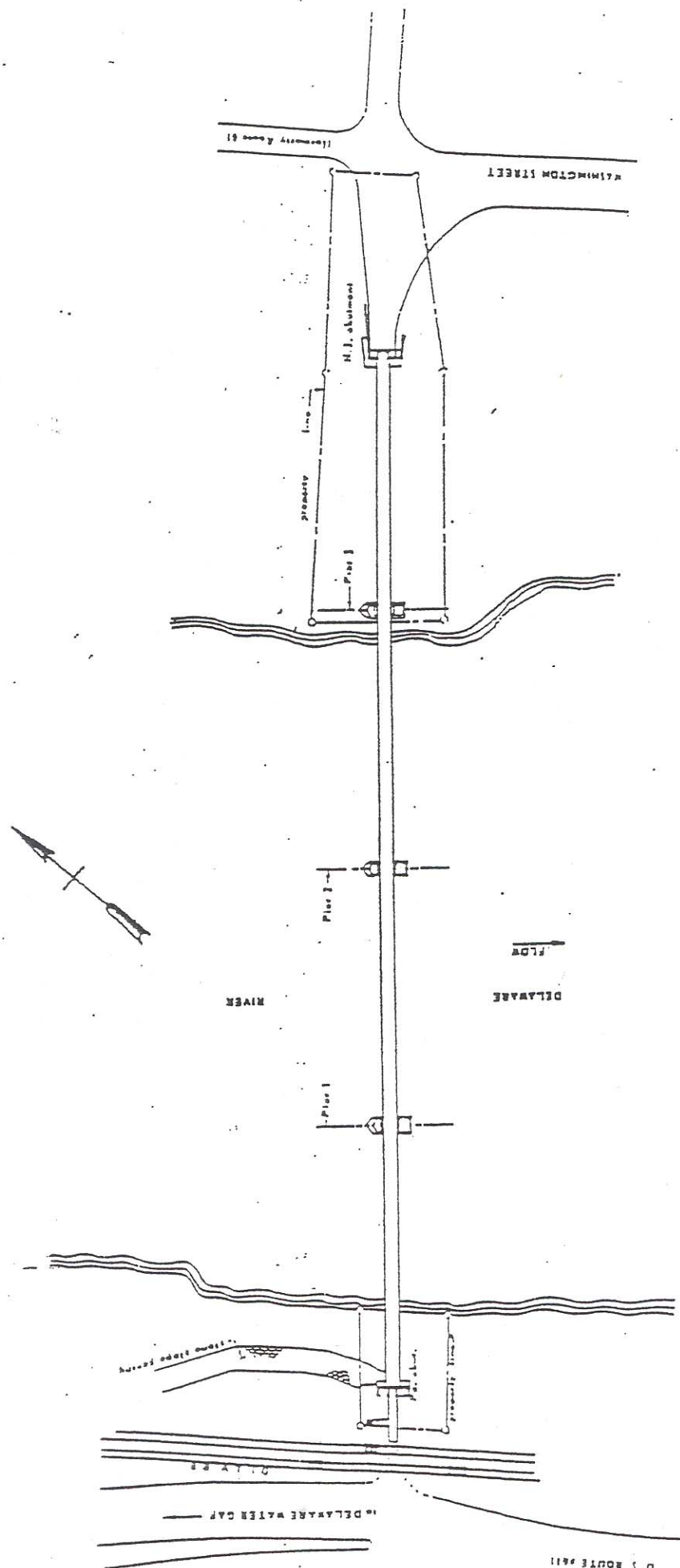
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
The bridge was rehabilitated in 2007				
505	R-B Water Street Improvements	\$1,402,000	\$184,000	\$1,217,000
BRIDGES SUB TOTAL		\$1,402,000	\$184,000	\$1,217,000
<u>Facilities and Grounds</u>				
RBTSB	Unplanned Projects	\$0	\$25,000	\$26,000
FACILITIES AND GROUNDS SUB TOTAL		\$0	\$25,000	\$26,000
TOTAL COST		\$1,402,000	\$209,000	\$1,243,000

PORTLAND-COLUMBIA
TOLL-SUPPORTED BRIDGE
(Structure No. 360)

STATE OF NEW JERSEY
COUNTY OF WARREN
TOWN OF COLUMBIA

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF NORTHAMPTON
BOROUGH OF PORTLAND



PORTLAND - COLUMBIA TOLL SUPPORTED BRIDGE

GENERAL

PORTLAND-COLUMBIA TOLL-SUPPORTED BRIDGE

(4 span, continuous, steel thru-deck girder)

The Portland-Columbia Toll-Supported Bridge (Structure No. 360) connects Portland Borough (Upper Mount Bethel Township), Pennsylvania with Columbia (Knowlton Township), New Jersey, just north of the Portland-Columbia Toll Bridge.

This Pedestrian Bridge is a four span continuous, thru-deck steel girder system, with a concrete deck and built up girders with a total length of 770 feet. The width of the walkway is 9 feet, 6 inches between girder centers. The present bridge was reconstructed in 1958, following the flood of 1955, and original vehicular traffic was diverted to the main river bridge.

This bridge was last cleaned and painted in 1998 under Contract 346. In 2003, the construction of a handicap accessible ramp at the west approach and bridge deck modifications was completed under Contract No. TS-388. In 2004, drainage and deck modifications were done under Contract No. TS-388A to alleviate ponding of water and corrosion due to improper drainage.

SIGNIFICANT FINDINGS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the legal loads.

PORTLAND-COLUMBIA TOLL-SUPPORTED BRIDGE

(4 span, continuous, steel thru-deck girder)

The structure is in overall satisfactory condition due to the substructure.

The deck is in satisfactory condition. The top of deck exhibits light to moderate scaling throughout with fine to medium transverse cracks. Several incipient spalls and spalls with exposed rebar are present at the deck underside. The underside of deck also exhibits fine to medium transverse cracks with efflorescence and water stains.

The approach walkways and superstructure are in good condition.

The substructure is in satisfactory condition. The north retaining wall is fractured adjacent to the west abutment breastwall and is displaced 2 1/2" towards the east. The top of the northeast retaining wall is displaced 8" towards the west. The east abutment breastwall exhibits spalled and hollow sounding concrete along the base. The east abutment backwall exhibits spalled and hollow sounding concrete patches with medium mapcracking at several locations. Fine to wide cracks are typical throughout the substructure units.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure units below the waterline were found to be in satisfactory condition with undermining of up to 2.5' vertically and 3.3' horizontally along the perimeter of the piers.

CONCLUSIONS

Based on the findings of the 2010 inspections, the bridge is capable of safely supporting the legal loads.

PORTLAND-COLUMBIA TOLL-SUPPORTED BRIDGE

The structure is in overall satisfactory condition with some minor deterioration of structural elements. Remove unsound concrete, clean exposed rebar and patch areas of incipient spalling throughout the underdeck (± 230 SF). Patch the spalled/hollow concrete at the east abutment backwall (± 30 SF). Areas of cracked and missing mortar should be repointed at substructure units (± 100 LF). Cracks at substructure units should be repaired (± 80 LF). Areas of cracked and missing stone masonry should be replaced (± 2 SF). Spalled concrete should be repaired at substructure units (± 100 SF). Debris should be removed at substructure units (± 4 CY).

For a list of maintenance repair items, see the *2010 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Portland-Columbia Pedestrian Bridge

ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
No Projects are currently planned.				
BRIDGES SUB TOTAL		\$0	\$0	\$0
<u>Facilities and Grounds</u>				
PCTSB	Unplanned Projects	\$151,000	\$10,000	\$11,000
FACILITIES AND GROUNDS SUB TOTAL		\$151,000	\$10,000	\$11,000
TOTAL COST		\$151,000	\$10,000	\$11,000

TOLL BRIDGE ANNUAL INSPECTION REPORTS
(2009 Toll Bridge Inspections)

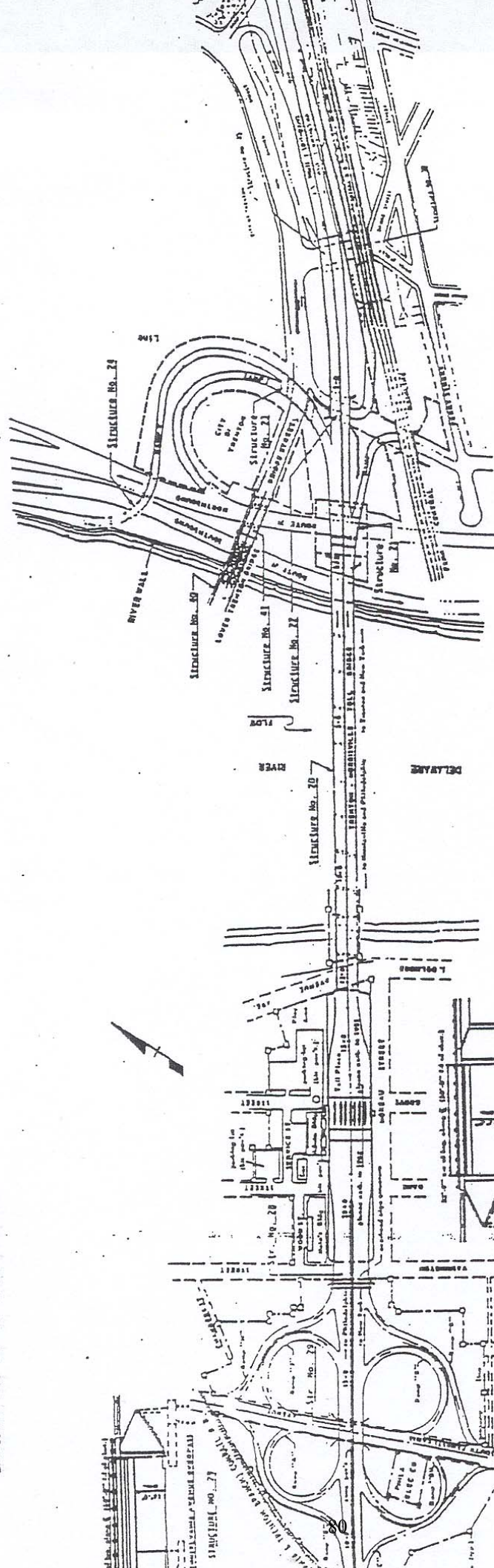
TRENTON-MORRISVILLE

TOLL BRIDGE FACILITY

(Structure No. 20)

STATE OF NEW JERSEY
COUNTY OF MERCER
CITY OF TRENTON

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
BOROUGH OF MORRISVILLE



NEW JERSEY APPROACH TO THE
TRENTON-MORRISVILLE TOLL BRIDGE

PENNSYLVANIA APPROACH TO THE
TRENTON-MORRISVILLE TOLL BRIDGE

TRENTON - MORRISVILLE TOLL BRIDGE

GENERAL

TRENTON-MORRISVILLE TOLL BRIDGE

(12 span, simply supported, composite steel multi-girder)

The Trenton-Morrisville Toll Bridge (Structure No. 20) carries US Route 1 over the Delaware River between Trenton, New Jersey and Morrisville, Pennsylvania.

The main bridge is a twelve span, simply supported, composite steel girder structure with an overall length of 1,322 feet. The substructure consists of reinforced concrete abutments and piers with granite facing on the piers. The bridge was originally constructed by the Commission in 1952 as a four (4) lane roadway, and widened to six (6) lanes in 1965 for a total roadway width of 62 feet. In 1983 an aluminum barrier was erected across the bridge, creating three southbound and two northbound lanes. In 2009 an extensive widening and rehabilitation project was completed, creating an addition northbound lane. The current configuration has three (3) northbound and three (3) southbound lanes.

The posted speed limit in the northbound direction is 40 mph and 50 mph in the southbound direction until midspan, where the speed limit is reduced to 20 mph approach to toll plaza.

The multi-year project for the widening and rehabilitation of the Route 1 corridor has been completed under Contract T-380B in 2009. This work included the main river bridge and approach structures in New Jersey and Pennsylvania. The project's major elements included the following work:

- Rehabilitating the main river bridge and widening it to accommodate a northbound auxiliary lane for exiting into Trenton
- Providing a deceleration lane on the viaduct over the Delaware Canal and Conrail property on the Pennsylvania side of the bridge
- Modifying the interchange at South Pennsylvania Avenue in Morrisville and installing a new traffic signal and resurfacing the pavement on South Pennsylvania Avenue
- Installing noise walls adjacent to northbound Route 1 in Morrisville
- Constructing a new toll plaza, serving southbound motorists on the Morrisville side of the bridge
- Realigning the NJ Route 29 Ramp (Ramp C) and constructing a new bridge over Route 29 to allow for improved access to that highway
- Rehabilitating, cleaning and repainting structural steel components of the bridge and its Route 1 approaches

TRENTON-MORRISVILLE TOLL BRIDGE APPROACH STRUCTURES

The New Jersey approach consists of nine approach structures. The Pennsylvania approach consists of two approach structures.

TRENTON-MORRISVILLE TOLL BRIDGE FACILITY AND GROUNDS

The one-way toll plaza, located at the Pennsylvania approach, has five toll lanes. The tollbooths are erected on concrete islands and are protected by an overhead canopy and has a service tunnel

for the toll collection staff. Each lane is equipped for E-ZPass. The recently completed construction project included replacement of the toll plaza.

Contract No. T-500A Trenton - Morrisville Administration Building Elevator Modernization was awarded in 2008 and construction was completed in 2009.

The 2009 inspection included the main river bridge, eleven approach bridges, and the facility and grounds.

SIGNIFICANT FINDINGS

Based on the findings of the 2009 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

TRENTON-MORRISVILLE TOLL BRIDGE MAIN RIVER BRIDGE

(12 span, simply supported, composite steel multi-girder)

The structure is in overall good condition.

The deck is in good condition.

The approach roadway is in very good condition.

The superstructure and substructure are in good condition.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure was found to be in satisfactory condition due to exposed footings at the piers.

ROUTE 29 OVERPASS (NJ)

(3 span, prestressed concrete spread box beams)

The structure is in overall good condition.

The deck and approach roadway are in very good condition.

The superstructure and substructure are in good condition.

RAMP N OVERPASS (NJ)

(1 span, steel multi-girder)

The structure is in overall good condition.

The deck is in good condition.

The approach roadway is in very good condition.

The superstructure and substructure are in good condition.

RAMP IY OVERPASS (NJ)

(3 span, steel multi-girder)

The structure is in overall good condition.

The deck, approach roadway, superstructure and substructure are in good condition.

RAMP Y OVERPASS (LONG RAMP) (NJ)

(4 span, steel multi-girder)

The structure is in overall good condition.

The deck, approach roadway, superstructure and substructure are in good condition.

UNION STREET OVERPASS (NJ)

(1 span, steel multi-girder)

The structure is in overall good condition.

The deck is in good condition.

The approach roadway is in very good condition.

The superstructure and substructure are in good condition.

CENTER STREET UNDERPASS (NJ)

(1 span, riveted steel plate girders)

The structure is in overall good condition.

The deck, approach roadway, superstructure and substructure are in good condition.

BROAD STREET UNDERPASS (NJ)

(1 span, steel multi-girder)

The structure is in overall good condition.

The deck is in good condition.

The approach roadway is in very good condition.

The superstructure and substructure are in good condition.

RAMP N OVER UNION STREET (NJ)

(3 span, prestressed concrete girders)

The structure is in overall good condition.

The deck is in very good condition.

The approach roadway, superstructure and substructure are in good condition.

RAMP C OVER NJ ROUTE 29 (NJ)

(3 span, steel multi-girder)

The structure is in overall very good condition.

WASHINGTON STREET OVERPASS (PA)

(1 span, steel multi-girder)

The structure is in overall good condition.

The deck, approach roadway and superstructure are in very good condition.

The substructure is in good condition.

SOUTH PENNSYLVANIA AVENUE OVERPASS (PA)

(1 span steel multi-girder)

The structure is in overall satisfactory condition.

The deck and approach roadway are in very good condition.

The superstructure and substructure are in good condition.

The deck, approach roadway, superstructure and substructure are in very good condition.

TRENTON-MORRISVILLE TOLL BRIDGE FACILITY AND GROUNDS

The HVAC system is not working adequately. The facility maintenance personnel have indicated that HVAC duct cleaning has been completed. HVAC system replacement is currently programmed in the future for the Trenton – Morrisville Administration Building.

The existing roof of the administration building consists of a rubber membrane system. Repair patches were observed on the roof. Occasional roof leakage has been reported. The administration building and maintenance facility roof replacement is in the planning stage.

An electronic surveillance system along with upgrading of the fire warning and alarm systems have been completed under Contract No. DB-396A Electronic Surveillance/Detection System.

The administration building brick and stone facade exhibits areas of displacement of the bricks due to pressure resulting from water intrusion. The interior of the administration building exhibits water damage adjacent to windows at several locations. There are sections of sidewalk and curb around the facility that exhibit settlement, cracking and spalling. (Some areas have been addressed post inspection)

CONCLUSIONS

Based on the findings of the 2009 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

TRENTON-MORRISVILLE TOLL BRIDGE MAIN RIVER BRIDGE

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

The Commission has undertaken a Substructure & Scour Remediation project in Districts 1, 2 & 3 under Contract No. C-476A. This project is under construction and includes this bridge.

ROUTE 29 OVERPASS (NJ)

The structure is in overall good condition. For additional information on the bridge condition, see the *2009 Annual Maintenance Report*.

RAMP N OVERPASS (NJ)

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

RAMP IY OVERPASS (NJ)

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

RAMP Y OVERPASS (LONG RAMP) (NJ)

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

UNION STREET OVERPASS (NJ)

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

CENTER STREET UNDERPASS (NJ)

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

BROAD STREET UNDERPASS (NJ)

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

RAMP N OVER UNION STREET (NJ)

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

RAMP C OVER NJ ROUTE 29 (NJ)

The structure is in overall very good condition. For additional information on the bridge condition, see the *2009 Annual Maintenance Report*.

WASHINGTON STREET OVERPASS (PA)

The structure is in overall good condition. For additional information on the bridge condition, see the *2009 Annual Maintenance Report*.

SOUTH PENNSYLVANIA AVENUE OVERPASS (PA)

The structure is in overall satisfactory condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

TRENTON-MORRISVILLE TOLL BRIDGE FACILITY AND GROUNDS

- A study should be performed to determine repairs necessary to the exterior of the administration building.
- A study should be done to determine upgrading room finishes in the administration building.
- The Commission should continue to conduct detailed life and safety studies as part of all facility renovation projects (A life safety code review consist of conducting a detailed physical inspection to determine if the building is up to code with the current Fire Protection NEFPA 101 Life and Safety Regulations and other local building codes, items reviewed include: stairway dimensions, emergency lighting, number and locations of exits, smoke detectors, fire extinguishers, sprinkler systems and other building safety features).
- A study should be performed to determine the best method of upgrading the HVAC system.
- A study should be conducted to determine the requirements and feasibility of converting the generator system from oil to natural gas.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Trenton-Morrisville Toll Bridge

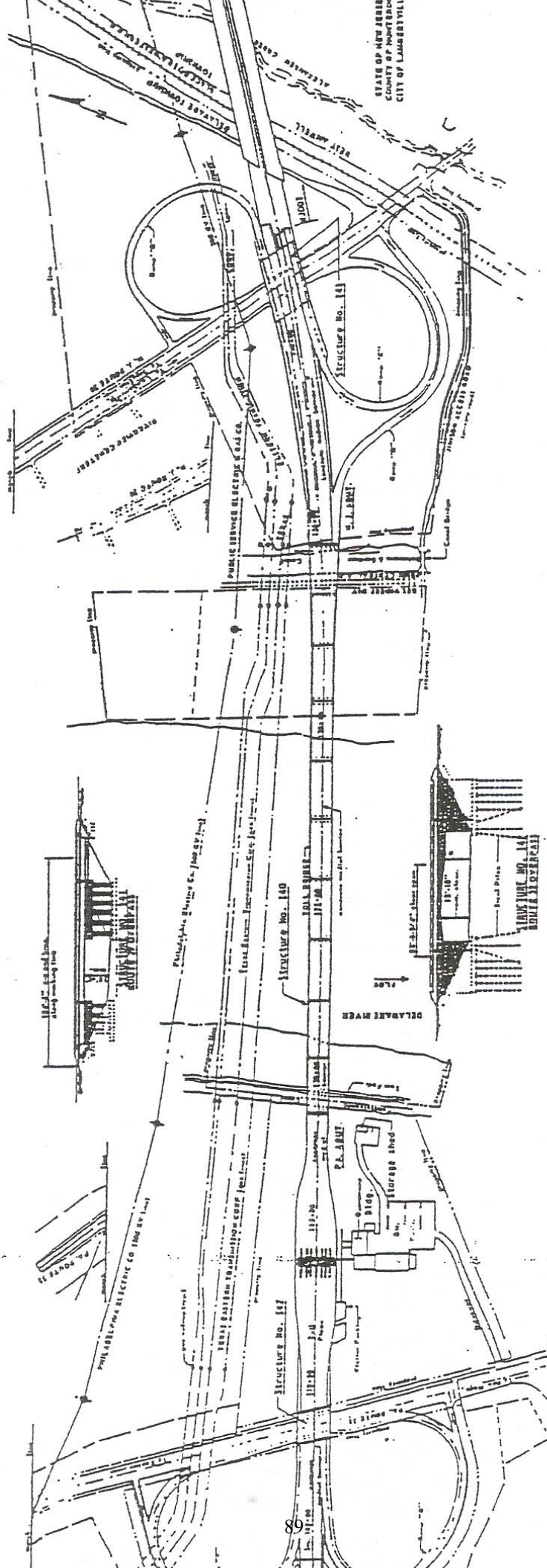
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
380	T-M TB Rehab + One Aux. NB Lane	\$104,420,000	\$4,920,000	\$240,000
BRIDGES SUB TOTAL		\$104,420,000	\$4,920,000	\$240,000
<u>Facilities and Grounds</u>				
TMTB	Unplanned Projects	\$1,384,000	\$100,000	\$104,000
466	TM HVAC Upgrade	\$1,912,000	\$933,000	\$962,000
468	TM Buildings Roof Replacement	\$858,000	\$27,000	\$94,000
519	TM Admin Building Renovations	\$2,535,000	\$168,000	\$581,000
FACILITIES AND GROUNDS SUB TOTAL		\$6,689,000	\$1,228,000	\$1,741,000
TOTAL COST		\$111,109,000	\$6,148,000	\$1,981,000

NEW HOPE-LAMBERTVILLE
TOLL BRIDGE FACILITY
(Structure No. 140)

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
TOWNSHIP OF SOLEBURY

STATE OF NEW JERSEY
COUNTY OF HUNTERDON
TOWNSHIP OF DELAWARE



PENNSYLVANIA APPROACH TO THE
NEW HOPE-LAMBERTVILLE TOLL BRIDGE

NEW JERSEY APPROACH TO THE
NEW HOPE-LAMBERTVILLE TOLL BRIDGE

NEW HOPE - LAMBERTVILLE TOLL BRIDGE

GENERAL

NEW HOPE-LAMBERTVILLE TOLL BRIDGE

(10 span, continuous, steel two girder/floorbeam/stringer)

The New Hope-Lambertville Bridge (Structure No. 140) was opened to traffic on July 22, 1971 and carries US Route 202 over the Delaware River between Delaware Township, New Jersey and Solebury Township, Pennsylvania.

The bridge is a ten span, continuous, steel two girder fracture critical structure. The deck is reinforced concrete and carries two lanes of traffic in each direction separated by a median barrier. The substructure units are composed of reinforced concrete with stone facing. The total length of the structure is 1,682 feet measured from center to center of bearings.

Complete rehabilitation of the floorbeam cantilever brackets was completed in October 2009 under Contract No. T-498A. All of the 130 steel cantilever bracket tie plates on the bridge were strengthened with high strength steel. Structural repairs were also made to the stringer bearings and steel catwalk, which included replacing the stringer bearing bolts and replacement of deteriorated sections of the catwalk.

NEW HOPE-LAMBERTVILLE APPROACH BRIDGES

The Commission's jurisdiction also includes the loop-ramp interchanges with overpasses provided at Route 29 in New Jersey and Route 32 in Pennsylvania. The posted speed limit on the approach roadways is 55 mph.

NEW HOPE-LAMBERTVILLE FACILITY AND GROUNDS

The toll plaza at the Pennsylvania approach has one-way toll collection, replacing the two-way collection prior to the 2002 rehabilitation. All lanes are equipped with E-ZPass. The toll plaza is erected on concrete islands and is protected with an overhead canopy that matches the Operations building roof.

Contract No. T-397B, New Hope - Lambertville Toll Bridge Building Administration Building Renovations & Addition, was completed in October 2008 and rededication of the building was held in December 2008. Contract No. T-397B included upgrades to the HVAC system and installation of a back-up generator to supply all power needs of the facility.

Upon rededication of the Administration Building in 2008, the New Hope – Lambertville Toll Bridge facility is now known as the New Hope Headquarters and Administration Building and houses most of the Commission's Executive Staff as well as some administrative and operations staff.

The 2009 inspection included the main river bridge, two approach bridges, and the facility and grounds.

SIGNIFICANT FINDINGS

Based on the findings of the 2009 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

NEW HOPE-LAMBERTVILLE TOLL BRIDGE

(10 span, continuous, steel two girder/floorbeam/stringer)

The structure is in overall good condition. The visually inspected pin and hanger system is in good condition.

The deck, superstructure and substructure are in good condition.

The approach roadway is in fair condition. There are medium to wide transverse partially sealed cracks at the east and west approach roadways.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure was found to be in good condition with only minor exposure of the pier footings.

ROUTE 29 OVERPASS

(3 span, simply supported, steel multi-stringer)

The structure is in overall fair condition due to the substructure.

The deck is in good condition.

The approach roadway is in fair condition. The approach roadways exhibit several fine to medium cracks throughout.

The superstructure is in good condition.

The substructure is in fair condition. Several large areas of hollow concrete and spalls with exposed rebars are noted at the east abutment breastwall and the pier caps and columns.

ROUTE 32 OVERPASS

(1 span, reinforced concrete rigid frame)

The structure is in overall satisfactory condition.

The roadway is in good condition.

The superstructure is in satisfactory condition. The intrados (exposed face) of the rigid frame exhibits few fine to medium cracks with efflorescence at the north and south ends of the midspan. Incipient spalls are noted over PA Route 32 southbound right lane and right shoulder.

The substructure is in good condition.

NEW HOPE-LAMBERTVILLE TOLL BRIDGE FACILITY AND GROUNDS

The New Hope-Lambertville tollbooths and tunnel are in good condition. The roadways at the tollbooths are in good condition. The administration building and attached maintenance garage facility roofs were replaced in 2007. The Commission owned roadway throughout the jurisdiction exhibits numerous areas of sealed and partially sealed random cracks, surface wearing, uneven patchwork and spalling.

CONCLUSIONS

Based on the findings of the 2009 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

NEW HOPE-LAMBERTVILLE TOLL BRIDGE MAIN RIVER BRIDGE

The structure is in overall good condition.

- Improve channel protection at Piers 1 through 6.
- The deteriorated stone masonry joints at the abutments should be repointed.
- Remove the timber debris at Piers 2, 3, 4 and 6.
- Pressure inject the masonry cracks with epoxy grout at the east abutment.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

The Commission has undertaken a Substructure & Scour Remediation project in Districts 1, 2 & 3 under Contract No. C-476A. This project is under construction and includes this bridge.

ROUTE 29 OVERPASS

The structure is in overall fair condition due to the substructure condition.

- The deck joints are deteriorated throughout the structure and the portions of the deck joints that are either loose or missing at Pier 2 and the east abutment should be repaired.
- Consideration should be given to replacing the deck joints throughout the structure with a more durable type of joint.
- There are several areas of spalls with exposed reinforcement and hollow concrete areas at the east abutment and Piers 1 and 2 that should be patched with concrete.
- Clean and paint the fascia stringer ends and bearings at the abutments and piers.
- Consideration should be given for replacement of existing bearings with elastomeric pads.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

ROUTE 32 OVERPASS

The structure is in overall satisfactory condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

NEW HOPE-LAMBERTVILLE TOLL BRIDGE FACILITY AND GROUNDS

- Studies should be conducted for replacing the material storage shed and magnesium chloride tanks.
- Consideration should be given to repaving the Commission-owned roadway, including approach roadway ramps.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

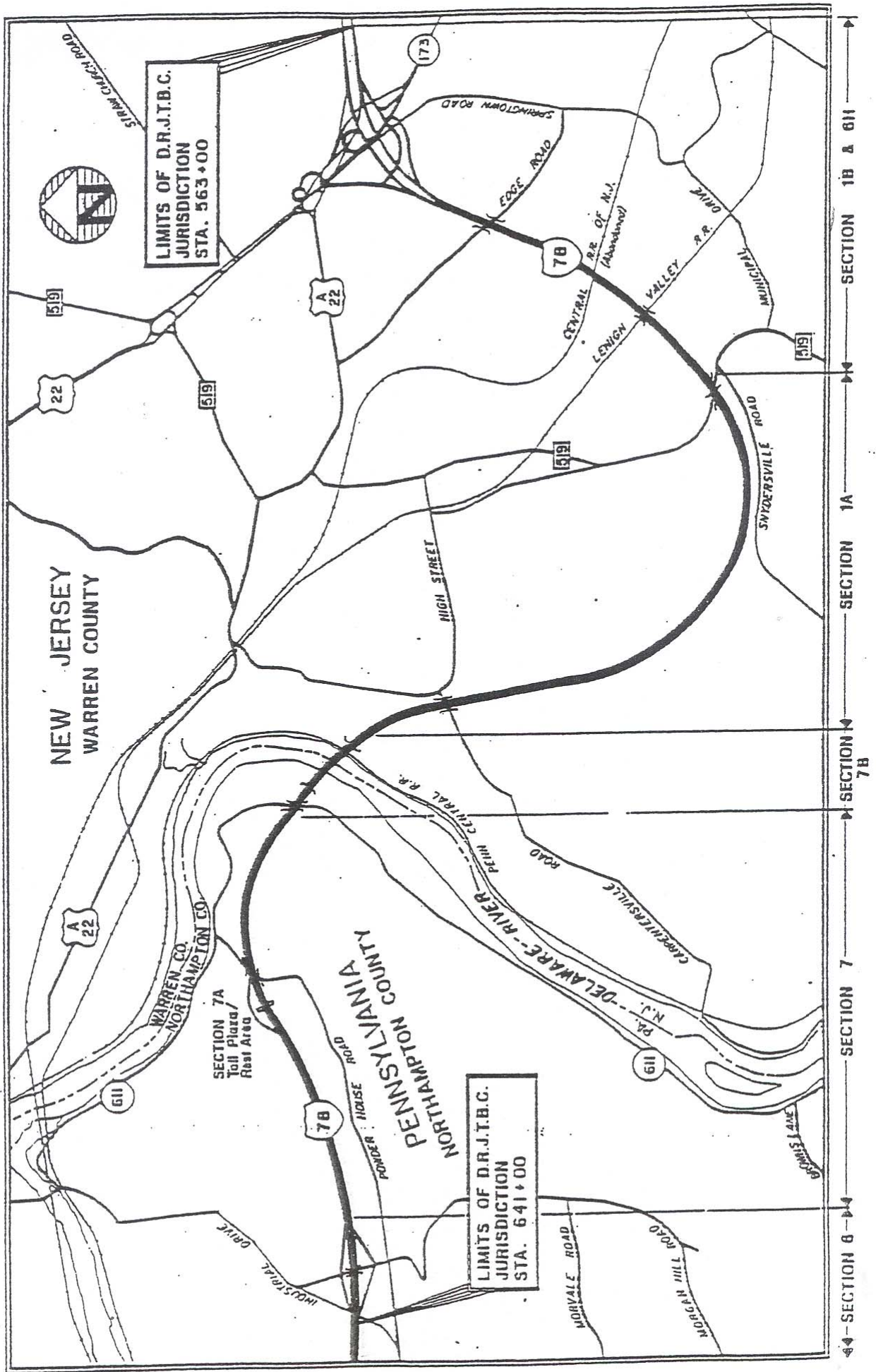
2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

New Hope Lambertville Toll Bridge

ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
543	NH-L TB PA & NJ Approach Roadways Repaving & NJ Route 29 Overpass Bearing Seat & Bridge Painting	\$5,469,000	\$560,000	\$4,840,000
BRIDGES SUB TOTAL		\$5,469,000	\$560,000	\$4,840,000
<u>Facilities and Grounds</u>				
NHLTB	Unplanned Projects	\$1,040,000	\$75,000	\$78,000
521	NH-L TB Equipment and Salt Storage Building Replacement	\$1,100,000	\$108,000	\$974,000
586	NH-L TB Maintenance Garage Door Replacements	\$35,000	\$35,000	\$0
FACILITIES AND GROUNDS SUB TOTAL		\$2,175,000	\$218,000	\$1,052,000
TOTAL COST		\$7,644,000	\$778,000	\$5,892,000

INTERSTATE 78
TOLL BRIDGE FACILITY
(Structure Nos. 270 & 275)



INTERSTATE 78 TOLL BRIDGE

GENERAL

INTERSTATE 78 TOLL BRIDGE MAIN RIVER BRIDGE

(Twin 7 span, continuous, steel multi-girder)

The Interstate 78 toll bridge carries traffic over the Delaware River between Williams Township, Northampton County, Pennsylvania and the Town of Phillipsburg, Warren County, New Jersey. The facility was opened to traffic on November 21, 1989.

The Interstate 78 main river bridge (Structure Nos. 270 & 275) is a twin, 1,222 foot long, four girder, 7 span continuous bridge. The dual roadways are each 46 feet from curb to curb and carry three lanes of traffic. The substructure consists of reinforced concrete hammerhead piers and reinforced concrete stub abutments. The posted speed limit on the bridge is 55 mph.

INTERSTATE 78 APPROACH BRIDGES

The New Jersey approach consists of six (6) approach structures. The Pennsylvania approach consists of five (5) approach structures. In total there are eleven (11) approach structures owned and maintained by the Commission that are part of the Interstate 78 Toll Bridge Facility.

INTERSTATE 78 ROADWAY

The Commission's jurisdiction extends approximately 2.2 miles to the west at the Pennsylvania approach and includes five (5) bridges and a Welcome Center. The New Jersey approach extends approximately 4.2 miles to the east from the main river bridge and includes six (6) approach structures (not including Conrail over I-78 or the Route 173 structures).

In October 2009, the Commission completed Contract T-424A, I-78 Roadway Rehabilitation, a two-year, rehabilitation project along the agency's 4.2-mile segment of I-78 in New Jersey. The project included subsurface remediation to address sinkholes as well as rehabilitating cracked roadway conditions as a result of heavy truck traffic along the roadway. Subsurface voids were filled and stabilized as part of the project; the Commission's New Jersey segment of I-78 is in an area where subsurface limestone geologic formations are prone to sinkholes. Work included rehabilitation of the concrete roadway, utilizing a variety of techniques including polyurethane grout injection and concrete slurry grouting. Crack stitching was also utilized at numerous locations, complete full depth replacement of the roadway was completed at the worst locations. The Still Valley Exit 3 Ramp was also rehabilitated as part of the project. Other improvements included repairs to various overpasses and secondary bridge structures, and the installation of a variety of safety upgrades, such as new striping and guiderails.

INTERSTATE 78 TOLL BRIDGE FACILITY AND GROUNDS

The one-way toll plaza, located at the Pennsylvania approach of the westbound lanes, has seven toll lanes. All toll booths are erected on concrete islands and are protected by an overhead canopy. All lanes are equipped with E-ZPass.

The 2009 inspection included the eastbound and westbound main river bridges, eleven (11) approach structures, and the facility and grounds.

SIGNIFICANT FINDINGS

Based on the findings of the 2009 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

INTERSTATE 78 TOLL BRIDGE (EASTBOUND)

(7 span, continuous, steel multi-girder)

The structure is in overall good condition.

The deck is in satisfactory condition. The top of the deck exhibits numerous fine to medium transverse cracks throughout. The metal Stay-In-Place forms at the underside of the deck have isolated areas of spot rust and the concrete overhangs exhibit few fine cracks with efflorescence.

The approach roadway is in satisfactory condition. A few medium to wide transverse cracks were noted at the approach roadways.

The superstructure and substructure are in good condition.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure for the eastbound roadway was found to be in satisfactory condition with minor concrete spalls and cracks with increased undermining at Piers 4 and 5.

INTERSTATE 78 TOLL BRIDGE (WESTBOUND)

(7 span, continuous, steel multi-girder)

The structure is in overall good condition.

The deck is in good condition.

The approach roadway is in satisfactory condition. A few medium to wide transverse cracks were noted at the approach roadways. The hot-poured sealer at the abutment header is slightly deteriorated and depressed.

The superstructure and substructure are in good condition.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure for the westbound roadway was found to be in satisfactory condition with hairline shrinkage cracks throughout and undermining of the concrete tremie at Pier 4 and the concrete apron at Pier 5.

SERVICE ROAD OVERPASS

(1 span, simply supported, prestressed concrete adjacent box beams)

The structure is in overall good condition.

The deck, approach roadway, superstructure and substructure are in good condition.

MORGAN HILL ROAD OVERPASS

(2 span, simply supported, prestressed concrete spread box beams)

The structure is in overall good condition.

The deck is in satisfactory condition. The top of the deck exhibits fine to medium cracks throughout, with some cracks being partially sealed. The compression-seal deck joints are partially covered with hot poured-sealer and exhibit deterioration where visible.

The approach roadway is in satisfactory condition. Medium to wide cracks were noted throughout both approach roadways.

The superstructure and substructure are in good condition.

CEDARVILLE ROAD OVERPASS

(4 span, simply supported, prestressed concrete I-beams)

The structure is in overall good condition.

The deck is in good condition.

The approach roadway is in satisfactory condition. The asphalt wearing surface exhibits minor to moderate wearing.

The superstructure and substructure is in good condition.

I-78 WESTBOUND OVER ROUTE 611

(3 span, simply supported, prestressed concrete spread box beams)

The structure is in overall good condition.

The deck is in good condition.

The approach roadway is in satisfactory condition. The west approach roadway exhibits medium to wide cracks. The east approach roadway has a few spalls partially patched with asphalt.

The superstructure and substructure are in good condition.

I-78 EASTBOUND OVER ROUTE 611

(3 span, simply supported, prestressed concrete spread box beams)

The structure is in overall good condition.

The deck is in good condition.

The approach roadway is in fair condition. The west approach roadway exhibits medium to wide cracks with several small spalls. The east approach roadway has few spalls with exposed rebars partially patched with asphalt and few wide cracks.

The superstructure and substructure are in good condition.

CARPENTERSVILLE ROAD OVERPASS

(2 span, continuous, steel multi-stringer)

The structure is in overall good condition.

The deck, approach roadway, superstructure and substructure are in good condition.

EDGE ROAD OVERPASS

(2 span, continuous, steel multi-stringer)

The structure is in overall satisfactory condition.

The deck and approach roadway are in good condition.

The superstructure is in satisfactory condition. The bottom flanges exhibit light to moderate rust and the remaining portion of the superstructure and bearings exhibit light surface rust.

The substructure is in good condition.

I-78 WESTBOUND OVER ROUTE 519

(2 span, continuous, steel multi-stringer)

The structure is in overall good condition.

The deck, approach roadway, superstructure and substructure are in good condition.

I-78 EASTBOUND OVER ROUTE 519

(2 span, continuous, steel multi-stringer)

The structure is in overall good condition.

The deck is in satisfactory condition. The compression-seal deck joints are partially covered with hot-poured sealer and exhibit areas of minor to moderate settlement.

The approach roadways are in satisfactory condition. The west approach roadway exhibits few partially sealed wide cracks.

The superstructure and substructure are in good condition.

I-78 WESTBOUND OVER RAMP C

(1 span, simply supported, steel multi-stringer)

The structure is in overall good condition.

The deck is in good condition.

The approach roadways are in satisfactory condition. The west approach roadway exhibits wide cracks. There are spalls at the approach slabs between the lanes due to missing and broken lane reflectors.

The superstructure and substructure are in good condition. Areas of heavy pigeon debris and spot rusting of the structural steel were noted.

I-78 EASTBOUND OVER RAMP C

(1 span, simply supported, steel multi-stringer)

The structure is in overall good condition.

The deck is in good condition.

The approach roadways are in satisfactory condition. The approach roadways exhibit wide cracks throughout.

The superstructure and substructure are in good condition. Areas of heavy pigeon debris and spot rusting of the structural steel were noted.

INTERSTATE 78 TOLL BRIDGE FACILITY AND GROUNDS

Some of the I-78 facility vehicles and equipment are not protected from the weather and are stored along parking lots because of a lack of storage capacity within the building.

The exterior wood stair case west of the maintenance building is deteriorated and has no handrail.

The employee parking lot exhibits uneven pavement and sealed cracks throughout.

CONCLUSIONS

Based on the findings of the 2009 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

INTERSTATE 78 TOLL BRIDGE (EASTBOUND)

The structure is in overall good condition.

- Remove the areas of heavy pigeon debris and clean and spot paint the structural steel as required.
- The broken reflectors at Span 6 and the east approach roadway should be replaced.

- Repair the undermined areas at Piers 4 and 5.
- Improve channel protection at Pier 4 and at the northwest corner of Pier 5.
- Repair the cracks in the tremie at Pier 4.
- Repair the spalls in the Pier 3 and 5 foundations.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

The Commission has undertaken a Substructure & Scour Remediation project in Districts 1, 2 & 3 under Contract No. C-476A. This project is under construction and includes this bridge.

INTERSTATE 78 TOLL BRIDGE (WESTBOUND)

The structure is in overall good condition.

- Remove the areas of heavy pigeon debris and clean and spot paint the structural steel as required.
- The undermined area and cracks in the tremie at Pier 4 should be repaired.
- Improve channel protection around Pier 4.
- The debris near the substructure units should be removed.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

The Commission has undertaken a Substructure & Scour Remediation project in Districts 1, 2 & 3 under Contract No. C-476A. This project is under construction and includes this bridge.

SERVICE ROAD OVERPASS

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

MORGAN HILL ROAD OVERPASS

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

CEDARVILLE ROAD OVERPASS

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

I-78 WESTBOUND OVER ROUTE 611

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

I-78 EASTBOUND OVER ROUTE 611

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

CARPENTERSVILLE ROAD OVERPASS

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

EDGE ROAD OVERPASS

The structure is in overall satisfactory condition.

- Clean and paint the superstructure steel and bearings.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

I-78 WESTBOUND OVER ROUTE 519

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

I-78 EASTBOUND OVER ROUTE 519

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

I-78 WESTBOUND OVER RAMP C

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

I-78 EASTBOUND OVER RAMP C

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

INTERSTATE 78 ROADWAY

Contract No. T-424A completed the I-78 Roadway Rehabilitation in New Jersey. The roadway is in very good condition.

INTERSTATE 78 TOLL BRIDGE FACILITY AND GROUNDS

- Replace the missing snow guards and install gutters on the maintenance garage.
- The Commission should continue to conduct detailed life and safety studies as part of all facility renovation projects (A life safety code review consist of conducting a detailed physical inspection to determine if the building is up to code with the current Fire Protection NEFPA 101 Life and Safely Regulations and other local building codes, items

reviewed include: stairway dimensions, emergency lighting, number and locations of exits, smoke detectors, fire extinguishers, sprinkler systems and other building safety features).

- Consider replacing and upgrading the fuel pump cabinets.
- A study should be conducted to determine the need for additional vehicle and equipment storage at the I-78 facility.
- A study of the HVAC system should be conducted to determine whether the system located at the facility needs to be upgraded.
- Install permanent impact attenuators at the toll plaza. This will be completed under Contract No. T-427B

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Interstate 78 Toll Bridge

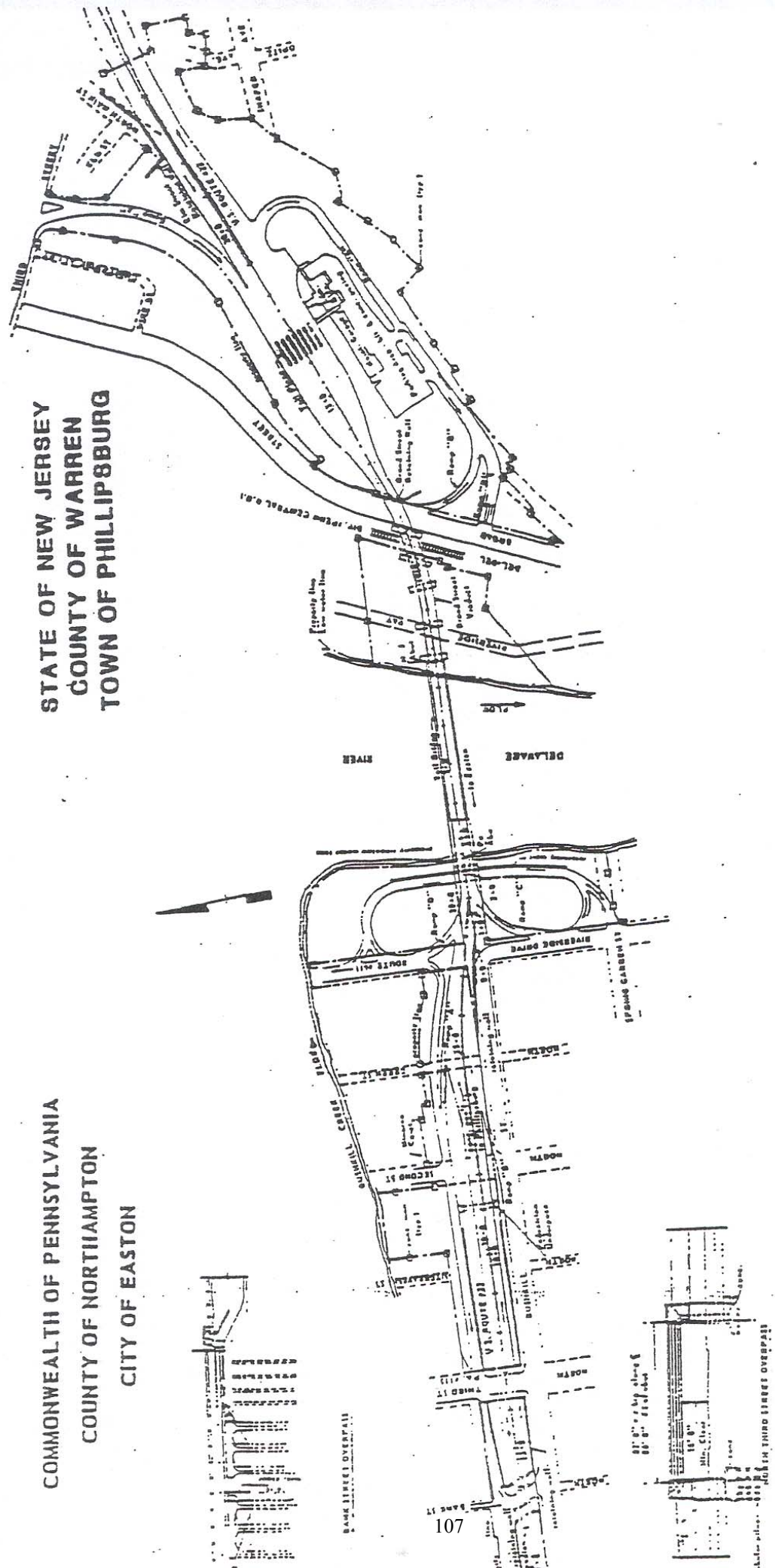
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
506	I-78 PA Approach Repaving & Welcome Center Improvements	\$11,082,000	\$936,000	\$7,583,000
552	Cleaning & Painting of I-78 Bridges (Edge, Carpentersville, Main River, etc)	\$7,281,000	\$153,000	\$7,123,000
542	I-78 Parapet Upgrades on various structures (starts in 2013)	\$10,530,000	\$0	\$0
562	I-78 Roadway Median Improvements - Pennsylvania	\$610,000	\$566,000	\$0
563	I-78 Roadway Median Improvements - New Jersey	\$2,690,000	\$2,616,000	\$0
BRIDGES SUB TOTAL		\$32,193,000	\$4,271,000	\$14,706,000
<u>Facilities and Grounds</u>				
I-78TB	Unplanned Projects	\$2,010,000	\$150,000	\$156,000
507	I-78 HVAC Upgrade	\$1,330,000	\$27,000	\$113,000
508	I-78 Maintenance Garage Improvements	\$3,201,000	\$0	\$363,000
578	I-78 Salt Storage Building Roll-up Curtain	\$11,000	\$11,000	\$0
FACILITIES AND GROUNDS SUB TOTAL		\$6,552,000	\$188,000	\$632,000
TOTAL COST		\$38,745,000	\$4,459,000	\$15,338,000

EASTON-PHILLIPSBURG
TOLL BRIDGE FACILITY
(Structure No. 300)

STATE OF NEW JERSEY
COUNTY OF WARREN
TOWN OF PHILLIPSBURG

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF NORTHAMPTON
CITY OF EASTON



EASTON - PHILLIPSBURG TOLL BRIDGE

GENERAL

EASTON-PHILLIPSBURG TOLL BRIDGE

(1 span, Petit Thru-Truss)

The Easton-Phillipsburg Toll Bridge (Structure No. 300) carries US Route 22 over the Delaware River between the City of Easton, Pennsylvania, and the Town of Phillipsburg, New Jersey. The bridge was opened to traffic on January 14, 1938. Westbound only toll collection commenced on June 4, 1989.

The main river bridge consists of a 540 foot Petit thru-truss span over the Delaware River. The overall length, including the approaches on either end of the structure, is approximately 1,010 feet. The roadway width is 40 feet between the trusses and carries 4 lanes of traffic. There are 8 foot sidewalks cantilevered outside of both trusses. The substructure consists of reinforced concrete abutments. The posted speed limit through the toll bridge facility is 25 mph.

Sidewalk reconstruction was performed under Contract No. T-420 and was completed in 2004.

The underside of the Easton-Phillipsburg Toll Bridge, which includes the roadway stringers, floorbeams, and the bottom chords of the trusses, received an in-depth inspection in April 2007. This special in-depth inspection was required due to the limited access to those members for the regular inspections. The underside components were found to be in overall satisfactory condition. All major areas of section loss at the floorbeams and lateral bracing was found below the curblines due to poor drainage.

EASTON-PHILLIPSBURG TOLL BRIDGE APPROACH STRUCTURES

The Commission's jurisdiction includes a total of five (5) approach structures. On the Pennsylvania approach there are four (4) approach structures.

Approximately 2,000 feet of the Pennsylvania approach was reconstructed in 1982. This reconstruction included new superstructures for the overpasses at Bank Street, Third Street and Route 611. The truss support for the center bearing of the Broad Street Viaduct was reconstructed in 2001.

EASTON-PHILLIPSBURG TOLL BRIDGE FACILITY AND GROUNDS

The one-way toll plaza, located at the New Jersey approach, has five (5) toll lanes. All tollbooths are erected on concrete islands and are protected by an overhead canopy. All lanes are equipped for E-ZPass.

The 2009 inspection included the main river bridge, five (5) approach bridges, and the facility and grounds.

SIGNIFICANT FINDINGS

Based on the findings of the 2009 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

EASTON-PHILLIPSBURG TOLL BRIDGE MAIN RIVER BRIDGE

(1 span, Petit Thru-Truss)

The structure is in overall satisfactory condition.

The deck is in satisfactory condition. Numerous medium to wide transverse cracks are noted throughout the bridge, mainly over the floorbeam locations with several shallow spalls.

There is no approach roadway for this structure due to the adjacent approach structures.

The superstructure is in satisfactory condition. Several members exhibit isolated areas of light to moderate surface rust and peeling paint. Pack rust was noted at several locations between eyebars and at gusset plate connections. Few access cover plates at the vertical truss members are welded and few welds are cracked. The underside inspection performed in April 2007 noted minor section loss to the floorbeams and lateral bracing.

The substructure is in good condition.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure was noted to be in good condition.

BROAD STREET VIADUCT

(5 span, simply supported, riveted steel three girder-floorbeam-stringer system)

The structure is in overall fair condition due to the superstructure condition.

The deck is in satisfactory condition. Fine to medium transverse cracks are noted throughout the top of deck. Several areas of the underside steel trough and sidewalk SIP forms exhibit heavy laminar rust.

The approach roadway (east only) is in satisfactory condition. Medium to wide cracks are noted in the asphalt. The eastbound and westbound lanes exhibit small spalls and loose concrete.

The superstructure is in fair condition. Several structural steel members exhibit areas of moderate to severe corrosion below the deck joints, along the curb openings, and those exposed directly to the elements. Severe rust was noted at the end stringers and floorbeam under the deck joint at Pier 4 with up to 50% material loss to the stringer connection bolts. Stringers 2 and 4 (from the north) deflect up to ¼" at the connection to the floorbeam at Pier 4 due to the losses at the connection bolts. Repaired cracks were noted at Piers 1 to 3 at the floorbeam-kneebrace connections. The weld repair at the vertical connection to the Span 3 south girder at Pier 3 has cracked and is 21" long. The crack extends approximately ½" beyond the weld repair area.

The substructure is in good condition.

ROUTE 611 OVERPASS

(1 span, simply supported, prestressed concrete adjacent box beam)

The structure is in overall satisfactory condition.

The deck is in fair condition. The top of deck exhibits large areas of deteriorated asphalt patches and concrete areas. The compression seal deck joints at the east and west abutments are depressed, torn, and missing throughout. The parapets have a few incipient spalls throughout.

The approach roadway (west only) is in satisfactory condition. The approach slab exhibits several small spalls with a few exposed rebars.

The superstructure is in satisfactory condition. The prestressed box beams exhibit a few small spalls and incipient spalls with moderate water stains throughout.

The substructure is in satisfactory condition. The abutments have a few medium to wide cracks throughout with hollow areas and delaminated concrete.

THIRD STREET OVERPASS

(1 span, simply supported, steel multi-stringer)

The structure is in overall good condition.

The deck is in good condition.

The approach roadway is in satisfactory condition. The approach slab exhibits several fine to medium cracks and small spalls throughout.

The superstructure and substructure are in good condition.

BANK STREET OVERPASS

(3 span, continuous, steel multi-stringer)

The structure is in overall good condition.

The deck is in fair condition. The underside of deck exhibits several spalls with exposed rebar and incipient spalls throughout.

The approach roadway, superstructure and substructure are in good condition.

The inlet at the northwest corner of Bank Street under Span 2 has settled with erosion of the roadway slab subbase material adjacent to the inlet. The concrete sidewalls of the inlet have also spalled with several areas of missing and broken concrete.

PEDESTRIAN TUNNEL

(Single cell, reinforced concrete box culvert)

The structure is in overall good condition.

The roadway and culvert are in good condition.

EASTON-PHILLIPSBURG TOLL BRIDGE FACILITY AND GROUNDS

The west side of the toll plaza has several concrete slabs of roadway with a few open and wide transverse cracks. The roadway surface is uneven with wear along tire lines and minor settlement of concrete slabs. During heavy rain, there are areas with ponding water and the tunnel under the toll booth exhibits minor leakage and occasionally the carpets on tunnel floor over the drains become wet. Overall the toll plaza is in fair condition.

Localized failure of steep embankments located at east and south sides of the maintenance yard, adjacent to the Broad Street ramp, were previously noted. Eroded embankment was observed at the base of the slope. These areas appear to be stable at the time of this inspection.

The current diesel fuel storage tank used by this facility has a 250 gallons capacity and it is inadequate for current needs. The fuel is dispensed utilizing a hand pump. The current underground diesel storage tank should be replaced with an above ground tank.

The administration building brick and stone façade exhibits areas of distress and displacement of the bricks due to pressure resulting from water intrusion. The circulating hot water heating system in the administration building is not functioning adequately and it needs to be flushed cleaned. Maintenance forces at the facility indicated that they will flush this heating system.

The roof on the administration building and garage was replaced in 2007 under Contract No. T-465A.

CONCLUSIONS

Based on the findings of the 2009 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

EASTON-PHILLIPSBURG TOLL BRIDGE MAIN RIVER BRIDGE

The structure is in overall satisfactory condition.

- Consideration should be given for a major rehabilitation project for the toll bridge and the approach structures including cleaning and painting of the superstructure steel, miscellaneous steel repairs, installation of bird mitigation measures, utility conduit repairs, drainage improvements and repaving. (A design contract for the Easton – Phillipsburg Toll Bridge is scheduled to be advertised in late 2009 or early 2010)
- Seal the medium crack at the east abutment and the wide crack at the west abutment with epoxy injected concrete.
- Improve channel protection at the east and west abutments.
- Repoint stone masonry joints at the east and west abutments.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

The Commission has undertaken a Substructure & Scour Remediation project in Districts 1, 2 & 3 under Contract No. C-476A. This project is under construction and includes this bridge.

BROAD STREET VIADUCT

The structure is in overall fair condition due to the superstructure.

- All gusset plates and floorbeam ends should be cleaned and spot painted.
- Replace the bird netting in Span 1.
- Grind smooth the steel fingers at the deck joints to remove the plow catch.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

ROUTE 611 OVERPASS

The structure is in overall satisfactory condition.

- Replace the missing and deteriorated compression seals at the east and west abutment deck joints including the sidewalks.
- Remove the hollow concrete areas at the north end of the east abutment and the south end of the east abutment and patch the areas with concrete.
- Epoxy coat the bearing seats and the end of the box beams.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

THIRD STREET OVERPASS

The structure is in overall good condition.

- Replace the compression seal joints at the east and west abutment deck joints and patch the spalls at the deck joint headers and adjacent areas with concrete.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

BANK STREET OVERPASS

The structure is in overall good condition.

- Repair the inlet at the northwest corner of Bank Street below Span 2.
- Replace the deteriorated and missing compression seals at the east and west abutment deck joints and patch the spalls at the deck joint headers with concrete.
- Replace the missing and sheared anchor bolts at the east abutment and Pier 2 bearings.
- Consideration should be given to replacing the existing bearings.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

PEDESTRIAN TUNNEL

The structure is in overall good condition. For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

EASTON-PHILLIPSBURG TOLL BRIDGE FACILITY AND GROUNDS

- The deteriorated and cracked concrete slabs on the west side of the toll plaza should be replaced. Several of the concrete slabs on the east side of toll plaza in the westbound lanes should be replaced.
- The spalled curbs and deteriorated relief joint should be repaired.
- A study should be performed to determine the necessary repairs to the exterior of the administration building.
- A study should be performed to determine repairs and upgrades to the grounds and auxiliary buildings.
- The Commission should continue to conduct detailed life and safety studies as part of all facility renovation projects (A life safety code review consist of conducting a detailed physical inspection to determine if the building is up to code with the current Fire Protection NEFPA 101 Life and Safely Regulations and other local building codes, items reviewed include: stairway dimensions, emergency lighting, number and locations of exits, smoke detectors, fire extinguishers, sprinkler systems and other building safety features).

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Easton-Phillipsburg Toll Bridge

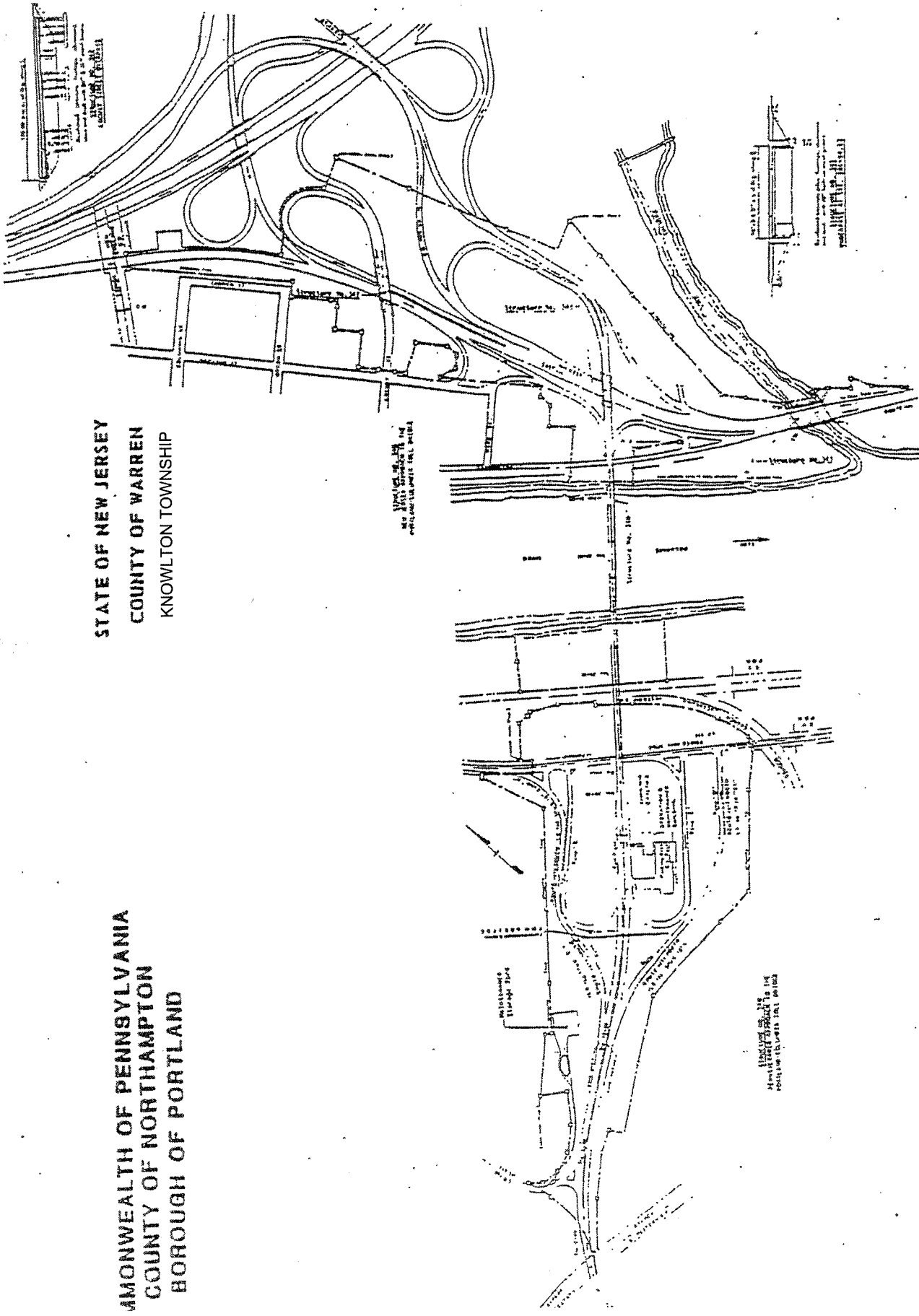
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
437	E-P TB Rehabilitation	\$29,615,000	\$944,000	\$6,804,000
BRIDGES SUB TOTAL		\$29,615,000	\$944,000	\$6,804,000
<u>Facilities and Grounds</u>				
EPTB	Unplanned Projects	\$1,097,000	\$75,000	\$78,000
564	E-P Parking Lot & Floor Drain Improvements	\$281,000	\$0	\$281,000
509	E-P HVAC Upgrade	\$1,995,000	\$41,000	\$169,000
522	E-P Elevator Modernization	\$680,000	\$0	\$63,000
FACILITIES AND GROUNDS SUB TOTAL		\$4,053,000	\$116,000	\$591,000
TOTAL COST		\$33,668,000	\$1,060,000	\$7,395,000

PORTLAND-COLUMBIA
TOLL BRIDGE FACILITY
(Structure No. 340)

COMMONWEALTH OF PENNSYLVANIA
 COUNTY OF NORTHAMPTON
 BOROUGH OF PORTLAND

STATE OF NEW JERSEY
 COUNTY OF WARREN
 KNOWLTON TOWNSHIP



PORTLAND - COLUMBIA TOLL BRIDGE

GENERAL

PORTLAND-COLUMBIA TOLL BRIDGE

(10 span, riveted steel multi-girder)

The Portland-Columbia Toll Bridge Facility (Structure No. 340) opened to traffic on December 1, 1953 and converted to toll collection in the westbound direction only on May 25, 1989. The bridge connects Pennsylvania Route 611 at Portland, Pennsylvania with US Route 46 at a section of Knowlton Township, New Jersey. US Route 46 merges with Interstate 80 located just north of the bridge on the New Jersey approach.

The main river bridge consists of a ten span, riveted steel plate girder system with an approximate total length of 1,309 feet. The roadway is 32 feet wide from curb to curb and carries one lane of traffic in each direction with a posted speed limit of 35 mph. The substructure units consist of reinforced concrete piers and concrete bin abutments. All the substructures are founded on spread footings with the exception of Pier 8, which is founded on piles. The piers also have partial granite stone facing.

A rehabilitation contract performed in 1992 included replacement of the existing concrete deck with a cast-in-place deck and concrete parapets. The combination sidewalk and maintenance walkway were removed and a new lighting system on the downstream side of the main bridge was installed. Approach roadway improvements (NJ and PA) and new drainage systems were also constructed. In 1998, the main river bridge, the pedestrian bridge to the north of the toll bridge, and both approach structures were cleaned and painted by contract.

PORTLAND-COLUMBIA APPROACH BRIDGES

The Commission's jurisdiction also includes two additional bridges at the New Jersey approach. Deck and barrier replacements were performed in 1992 in conjunction with the main river bridge rehabilitation contract.

PORTLAND-COLUMBIA TOLL BRIDGE FACILITY AND GROUNDS

The one-way toll plaza, located at the Pennsylvania approach, has three toll lanes. All the tollbooths are erected on concrete islands and are protected by an overhead canopy. All three lanes are equipped for E-ZPass.

The 2009 inspection included the main river bridge, two approach bridges, and the facility and grounds.

SIGNIFICANT FINDINGS

Based on the findings of the 2009 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

PORTLAND-COLUMBIA TOLL BRIDGE

(10 span, riveted steel multi-girder)

The structure is in overall good condition.

The deck is in good condition.

The approach roadway is in satisfactory condition. Large areas of fine map cracking are noted at both approaches with few medium to wide cracks and shallow spalls.

The superstructure and substructure are in good condition.

An underwater inspection was performed in 2008 under Contract No. C-476A. The underwater components of the substructure were noted to be in good condition with minor concrete surface delaminations and minor cracks throughout.

ROUTE 46 OVERPASS

(1 span, riveted steel multi-girder)

The structure is in overall good condition.

The deck is in good condition.

The approach roadway is in satisfactory condition. The east approach exhibits numerous medium to wide cracks throughout the pavement.

The superstructure and substructure are in good condition.

LOCUST STREET OVERPASS

(4 span, steel multi-stringer)

The structure is in overall satisfactory condition.

The deck, approach roadway and superstructure are in good condition.

The substructure is in satisfactory condition. A spall was noted at the east abutment bridge seat exposing the anchor bolt of the Stringer 6 bearing with a 10 square inch area of undermining of the masonry plate (approximately 10%). All three piers exhibit hollow concrete areas and cracks at the pier columns and at the pier cap of Pier 1. There is a large area of collapsed slope protection at the south end of the west abutment under Stringer 2 with loose bricks and exposed fill.

PORTLAND-COLUMBIA TOLL BRIDGE FACILITY AND GROUNDS

The maintenance parking lot is in poor condition with wide cracking of the asphalt pavement and unevenness throughout. The storage yard and driveway are in poor condition with numerous areas of deteriorated pavement. Also, the roadway drainage is poor because of spalling and cracking of the pavement.

The roof on the maintenance garage and the administration building was replaced in 2005 under Contract No. T-439A.

The HVAC controls are approximately 20 years old and the controls are not working properly.

The entire District 3 salt storage is maintained at this location. The existing storage capacity is not sufficient. A new salt storage facility is currently planned for this Toll Bridge Facility.

CONCLUSIONS

Based on the findings of the 2009 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

PORTLAND-COLUMBIA TOLL BRIDGE

The structure is in overall good condition.

- The incipient spalls, delaminated and cracked areas throughout the concrete patches in the east abutment and Piers 2, 3, 4 and 9 should be repaired.
- Improve channel protection around Piers 4 through 8.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

The Commission has undertaken a Substructure & Scour Remediation project in Districts 1, 2 & 3 under Contract No. C-476A. This project is under construction and includes this bridge.

ROUTE 46 OVERPASS

The structure is in overall good condition.

- Replace the missing and deteriorated compression joint seals at the east and west abutment deck joints.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

LOCUST STREET OVERPASS

The structure is in overall satisfactory condition.

- Repair the spall causing the undermining of the Stringer 6 bearing at the east abutment.
- Remove the pack rust below the rocker bearings at Stringers 2 through 5 at the west abutment and Stringer 4 at the east abutment.
- Reset the shifted sliding plate bearings at all piers.
- Replace the missing anchor bolts at Stringer 1 of Span 4 at Pier 3.

- Consideration should be given to replacing all existing bearings.
- The cracked and hollow concrete throughout the piers should be removed and patched with concrete.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

PORTLAND-COLUMBIA TOLL BRIDGE FACILITY AND GROUNDS

- The maintenance (rear) parking lot and the salt storage yard access and turn around should be repaved.
- New sidewalks, curbs and drainage should be constructed.

These improvements will be included in Contract No. T-441A Locust Street Improvements.

- A study was performed on the HVAC controls to determine what components need to be replaced, or if the entire system should be upgraded.
- A study was performed to determine the district's deicing requirements. A new district salt storage facility is currently planned for Portland – Columbia Toll Bridge Facility.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Portland-Columbia Toll Bridge

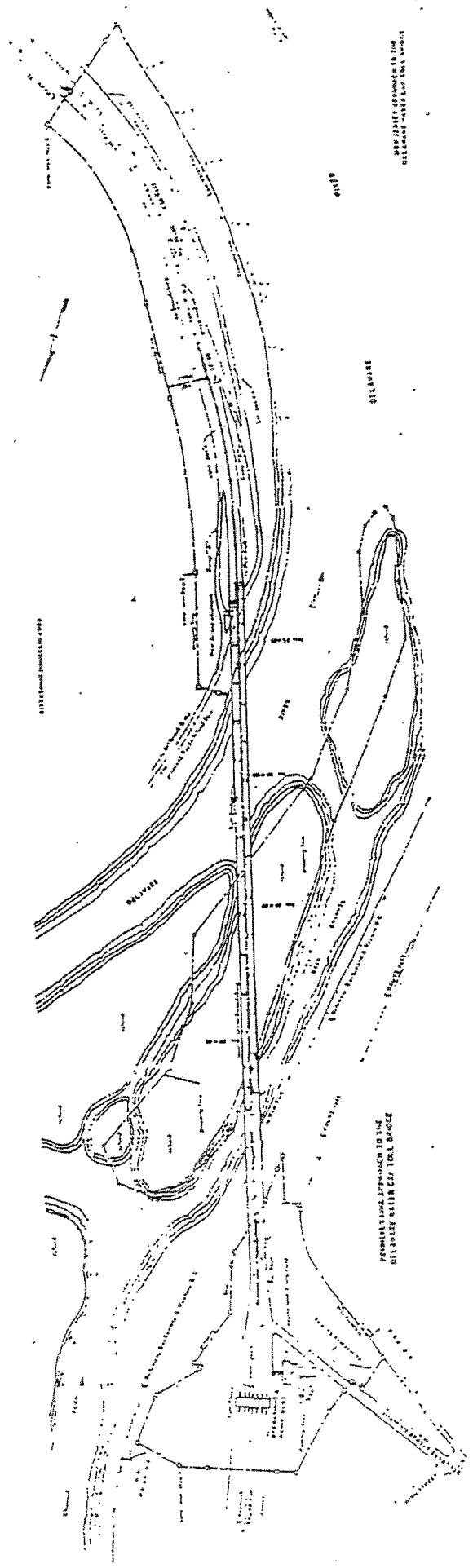
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
566	P-C Approach Roadway Improvements	\$3,604,000	\$308,000	\$2,624,000
BRIDGES SUB TOTAL		\$3,604,000	\$308,000	\$2,624,000
<u>Facilities and Grounds</u>				
PCTB	Unplanned Projects	\$719,000	\$50,000	\$52,000
512	P-C HVAC Upgrade	\$1,492,000	\$0	\$138,000
FACILITIES AND GROUNDS SUB TOTAL		\$2,211,000	\$50,000	\$190,000
TOTAL COST		\$5,815,000	\$358,000	\$2,814,000

DELAWARE WATER GAP
TOLL BRIDGE FACILITY
(Structure Nos. 380 & 390)

STATE OF NEW JERSEY
COUNTY OF WARREN
HARDWICK TOWNSHIP

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF MONROE
BOROUGH OF DELAWARE WATER GAP



DELAWARE WATER GAP TOLL BRIDGE

GENERAL

DELAWARE WATER GAP TOLL BRIDGE

(Eastbound: 17 span, riveted steel multi-girder)

(Westbound: 16 span, riveted steel multi-girder)

The Delaware Water Gap Toll Bridge (Structure Nos. 380 and 390) carries Interstate 80 across the Delaware River near Delaware Water Gap, Pennsylvania, and Hardwick Township, NJ, providing a gateway from the eastern metropolitan area to the Pocono recreational area. Through Pennsylvania, the four lane limited access highway crosses the width of Pennsylvania to the Ohio border and directly connects to the Ohio Turnpike. On the New Jersey side, Interstate 80 connects the Delaware Water Gap Toll Bridge to the George Washington Bridge.

The toll bridge, built by the Commission and opened on December 16, 1953, is a twin, multi-span (17 spans EB and 16 spans WB), steel riveted plate girder bridge approximately 2,465 feet in total length. The dual roadways are each 28 feet wide from curb to curb, carrying two lanes of traffic each, and are separated by an aluminum barrier. A 5 foot wide sidewalk is located on the south side of the eastbound roadway, separated from the travel lanes with a concrete barrier. The substructure units consist of reinforced concrete bin abutments and piers. The piers also have partial granite stone facing. The speed limit posted at both approach roadways is 55 mph.

Major rehabilitation work was completed in 1989. The rehabilitation work included reconstruction of the toll plaza for one-way toll collection in the westbound direction (8 total lanes), deck replacement, construction of a New Jersey approach pedestrian walkway, toll plaza access tunnel, and miscellaneous pavement replacement. Other work performed under this contract included the installation of the aluminum median barrier, lighting and signage.

DELAWARE WATER GAP TOLL BRIDGE FACILITY AND GROUNDS

The one-way toll plaza, located at the Pennsylvania approach has eight (8) toll lanes. All tollbooths are erected on concrete islands and are protected by an overhead canopy.

A ½ mile section of Interstate 80 east of the bridge was resurfaced in 2007 under Contract No. T-492A, a reimbursement agreement with the New Jersey Department of Transportation.

The 2009 inspection included the eastbound and westbound main river bridges and the facility and grounds.

SIGNIFICANT FINDINGS

Based on the findings of the 2009 inspections, the main river bridges are capable of safely supporting all legal loads.

DELAWARE WATER GAP TOLL BRIDGE (EASTBOUND)

(17 span, riveted steel multi-girder)

The structure is in overall satisfactory condition.

The deck is in satisfactory condition. The cast-in-place microsilica concrete (deck slab) roadway and sidewalk deck, installed in 1989, exhibits numerous fine to medium transverse cracks and longitudinal cracks over the stringer locations. These cracks were formed during the initial pouring procedures. Cores taken in 1989 and again in 1996 indicated that cracks to have grown to a maximum width of 1/16" at some locations, and also showed no signs of corrosion to the reinforcement. This inspection revealed minor or no rust to the stay-in-place forms at the underside of the deck and no significant changes to the cracks on the surface of the deck.

As a result of the above noted deck conditions, the Commission as part of Contract C-472A, completed a comprehensive Bridge Deck Condition Survey in 2008. The results of this Survey indicated that widespread transverse cracking exists throughout the decks. These cracks, which are generally very small in width, were mostly formed during initial pouring procedures. Although the cracking is widespread, it does not seem to be causing any significant deterioration in the deck, based on the bridge deck evaluation results for this project. The deck evaluation results indicate that there is very little deterioration. Based on these findings, the appropriate deck restoration strategy recommended was to patch the areas of deterioration and protect the decks from intrusion of moisture through the cracks via a penetrating sealer.

The deck joints were rebuilt during the deck replacement in 1989 and consist of steel plates welded to the original finger joints, combined with steel angle armoring and strip seals. The "Seva" patch material, used as the joint header material, is deteriorated at numerous locations throughout. The material is settled, cracked, and spalled, exposing the steel plates and steel angle armoring below in several areas. Few deck joints in the eastbound roadway are slightly vertically offset between spans resulting in minor plow catch damage. All the deck joints also exhibit moderate debris accumulation in the joint opening.

The approach roadway in Pennsylvania is in satisfactory condition. Fine to medium map cracks were noted at the approaches. Random cracks and small spalls were also noted at the approaches.

The superstructure is in good condition.

The substructure is in satisfactory condition. The substructure exhibits areas of spall repair and epoxy coating that was performed by Maintenance forces. Numerous areas of spalled and hollow concrete were noted throughout the substructure. Some of these areas have been removed by maintenance forces and the exposed reinforcement was epoxy coated. The footing at the west abutment is exposed.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure for the eastbound roadway was found to be in satisfactory condition due to concrete spalls with exposed reinforcement on the pier caps.

DELAWARE WATER GAP TOLL BRIDGE (WESTBOUND)

(16 span, riveted steel multi-girder)

The structure is in overall satisfactory condition.

The deck is in satisfactory condition. The defects noted at the westbound roadway deck are similar to the eastbound roadway deck. The deck joints in the westbound roadway exhibit 1/2” to 3/4” vertical offset resulting in plow catch damage at the east and west abutments and Pier 3. The aluminum median barrier exhibits scrape marks.

The approach roadway is in satisfactory condition. Fine to medium map cracks were noted at the approaches. A few small spalls were noted at the approach slabs.

The superstructure is in satisfactory condition. The north and south fascia girders exhibit isolated areas of minor material loss to the bottom flange throughout all spans. Several rocker bearings exhibit moderate to heavy rust at the bearings and keeper angles. A few bearings are missing shoulder bolts. No lateral movement of the bearings was noted at the time of inspection. The paint at the fascia beams is in fair condition, while the paint at the interior beams is in good condition.

The substructure is in good condition.

An underwater inspection was performed in 2008 under Contract No. C-476A. The substructure for the westbound roadway was found to be in satisfactory to good condition.

The results of the recently completed Northerly Crossing Corridor Congestion Mitigation Study indicate that the I-80 DWG Bridge currently operates at a level of service F during the weekday PM peak period. This report recommends that the DRJTBC proceed with an Open Road Tolling project at the I-80 DWG Bridge to help increase the throughput capacity at the I-80 bridge.

DELAWARE WATER GAP TOLL BRIDGE FACILITY AND GROUNDS

A need has been identified for additional maintenance garage space at this facility. The existing garage space does not allow for indoor storage of all vehicles. The existing maintenance garage also does not have restroom, locker room or lunchroom facilities, which are present at the other Commission maintenance facilities. A training/meeting room for the district is also needed. Currently, meetings take place in the garage area and are disrupted by outside activity.

Maintenance has requested to replace HVAC system because it is not functioning properly. Maintenance has also requested to replace streetlight electrical panels at three locations. The metal cabinets are corroded and are difficult to open and close.

Maintenance has indicated that the salt storage capacity is insufficient for the entire district. A new district salt storage facility is currently planned for the Portland – Columbia Toll Bridge Facility.

CONCLUSIONS

Based on the findings of the 2009 inspections, the main river bridges are capable of safely supporting all legal loads.

DELAWARE WATER GAP TOLL BRIDGE (EASTBOUND)

The structure is in overall satisfactory condition.

- The bearings should be replaced with elastomeric bearings.
- The hollow concrete areas and spalls throughout the substructure should be repaired with concrete.
- The structural steel superstructure should be cleaned and painted.
- The top of deck cracks should be sealed with a methacrylate sealer.
- Reconstruct the deteriorated and settled roadway catch basins along the left and right shoulders of I-80 at the toll plaza.
- Repair concrete spalls at Pier 3 through 8.
- Improve channel protection around the footings at Piers 8, 9, 12 and 14.
- Remove debris at substructure units.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

Contract No. C-472A Delaware Water Gap Toll Bridge Rehabilitation is underway and addresses the above water line items referenced above.

The Commission has undertaken a Substructure & Scour Remediation project in Districts 1, 2 & 3 under Contract No. C-476A. This project is under construction and includes this bridge.

DELAWARE WATER GAP TOLL BRIDGE (WESTBOUND)

The structure is in overall satisfactory condition.

- The existing steel bearings should be replaced with elastomeric bearings.
- The structural steel girders should be painted.
- The top of deck cracks should be sealed with a methacrylate sealer.
- Improve channel protection around Piers 8, 9 and 13.
- Repair the spalled areas and void at the west abutment breastwall and Pier 5.
- Grout repair and pressure inject cracks at Pier 5.
- Remove debris at Piers 3, 9, 12 and 13.
- Repoint masonry joints at Pier 15.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

Contract No. C-472A Delaware Water Gap Toll Bridge Rehabilitation is underway and addresses the above water items referenced above.

The Commission has undertaken a Substructure & Scour Remediation project in Districts 1, 2 & 3 under Contract No. C-476A. This project is under construction and includes this bridge.

DELAWARE WATER GAP TOLL BRIDGE FACILITY AND GROUNDS

- A study for the expansion and modifications of maintenance garage is recommended.
- A study should be performed on the HVAC controls to determine what components need upgrading, or if entire system should be upgraded.
- Consider replacing the severely corroded electrical panels for the streetlights.
- A study was performed to determine the district's deicing requirements. A new district salt storage facility is currently planned for Portland – Columbia Toll Bridge Facility.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Delaware Water Gap Toll Bridge

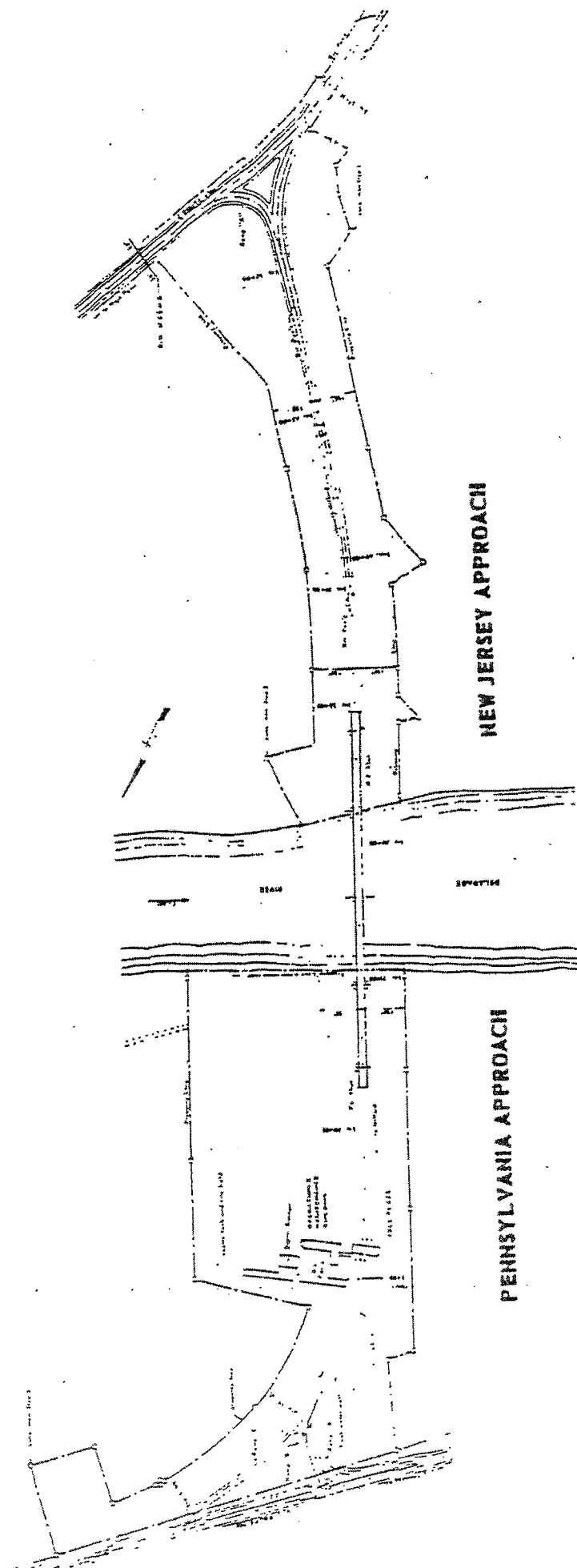
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
440B	Phase 1 - DWG Toll Bridge ORT Implementation	\$7,317,000	\$2,666,000	\$0
440C	DWG Toll Bridge Improvements (starts in 2013)	\$173,099,000	\$0	\$0
472	Delaware Water Gap Toll Bridge Rehabilitation	\$18,801,000	\$9,227,000	\$0
581	DWG / I-80 NJ Roadway Safety Improvements	\$275,000	\$265,000	\$0
591	Oak Street Bridge Replacement	\$5,777,000	\$0	\$726,000
BRIDGES SUB TOTAL		\$205,269,000	\$12,158,000	\$726,000
<u>Facilities and Grounds</u>				
DWGTB	Unplanned Projects	\$1,046,000	\$75,000	\$78,000
474	DWG Maintenance Garage Improvements	\$3,154,000	\$2,409,000	\$745,000
513	DWG HVAC Upgrade	\$2,070,000	\$0	\$43,000
FACILITIES AND GROUNDS SUB TOTAL		\$6,270,000	\$2,484,000	\$866,000
TOTAL COST		\$211,539,000	\$14,642,000	\$1,592,000

MILFORD-MONTAGUE
TOLL BRIDGE FACILITY
(Structure No. 400)

STATE OF NEW JERSEY
COUNTY OF SUSSEX
TOWN OF MONTAGUE

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF PIKE
DINGMAN TOWNSHIP



MILFORD - MONTAGUE TOLL BRIDGE

GENERAL

MILFORD-MONTAGUE TOLL BRIDGE

(4 span, continuous, steel deck truss)

The Milford-Montague Toll Bridge (Structure No. 400) is the northern-most toll bridge across the Delaware River under the Commission's jurisdiction. Located seven miles south of the New Jersey/New York state line, the bridge connects US Route 206 at Montague, New Jersey to US Route 209 at Dingman Township, Pennsylvania.

The toll bridge, built by the Commission and opened to traffic on December 30, 1953, is a four span continuous steel deck truss structure with an approximate total length of 1,150 feet. The curb to curb width of the roadway is 27'-6" and carries one lane of traffic in each direction with a posted speed limit on the New Jersey approach of 40 mph. Cantilevered from the north truss is a 4'-0" wide sidewalk. The substructure units consist of reinforced concrete abutments and piers with granite stone facing on the piers.

In 1982 the original deck was replaced with precast concrete deck panels and stringers were relocated (fifth stringer added) for the addition of the cantilevered sidewalk. Also included in the 1982 rehabilitation project were modifications to the substructures and bridge lighting, and the addition of the aluminum safety barriers. In 1998, the New Jersey approach was milled and repaved by contract.

Contract No. T-430A, a rehabilitation contract for the Milford-Montague Toll Bridge, was completed in 2009. The improvements to the structure are:

- Concrete deck replacement
- Superstructure steel repairs
- Cleaning and painting of the superstructure
- Substructure repairs
- Slope protection and erosion damage repairs
- Approach roadway repaving
- Drainage improvements
- Safety feature improvements (signage, guide rails, etc.)
- New Toll Plaza

MILFORD-MONTAGUE TOLL BRIDGE FACILITIES AND GROUNDS

At the Pennsylvania approach, there are three westbound toll collection lanes that are protected by a canopy and founded on concrete islands.

In 2009, the toll plaza was replaced under Contract No. T-430A.

The 2009 inspection included the main river bridge and the facility and grounds.

SIGNIFICANT FINDINGS

Based on the findings of the 2009 inspections, the main river bridge is capable of safely supporting all legal loads.

MILFORD-MONTAGUE TOLL BRIDGE

(4 span, continuous, steel deck truss)

The structure is in overall good condition.

The deck and approach roadway are in very good condition.

The superstructure and substructure are in good condition.

An underwater inspection was performed in 2008 under Contract No. C-476A. The underwater components of the substructure were noted to be in good condition.

MILFORD-MONTAGUE TOLL BRIDGE FACILITIES AND GROUNDS

The toll plaza, approach roadway, and sign structures were rehabilitated under Contract No. T-430A in 2009.

The HVAC system is showing signs of the age and it is not functioning satisfactorily.

The present salt storage capacity is insufficient for the entire district in the event of a major snowstorm. A new district salt storage facility is currently planned for the Portland – Columbia Toll Bridge Facility

CONCLUSIONS

Based on the findings of the 2009 inspections, the main river bridge is capable of safely supporting all legal loads.

MILFORD-MONTAGUE TOLL BRIDGE

The structure is in overall good condition.

- Improve channel protection at Piers 2 and 3.

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

The Commission has undertaken a Substructure & Scour Remediation project in Districts 1, 2 & 3 under Contract No. C-476A. This project is under construction and includes this bridge.

MILFORD-MONTAGUE TOLL BRIDGE FACILITIES AND GROUNDS

- A study should be performed on the HVAC controls to determine what components need upgrading, or if the entire system should be upgraded.

- A study should be performed to determine the district's overall deicing requirements. The study should include but not limited to determining salt storage capacity, storage location, type of storage and any additional deicing capabilities. A new district salt storage facility is currently planned for the Portland – Columbia Toll Bridge Facility

For a list of maintenance repair items, see the *2009 Annual Maintenance Report*.

2010-2011 CAPITAL PLAN ESTIMATED EXPENDITURES

Milford-Montague Toll Bridge

ESTIMATED COST OF RECOMMENDED IMPROVEMENTS FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	Program Cost	General Reserve Fund	
			2011	2012
<u>Bridges, Roadways, Sidewalks, and Approaches</u>				
The bridge was rehabilitated in 2009				
BRIDGES SUB TOTAL		\$0	\$0	\$0
<u>Facilities and Grounds</u>				
MMTB	Unplanned Projects	\$719,000	\$50,000	\$52,000
514	M-M HVAC Upgrade (incl. Emerg. Gen. Relocation)	\$1,491,000	\$0	\$31,000
FACILITIES AND GROUNDS SUB TOTAL		\$2,210,000	\$50,000	\$83,000
TOTAL COST		\$2,210,000	\$50,000	\$83,000

2011-2012 CAPITAL PLAN VEHICLES & EQUIPMENT

2011 VEHICLES & EQUIPMENT SUMMARY BY DISTRICT

DISTRICT	Est. Purchase \$	Est. Sale \$	Est. Net \$
Trenton-Morrisville	\$ 50,000	\$ 10,000	\$ 40,000
New Hope-Lambertville	\$ 190,000	\$ 21,500	\$ 168,500
Southern Div. Toll-Supported	\$ 5,000	\$ -	\$ 5,000
District 1 Total	\$ 245,000	\$ 31,500	\$ 213,500
Interstate 78	\$ 176,000	\$ 7,950	\$ 168,050
Easton-Phillipsburg	\$ 56,000	\$ 5,000	\$ 51,000
Northern Div. Toll-Supported	\$ 95,000	\$ 13,000	\$ 82,000
District 2 Total	\$ 327,000	\$ 25,950	\$ 301,050
Portland-Columbia	\$ 61,000	\$ 2,200	\$ 58,800
Delaware Water Gap	\$ 85,000	\$ 4,000	\$ 81,000
Milford-Montague	\$ 50,000	\$ 2,000	\$ 48,000
District 3 Total	\$ 196,000	\$ 8,200	\$ 187,800

TOTAL \$ **768,000** \$ **65,650** \$ **702,350**

2011 VEHICLES & EQUIPMENT \$ 768,000

2011-2012 CAPITAL PLAN VEHICLES & EQUIPMENT

TRENTON - MORRISVILLE

CAPITAL EQUIPMENT REQUEST

(>\$5,000 AND 3 YEAR OR MORE LIFE)

[illegible]

2011-2012 CAPITAL PLAN VEHICLES & EQUIPMENT

NEW HOPE - LAMBERTVILLE

CAPITAL EQUIPMENT REQUEST

(>\$5,000 AND 3 YEAR OR MORE LIFE)

Recommended New Items	Dept	Identifier(s)	Items To Be Replaced, Sold, or Transferred*	Est. Purchase	Est. Sale	Est. Net
Small Tools/Misc. Equipment			New Items	\$5,000		\$5,000
2011 Ford F-550 4WD Dump Truck			2000 F-450 DUMP TRUCK	\$75,000	\$7,500	\$67,500
		1FDXF47F7YEA73858	Serial No.			
		SG24458	License Plate No.			
		52,402	Mileage / Hrs			
			Hours			
		NH 15035	Commission ID No.			
2011 Ford F-350 4WD Pick-Up			2002 F-250 PICKUP	\$40,000	\$5,000	\$35,000
		1FTNF21F12EC27206	Serial No.			
		SG21018	License Plate No.			
		80,038	Mileage / Hrs			
			Hours			
		NH 15040	Commission ID No.			
2011 SUV			2002 Chevy Blazer	\$35,000	\$4,000	\$31,000
		1GNDT13W12K23351	Serial No.			
		SG21184	License Plate No.			
		74,000	Mileage / Hrs			
			Hours			
		NH 11008	Commission ID No.			
2011 SUV / Sedan			2005 Mercury Grand Marquis	\$35,000	\$5,000	\$30,000
		2MEFM75W05X635442	Serial No.			
		MG 1877F	License Plate No.			
		68,988	Mileage / Hrs			
			Hours			
		NH 10003	Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
Estimated Total				\$190,000	\$21,500	\$168,500

SOUTHERN DISTRICT TOLL SUPPORTED BRIDGES

(>\$5,000 AND 3 YEAR OR MORE LIFE)

G:\PR10\0013\Bridge\Annual Report\2011_CIP_v16.xlsx

2011-2012 CAPITAL PLAN VEHICLES & EQUIPMENT

INTERSTATE 78

CAPITAL EQUIPMENT REQUEST

(>\$5,000 AND 3 YEAR OR MORE LIFE)

[illegible]

2011-2012 CAPITAL PLAN VEHICLES & EQUIPMENT

EASTON - PHILLIPSBURG

CAPITAL EQUIPMENT REQUEST

(>\$5,000 AND 3 YEAR OR MORE LIFE)

[illegible]

2011-2012 CAPITAL PLAN VEHICLES & EQUIPMENT

PORTLAND - COLUMBIA

CAPITAL EQUIPMENT REQUEST

(>\$5,000 AND 3 YEAR OR MORE LIFE)

[illegible]

2011-2012 CAPITAL PLAN VEHICLES & EQUIPMENT

DELAWARE WATER GAP

CAPITAL EQUIPMENT REQUEST

(>\$5,000 AND 3 YEAR OR MORE LIFE)

[illegible]

2011-2012 CAPITAL PLAN VEHICLES & EQUIPMENT

MILFORD - MONTAGUE

CAPITAL EQUIPMENT REQUEST

(>\$5,000 AND 3 YEAR OR MORE LIFE)

[illegible]

2011-2012 CAPITAL PLAN



SUMMARY OF EXPENDITURES

CAPITAL PROGRAM ESTIMATED EXPENDITURES

	<i>2011</i>	<i>2012</i>
Toll Bridge Facilities	\$25,032,000	\$41,492,000
Toll-Supported Bridge Facilities	\$19,598,000	\$27,933,000
Commission Initiatives & System-Wide Projects	\$38,981,000	\$21,830,000

<i>Subtotal</i>	\$83,611,000	\$91,255,000
-----------------	---------------------	---------------------

VEHICLE / EQUIPMENT GROSS PURCHASES

	<i>2011</i>	<i>2012</i>
Vehicular and Maintenance Equipment	\$768,000	\$1,500,000

<i>Subtotal</i>	\$768,000	\$1,500,000
-----------------	------------------	--------------------

	<i>2011</i>	<i>2012</i>
<i>TOTAL 2011 - 2012 CAPITAL PLAN</i>	<u>\$84,379,000</u>	<u>\$92,755,000</u>

2011-2012 CAPITAL PLAN



TOLL BRIDGES

	<u>2011</u>	<u>2012</u>
<u>Trenton-Morrisville</u>	\$6,148,000	\$1,981,000
<u>New Hope-Lambertville</u>	\$778,000	\$5,892,000
<u>Interstate 78</u>	\$1,996,000	\$22,461,000
<u>Easton-Phillipsburg</u>	\$1,060,000	\$7,395,000
<u>Portland-Columbia</u>	\$358,000	\$2,814,000
<u>Delaware Water Gap</u>	\$14,642,000	\$866,000
<u>Milford-Montague</u>	\$50,000	\$83,000

<i>Subtotal</i>	<i>\$25,032,000</i>	<i>\$41,492,000</i>
------------------------	----------------------------	----------------------------

TOLL-SUPPORTED BRIDGES

	<u>2011</u>	<u>2012</u>
<u>Lower Trenton</u>	\$25,000	\$26,000
<u>Calhoun Street</u>	\$15,000	\$16,000
<u>Scudder Falls</u>	\$9,261,000	\$23,826,000
<u>Washington Crossing</u>	\$403,000	\$16,000
<u>New Hope-Lambertville</u>	\$25,000	\$26,000
<u>Centre Bridge-Stockton</u>	\$25,000	\$26,000
<u>Lumberville-Raven Rock</u>	\$377,000	\$2,659,000
<u>Uhlerstown-Frenchtown</u>	\$25,000	\$26,000
<u>Upper Black Eddy-Milford</u>	\$9,027,000	\$16,000
<u>Riegelsville</u>	\$171,000	\$16,000
<u>Northampton Street</u>	\$25,000	\$26,000
<u>Riverton-Belvidere</u>	\$209,000	\$1,243,000
<u>Portland-Columbia</u>	\$10,000	\$11,000

<i>Subtotal</i>	<i>\$19,598,000</i>	<i>\$27,933,000</i>
------------------------	----------------------------	----------------------------

COMMISSION INITIATIVES & SYSTEM-WIDE PROJECTS

<u>2011</u>	<u>2012</u>
<i>\$38,981,000</i>	<i>\$21,830,000</i>

<i>TOTAL CAPITAL PLAN EST. EXPENDITURES</i>	<i>\$83,611,000</i>	<i>\$91,255,000</i>
--	----------------------------	----------------------------

2011-2012 CAPITAL PLAN



BRIDGES, ROADWAYS, SIDEWALKS, & APPROACHES SUMMARY

<u>DISTRICT I</u>	<u>2011</u>	<u>2012</u>
<u>Trenton-Morrisville Toll Bridge</u>	\$4,920,000	\$240,000
<u>Lower Trenton Toll-Supported Bridge</u>	\$0	\$0
<u>Calhoun Street Toll-Supported Bridge</u>	\$0	\$0
<u>Scudder Falls Toll-Supported Bridge</u>	\$9,186,000	\$23,748,000
<u>Washington Crossing Toll-Supported Bridge</u>	\$388,000	\$0
<u>New Hope-Lambertville Toll-Supported Bridge</u>	\$0	\$0
<u>New Hope Lambertville Toll Bridge</u>	\$560,000	\$4,840,000
<u>Centre Bridge-Stockton Toll-Supported Bridge</u>	\$0	\$0
<u>Lumberville-Raven Rock Toll-Supported Bridge</u>	\$367,000	\$2,648,000
<i>District I Total</i>	<i>\$15,421,000</i>	<i>\$31,476,000</i>
<u>DISTRICT II</u>	<u>2011</u>	<u>2012</u>
<u>Uhlerstown-Frenchtown Toll-Supported Bridge</u>	\$0	\$0
<u>Upper Black Eddy-Milford Toll-Supported Bridge</u>	\$9,012,000	\$0
<u>Riegelsville Toll-Supported Bridge</u>	\$156,000	\$0
<u>Interstate 78 Toll Bridge</u>	\$1,808,000	\$21,829,000
<u>Northampton Street Toll-Supported Bridge</u>	\$0	\$0
<u>Easton-Phillipsburg Toll Bridge</u>	\$944,000	\$6,804,000
<u>Riverton-Belvidere Toll-Supported Bridge</u>	\$184,000	\$1,217,000
<i>District II Total</i>	<i>\$12,104,000</i>	<i>\$29,850,000</i>

2011-2012 CAPITAL PLAN



BRIDGES, ROADWAYS, SIDEWALKS, & APPROACHES SUMMARY

<u>DISTRICT III</u>	<u>2011</u>	<u>2012</u>
<u>Portland-Columbia Toll Bridge</u>	\$308,000	\$2,624,000
<u>Portland-Columbia Toll-Supported</u>	\$0	\$0
<u>Delaware Water Gap Toll Bridge</u>	\$12,158,000	\$0
<u>Milford-Montague Toll Bridge</u>	\$0	\$0
<i>District III Total</i>	<i>\$12,466,000</i>	<i>\$2,624,000</i>

	<u>2011</u>	<u>2012</u>
<i>BRIDGES, ROADWAYS, SIDEWALKS & APPROACHES TOTAL</i>	<i>\$39,991,000</i>	<i>\$63,950,000</i>

FACILITIES AND GROUNDS SUMMARY

<u>DISTRICT I</u>	<u>2011</u>	<u>2012</u>
<u>Trenton-Morrisville Toll Bridge</u>	\$1,228,000	\$1,741,000
<u>Lower Trenton Toll-Supported Bridge</u>	\$25,000	\$26,000
<u>Calhoun Street Toll-Supported Bridge</u>	\$15,000	\$16,000
<u>Scudder Falls Toll-Supported Bridge</u>	\$75,000	\$78,000
<u>Washington Crossing Toll-Supported Bridge</u>	\$15,000	\$16,000
<u>New Hope-Lambertville Toll-Supported Bridge</u>	\$25,000	\$26,000
<u>New Hope Lambertville Toll Bridge</u>	\$218,000	\$1,052,000
<u>Centre Bridge-Stockton Toll-Supported Bridge</u>	\$25,000	\$26,000
<u>Lumberville-Raven Rock Toll-Supported Bridge</u>	\$10,000	\$11,000
<i>District I Total</i>	<i>\$1,636,000</i>	<i>\$2,992,000</i>

2011-2012 CAPITAL PLAN



FACILITIES AND GROUNDS SUMMARY

<u>DISTRICT II</u>	<u>2011</u>	<u>2012</u>
<u>Uhlerstown-Frenchtown Toll-Supported Bridge</u>	\$25,000	\$26,000
<u>Upper Black Eddy-Milford Toll-Supported Bridge</u>	\$15,000	\$16,000
<u>Riegelsville Toll-Supported Bridge</u>	\$15,000	\$16,000
<u>Interstate 78 Toll Bridge</u>	\$188,000	\$632,000
<u>Northampton Street Toll-Supported Bridge</u>	\$25,000	\$26,000
<u>Easton-Phillipsburg Toll Bridge</u>	\$116,000	\$591,000
<u>Riverton-Belvidere Toll-Supported Bridge</u>	\$25,000	\$26,000
<i>District II Total</i>	<i>\$409,000</i>	<i>\$1,333,000</i>

FACILITIES AND GROUNDS SUMMARY

<u>DISTRICT III</u>	<u>2011</u>	<u>2012</u>
<u>Portland-Columbia Toll Bridge</u>	\$50,000	\$190,000
<u>Portland-Columbia Toll-Supported Bridge</u>	\$10,000	\$11,000
<u>Delaware Water Gap Toll Bridge</u>	\$2,484,000	\$866,000
<u>Milford-Montague Toll Bridge</u>	\$50,000	\$83,000
<i>District III Total</i>	<i>\$2,594,000</i>	<i>\$1,150,000</i>

	<u>2011</u>	<u>2012</u>
<i>FACILITIES AND GROUNDS TOTAL</i>	<i>\$4,639,000</i>	<i>\$5,475,000</i>

2011-2012 CAPITAL PLAN



EQUIPMENT PURCHASES

2011 VEHICLE & EQUIPMENT PURCHASES

<u>Toll Facility</u>	<u>Estimated Purchase Price of New Units</u>	<u>Estimated Sell Price of Used Units</u>	<u>Estimated Net Cost</u>
Trenton-Morrisville	\$50,000	\$10,000	\$40,000
New Hope-Lambertville	\$190,000	\$21,500	\$168,500
Interstate Route 78	\$176,000	\$7,950	\$168,050
Easton-Phillipsburg	\$56,000	\$5,000	\$51,000
Portland-Columbia	\$61,000	\$2,200	\$58,800
Delaware Water Gap	\$85,000	\$4,000	\$81,000
Milford-Montague	\$50,000	\$2,000	\$48,000
Southern - Toll-Supported Bridges	\$5,000	\$0	\$5,000
Northern - Toll-Supported Bridges	\$95,000	\$13,000	\$82,000
	\$768,000	\$65,650	\$702,350

TOTAL 2011 GROSS VEHICLE & EQUIPMENT PURCHASES

\$768,000

ESTIMATED 2012 GROSS VEHICLE & EQUIPMENT PURCHASES*

\$1,500,000

**The 2010 V & E purchases above are based upon the "actual" estimates listed in the "Vehicle & Equipment" section of the 2010 General Engineering Annual Inspection Report. The 2012 V & E purchases of \$1.5M above are estimates of anticipated replacements/cost of new items for 2011 and are subject to change pending the 2011 General Engineering Inspection.*

SCHEDULE OF INSURANCE

I. CURRENT SCHEDULE OF INSURANCE (2010)

The Delaware River Joint Toll Bridge Commission currently has in effect the following principle types and amounts of insurance coverage:

A. General Liability

\$	2,000,000	General Aggregate Limit
\$	2,000,000	Products/Completed Operations Aggregate Limit
\$	1,000,000	Personal/Advertising Injury Limit
\$	1,000,000	Each Occurrence Limit
\$	300,000	Damage to Premises
\$	15,000	Medical Expense Limit, Any One Person

The above General Liability limits apply for all bridges (Toll and Toll-Supported Bridges).

The above General Liability limits apply per each location.

Coverage includes Independent Contractors, Medical Payments, Contractual Liability, Fire Damage, Legal Liability, Employees as Additional Insured, Host Liquor Liability, Incidental Medical Malpractice, Broad Form Property Damage Liability, Non-owned Watercraft Liability (under 26ft), Limited Worldwide Products Liability and Extended Bodily Injury Liability.

B. Commercial Automobile Liability

\$	1,000,000	Bodily Injury/Property Damage Combined Single Limit, Each Accident
\$	35,000	Uninsured/Underinsured Motorist Coverage (PA & NJ)
\$	50,000	Garagekeepers Liability
(Lesser of ACV or		Hired Car Physical Damage Coverage Cost of Repair)

Deductible on Comprehensive and Collision

\$	500	Cost New Less than \$29,999
\$	1,000	Cost New \$30,000-\$49,999
\$	2,000	Cost New Greater Than 50,000

C. Umbrella Liability

\$	25,000,000	Each Occurrence, Annual Aggregate
----	------------	-----------------------------------

There is an excess umbrella policy with a \$25,000,000 limit. The total coverage of \$50,000,000 is inclusive of all Bridges, Vehicles, and Operations.

SCHEDULE OF INSURANCE

D. Building & Contents Insurance

\$	1,000,000	Extra Expense
\$	11,000,000	Loss Limit Location #1
\$	6,000,000	Loss Limit Locations 2, 4, 6
\$	7,000,000	Loss Limit Locations 3
\$	3,000,000	Loss Limit Locations 5, 7
\$	1,500,000	Loss Limit Locations 8
\$	1,000,000	Unnamed Locations
\$	5,000	Deductible

(Additional sub-limits and deductibles apply)

Coverage extensions include: Debris Removal, Pollutant Cleanup and Removal, Newly Acquired Buildings and Personal Property, Personal Property of Others/Employees, Valuable papers-Cost of Research, Property Off Premises within 1,000 feet, Outdoor Property - Trees, Shrubs and Plants, Property in Transit (Special Form Only) and Fences and Signs.

E. Equipment Floater Limits (Included in Building Policy)

\$	2,360,753	Specific Limits Apply Per Schedule
\$	233,204	Miscellaneous Unscheduled Tools
\$	1,000	Deductible (2% of value, \$1,000 minimum)

F. Bridge Property Coverage

Loss Limits:

\$	50,000,000	Loss Limit – Primary
\$	50,000,000	Loss Limit – Excess of \$50,000,000 per Occurrence
\$	375,000,000	Loss Limit – Excess of \$100,000,000 per Occurrence
\$	100,000,000	Flood – Excess of \$150,000,000 per Occurrence/Aggregate

Values:

Toll Bridge Summary

Trenton-Morrisville Facility

\$	44,767,828	Bridge
\$	20,936,487	Viaducts
\$	9,287,856	Use/Occupancy

New Hope-Lambertville Facility

\$	44,127,928	Bridge
\$	9,658,626	Viaducts
\$	2,405,065	Use/Occupancy

SCHEDULE OF INSURANCE

Interstate Route 78 Facility

\$	51,756,100	Bridge
\$	34,466,155	Viaducts
\$	39,440,757	Use/Occupancy

Easton-Phillipsburg Facility

\$	10,403,360	Bridge
\$	10,931,547	Viaducts
\$	9,985,086	Use/Occupancy

Portland-Columbia Facility

\$	18,839,128	Bridge
\$	3,903,018	Viaducts
\$	1,814,049	Use/Occupancy

Delaware Water Gap Facility

\$	69,856,301	Bridge
\$	26,116,394	Use/Occupancy

Milford-Montague Facility

\$	15,954,108	Bridge
\$	1,292,881	Use/Occupancy

All Seven (7) Toll Bridges

\$	255,704,753	Bridges
\$	79,895,833	Viaducts
\$	90,342,087	Use and Occupancy
\$	425,942,673	<i>TOTAL (Toll Bridges)</i>

Toll-Supported Bridge Summary

<u>Lower Trenton</u>	\$	18,389,538
<u>Calhoun Street</u>	\$	10,922,579
<u>Scudder Falls</u>	\$	51,282,729
<u>Washington Crossing</u>	\$	5,697,834
<u>New Hope-Lambertville</u>	\$	9,127,864
<u>Centre Bridge-Stockton</u>	\$	8,024,688
<u>Lumberville-Raven Rock</u>	\$	2,546,256
<u>Uhlerstown-Frenchtown</u>	\$	7,234,745
<u>Upper Black Eddy-Milford</u>	\$	6,476,667
<u>Riegelsville</u>	\$	4,092,513
<u>Northampton Street</u>	\$	7,622,317
<u>Riverton-Belvidere</u>	\$	4,960,099

SCHEDULE OF INSURANCE

<u>Portland-Columbia</u>	\$ 3,483,008
--------------------------	--------------

All Thirteen (13) Toll-Supported Bridges \$ 139,860,837

GRAND TOTAL: TWENTY (20) BRIDGES: \$565,803,510

Use and Occupancy Deductible – 5 days, All other 1% of Loss (\$50,000 Minimum)

Flood Coverage - \$250,000,000 Annual Aggregate - Multiple Policies

Earthquake Coverage – \$150,000,000 Annual Aggregate - Multiple Policies

Boiler & Machinery Coverage Insured under separate policy

G. Public Officials / Employment Practices Liability

\$	10,000,000	Each Loss
----	------------	-----------

\$	10,000,000	Aggregate
----	------------	-----------

Retention

\$ 50,000 Corporate Reimbursement

\$ 50,000 Entity Coverage

\$ 35,000 Employment Practices Liability Coverage

Excess policy provides additional \$10,000,000 Per Claim/Annual Aggregate

H. Workers Compensation and Employers Liability Coverage

Workers Compensation – Statutory Limits

Employers Liability – Bodily Injury by Accident

\$	500,000	Each Accident
----	---------	---------------

\$	500,000	Policy Limit by Disease	Bodily Injury
----	---------	-------------------------	---------------

\$ 500,000	Each Employee by Disease	Bodily Injury
------------	--------------------------	---------------

I. Commercial Crime Coverage

\$	10,000	Forgery or Alteration, \$1,000 deductible
----	--------	---

\$ 250,000	Money In-Out for Theft, Disappearance and Destruction, \$10,000 deductible
------------	--

\$ 5,000,000	Employee Dishonesty, \$50,000 Deductible
--------------	--

\$	5,000,000	Computer Fraud Including Wire Transfer Fund
----	-----------	---

Coverage includes all locations.

J. Professional Architects and Engineers

\$ 1,000,000 per Occurrence/Aggregate

SCHEDULE OF INSURANCE

II. INSURANCE REQUIREMENTS FOR 2010

In accordance with Section 708 of the Bridge System Revenue Bonds, Series 2007, the following types of insurance are required to be maintained by the Commission to the extent as reasonably obtainable:

MULTI-RISK INSURANCE

The Commission currently maintains insurance for full replacement of all twenty (20) Toll and Toll-Supported Bridges and their approach structures (viaducts). In 1999 the Commission supplemented the full insurance coverage for the thirteen (13) Toll-Supported Bridges. The full replacement costs are reviewed annually and updated accordingly to follow current inflation and construction costs.

TranSystems has re-assessed each of the twenty (20) Toll and Toll-Supported Bridges and their associated approach structures (viaducts) with respect to the structures replacement costs. Most of the bridges, when and if replaced, will be replacement in kind. A simple cost per square foot (the overall bridge length multiplied by its overall width) was used in the development of the replacement costs for all of the Toll and Toll-Supported Bridges and their approach structures (viaducts). Square foot unit costs may vary between bridges due to specific characteristics such as the need for deep foundations, feature crossed and aesthetics. The Engineering News Record (ENR) Construction Cost Index (CCI) is utilized to update the replacement costs on a yearly basis due to inflation.

The 2010 Estimated Replacement Costs for the twenty Toll and Toll-Supported Bridges and their approach structures are listed below:

<u>TOLL FACILITY</u>		<u>BRIDGE</u>		<u>APPROACH STRUCTURES</u>
Trenton-Morrisville	\$	44,800,000	\$	21,000,000
New Hope-Lambertville	\$	44,200,000	\$	9,700,000
Interstate Route 78	\$	51,800,000	\$	34,500,000
Easton-Phillipsburg	\$	10,500,000	\$	11,000,000
Portland-Columbia	\$	18,900,000	\$	4,000,000
Delaware Water Gap	\$	69,900,000	\$	0
Milford-Montague	\$	16,000,000	\$	0
<i>SUBTOTALS</i>	\$	<i>256,100,000</i>	\$	<i>80,200,000</i>

<u>TOLL-SUPPORTED FACILITY</u>		<u>BRIDGE</u>		<u>APPROACH STRUCTURES</u>
Lower Trenton	\$	18,400,000	\$	0
Calhoun Street	\$	11,000,000	\$	0
Scudder Falls	\$	45,600,000	\$	5,800,000
Washington Crossing	\$	5,700,000	\$	0
New Hope-Lambertville	\$	9,200,000	\$	0
Centre Bridge-Stockton	\$	7,400,000	\$	700,000
Lumberville-Raven Rock *	\$	2,600,000	\$	0
Uhlerstown-Frenchtown	\$	7,300,000	\$	0
Upper Black Eddy-Milford	\$	6,500,000	\$	0
Riegelsville	\$	4,100,000	\$	0
Northampton Street	\$	7,700,000	\$	0

SCHEDULE OF INSURANCE

Riverton-Belvidere	\$	5,000,000	\$	0
Portland-Columbia *	\$	3,500,000	\$	0
<i>SUBTOTALS</i>	\$	<i>134,000,000</i>	\$	<i>6,500,000</i>

* Pedestrian Bridge

Total (All Bridges) Replacement Cost for 2010 = \$ 476,800,000

USE AND OCCUPANCY INSURANCE

The Commission currently maintains Use and Occupancy Insurance for all of its seven (7) Toll Facilities. The Commission has provided the anticipated 2011 revenues presented below.

<u>TOLL FACILITY</u>	<u>2011 ANTICIPATED REVENUE</u>
Trenton-Morrisville	\$ 9,287,856
New Hope-Lambertville	\$ 2,405,065
Interstate Route 78	\$ 39,440,757
Easton-Phillipsburg	\$ 9,985,086
Portland-Columbia	\$ 1,814,049
Delaware Water Gap	\$ 26,116,394
Milford-Montague	\$ 1,292,881
(Total Toll Revenue)	\$ 90,342,087
Interest on Investments	\$ 996,000
EZ Pass Account Service Fee	\$ 756,000
Other Income	\$ 401,000
(TOTAL PROJECTED REVENUE - 2011)	\$ 92,495,087

WAR-RISK INSURANCE

The Commission does not maintain this type of insurance for any of its bridges, as it is not reasonably obtainable due to its excessive cost. However the Commission does maintain coverage for terrorism.

PUBLIC LIABILITY – PROPERTY DAMAGE – BODILY INJURY

Public Liability and Property Damage are maintained by the Commission under its General Liability and Auto Liability insurance coverage, which provides a maximum coverage of \$1,000,000. In addition the Commission carries \$50,000,000 maximum coverage in Excess Liability Insurance on all Bridges, Vehicles and Operations and \$500,000 in Business Travel Accident Insurance.

SCHEDULE OF INSURANCE

BLANKET REAL AND PERSONAL PROPERTY INSURANCE- ADMINISTRATIVE & MAINTENANCE BUILDINGS, CONTENTS, TOLL BOOTHS, ETC.

The Commission currently maintains Building and Contents Insurance in the amount of \$27,189,000. Estimated replacement costs for all Toll Facility Administration Buildings, Maintenance Buildings and Garages and Toll Plazas were calculated based upon the overall square-foot area of each facility. The Engineering News Record (ENR) Construction Cost Index (CCI) is utilized to update the replacement costs on a yearly basis due to inflation. The estimated replacement costs for 2010 are as follows:

<u>LOCATION</u>	<u>2010 ESTIMATED REPLACEMENT VALUE</u>
Trenton-Morrisville	\$ 10,383,000
New Hope-Lambertville	\$ 6,095,000
Interstate 78	\$ 6,759,000
Easton-Phillipsburg	\$ 5,518,000
Portland-Columbia	\$ 2,796,000
Delaware Water Gap	\$ 5,091,000
Milford-Montague	\$ 3,035,000
Belvidere (Storage Bldg.)	\$ 260,000
New Hope Toll Supported (Garage)	\$ 182,000
15 Toll Supported Bridge Officer Shelters	\$ 219,000
Lumberville-Raven Rock (Bridge Tender house)	\$ 270,000
TOTAL	\$ 40,608,000

OTHER INSURANCE

Following good business practice and conforming to the laws of the State of New Jersey and the Commonwealth of Pennsylvania, the Commission carries additional insurance to that which is required by the Bridge System Revenue Bond Resolution. Among this additional coverage is a \$10 million Public Officials Liability insurance.

SCHEDULE OF INSURANCE

III. CONCLUSIONS AND RECOMMENDATIONS FOR 2011

In general the Commission's overall insurance coverage is adequately provided; however, the amounts of the following coverage's should be adjusted:

- The Use and Occupancy Insurance should be adjusted to reflect the estimated 2011 anticipated revenues in conformance with the Bridge System Revenue Bond Resolutions.
- The Blanket Building and Contents Insurance should be adjusted to reflect the 2011 estimated property replacement values published above.

PAINT CONDITION RATINGS

- EXCELLENT** - No problems noted.
- GOOD** - Some minor problems, but paint is sound and functioning as intended to protect the metal surfaces.
- SATISFACTORY** - Surface or freckled rust has formed or is forming. The paint system may be chalking, peeling or showing signs of paint distress, but there is no exposure of metal.
- FAIR** - Surface or freckled rust is prevalent. There may be exposed metal and/or beginning signs of active corrosion, but there is little to no section loss of steel members.
- POOR** - The overall paint system has failed which has consequently caused corrosion and significant section loss to steel members. Exposed metal and/or corrosion are typical throughout the bridge. A new paint system is required.

NOTE: Paint system ratings for a bridge will be an overall condition. Although localized areas may exhibit a better or worse condition, the rating encompasses the majority of the bridge paint system for the entire bridge.

BRIDGE CONDITION RATINGS

<u>EXCELLENT</u> -	New bridge.
<u>VERY GOOD</u> -	No problems noted.
<u>GOOD</u> -	Some minor problems.
<u>SATISFACTORY</u> -	Some minor deterioration of structural elements.
<u>FAIR</u> -	Minor section loss, deterioration, spalling and/or scour of primary structural elements.
<u>POOR</u> -	Advanced section loss, deterioration, spalling and/or scour of primary structural elements.
<u>SERIOUS</u> -	Seriously deteriorated primary structural elements.
<u>CRITICAL</u> -	Facility should be closed until repairs are performed.
<u>IMMINENT FAILURE</u> -	Facility is closed. Study of repairs is feasible.
<u>FAILED</u> -	Facility is closed and beyond repair.

NOTE: These condition ratings are used to describe the existing, in-place bridge as compared to its as-built condition or its posted weight restriction. These ratings provide an overall characterization of the general condition of the entire bridge. These ratings do not describe a localized or nominally occurring instance of deterioration or disrepair or reflect structural or geometric adequacy.

COST ESTIMATING

The costs associated with the repairs and rehabilitation for various elements at the bridge facilities are estimated based upon the following criteria as applicable or available:

- 1) **BID PRICES**: Quantities are developed during routine inspections for the appropriate repair (square foot, cubic yard, etc.). A unit cost is developed using standard bid items most resembling the repair. Inflation, if required, is used to increase unit costs for repair next year.
- 2) **COMMISSION PERSONNEL/HISTORY**: Maintenance staff are interviewed about the materials and length of time required for certain repairs. Maintenance staff are also asked about previous work relating to the proposed work and the costs relating to them. Depending on the year and extent of the previous work, the proposed costs are adjusted accordingly.
- 3) **EXPERIENCE**: Some of the proposed repairs/rehabilitation cannot be accurately quantified and no previous related work is available. Costs are then developed based upon experience of similar tasks. A length of time to complete the job is assumed and costs are approximated.

NOTE: Cost Estimates for major rehabilitation work include a 20% increase in cost to account for engineering services to prepare the contract documents and supervise construction.

APPENDIX A:
BRIDGE LISTING

Bridge Name	Structure Type	No. Of Spans	Structure Length (FT - IN)
Trenton-Morrisville Toll Bridge	Steel Multi-Girder	12	1324 - 6
Washington Street Overpass (Pa)	Steel Multi-Girder	1	52 - 9 c-c brg.
South Pennsylvania Avenue Overpass (Pa)	Steel Multi-Girder	1	63 - 7 c-c brg.
Ramp "IY" Overpass (NJ) {Bridge St.}	Steel Multi-Girder	3	132 - 9 c-c brg.
Union Street Overpass (NJ)	Steel Multi-Girder	1	74 - 6 c-c brg.
Ramp "C" over Route 29 (NJ)	Steel Multi-Girder	3	183 - 3
Ramp "N" Over Union Street (NJ)	P/S Concrete Girder	3	168 - 0 c-c brg.
Center Street Underpass (NJ)	Riveted Steel Plate Girder	1	91 - 3 c-c brg.
Broad Street Underpass (NJ)	Steel Multi-Girder	1	76 - 11 c-c brg.
Ramp 'N' Overpass (NJ)	Steel Multi-Girder	1	77 - 1 c-c brg.
Route 29 Overpass @ TMTB (NJ)	P/S Concrete Spread Box Beams	3	118 - 0
Ramp 'Y' Overpass (Long Ramp) (NJ)	Steel Multi-Girder	4	282 - 0 c-c brg.
Lower Trenton Toll-Supported Bridge	Subdivided Warren Truss	5	1021 - 7
Calhoun Street Toll-Supported Bridge	Iron Phoenix Truss	7	1273 - 3
Scudder Falls Toll-Supported Bridge	Riveted Steel 2 Girder/Floorbeam/Stringer	10	1740
Taylorville Road Overpass (Pa)	Steel Multi-Stringer	3	134 - 0 c-c brg.
Pennsylvania Canal Overpass (Pa)	Steel Multi-Stringer	1	61 - 4
Washington Crossing Toll-Supported Bridge	Double Warren Truss	6	876 - 7
New Hope-Lambertville Toll-Supported Bridge	Pratt Truss	6	1045 - 6.5
New Hope Lambertville Toll Bridge	Steel 2 Girder/Floorbeam/Stringer	10	1682
Route 32 Overpass (Pa)	Concrete Rigid Frame	1	83 - 7
Route 29 Overpass @ NHLTB (NJ)	Steel Multi-Stringer	3	185 - 0 c-c brg.
Centre Bridge-Stockton Toll-Supported Bridge	Riveted Steel Warren Truss	6	824 - 10
Pennsylvania Canal Bridge	P/S Concrete Adjacent Box Beams	1	63 - 0
Lumberville-Raven Rock Pedestrian Bridge	Suspension	4	688 - 3
Uhlertown-Frenchtown Toll-Supported Bridge	Riveted Steel Warren Truss	6	950 - 10
Upper Black Eddy-Milford Toll-Supported Bridge	Warren Truss	3	699 - 9.25
Riegelsville Toll-Supported Bridge	Suspension	3	576 - 9.875
Interstate 78 Toll Bridge WB	Steel Multi-Girder	7	1222
Interstate 78 Toll Bridge EB	Steel Multi-Girder	7	1222
Morgan Hill Road Bridge Overpass (Pa)	P/S Concrete Spread Box Beams	2	210 - 0 c-c brg.
Cedarville Road Overpass (Pa)	P/S Concrete I-Beams	4	Unknown
I-78 over Route 611 (Pa) WB	P/S Concrete Spread Box Beams	3	197 - 6 c-c brg.
I-78 over Route 611 (Pa) EB	P/S Concrete Spread Box Beams	3	199 - 9 c-c brg.
Carpentersville Road Overpass (NJ)	Steel Multi-Stringer	2	203 - 0 c-c brg.
Edge Road Overpass (NJ)	Steel Multi-Stringer	2	272 - 0 c-c brg.
I-78 WB over Route 519 (NJ)	Steel Multi-Stringer	2	237 - 10 c-c brg.
I-78 EB over Route 519 (NJ)	Steel Multi-Stringer	2	236 - 5 c-c brg.
I-78 WB over Ramp C (NJ)	Steel Multi-Stringer	1	112 - 6 c-c brg.
I-78 EB over Ramp C (NJ)	Steel Multi-Stringer	1	116 - 11 c-c brg.
Service Road Overpass (Pa)	P/S Concrete Adjacent Box Beams	1	43 - 0 c-c brg.
Northampton Street Toll-Supported Bridge	Cantilever Truss	3	550 - 0 pin to pin
Easton-Phillipsburg Toll Bridge	Petit Thru-Truss	1	539 - 8 pin to pin
Broad Street Viaduct (NJ)	Riveted Steel 3 Girder/Floorbeam/Stringer	5	431 - 4
Third Street Overpass (Pa)	Steel Multi-Stringer	1	83 - 0 c-c brg.
Pedestrian Tunnel (Pa)	Reinforced Concrete Box Culvert	1	Unknown
Bank Street Overpass (Pa)	Steel Multi-Stringer	3	120 - 0 c-c brg.
Route 611 Overpass (Pa)	P/S Concrete Adjacent Box Beams	1	34 - 0 fc-fc abut.
Riverton-Belvidere Toll-Supported Bridge	Riveted Steel Double Warren Truss	4	652 - 5
Portland-Columbia Toll Bridge	Riveted Steel Multi-Girder	10	1309
Route 46 Overpass (NJ)	Riveted Steel Multi-Girder	1	96 - 1
Locust Street Overpass (NJ)	Steel Multi-Stringer	4	170 - 0 c-c brg.
Portland-Columbia Pedestrian Bridge	Steel Thru-Deck Girder	4	770
Delaware Water Gap Toll Bridge EB	Riveted Steel Multi-Girder	17	2398 - 6 c.c brg. abut.
Delaware Water Gap Toll Bridge WB	Riveted Steel Multi-Girder	16	2462 - 10 c.c. brg. abut.
Milford-Montague Toll Bridge	Steel Deck Truss	4	1150

