Delaware River Joint Toll Bridge Commission

Preserving Our Past, Enhancing Our Future

2014 TOLL-SUPPORTED BRIDGES ANNUAL INSPECTION REPORT

FEBRUARY 2015

TOLL BRIDGES

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

TOLL-SUPPORTED BRIDGES

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

Prepared by

TranSystems

TranSystems

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February 17, 2015

Mr. Joseph Resta
Executive Director
Delaware River Joint Toll Bridge Commission
2492 River Road
New Hope, PA 18938-9519

RE: DRJTBC Contract No. C-07-11D
General Engineering Consultant – 2014 Annual Inspections
Toll-Supported Bridge Inspections
Annual Inspection Report

Dear Mr. Resta:

It is with great pleasure that we are submitting the Consulting Engineer's 2014 Annual Inspection Report (2014 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, (9 structures)
C. Various roadways and thirty-four (34) approach bridges serving the main river crossings
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 2014 inspection of the Toll-Supported Bridge Facilities. An update of the 2013 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. With the replacement of the Route 611 Bridge and rehabilitation of the Broad Street Viaduct at the Easton Phillipsburg Toll Bridge the Commission no longer has any bridges listed as Structurally Deficient. There are 29 bridges classified as Functionally Obsolete.

The 2014 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 2015 and 2016. The estimated expenditure for capital projects in 2015 is $50,187,081. In addition, an estimated expenditure of $1,437,500 has been included in the capital plan for new vehicle and equipment purchases in 2015. Therefore, the total amount of ongoing capital projects and vehicle and equipment expenditures in 2015 is estimated to be $51,660,581. The estimated expenditure for ongoing capital projects and vehicle and equipment expenditures for 2016 is $71,224,296.

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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

William Clark, P.E.
Project Manager/Senior Associate

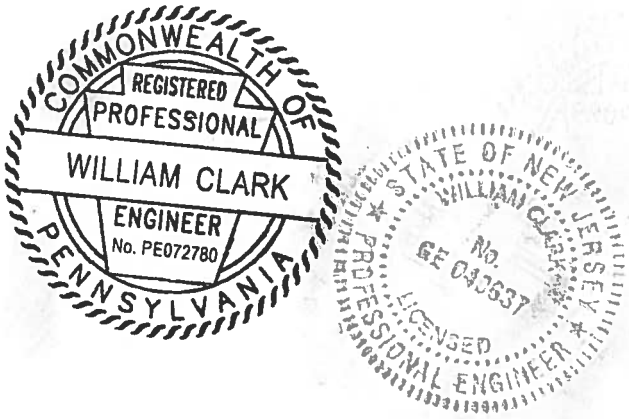

TABLE OF CONTENTS

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

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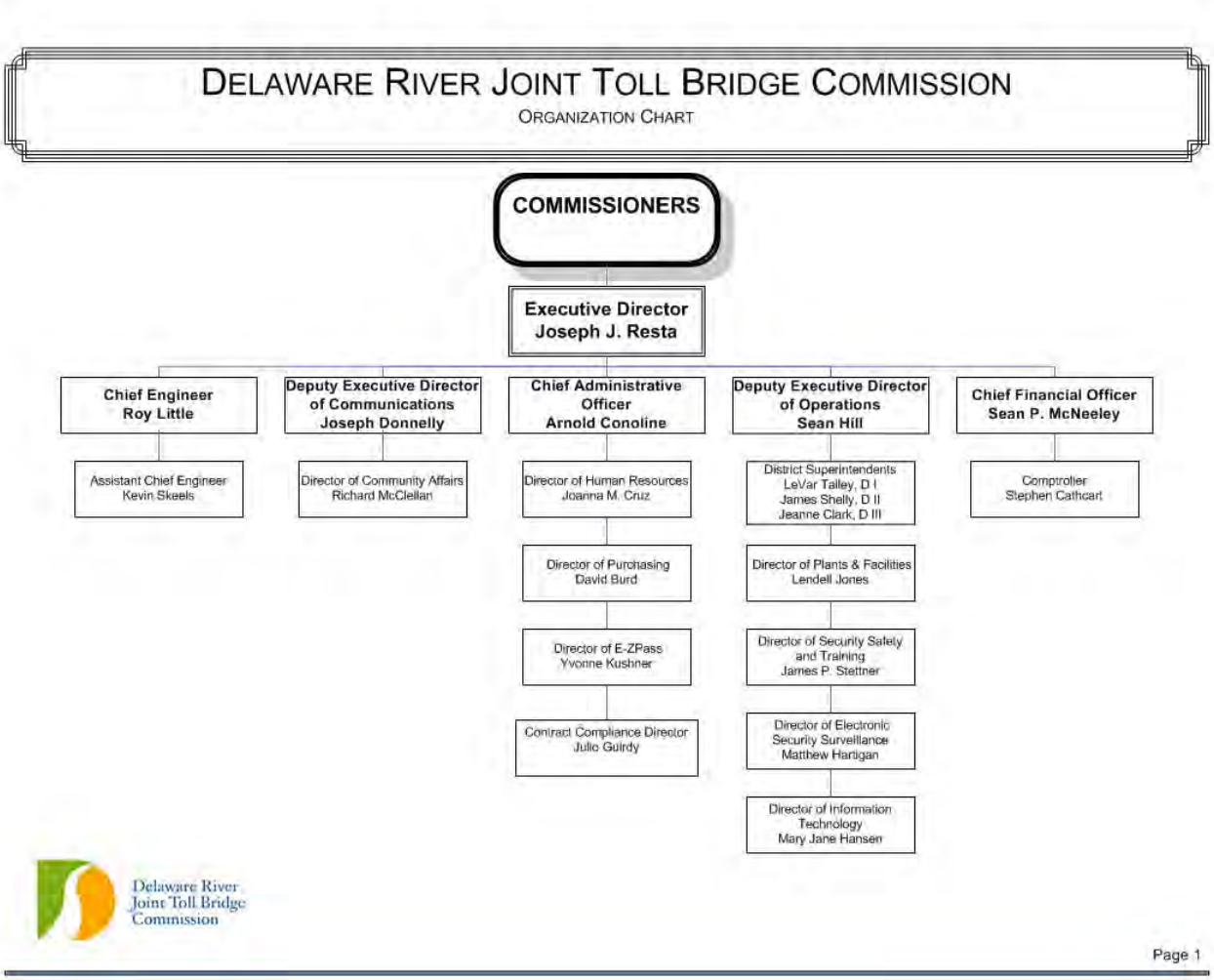


INTRODUCTION

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 (2014, 2016, etc.) and the Toll Bridges in odd years (2015, 2017, etc.). All load-posted bridges will receive special interim inspections in the year they do not receive their regular biennial inspection in accordance with PennDOT requirements. The associated facilities and grounds are inspected with each respective bridge.

This 2014 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 2014 inspections of the Toll-Supported Bridges. This year's inspections consisted of thirteen (13) Toll-Supported Bridges and any accompanying facilities and approach structures. In addition to the bridge inspections, an inspection of the Toll-Supported Bridge Officer shelters was conducted including and roadways under the jurisdiction of the Commission. The conclusions and recommendations concerning the Toll Bridges are based on the 2013 inspections. Any updates to the 2013 conclusions or recommendations for the Toll Bridges are indicated by text that is ***bold and italicized***. The inspection findings shown for the Toll Bridges are 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 ladders, Commission-owned lift trucks, an under-bridge unit (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 type deficiencies which have been identified during the annual inspection can be found in the *2014 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.

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

PROJECTS COMPLETED 2001 - 2014 (> $250,000)	PROGRAM COST
T-M TB Rehab + One Aux. NB Lane	99,433,230
I-78 Roadway Rehabilitation (NJ)	49,255,578
Compact Authorized Investments	33,260,827
Electronic Surveillance/Detection System	21,083,025
M-M Toll Bridge Rehabilitation	18,507,283
E-ZPass Implementation	18,023,146
Delaware Water Gap Toll Bridge Rehabilitation	17,582,749
I-78 Toll Bridge PA Approach Paving Improvements	17,225,333
CS TSB Rehabilitation	10,866,358
Upper Black Eddy - Milford TSB Rehabilitation	9,957,164
District 1, 2 & 3 Substructure & Scour Remediation	9,736,650
CB-S Rehabilitation	9,730,805
NH-L TB Plaza & Bridge Rehab	9,671,373
R-B TSB Rehabilitation Contract (Design / Construction)	9,258,179
2011 - 2012 Substructure Repair & Scour Remediation	8,830,549
I-78 Open Road Tolling (ORT) Lanes	8,640,584
RGL Rehabilitation	7,909,813
NHLTSB Rehabilitation Contract (Design, Construction, CM/CI)*	7,700,991
Northampton Street Bridge Rehabilitation	7,364,066
NH-L TB PA & NJ Approach Roadways Repaving & NJ Route 29 Overpass Bearing Seat & Bridge Painting	6,559,029
Phase 1 - DWG Toll Bridge ORT Implementation	6,239,749
Uhlerstown-Frenchtown Rehabilitation	5,779,187
NH-L Addition & Renovations	5,767,617
E-ZPass In-Lane System Integration DBM (CAPITAL COSTS ONLY)	5,534,768
58 Projects under $250,000 each	5,037,773
Power Upgrades - all facilities+Struct Wiring+Telephone	4,760,754
Cleaning & Painting of the LT TSB & Sign Replacement	4,567,205
L-RR TSB Rehabilitation & Retaining Wall Reconstruction	4,056,547
Phase 1 Rehabilitation & Concept Study for the Washington Crossing TSB	3,293,657
DWG Maintenance Garage Improvements	3,274,856
NH-L TB - Floorbeam Bracket Improvements	3,022,595

Compact Authorized Investment Consultants		1,918,550
E-P Sidewalk Replacement		1,705,247
I-78 Roadway Median Improvements - New Jersey		1,468,315
Scudder Falls TSB Deck Joint Replacement		1,446,418
Financial Management System		1,207,991
Customer Service Center / Violations Processing Center		1,091,651
DWG River Road Improvements		1,011,037
E-ZPass Customer Service Center / Violation Processing Center (CSC/VPC)		988,580
DBOM (CAPITAL COSTS ONLY)		
High Priority Structural Steel Repairs at the SFTSB		968,625
I-78 Expansion Dam Replacement		867,788
R-B Water Street Improvements		849,722
Emergency and Priority Repair Contract (all Bridges) -T/TS 389		749,233
NH-L Terne Roof Replacement		685,101
Northerly Corridor Congestion Mitigation Study		647,376
M-M Upgrade Water Supply		647,143
E-P Replace Roof System on Admin Bldg and Garage		599,782
I-80 NJ Repaving (NJDOT)		581,442
RGL End Floorbeam Bearings (Task Order)		565,563
Southerly Crossing Corridor Study		544,643
E-P Pavement of Bridge Approaches (PennDOT)		517,090
I-78 Roadway Median Improvements - Pennsylvania		492,664
I-78 Salt Storage Bin		485,681
Substructure & Scour Remediation Contract - P-C Ped		482,299
CS Interim Repair Contract (Structural Steel Repairs)		445,913
TM Elevator Upgrade		436,706
WX Deck joint replacement/ rehabilitation @ Pier 1,2,4 & 5		407,885
Phase 1 DWG Toll Bridge ORT Study		405,011
IT Network Systems & Telephone Upgrades		377,820
Emergency and Priority Repair Contract (all Bridges) -I-80/NHTSB		367,116
P-C TS Ped Bridge - Handicap Accessible Ramp		305,656
District 3 Roof Replacement - DWG		297,021
P-C TSB Deck Repairs and Drainage Modifications		290,998
NH-L TB Electrical Improvements		290,466
District 3 Roof Replacement - P-C		265,756
I-78 Rock Slide Mitigation		264,213
Installation of Electronic Time Card System at All Commission Facilities		260,000
	Total	**461,649,095**

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

PROJECTS UNDERWAY	PROGRAM COST
I-95/Scudder Falls Replacement	327,484,128
E-P TB Rehabilitation	30,605,495
TM Admin Building Improvements	22,183,501
ETC System Wide Replacement & E-ZPass Next Generation Technology	20,117,374
TM TB Maintenance Facility Improvements	17,427,230
Prelim. Engineering & Environmental Doc. for the Scudder Falls (I-95) Improvements	13,583,321
P-C Approach Roadway Improvements	6,067,409
Electronic Surveillance System (ESS) Department Projects	6,003,777
I-78 Welcome Center & Maintenance Garage Improvements	5,940,269
Lower Trenton TSB Approach Roadways Improvements	4,028,826
Trenton-Morrisville TB Approach Roadways Improvements	3,672,977
Scudder Falls Bridge Interim Deck Repairs	3,262,539
IT Department Capital Improvements	2,017,390
Easton – Phillipsburg Toll Bridge Ramp C Slope Stabilization	1,973,411
New Hope - Lambertville Toll Bridge Equipment Storage Building	1,123,232
Electronic Toll Collection / Tolling Task Order Consultant (2013)	550,000
Traffic Count Program Upgrade	515,122
Level 3 – Investment Grade Traffic and Revenue Forecasts	475,995
P-C TB Emergency Generator Improvements	450,000
Milford-Montague Toll Bridge Emergency Generator Improvements	450,000
Bridge Monitoring System for Select Vehicular Bridges	389,614
Districts 1, 2 & 3 Facility Improvement Projects	383,000
DWG TB Emergency Generator Improvements	354,000
Cartegraph Upgrades (IT Dept.)	347,104
Business Collaboration Software & Hardware Upgrade (IT Dept.)	300,000
Riverton – Belvidere TSB PA & NJ Approach Slope Stabilization	274,130
E-ZPass ETC Technical Consultant	249,523
I-78 TB Emergency Generator Improvements	246,113
Buildings & Facilities Energy Audit	210,000
E-P TB Emergency Generator Improvements	201,714
Commission Website Upgrade & Redesign (Communications Dept.)	200,000
New Hope-Lambertville Toll Bridge Pin and Hanger Evaluation & Improvements	90,000
Electronic Surveillance/Detection System (ESS) Technical Consultant	82,236
Integrated Capital Planning & Management Software Study	82,000
I-78 Water System Improvements	37,125
New Hope Old Firehouse Inspection & Study	30,204
Washington Crossing TSB Pier Block Alignment	15,500
Total	**471,424,260**

PROJECTS PLANNED	PROGRAM COST
I-78 Toll Bridge Rehabilitation & Deck Replacement	84,271,350
Cleaning & Painting of I-78 Bridges (Edge, Carpentersville, Main River, etc)	16,662,358
I-78 New Jersey Roadway Mill & Paving	15,351,747
Northampton Street TSB Floor System Replacement & Rehabilitation	10,784,986
Washington Crossing TSB Phase 2 Rehabilitation	9,683,967
Trenton-Morrisville Toll Bridge All Electronic Tolling	9,643,923
Easton - Phillipsburg Toll Bridge Administration Building Improvements	8,687,340
Trenton-Morrisville Toll Bridge Open Road Tolling	8,057,025
Centre Bridge Stockton Toll Supported Bridge Rehabilitation	6,937,170
Uhlerstown - Frenchtown TSB Rehabilitation	6,464,509
NH-L Toll Supported Bridge Rehabilitation	4,451,538
Multi-Bridge Miscellaneous Improvements	4,396,412
I-78 Approach/Transition Slabs Rehabilitation & Cedarville Road Overpass Rehabilitation	4,070,865
Officer Shelter Replacement Program	2,878,438
Repainting Riverton-Belvidere Toll Supported Bridge	2,450,000
Portland - Columbia Ped. TSB Improvements	2,280,362
I-78 HVAC Upgrade	2,202,682
Facility Stormwater & Drain Improvements	2,004,691
Riverton – Belvidere TSB Critical Members Strengthening	1,872,552
DWG HVAC Improvements	1,620,755
P-C HVAC Upgrade	1,584,232
M-M HVAC Improvements	1,582,084
Toll Plaza Sign Replacement	1,087,000
Existing ETC End-of-Life Equipment Replacement	1,047,953
E-ZPass Customer Service Center AET System Components	914,497
New Hope - Lambertville Toll Bridge Salt Storage Building Improvements	871,201
E-P Parking Lot Improvements	784,583
Lower Trenton Toll Supported Bridge “Trenton Makes” Sign Replacement	658,000
Fuel Management System	580,000
I-78 Toll Plaza Islands Impact Protection	486,676
CB-S TSB Approach Pavement & Stormwater Inlet Improvements	478,500
Washington Crossing Toll-Supported Bridge Priority Repairs	418,000
DWG / I-80 NJ Roadway Safety Improvements	333,306
NH-L Toll Bridge Parking Lot Paving	209,235
Broadband Communications System Study	200,000
Intelligent Transportation Systems (ITS) Improvement Study	106,724
DWG Toll Bridge Improvements (future widening/replacement coordination)	100,090
All Electronic Toll Collection / Cashless Tolling Strategy Study	78,750
Total	**216,293,501**

VEHICLES & EQUIPMENT, LABOR AND UNFORESEEN PROJECTS (2001-2024)

Capitalized Engineering Department Labor	16,914,004
Capitalized Capital Prgm Mgmt Consultant Expenditures	20,875,036
Vehicles & Equipment	29,286,600
Unforeseen Projects	11,848,706
TOTAL	**$78,924,346**

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.

The format of the cost sheets for the 2014 Annual Inspection Report reflects the estimated cost of recommended improvements funded by the General Reserve in 2015 and 2016. Cost sheets for the Toll Bridges have been updated to reflect anticipated costs in 2015 and 2016. In addition the cost sheets provide the total program cost of the projects (Design, CM-CI and Construction, etc.). The total in each section does not include the cost of completed projects.

This report will summarize significant findings, recommendations, and associated estimated costs at the end of each section for each facility. 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.


84
6
MILFORD
MONTAGUE TOLL
PIKE
390
206
402
209
SUSSEX
NEW JERSEY
MONROE
80
DELAWARE WATER GAP TOLL
94
PORTLAND
COLUMBIA (PED)
DISTRICT 3
PORTLAND COLUMBIA TOLL
80
RIVERTON
BELVIDERE
46
191
611
NORTHAMPTON
33
WARREN
57
57
EASTON PHILLIPSBURG TOLL
DISTRICT 2
22
NORTHAMPTON ST
I-78 TOLL
78
78
RIEGELSVILLE
HUNTERDON
UPPER BLACK EDDY
MILFORD
611
UHLERSTOWN
FRENCHTOWN
202
LUMBERVILLE
RAVEN ROCK (PED)
29
32
CENTRE BRIDGE
STOCKTON
DISTRICT 1
BUCKS
NEW HOPE
LAMBERTVILLE TOLL
NEW HOPE
LAMBERTVILLE
29
31
202
32
WASHINGTON CROSSING
95
SCUDDER FALLS
1
MERCER
CALHOUN ST.
LOWER TRENTON
TRENTON
MORRISVILLE TOLL
PENNSYLVANIA

COMMISSION INITIATIVES

AND SYSTEM-WIDE PROJECTS

(2015-2016 Expenditures)

2015-2016 CAPITAL PLAN ESTIMATED EXPENDITURES

In addition to addressing the findings of the 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 provides more efficient management 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

		General Reserve Fund		
Project Description	**** Program Cost***	**2015**	**2016**	***2015-2016 Total***
Customer Service Center / Violations Processing Center This project includes the design, build, maintenance and operation of the E-ZPass Customer Service Center / Violation Processing Center. Included in this project is the preparation and testing of the software/back office to convert existing Electronic Toll Collection (ETC) CSC/VPC from the current vendor to a vendor selected through a best value procurement.	*$1,091,651*	$109,165	$0	$109,165
Capitalized Engineering Department Labor This Commission initiative tracks 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.	*$16,914,004*	$853,000	$881,016	$1,734,016
Capitalized Capital Prgm Mgmt Consultant Expenditures This project includes Contract No. C-502A Capital Program Management Consultant (CPMC) Services into 2015. Additional costs are programmed for continued CPMC expenditures to be procured under additional "CPMC" contracts as needed throughout the rest of the 10-year Rolling Capital Improvement Program.	*$20,875,036*	$660,000	$619,706	$1,279,706
Traffic Count Program Upgrade Replacement of the existing Traffic Count System with a new system to count traffic at all vehicular Toll Supported Bridges and the free direction of all Toll Bridges. The installation of a new traffic count program to manage the traffic data includes the replacement of the traffic counters, modems and software. The new system may provide increased functionality such as vehicle length data and speed data.	*$515,122*	$424,129	$0	$424,129
Intelligent Transportation Systems (ITS) Improvement Study This work will include conducting a study to evaluate ITS needs, inter-agency coordination with NJDOT, PennDOT, & DVRPC /NJTPA, opportunities and system components to be used at the DWG, E-P, I-78, T-M & I-95 Bridges.	*$106,724*	$52,500	$54,224	$106,724

2015-2016 CAPITAL PLAN ESTIMATED EXPENDITURES

COMMISSION INITIATIVES & SYSTEM-WIDE PROJECTS

Project Description	* Program Cost	General Reserve Fund 2015	2016	2015-2016 Total
Electronic Surveillance/Detection System (ESS) Technical Consultant ESS Technical Consultant - $500,000 Task Order Agreement for various ESS related project assignments.	*$82,236*	$31,226	$0	$31,226
ETC System Wide Replacement & E-ZPass Next Generation Replacement of the existing Electronic Toll Collection (ETC) System which was implemented in 2002 and had an expected life of 8 to 10 years.	*$20,117,374*	$5,688,595	$14,428,779	$20,117,374
All Electronic Toll Collection / Cashless Tolling Strategy Study 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 and the Scudder Falls Bridge.	*$78,750*	$78,693	$0	$78,693
Level 3 – Investment Grade Traffic and Revenue Forecasts This project includes developing a complete financial grade traffic and revenue study for the Commission's Seven Toll Bridges and the Scudder Falls Bridge. This project will continue where the 2009 Traffic and Revenue Projections Study (C-501A) left off.	*$475,995*	$38,390	$39,651	$78,041
Bridge Monitoring System for Select Vehicular Bridges Implementation of a Bridge Monitoring System to include structural health monitoring as well as overweight / oversized vehicle detection, deterrent and enforcement of select vehicular bridge facilities. Work includes a feasibility study to investigate and report on the use of sensor type technologies as a means to evaluate and electronically monitor the	*$389,614*	$272,730	$0	$272,730
Commission Website Upgrade & Redesign (Communications Dept.) Upgrade and redesign our current DRJTBC.org website adding additional functionality. (Communications Dept)	*$200,000*	$200,000	$0	$200,000
Existing ETC End-of-Life Equipment Replacement Should the Commission not elect to replace the existing electronic toll collection system, this program covers the replacement of obsolete and end-of life components. It is noted that a study of the existing system was completed by STV under Task Order Assignment C-538-A-7. This program follows the recommendations of the report.	*$1,047,953*	$515,511	$532,442	$1,047,953
Integrated Capital Planning & Management Software Study This project will review Capital Planning & Management Softwares fully compatible and itegrateble with the Commisison's Munis System and recommend implementation of a system for assisting with managing and planning the Commission's capital program and 2 year capital plan.	*$82,000*	$82,000	$0	$82,000
Business Collaboration Software & Hardware Upgrade (IT Dept.) Update of business collaboration software and hardware including exchange, lync, and sharepoint.	*$300,000*	$260,408	$0	$260,408
Electronic Toll Collection / Tolling Task Order Consultant (2013) The program includes the Electronic Toll Collection / Tolling Task Order Consultant. This contract is a Task Order Assignment for various ETC / Engineering related projects.	*$550,000*	$385,000	$0	$385,000

2015-2016 CAPITAL PLAN ESTIMATED EXPENDITURES

COMMISSION INITIATIVES & SYSTEM-WIDE PROJECTS

		General Reserve Fund		
Project Description	**** Program Cost***	**2015**	**2016**	***2015-2016 Total***
Broadband Communications System Study A feasibility study will be performed to evaluate alternitives for a Broadband Communication System to handle all future data needs for the	*$200,000*	$200,000	$0	$200,000
IT Department Capital Improvements IT Department Capital Projects. More details in backup sheet.	*$2,017,390*	$1,785,000	$232,390	$2,017,390
Electronic Surveillance System (ESS) Department Projects ESS Department Capital Projects. More details in backup sheet.	*$6,003,777*	$4,246,472	$213,117	$4,459,589
Buildings & Facilities Energy Audit Building audit of all the Commission's administration and maintenance buildings and facilities to determine what improvements the Commission can undertake to be more energy efficient and reduce costs.	*$210,000*	$210,000	$0	$210,000
Districts 1, 2 & 3 Facility Improvement Projects Capital projects requested by DEDO / District Superintendants / Maintenance	*$383,000*	$185,000	$0	$185,000
Officer Shelter Replacement Program The system-wide replacement of all toll-supported bridge officers' shelters throughout the Commission, creating two standardized officer shelter types. One type would be a full 24/7 shelter; the other would be a smaller, part-time satellite shelter (no restroom facilities) for use for enforcement	*$2,878,438*	$107,500	$943,761	$1,051,261
Toll Plaza Sign Replacement Installation of LED Daktronics signs at the New Hope-Lambertville, Easton-Phillipsburg, Portland-Columbia and Milford-Montague Toll Bridges. Upon completion of this project, all Toll Bridges will have LED signs over the toll lanes.	*$1,087,000*	$1,087,000	$0	$1,087,000
Fuel Management System Implementation of a system utilizing a secure element such as a key or proximity card to authorize and control the dispensing of fuel products to fleet vehicles while collecting accurate, valuable fuel usage and vehicle data for fuel accounting, Fleet Management and Fleet maintenance. A comprehensive hardware, software and telephone support plan is required and made up of fully trained Installation Technicians and Customer Support Technicians made available to make our fuel management system run smoothly from day one.	*$580,000*	$580,000	$0	$580,000

	**** Program Cost***	**2015**	**2016**	**2015-2016 Total**
Total for all of the above Commission Initiatives and System-wide Projects:	***$76,186,064***	***$18,052,319***	***$17,945,086***	***$35,997,405***

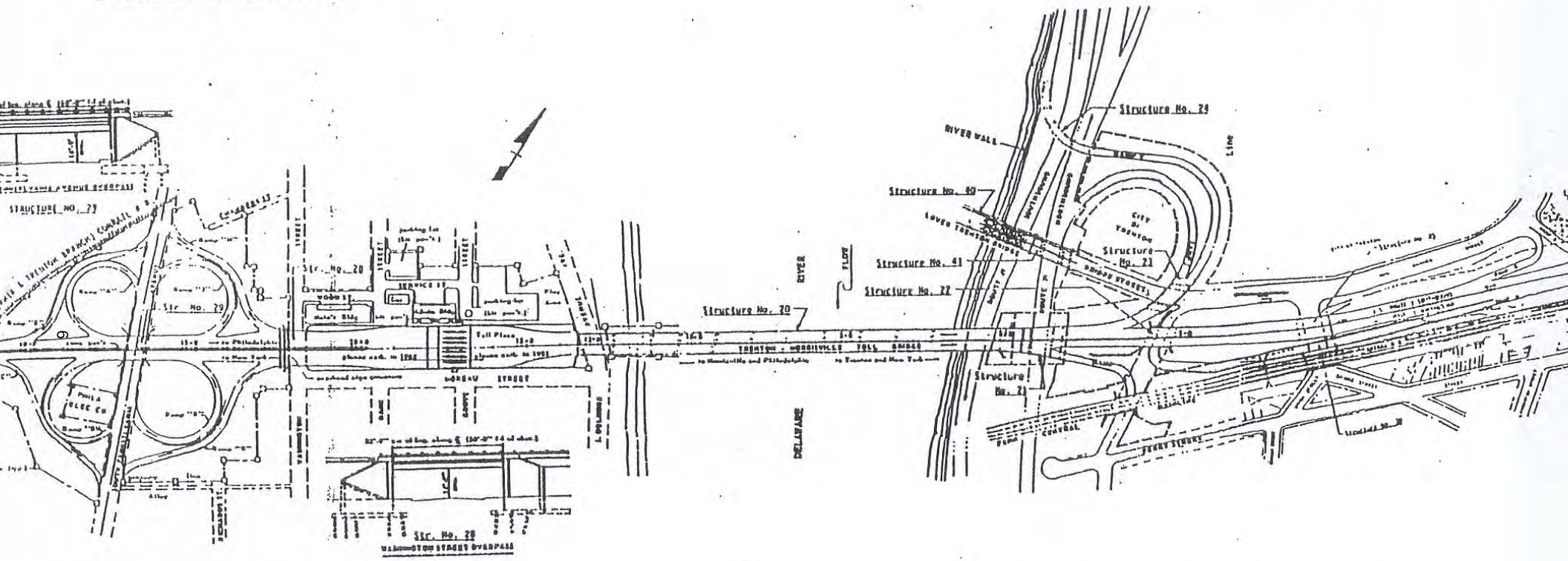
TRENTON-MORRISVILLE

TOLL BRIDGE FACILITY

(Structure No. 20)

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
BOROUGH OF MORRISVILLE

STATE OF NEW JERSEY
COUNTY OF MERCER
CITY OF TRENTON



PENNSYLVANIA APPROACH TO THE
TRENTON-MORRISVILLE TOLL BRIDGE

NEW JERSEY 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 1992, the toll plaza was converted to one-way collection under Contract No. T-312. In 2009 an extensive widening and rehabilitation project was completed, creating an additional 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 while the speed limit on the approach in the southbound direction is 50 mph, which decreases to 40 mph near the Union Street overpass.

The multi-year project for the widening and rehabilitation of the Route 1 corridor was completed under Contract T-380B in 2009. This work included the main river bridge and approach structures in New Jersey and Pennsylvania and included the addition of an approach structure in New Jersey (Ramp "C"). 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 (9) approach structures. The Pennsylvania approach consists of two (2) approach structures.

TRENTON-MORRISVILLE TOLL BRIDGE FACILITY AND GROUNDS

The southbound one-way toll plaza, located at the Pennsylvania approach, has five toll lanes. A new toll plaza was constructed in 2009 and consists of three tollbooths erected on concrete islands, and two E-ZPass only lanes, an overhead canopy and a service tunnel for the toll collection staff and ETC equipment. All lanes are equipped for E-ZPass. The toll system barrier gates were removed in 2010 with the installation of Violation Enforcement System (VES) technology - high-resolution cameras and lights - in toll collection lanes

Contract T-500A Trenton - Morrisville Administration Building Elevator Modernization was completed in 2009.

The 2013 inspection included the main river bridge, eleven (11) approach bridges, and the facility and grounds.

SIGNIFICANT FINDINGS

Based on the findings of the 2013 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 fair condition.

The superstructure and substructure are in good condition.

An underwater inspection was performed in 2011 under Contract No. C-605A. The substructure was found to be in satisfactory condition due to exposed footings at the piers. For additional information see the final Contract No. C-605A report.

The sign structures (2) in Span 11 and Span 2 are in good condition.

The roadways within the Commission's jurisdiction are in overall fair condition. The US Route 1 southbound off ramp to South Pennsylvania Avenue exhibits wide mapcracking, longitudinal cracks and shallow potholes. The US Route 1 southbound on ramp from NJ Route 29 southbound exhibits wide mapcracking throughout with sealed and partially sealed cracks north and south of the Ramp IY Overpass. Deteriorated asphalt is typical at the US Route 1 northbound on ramp from Bridge Street and the US Route 1 southbound on ramp from NJ Route 29 northbound.

ROUTE 29 OVERPASS (NJ)
(3 span, prestressed concrete spread box beams)

The structure is in overall good condition.

The approach roadway is in fair condition.

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

RAMP IY OVERPASS (NJ)
(3 span, steel multi-girder)

The structure is in overall good condition.

The approach roadway is in fair condition.

The deck, 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 approach roadway is in fair condition. The asphalt wearing surface exhibits wide spread cracks and raving of the asphalt.

The deck, 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 Satisfactory condition.

The deck, approach roadway, and superstructure are in good condition. The abutment rocker bearings exhibit pack rust build.

The substructure is in satisfactory condition.

BROAD STREET UNDERPASS (NJ)
(1 span, steel multi-girder)

The structure is in overall satisfactory condition.

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

The substructure is in satisfactory 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.

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

WASHINGTON STREET OVERPASS (PA)
(1 span, steel multi-girder)

The structure is in overall good condition.

The deck is in very good condition.

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

Deterioration was noted at the south abutment bearing pedestals.

The sign structure at the south approach is in good condition.

SOUTH PENNSYLVANIA AVENUE OVERPASS (PA)
(1 span steel multi-girder)

The structure is in overall good condition.

The deck is in good condition.

The approach roadway exhibits some minor settlement in the south approach concrete slabs.

The superstructure and substructure are in good condition. The several anchor bolts were noted to be missing at the north abutment.

The sign structures (2) at the north approach and south approach exit ramp are in good condition.

TRENTON-MORRISVILLE TOLL BRIDGE FACILITY AND GROUNDS

Administration Building: The building's exterior limestone and bridge veneer exhibits evidence of expansion jacking at the relieving angles and lintels. The masonry is pushing out due to pressure from the rusting ferrous metal supports behind. The brickwork is cracked and has rotated. One of the more significant areas where movement occurs due to corrosion is adjacent to the roof scupper and along the roof parapet. The building's roof is over 20 years old and is leaking.

The building's veneer has undergone movement at the corners and some attempt has been made to fill the cracks; however it appears that the building continues to still be moving. The cracks are not in the expected location between the windows, suggesting that other forces may be at work. At the location of the limestone panels, at the building's corners, the veneer seems to be distressed. The cause of this could be that water is getting in through the numerous open joints and has penetrated the concrete frame rusting the column reinforcement causing failure of the surfaced concrete and expanding.

The movement of the building's veneer is also caused by the open joints in the stone and as a result the metal supports continuing to corrode. Stone movement at the upper areas suggests that the anchors that tie the stone back to the masonry have rusted. The expanded rusted metal is causing displacement of the face of the stone.

There are many areas of open joints both in the stone and the brick. There are also open joints around the exterior face of the windows and evidence shows water is penetrating these joints and causing damage on the interior side.

The concrete canopy on the south elevation over the windows shows evidence of cracks and a drainage problem. Water stains have formed underneath the canopy caused by the water penetrating the slab and overflowing along the edge.

The concrete canopy structure on the west elevation within the maintenance service yard exhibits evidence of corrosion to the concrete reinforcement. The stainless steel fascia along the canopy edge at the southwest corner is damaged by impact.

The HVAC system is not working adequately. HVAC system replacement is currently programmed in the future for the Trenton – Morrisville Administration Building Renovations.

Storage Garage: There are cracks in the brick masonry at the corners which appear to be expansion related. There has been some attempt to fill the cracks; however there are indications that the building continues to move. There is no provision for expansion control in the existing building and appears to have formed its own. There is evidence that the metal lintels, over the structural openings, have rusted and expanded causing the brick veneer to push out.

Maintenance Garage: In the rear of the maintenance garage there is an emergency egress path that leads to the street at one end and to the maintenance service yard on the other end. At the end leading to the street, the path is closed off by a chain linked fence and gate which is locked. The egress path is also obstructed by plastic drain pipes.

CONCLUSIONS

Based on the findings of the 2013 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.

- Items to be included in future repair contract:
  - Mill and resurface deteriorated approach roadway pavement throughout the facility
  - Repair deteriorated and settled curbs and sidewalks throughout the facility
  - Replace all traffic striping with long life epoxy striping throughout the facility
  - Patch spalls at the west abutment
  - Repoint mortar at Piers 1 through 9
  - Remove debris at Pier 2 and Pier 7
  - Place riprap at Pier 3, Pier 4, and Pier 6

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

ROUTE 29 OVERPASS (NJ)

The structure is in overall good condition.

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

RAMP N OVERPASS (NJ)

The structure is in overall good condition.

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

RAMP IY OVERPASS (NJ)

The structure is in overall good condition.

For a list of maintenance repair items, see the *2013 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 *2013 Annual Maintenance Report*.

UNION STREET OVERPASS (NJ)

The structure is in overall good condition.

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

CENTER STREET UNDERPASS (NJ)

The structure is in overall satisfactory condition.

- Items to be included in future repair contract:
    - Reset Girder 3 bearing at the east abutment

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

BROAD STREET UNDERPASS (NJ)

The structure is in overall satisfactory condition.

For a list of maintenance repair items, see the *2013 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 *2013 Annual Maintenance Report*.

RAMP C OVER NJ ROUTE 29 (NJ)

The structure is in overall very good condition

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

WASHINGTON STREET OVERPASS (PA)

The structure is in overall good condition.

- Items to be included in future repair contract:
    - Reconstruct the Stringer 5 bearing pedestal at the south abutment

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

SOUTH PENNSYLVANIA AVENUE OVERPASS (PA)

The structure is in overall good condition.

- Items to be included in future repair contract:
    - Replace the missing anchor bolts at the north abutment bearings.
    - Replace the missing east keeper plate at Stringer 6 bearing at the north abutment

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

TRENTON-MORRISVILLE TOLL BRIDGE FACILITY AND GROUNDS

While the buildings and structures located on the grounds have been maintained in a state of good repair, building infrastructure improvements are necessary at the Trenton-Morrisville Administration Building. These include replacement of the aged and poorly functioning HVAC (Heating, Ventilation, Air-Conditioning) system, replacement of the roofing system which is past its useful life (and patched repeatedly), repairs to the building's stone façade, and miscellaneous interior renovations to replace leaking windows, aged plumbing in poor condition, and certain necessary ADA improvements.

Improvements to the T-M Administration Building are planned. Planned improvements include the replacement of the HVAC system and the roof along with refurbishing of the building's weathered and deteriorated stone façade. Additionally, interior renovations will be implemented. The scope and extent of the interior renovation work will be determined by study and approved by the Commission.

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

2014-2015 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 2014	2015
	Bridges, Roadways, Sidewalks, and Approaches			
	The bridge was rehabilitated in 2009			
	BRIDGES SUB TOTAL	***$0***	**$0**	**$0**
	Facilities and Grounds			
TMTB	**Unforeseen Projects**	*$1,524,000*	$100,000	$104,000
519	**TM Admin Building Improvements**	*$16,432,000*	$444,000	$5,170,000
646	**Trenton – Morrisville Toll Bridge Fuel Systems Improvement**	*$156,000*	$29,000	$127,000
639	**Trenton-Morrisville TB & LT TSB Approach Roadways Improvements**	*$2,526,000*	$187,000	$2,339,000
	FACILITIES AND GROUNDS SUB TOTAL	**$20,638,000**	**$760,000**	**$7,740,000**
	TOTAL COST	***$20,638,000***	**$760,000**	**$7,740,000**

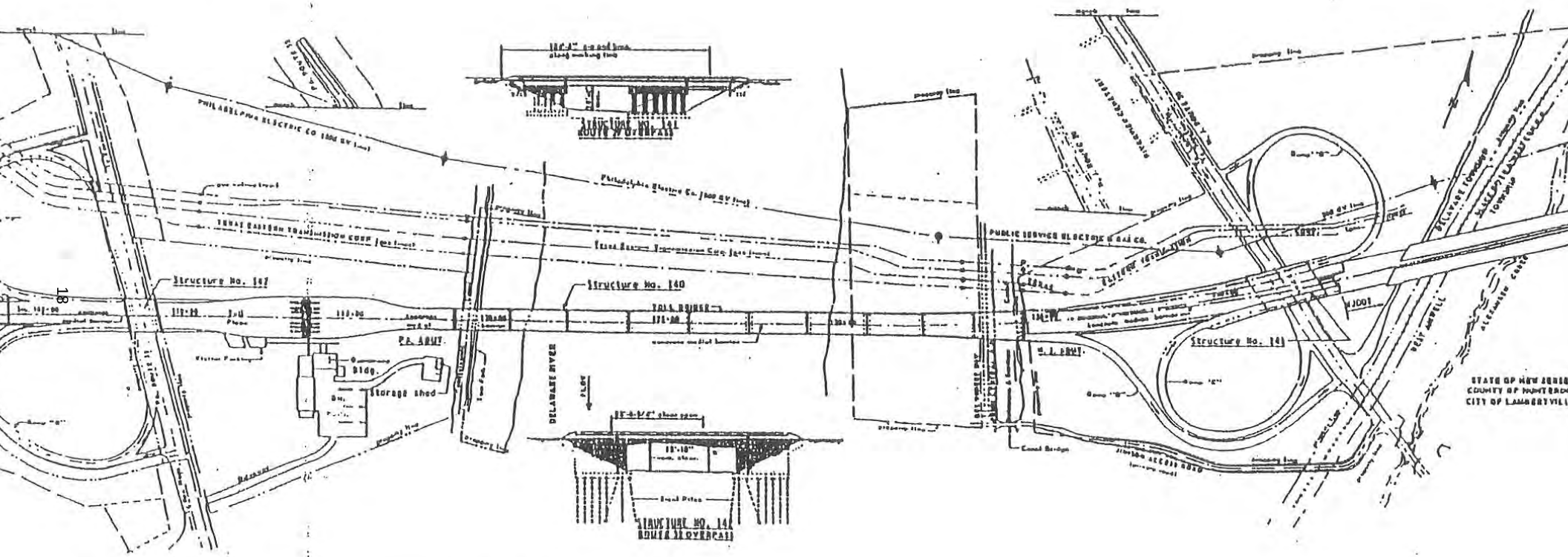
NEW HOPE-LAMBERTVILLE

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 and floorbeam 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. In 2003, the Rehabilitation of the New Hope-Lambertville Toll Bridge was completed under Contract No. T-370B-3. Work completed under this contract included deck, bearing (installed isolation bearings), deck joint, parapet, light pole, and guide rail rehabilitation as well as miscellaneous cleaning and painting as needed on the bridge.

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.

Substructure Repairs of Piers 2 through 6 including both abutments were completed under Contract No. T/TS-476A-1 in 2010. These repairs included masonry repointing at Piers 2 and 4 and both abutments. Epoxy injection crack sealing of Piers 2 through 6 and the NJ abutment were also completed at this bridge.

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 on the Pennsylvania approach was reconstructed in 2003 under Contract No. T-370B-2, and has one-way toll collection, replacing the two-way collection prior to the rehabilitation. Two lanes are equipped with toll booths and two lanes are E-ZPass only, but all four (4) lanes are equipped with E-ZPass and can accept cars or trucks. The toll plaza is erected on concrete islands and is protected with an overhead canopy that matches the Operations building roof. The toll booth barrier gates were removed in 2010 with the installation of Violation Enforcement System (VES) technology - high-resolution cameras and lights - in toll collection lanes

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. In 2010, highway lighting electrical improvements were completed under Contract No. T-554A. The work included providing, installing and testing electrical equipment, grounding, and circuits for the highway lighting electrical system and replacements and upgrades of electrical panel board's equipment at the New Hope-Lambertville Toll Bridge Administration Building.

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.

Contract No. T-543A the New Hope-Lambertville Toll Bridge PA & NJ Approach Roadways Repaving & NJ Route 29 Overpass Bearing Seat and Bridge Painting Project is currently under construction. The project scope includes the rehabilitation, repair and repaving of Route 202 approach roadway segment leading to and from the toll bridge in New Jersey and Pennsylvania .Rehabilitation, repair and repaving of associated on/off ramps to PA Route 32 and NJ Route 29. Repointing, joint sealing and concrete repairs to the overpass that carries Route 202 across Route 32/River Road in Pennsylvania as well as extensive repairs on the approach bridge that carries Route 202 across Route 29 in New Jersey, including repair of deteriorated concrete, blast cleaning and repainting of structural steel members, deck joint work, and replacement of 16 bearings.

The 2013 inspection included the main river bridge, two approach bridges, and the facility and grounds.

SIGNIFICANT FINDINGS

Based on the findings of the 2013 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

Contract No. T-543A the New Hope-Lambertville Toll Bridge PA & NJ Approach Roadways Repaving & NJ Route 29 Overpass Bearing Seat and Bridge Painting Project was under construction at the time of the inspection.

NEW HOPE-LAMBERTVILLE TOLL BRIDGE
(10 span, continuous, steel two girder/floorbeam/stringer)

The structure is in overall satisfactory condition.

The deck is 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.

The superstructure is in satisfactory condition. There are numerous stringers that exhibit material losses up to 3/16". Several stringers exhibit web holes and corrosion cracks at joint areas.

The substructure and pin and hanger system are in good condition.

An underwater inspection was performed in 2011 under Contract No. C-605A. The substructure was found to be in good condition. For additional information see the final Contract No. C-605A report.

The sign structures (2) in Span 2 and Span 8 are in satisfactory condition.

ROUTE 29 OVERPASS
(3 span, simply supported, steel multi-stringer)

The structure is in overall fair condition.

The deck is in good condition. The deck joints are deteriorated and require frequent repairs.

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

The superstructure is in satisfactory condition. Up to 1/8" material loss was noted at the bottom flange of several stringers.

The substructure is in fair condition. Several large areas of hollow concrete and spalls with exposed reinforcement were 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 Fair condition. The approach roadways exhibit several fine to medium cracks throughout.

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. Spalls with exposed reinforcement and incipient spalls were noted over PA Route 32 southbound right lane, left lane and right shoulder.

The substructure is in good condition.

NEW HOPE-LAMBERTVILLE TOLL BRIDGE FACILITY AND GROUNDS

The buildings and structures located on the grounds have been maintained in a state of good repair, and are in overall 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 rear siding of the Maintenance Building has been damaged multiple times over many years by impact from lawn mowing operations. Repairs have consisted of using screws to reattach the siding and due to the number of impacts screws are no longer effective in maintaining the repair. The bottom of the siding has also developed small holes from the impact.

CONCLUSIONS

Based on the findings of the 2013 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 satisfactory condition.

- Items to be included in future repair contract:
  - Clean and spot paint areas of corrosion in the structural steel below the deck joints
  - Repoint stone masonry at the east and west abutments
  - Pressure inject cracks at the east abutment
  - Place riprap at Piers 2 and 3
  - Remove debris at Piers 2, 3, 5 and 6

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

ROUTE 29 OVERPASS

The structure is in overall fair condition.

- Items to be included in future repair contract:
  - Replace in-kind the missing, loose and deteriorated portions of the deck joints (wabo-flex) at the west abutment, Pier 1 and Pier 2. Consideration should be given to replacing the wabo-flex joints with a more durable deck joint system. ***This work is currently ongoing under Contract No. T-543A.***
  - Repair the spalls, incipient spalls and hollow concrete areas throughout the substructure units. ***This work is currently ongoing under Contract No. T-543A.***
  - 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 and repairing areas of section loss to the stringers at the bearings areas. ***This work is currently ongoing under Contract No. T-543A.***
  - Replace the guide rail end terminal at the northwest embankment

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

ROUTE 32 OVERPASS

The structure is in overall satisfactory condition.

- Repair the spalls, incipient spalls and hollow concrete areas. ***This work is currently ongoing under Contract No. T-543A.***

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

NEW HOPE-LAMBERTVILLE TOLL BRIDGE FACILITY AND GROUNDS

- The scope of work for the ongoing Contract No. T-543A will include:
  - Repaving approach roadways
  - Repainting the roadway light poles
  - Replace the damaged exterior corrugated metal siding on rear of maintenance building panel. Install a buffer zone, such as a mulch or stone bed, between the wall and grass to keep lawn mowers away from the building.

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

2014-2015 CAPITAL PLAN ESTIMATED EXPENDITURES

New Hope Lambertville Toll Bridge

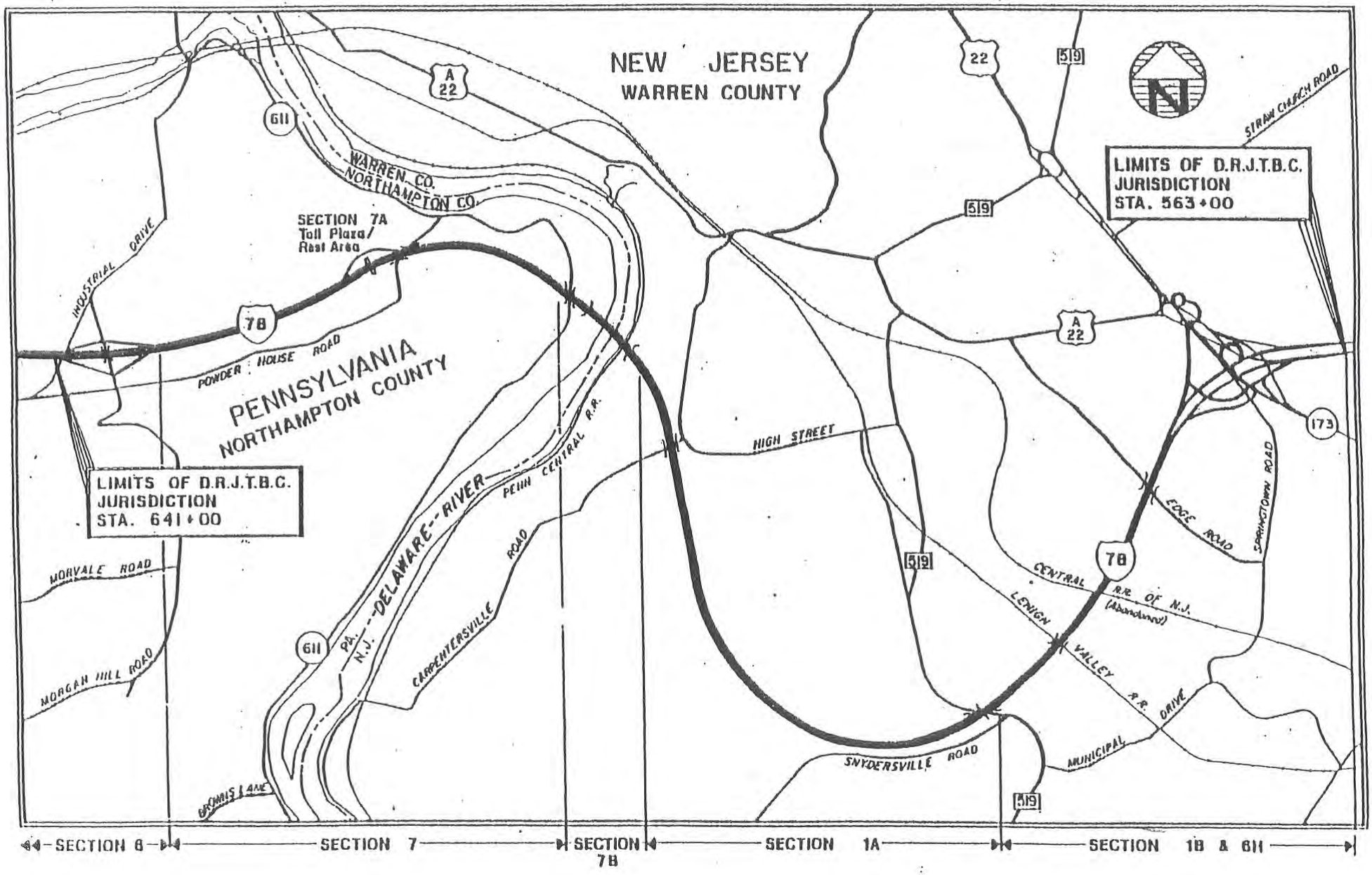
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS
FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	*Program Cost*	General Reserve Fund 2014	2015
	Bridges, Roadways, Sidewalks, and Approaches			
543	**NH-L TB PA & NJ Approach Roadways Repaving & NJ Route 29 Overpass Bearing Seat & Bridge Painting**	*$8,307,000*	$707,000	$0
	BRIDGES SUB TOTAL	***$8,307,000***	**$707,000**	**$0**
	Facilities and Grounds			
NHLTB	**Unforeseen Projects**	*$1,172,000*	$75,000	$78,000
521	**New Hope - Lambertville Toll Bridge Equipment Storage Building**	*$1,129,000*	$0	$72,000
611	**New Hope - Lambertville Toll Bridge Salt Storage Building Improvements**	*$875,000*	$0	$52,000
	FACILITIES AND GROUNDS SUB TOTAL	***$3,176,000***	**$75,000**	**$202,000**
	TOTAL COST	***$11,483,000***	**$782,000**	**$202,000**

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 steel 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.

In 2011, the west deck joint of the I-78 Westbound over County Route 519 Bridge at Milepost 2.2 in New Jersey was rehabilitated after it began to fail.

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 22/173 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.

In 2010, the Commission completed two Design-Build Contracts, DB-562A & DB-563A, for the design and installation of median guide rails along the Commission's jurisdiction in NJ & PA to address potential cross-overs. DB-563A also included the installation of snow fence on the County Route 519 Overpass structure in NJ.

The I-78 Toll Bridge Pennsylvania Approach Paving Improvements was completed in 2013 under Contract No. T-506A. Work completed under this contract included repaving of the entire Pennsylvania Approach and repaving of the Welcome Center Parking Lot.

INTERSTATE 78 TOLL BRIDGE FACILITY AND GROUNDS

The one-way toll plaza opened in 1989 and located at the Pennsylvania approach of the westbound lanes, had seven toll lanes. The toll plaza was reconfigured to 6 lanes in 2010 under Contract No. DB-427B: I-78 Open Road Tolling Lanes (Express E-ZPass) Implementation. This traffic-congestion-mitigation project involved the reconfiguration of the barrier toll plaza, removing three lanes and installing two Express E-ZPass lane with shoulders and paving and re-striping work approaching the toll plaza. All lanes are capable of handling both cars and trucks. The project also involved the installation of new LED (light-emitting diode) variable message signs on the canopy; All lanes are equipped with E-ZPass. The toll booth barrier gates were removed in 2010 with the installation of Violation Enforcement System (VES) technology - high-resolution cameras and lights - in toll collection lanes.

The salt storage building was constructed under Contract No. T-392R in 2003.

The 2013 inspection included the eastbound and westbound main river bridges, eleven (11) approach structures, five (5) sign structures and the facility and grounds.

SIGNIFICANT FINDINGS

Based on the findings of the 2013 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 on 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 Pennsylvania concrete approach slabs.

The superstructure and substructure are in good condition.

An underwater inspection was performed in 2011 under Contract No. C-605A. The substructure was found to be in satisfactory condition due to cracks throughout the substructure units. For additional information see the final Contract No. C-605A report.

INTERSTATE 78 TOLL BRIDGE (WESTBOUND)
(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 on 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 Pennsylvania concrete approach slabs.

The superstructure and substructure are in good condition.

An underwater inspection was performed in 2011 under Contract No. C-605A. The substructure was found to be in satisfactory condition due to cracks throughout the substructure units. For additional information see the final Contract No. C-605A report.

The sign structures (5) west of the toll plaza and east of the toll plaza are in good condition.

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 debris and exhibit deterioration where visible.

The approach roadway immediately adjacent to the bridge 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 immediately adjacent to the bridge is in satisfactory condition. The asphalt wearing surface exhibits minor to moderate wearing.

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

CARPENTERSVILLE ROAD OVERPASS
(2 span, continuous, steel multi-stringer)

The structure is in overall satisfactory condition.

The deck is in good condition.

The approach roadway immediately adjacent to the bridge is in satisfactory condition. Medium to wide transverse and longitudinal cracks were noted.

The superstructure is in good 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 satisfactory condition. The north and south abutment breastwalls exhibit mapcracking with water leakage and efflorescence. There is a spall in the east end of the north abutment breastwall.

I-78 WESTBOUND OVER ROUTE 519
(2 span, continuous, steel multi-stringer)

The structure is in overall satisfactory condition.

The deck is in good condition.

The approach roadway is in satisfactory condition. The approach roadways exhibit edge spalls with partially sealed cracks.

The superstructure is in good 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 satisfactory condition. The west abutment breastwall exhibits medium horizontal and vertical cracks with several hollow areas.

I-78 EASTBOUND OVER ROUTE 519
(2 span, continuous, steel multi-stringer)

The structure is in overall satisfactory 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 is in good 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 satisfactory condition. The east and west abutment breastwalls exhibits fine to medium horizontal and vertical cracks with water staining throughout.

EDGE ROAD OVERPASS
(2 span, continuous, steel multi-stringer)

The structure is in overall satisfactory condition.

The deck is in good condition.

The approach roadway immediately adjacent to the bridge is in satisfactory condition. Fine to medium cracks were noted. Several cracks are partially sealed.

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 satisfactory condition. The north and south abutment breastwalls exhibit fine to medium full height vertical cracks with water staining.

I-78 WESTBOUND OVER RAMP C
(1 span, simply supported, steel multi-stringer)

The structure is in overall satisfactory 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 is in good condition.

The substructure is in satisfactory condition. The east and west abutment breastwalls exhibit fine to medium vertical cracks with water leakage.

I-78 EASTBOUND OVER RAMP C
(1 span, simply supported, steel multi-stringer)

The structure is in overall satisfactory condition.

The deck is in good condition.

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

The superstructure is in good condition.

The substructure is in satisfactory condition. The east and west abutment breastwalls exhibit medium vertical cracks with heavy water staining.

INTERSTATE 78 TOLL BRIDGE FACILITY AND GROUNDS

The overall condition of the I-78 Facilities is good. The buildings and structures located on the grounds have been maintained in a state of good repair. 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.

CONCLUSIONS

Based on the findings of the 2013 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.

- Items to be included in future repair contract:
    - Remove the areas of heavy pigeon debris and clean and spot paint the structural steel as required
    - Replace the missing raised pavement markers throughout the bridge
    - Pressure inject cracks at the west abutment
    - Repair erosion around drainage embankment at Pier 6

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

INTERSTATE 78 TOLL BRIDGE (WESTBOUND)

The structure is in overall good condition.

- Items to be included in future repair contract:
    - Replace the section of damaged guiderail at Sign Structure 2 and 3
    - Remove the areas of heavy pigeon debris and clean and spot paint the structural steel as required
    - Replace the missing raised pavement markers throughout the bridge
    - Pressure inject cracks at the west abutment and Pier 6
    - Place riprap at Pier 6

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

SERVICE ROAD OVERPASS

The structure is in overall good condition.

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

MORGAN HILL ROAD OVERPASS

The structure is in overall good condition.

- Items to be included in future repair contract:

- Replace the deteriorated compression seals at the north and south abutment deck joints

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

CEDARVILLE ROAD OVERPASS

The structure is in overall good condition.

- Items to be included in future repair contract:
  - Install membrane waterproofing at the ends of the prestressed concrete girders
  - Replace the compression seals at Piers 1, 2 and 3 deck joints
  - Replace the shifted elastomeric bearing pad at the south fascia beam at Pier 1

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

I-78 WESTBOUND OVER ROUTE 611

The structure is in overall good condition.

- Items to be included in future repair contract:
  - Replace the deck joint compression seals at all deck joints. ***This work is scheduled to be completed under ongoing contract.***

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

I-78 EASTBOUND OVER ROUTE 611

The structure is in overall good condition.

- Items to be included in future repair contract:
  - Replace the deck joint compression seals at all deck joints. ***This work is scheduled to be completed under ongoing contract.***

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

CARPENTERSVILLE ROAD OVERPASS

The structure is in overall satisfactory condition.

- Items to be included in future repair contract:
  - Clean and paint the superstructure steel and bearings

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

EDGE ROAD OVERPASS

The structure is in overall satisfactory condition.

- Items to be included in future repair contract:
    - Clean and paint the superstructure steel and bearings

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

I-78 WESTBOUND OVER ROUTE 519

The structure is in overall satisfactory condition.

- Items to be included in future repair contract:
    - Clean and paint the superstructure steel and bearings
    - Patch the spalls at the northeast wingwall, the northeast corner of the east abutment breastwall, and the delaminated concrete at the south end of the east abutment breastwall

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

I-78 EASTBOUND OVER ROUTE 519

The structure is in overall satisfactory condition.

- Items to be included in future repair contract:
    - Clean and paint the superstructure steel and bearings

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

I-78 WESTBOUND OVER RAMP C

The structure is in overall satisfactory condition.

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

I-78 EASTBOUND OVER RAMP C

The structure is in overall satisfactory condition.

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

INTERSTATE 78 ROADWAY

Contract Nos. T-424A and T-506 completed the I-78 Roadway Rehabilitation in New Jersey (2009) and Pennsylvania (2013). The roadway is in good condition.

INTERSTATE 78 TOLL BRIDGE FACILITY AND GROUNDS

A study of the HVAC system should be conducted to determine whether the system located at the facility needs to be upgraded. The system is 24 years old and nearing the end of its useful life.

- Items to be included in future repair contract:
    - Replace damaged or missing snow guards per manufacturer's recommendation at the maintenance garage
    - Install a roof gutter over the maintenance garage doors
    - Replace the maintenance garage doors
    - Consider upgrading the public restrooms at the Visitor's Center
    - Consider converting open storage area at the end of the garage into an enclosed storage space or expanding the garage area.
    - Trees and vegetation should be cleared within the clear zone along the entire length of the Commission's jurisdiction

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

2014-2015 CAPITAL PLAN ESTIMATED EXPENDITURES

Interstate 78 Toll Bridge

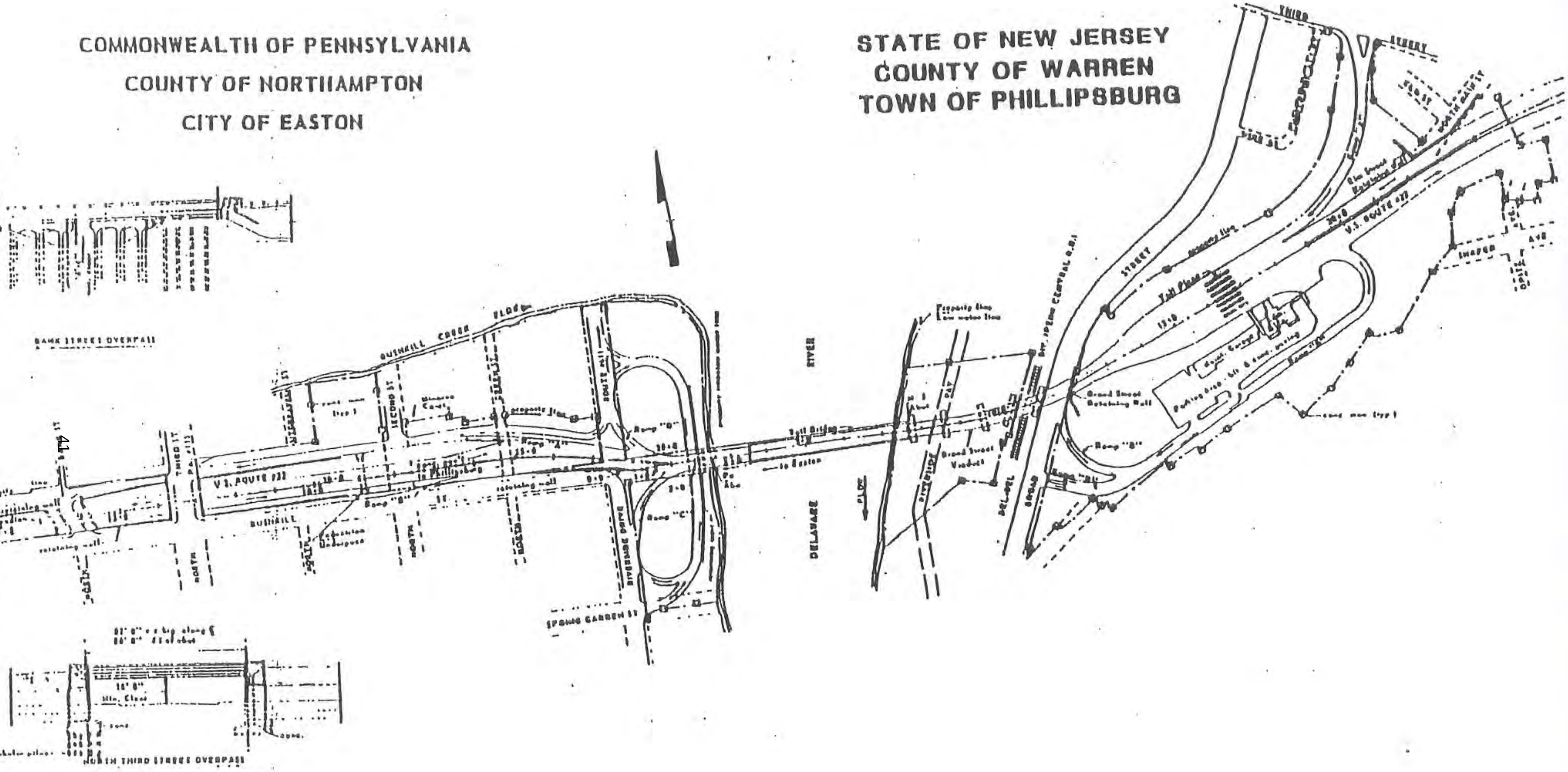
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS
FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	*Program Cost*	General Reserve Fund 2014	2015
	Bridges, Roadways, Sidewalks, and Approaches			
506	**I-78 Toll Bridge PA Approach Paving Improvements**	*$17,515,000*	$1,584,000	$0
	BRIDGES SUB TOTAL	***$17,515,000***	***$1,584,000***	***$0***
	Facilities and Grounds			
I-78TB	**Unforeseen Projects**	*$2,223,000*	$150,000	$156,000
507	**I-78 HVAC Upgrade**	*$2,155,000*	$33,000	$209,000
508	**I-78 Maintenance Garage Improvements**	*$4,397,000*	$351,000	$2,478,000
603	**I-78 TB Emergency Generator Improvements**	*$240,000*	$31,000	$209,000
	FACILITIES AND GROUNDS SUB TOTAL	***$9,015,000***	**$565,000**	**$3,052,000**
	TOTAL COST	***$26,530,000***	**$2,149,000**	**$3,052,000**

EASTON-PHILLIPSBURG

TOLL BRIDGE FACILITY

(Structure No. 300)



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 Easton-Phillipsburg Toll Bridge and all approach structures received an in-depth, hands on inspection in 2010 for the on-going rehabilitation Contract T-437A which includes all structures in this facility.

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 toll plaza was converted to one-way toll collection in 1989 under Contract No. T-296. It is located at the New Jersey approach and 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 toll booth barrier gates were removed in 2010 with the installation of Violation Enforcement System (VES) technology - high-resolution cameras and lights - in toll collection lanes

The 2013 inspection included a visual limited access inspection of the main river bridge and the five (5) approach bridges due to the on-going rehabilitation under Contract No. T-437A. A routine inspection of the facility and grounds was performed.

SIGNIFICANT FINDINGS

Based on the findings of the 2013 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

A visual limited access inspection was performed due to the on-going rehabilitation Contract T-437A.

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. For additional conditions related to the below deck superstructure, refer the 2010 in-depth inspection report.

The substructure is in good condition.

An underwater inspection was performed in 2011 under Contract No. C-605A. The substructure was noted to be in good condition. For additional information see the final Contract No. C-605A report.

The sign structures (4) are in overall fair condition. Sign Structure 1 approximately 250’ west of the toll bridge exhibits several wide cracks with efflorescence and areas of fractured and spalled concrete at the north concrete pedestal foundation. Sign Structure 3 at the toll plaza exhibits several partially sealed wide cracks in the north and south concrete pedestal foundations.

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

The structure is in overall poor 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 stay in place (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 poor 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. Stringers 1 to 4 and the shelf bearing angles at the east side of Floorbeam 5 in Span 4 exhibit severe rust and section loss. The bearing shelf angles supporting the stringers were note to be cracked and deflecting under live load; a steel W-beam temporary support system has been constructed between Girders 2 and 3 at the east side of Floorbeam 5 to support Stringers 1 to 4 under Contract T-437B.

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. Horizontal Lateral bracing gusset plates in span 5 exhibit severe rust and significant section; steel cables have been installed by the Commission maintenance forces as a temporary repair.

The substructure is in good condition.

ROUTE 611 OVERPASS
(1 span, simply supported, prestressed concrete adjacent box beam)

The structure is in overall poor condition.

The deck is in poor 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.

The superstructure is in poor condition. The prestressed box beams exhibit a few small spalls and incipient spalls with moderate water stains throughout. There is a broken tie rod at Beam 13 over the east abutment.

The substructure is in fair 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 satisfactory condition.

The deck is in satisfactory condition. Exposed concrete at the deck underside exhibits transverse cracks with efflorescence and incipient spalls.

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

The superstructure is in satisfactory condition. Light to heavy laminar rust was noted at the bottom flange of several stringers.

The substructure is in satisfactory condition. Fine to medium cracks are typical the west and east abutment breastwalls.

BANK STREET OVERPASS
(3 span, continuous, steel multi-stringer)

The structure is in overall satisfactory condition.

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

The approach roadway is in good condition.

The superstructure is in satisfactory condition. Light to moderate laminar rust was noted at several stringers with minor material losses.

The substructure is in satisfactory condition. Several sealed vertical cracks were noted at the east abutment breastwall and backwall.

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 buildings and structures located on the grounds have been maintained in a state of good repair, and are in overall fair condition. 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.

The maintenance building asphalt parking lot is in fair condition with numerous cracks and worn asphalt. The slope embankment along Ramp C exhibits areas of erosion and washouts.

The administration building brick and stone façade exhibits areas of distress and displacement of the bricks due to pressure resulting from water intrusion.

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

CONCLUSIONS

Based on the findings of the 2013 inspections, the main river bridge and all approach structures are capable of safely supporting all legal loads.

A visual limited access inspection was performed due to the on-going rehabilitation Contract T-437A.

EASTON-PHILLIPSBURG TOLL BRIDGE MAIN RIVER BRIDGE

The structure is in overall satisfactory condition.

- The scope of work for the on-going Contract No. T-437A Easton Phillipsburg Toll Bridge Rehabilitation includes the following:
    - Clean and paint the entire bridge
    - Repave the bridge with asphalt
    - Repair the cracked base plates on the sidewalk railing posts
    - Repair the pedestal foundations at Sign Structures 1 and 3
    - Repoint stone masonry
    - Seal the medium crack at the abutments
    - Improve channel protection at the east and west abutments

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

BROAD STREET VIADUCT

The structure is in overall poor condition.

- The scope of work for the on-going Contract No. T-437A Easton Phillipsburg Toll Bridge Rehabilitation includes the following:
    - Replace all areas of deteriorated steel including the cracked steel angle at the north and south girder at Pier 3 and the north girder at Piers 1 and 2
    - Replace the gusset plates at Floorbeam 2 at the south girder and Floorbeam 4 at the north girder in Span 5
    - Repair the stringers and rebuild the bearing shelf seats at Stringers 1 through 4 (from north) at the east side of Floorbeam 5 in Span 4
    - Paint the entire steel superstructure
    - Replace the deck joints
    - Repair the cracked base plates on the sidewalk railing posts
    - Clean and epoxy coat all bridge seats

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

ROUTE 611 OVERPASS

The structure is in overall poor condition.

- The scope of work for the on-going Contract No. T-437A Easton Phillipsburg Toll Bridge Rehabilitation includes the following:
    - Replacement of structure

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

THIRD STREET OVERPASS

The structure is in overall satisfactory condition.

- The scope of work for the on-going Contract No. T-437A Easton Phillipsburg Toll Bridge Rehabilitation includes the following:
    - Replace the compression seal joints at the east and west abutments
    - Patch the spalls at the deck joint headers and adjacent areas with concrete
    - Remove the fractured concrete and patch the spalls at the west abutment bearing seat at Stringers 1, 3, 4, 7, 8 and 10, and the east abutment bearing seat and backwall at Stringer 7
    - Power wash the stone facing at the east and west abutments and repair all areas of loose and missing mortar

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

BANK STREET OVERPASS

The structure is in overall satisfactory condition.

- The scope of work for the on-going Contract No. T-437A Easton Phillipsburg Toll Bridge Rehabilitation includes the following:
    - Remove the incipient spalls at the south overhang and the median of the underside of deck at all spans, clean any exposed reinforcement, and epoxy coat all the spalled areas
    - Replace 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
    - 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
    - Replace the missing traffic delineators at the bridge median

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

PEDESTRIAN TUNNEL

The structure is in overall good condition. To improve access a pedestrian access ramp is being constructed on the Bushkill Road side of the tunnel under Contract T-437A.

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

EASTON-PHILLIPSBURG TOLL BRIDGE FACILITY AND GROUNDS

- Items to be included in future repair contract:
    - The administration building brick and stone façade exhibits areas of distress and displacement of the bricks due to pressure resulting from water intrusion. A series of probes should be undertaken to confirm issues with the masonry relieving angles and the displacement of the brick veneer. Following the probes, remove courses of masonry directly above and below the relieving angles, remove rust and treat the metal angles. Reinstallation or replacement of the angles may be needed.
    - Repoint areas of cracked, missing and deteriorated brick masonry throughout the Administration Building
    - Repair overhead garage door and safety device in maintenance equipment room
    - Resurface the asphalt parking lot, remove the unused sidewalk along the retaining wall and replace with grass.
    - Install a slope protection system along Ramp C to stop erosion and debris from falling onto the roadway

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

2014-2015 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 2014	2015
	Bridges, Roadways, Sidewalks, and Approaches			
437	**E-P TB Rehabilitation**	*$30,683,000*	$15,644,000	$2,281,000
	BRIDGES SUB TOTAL	***$30,683,000***	**$15,644,000**	**$2,281,000**
	Facilities and Grounds			
EPTB	**Unforeseen Projects**	*$1,213,000*	$75,000	$78,000
574	**E-P TB Emergency Generator Improvements**	*$202,000*	$27,000	$176,000
641	**Easton – Phillipsburg Toll Bridge Ramp C Slope Stabilization**	*$2,498,000*	$50,000	$2,448,000
	FACILITIES AND GROUNDS SUB TOTAL	***$3,913,000***	**$152,000**	**$2,702,000**
	TOTAL COST	***$34,596,000***	**$15,796,000**	**$4,983,000**

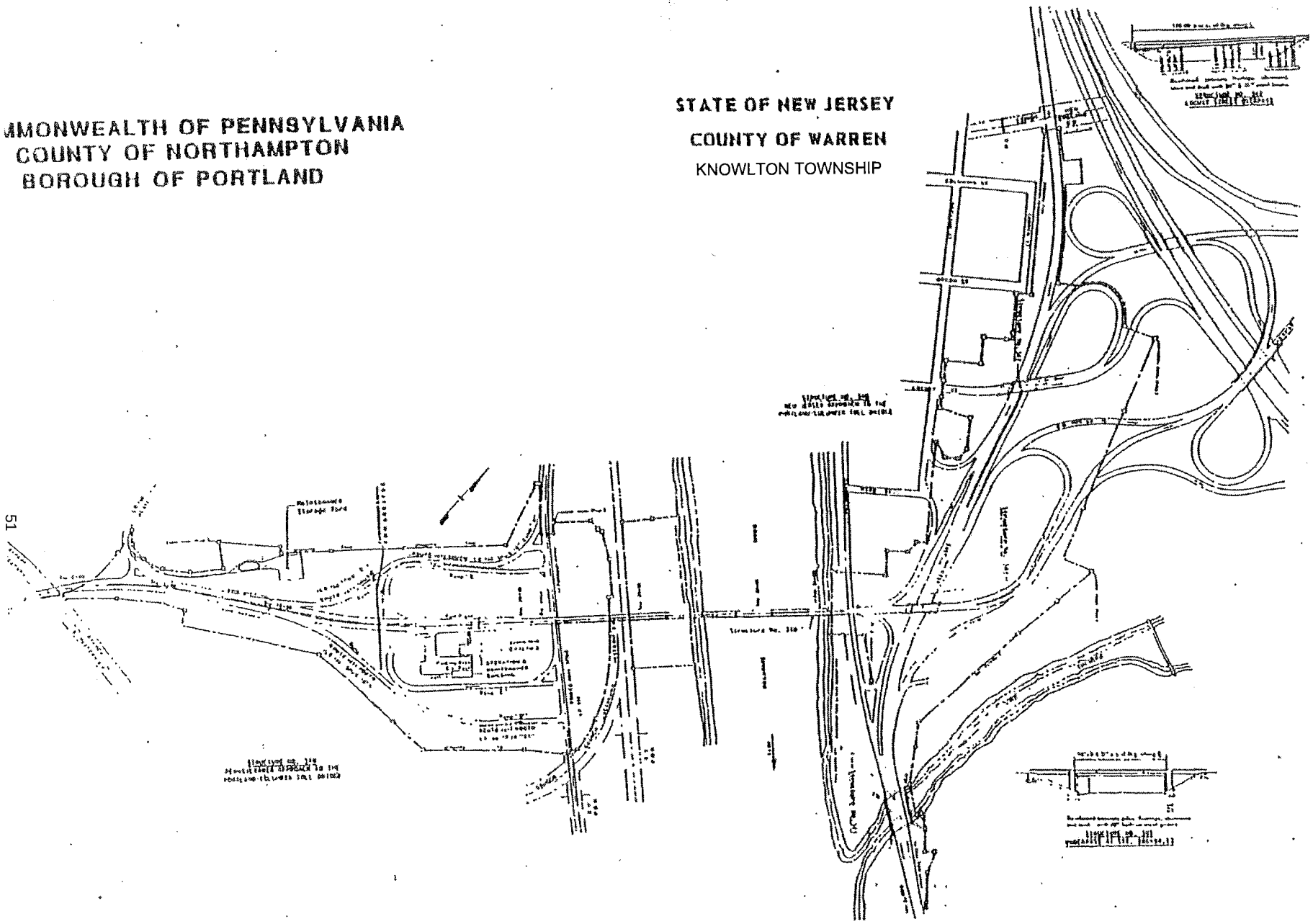
PORTLAND-COLUMBIA

TOLL BRIDGE FACILITY

(Structure No. 340)

MMONWEALTH 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 under Contract T-297. 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.

In 2010, the Commission completed a Substructure & Scour Remediation project in Districts 1, 2 & 3 under Contract No. T/TS-476A-2. This project included substructure repairs of piers 1 through 9 and both abutments including masonry repointing, epoxy injection crack sealing of pier footings and spall repairs. In 2012, the Commission completed a second Substructure & Scour Remediation project in Districts 1, 2 & 3 under Contract No. T/TS-573A. This project included underwater repairs to the footings at piers 6 and 7 consisting of tremie and concrete bag remediation.

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.

Repairs to the Locust Street Bridge were completed in 2010 under Contract No. T-441A. These repairs included, resetting, cleaning and painting of the steel bearings, concrete repairs to the bridge substructure and new concrete slope protection at each abutment.

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 toll booth barrier gates were removed in 2010 with the installation of Violation Enforcement System (VES) technology - high-resolution cameras and lights - in toll collection lanes

A 2,000 ton salt storage barn was constructed in 2010 under Contract No. T-441A which services all District 3 bridges. Also completed under Contract No. T-441A was the installation of impact attenuators at the toll plaza, repairs to the concrete toll plaza islands and restriping of the traffic marking in the toll plaza area. The facility parking lot, driveways and maintenance yards were resurfaced and new curbs and sidewalks were also installed. Another project element was the installation of a sewer line connecting the administration building to the new Portland Borough municipal sewer system.

The 2013 inspection included the main river bridge, two approach bridges, and the facility and grounds.

SIGNIFICANT FINDINGS

Based on the findings of the 2013 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 Fair condition. Large areas of fine map cracking were 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 2011 under Contract No. C-605A. The underwater components of the substructure were noted to be in good condition. For additional information see the final Contract No. C-605A report.

The sign structures (5) are in overall satisfactory condition with moderate rust at the posts.

The Commission jurisdiction roadway is in overall fair condition. The on ramp to Locust Street westbound exhibits numerous sealed cracks throughout. The on ramp to I-80 eastbound from Locust Street eastbound exhibits wide mapcracking throughout. There are numerous wide sealed and partially sealed cracks on the US Route 46 onramp from US Route 46 eastbound.

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 immediately adjacent to the bridge 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 good condition.

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

PORTLAND-COLUMBIA TOLL BRIDGE FACILITY AND GROUNDS

The buildings and structures located on the grounds have been maintained in a state of good repair, and are in overall good condition.

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

The HVAC system is approximately 20 years old and may be reaching the end of its useful life.

The asphalt roadways throughout the Commissions are in fair condition, exhibiting numerous cracks, potholes and areas of settlement.

CONCLUSIONS

Based on the findings of the 2013 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.

- Items to be included in future repair contract:
  - Spall repair at Pier 2 and Pier 4
  - Pressure inject cracks at Pier 4
  - Remove debris at Pier 8
  - Place riprap around Pier 5 and Pier 8

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

ROUTE 46 OVERPASS

The structure is in overall good condition.

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

LOCUST STREET OVERPASS

The structure is in overall good condition.

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

PORTLAND-COLUMBIA TOLL BRIDGE FACILITY AND GROUNDS

The HVAC system in the administration building is nearing the end of its useful life. A study should be performed to determine if and when system replacement should be done.

Mill and resurface deteriorated approach roadway pavement throughout the facility.

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

2014-2015 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 2014	2015
	Bridges, Roadways, Sidewalks, and Approaches			
566	**P-C Approach Roadway Improvements**	*$6,047,000*	$366,000	$5,682,000
	BRIDGES SUB TOTAL	***$6,047,000***	**$366,000**	**$5,682,000**
	Facilities and Grounds			
PCTB	**Unforeseen Projects**	*$792,000*	$50,000	$52,000
512	**P-C HVAC Upgrade**	*$1,486,000*	$0	$29,000
604	**P-C TB Emergency Generator Improvements**	*$214,000*	$214,000	$0
	FACILITIES AND GROUNDS SUB TOTAL	***$2,492,000***	**$264,000**	**$81,000**
	TOTAL COST	***$8,539,000***	**$630,000**	**$5,763,000**

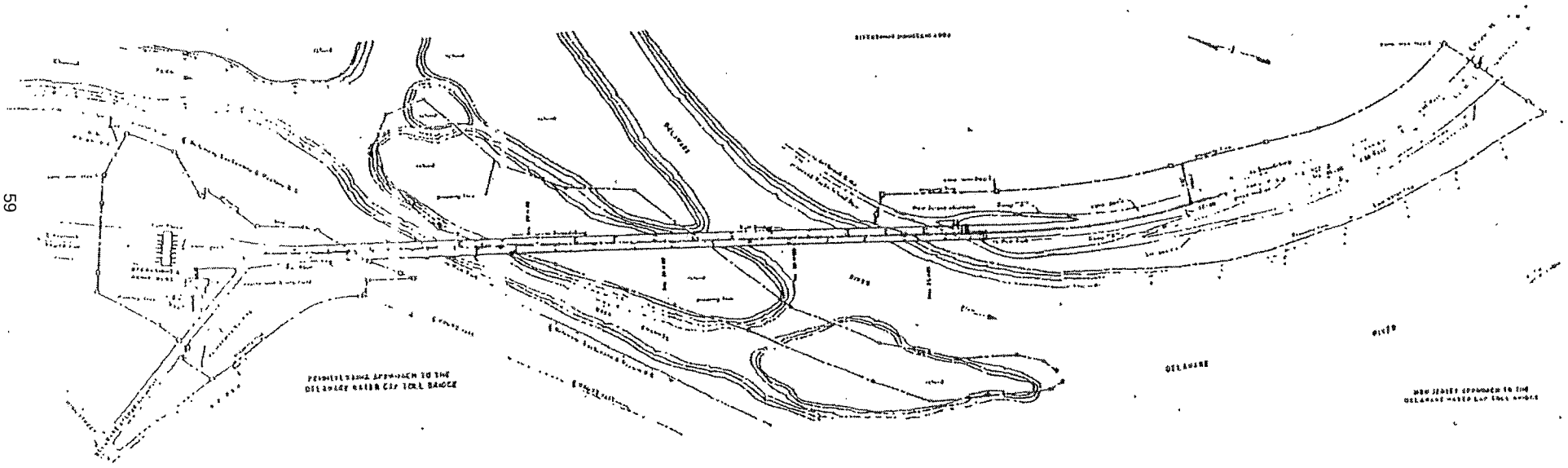
DELAWARE WATER GAP

TOLL BRIDGE FACILITY

(Structure Nos. 380 & 390)

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF MONROE
BOROUGH OF DELAWARE WATER GAP

STATE OF NEW JERSEY
COUNTY OF WARREN
HARDWICK TOWNSHIP



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.

In November 2011, both structures were rehabilitated under Contract No. T-472A. This contract included replacement of the steel expansion bearings, concrete repairs to the piers and abutments, replacement of the deck joints and cleaning and painting of the structural steel.

In 2010, the Commission completed a Substructure & Scour Remediation project in Districts 1, 2 & 3 under Contract No. T/TS-476A-2. This project included substructure repairs to piers 4W through 7W, 14W and 14E including masonry repointing and spall repairs. In 2012, the Commission completed a second Substructure & Scour Remediation project in Districts 1, 2 & 3 under Contract No. T/TS-573A. This project included repairs to the footings at piers 8W, 9W, 8E and 9E consisting of epoxy injection crack sealing and Riprap repair around the perimeter of the footing.

DELAWARE WATER GAP TOLL BRIDGE FACILITY AND GROUNDS

The one-way toll plaza, located at the Pennsylvania approach has five (5) toll lanes. The toll plaza was reconfigured to in 2011 under the Delaware Water Gap Open Road Tolling Implementation, Contract No. T-440B. This traffic-congestion-mitigation project involved the reconfiguration of the barrier toll plaza, removing three lanes to make way for a single Express E-ZPass lane with shoulders. The project included the removal of the three left toll plaza booths

and replacing them with a single open-road tolling lane. Additionally, the remaining five lanes at the toll plaza consist of a new E-ZPass only lane and four mixed-mode (cash and electronic toll collections) lanes. All lanes are now capable of handling both cars and trucks. The project also involves the installation of new signage, paving and striping work. The toll booth barrier gates were removed in 2010 with the installation of Violation Enforcement System (VES) technology - high-resolution cameras and lights - in toll collection lanes

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 maintenance garage was under construction at the time of inspection (Contract No. T-474A) and therefore was not inspected during this cycle.

The 2013 inspection included the eastbound and westbound main river bridges and the facility and grounds.

SIGNIFICANT FINDINGS

Based on the findings of the 2013 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 good condition.

The deck is in satisfactory condition. Numerous fine to wide transverse cracks were noted throughout the deck. The 2011 structure rehabilitation included the application of penetrating deck sealant.

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

The superstructure and substructure are in good condition.

An underwater inspection was performed in 2011 under Contract No. C-605A. The underwater components of the substructure were noted to be in satisfactory condition due to minor deterioration of the substructure units and exposed footings. For additional information see the final Contract No. C-605A report.

The sign structures (3) at the toll plaza are in overall good condition.

DELAWARE WATER GAP TOLL BRIDGE (WESTBOUND)
(16 span, riveted steel multi-girder)

The structure is in overall good condition.

The deck is in satisfactory condition. Numerous fine to wide transverse cracks were noted throughout the deck. The 2011 structure rehabilitation included the application of penetrating deck sealant.

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

The superstructure and substructure are in good condition.

An underwater inspection was performed in 2011 under Contract No. C-605A. The underwater components of the substructure were noted to be in satisfactory condition due to minor deterioration of the substructure units and exposed footings. For additional information see the final Contract No. C-605A report.

DELAWARE WATER GAP TOLL BRIDGE FACILITY AND GROUNDS

The buildings and structures located on the grounds have been maintained in a state of good repair, and are in overall good condition. The maintenance garage was not inspected this year due to ongoing construction under Contract No. T-474A.

The HVAC system in the administration building is nearing the end of its useful life. During the facilities inspection, Maintenance and Operations personnel had noted the current HVAC system does not function properly.

CONCLUSIONS

Based on the findings of the 2013 inspections, the main river bridges are capable of safely supporting all legal loads.

DELAWARE WATER GAP TOLL BRIDGE (EASTBOUND)

The structure is in overall good condition.

- Items to be included in future repair contract:
  - Place riprap at Pier 7, Pier 8, Pier 9 and Pier 12
  - Remove debris at Pier 3, Pier 8, Pier 9, Pier 10, Pier 11 and Pier 13

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

DELAWARE WATER GAP TOLL BRIDGE (WESTBOUND)

The structure is in overall good condition.

- Items to be included in future repair contract:
  - Place riprap at Pier 8, Pier 9, Pier 12 and Pier 14
  - Remove debris at Pier 3, Pier 6, Pier 8, Pier 9, Pier 10, Pier 11, Pier 12 and Pier 13

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

DELAWARE WATER GAP TOLL BRIDGE FACILITY AND GROUNDS

The HVAC system in the administration building is nearing the end of its useful life. A study should be performed to determine if and when system replacement should be done.

Construction for the River Road Improvements (Contract No. C-24A) was ongoing during the inspection.

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

2014-2015 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 2014	2015
	Bridges, Roadways, Sidewalks, and Approaches			
581	**DWG / I-80 NJ Roadway Safety Improvements**	*$317,000*	$284,000	$0
440C	**DWG Toll Bridge Improvements (future widening/replacement coordination)**	*$59,000*	$5,000	$6,000
	BRIDGES SUB TOTAL	***$376,000***	**$289,000**	**$6,000**
	Facilities and Grounds			
DWGTB	**Unforeseen Projects**	*$1,199,000*	$75,000	$78,000
474	**DWG Maintenance Garage Improvements**	*$3,496,000*	$491,000	$0
	FACILITIES AND GROUNDS SUB TOTAL	***$4,695,000***	**$566,000**	**$78,000**
	TOTAL COST	***$5,071,000***	**$855,000**	**$84,000**

MILFORD-MONTAGUE

TOLL BRIDGE FACILITY

(Structure No. 400)

COMMONWEALTH OF PENNSYLVANIA

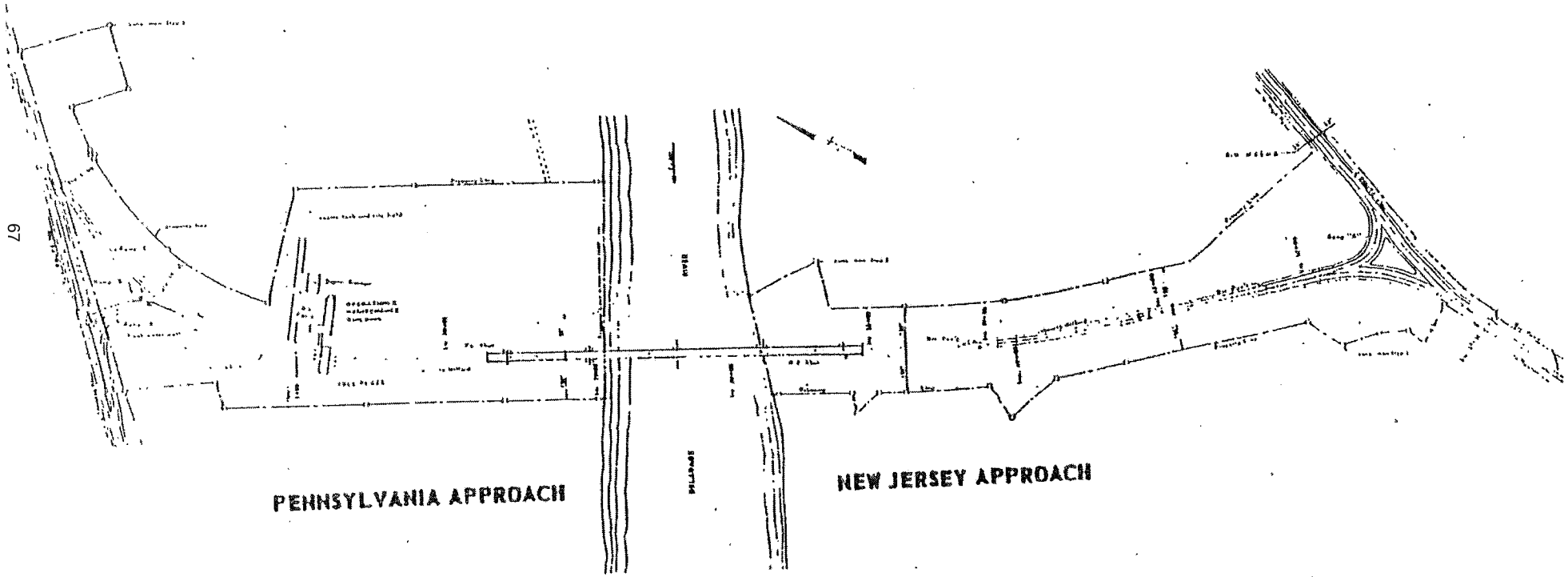
COUNTY OF PIKE

DINGMAN TOWNSHIP

STATE OF NEW JERSEY

COUNTY OF SUSSEX

TOWN OF MONTAGUE



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 Route209 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. In 1999 the toll plaza was converted to on-way collection.

Contract No. T-430A, a rehabilitation contract for the Milford-Montague Toll Bridge, was completed in 2009. The improvements to the structure included 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.), and a new toll plaza and canopy.

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. The toll booth barrier gates were removed in 2010 with the installation of Violation Enforcement System (VES) technology - high-resolution cameras and lights - in toll collection lanes

The Commission facility was connected to the local municipal water supply provided by the Milford Water Authority in 2009 under Contract No.T-432A.

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

The 2013 inspection included the main river bridge and the facility and grounds.

SIGNIFICANT FINDINGS

Based on the findings of the 2013 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 is in very good condition.

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

An underwater inspection was performed in 2011 under Contract No. C-605A. The underwater components of the substructure were noted to be in good condition. For additional information see the final Contract No. C-605A report.

The sign structure is in overall good condition.

MILFORD-MONTAGUE TOLL BRIDGE FACILITIES AND GROUNDS

The buildings and structures located on the grounds have been maintained in a state of good repair, and are in overall good condition. The toll plaza, approach roadway, and sign structures were rehabilitated under Contract No. T-430A in 2009.

It is noted that the emergency generator is located inside the Maintenance garage. During prolonged use, noise levels may be excessive. Consideration should be given to relocate the generator outdoors.

CONCLUSIONS

Based on the findings of the 2013 inspections, the main river bridge is capable of safely supporting all legal loads.

MILFORD-MONTAGUE TOLL BRIDGE

The structure is in overall good condition.

- Items to be included in future repair contract:
    - Place riprap at the north nose of Pier 2
    - Remove debris at Pier 2

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

MILFORD-MONTAGUE TOLL BRIDGE FACILITIES AND GROUNDS

The HVAC system in the administration building is nearing the end of its useful life. A study should be performed to determine if and when system replacement should be done.

- Items to be included in future repair contract:
    - Relocate the loud emergency generator to the outside of the maintenance garage

For a list of maintenance repair items, see the *2013 Annual Maintenance Report*.

2014-2015 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 2014	2015
	Bridges, Roadways, Sidewalks, and Approaches			
	The bridge was rehabilitated in 2009			
	BRIDGES SUB TOTAL	***$0***	**$0**	**$0**
	Facilities and Grounds			
MMTB	**Unforeseen Projects**	*$815,000*	$50,000	$52,000
636	**Milford-Montague Toll Bridge Emergency Generator Improvements**	*$221,000*	$221,000	$0
	FACILITIES AND GROUNDS SUB TOTAL	***$1,036,000***	**$271,000**	**$52,000**
	TOTAL COST	***$1,036,000***	**$271,000**	**$52,000**

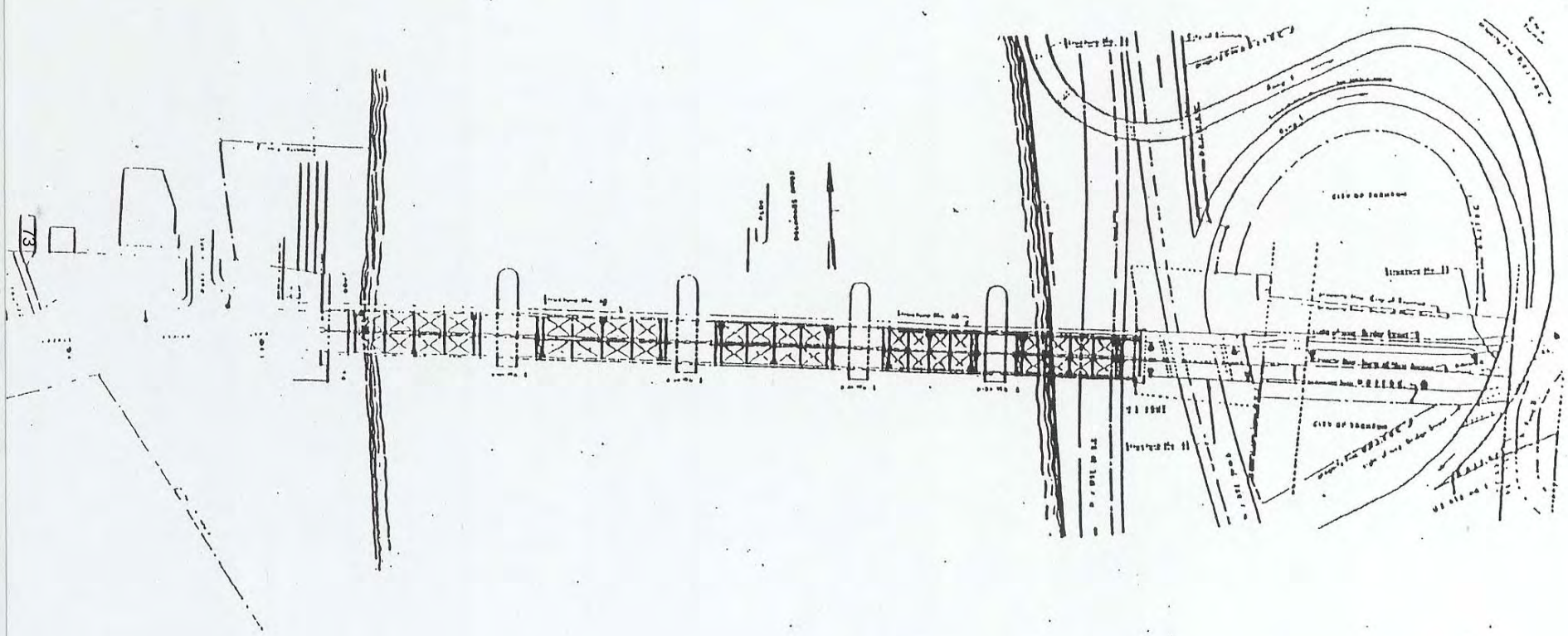
LOWER TRENTON

TOLL-SUPPORTED BRIDGE

(Structure No. 40)

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
BOROUGH OF MORRISVILLE

STATE OF NEW JERSEY
COUNTY OF MERCER
CITY OF TRENTON



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. A timber plank sidewalk is supported by the upriver truss on steel cantilever brackets. 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 for the bridge roadway.

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 No. TS-398C.

The structure was cleaned and painted under Contract No. TS-398A in 2005.

Contract No. T/TS-476A-1 Substructure Repair and Scour Remediation - District 1, included above water repairs to Piers 1 through 4 and the PA abutment including masonry repointing, epoxy crack sealing and masonry stone replacement. Pier 4 also included underwater concrete repairs to the apron. This work was completed in 2010. The second scour contract, Contract No. T/TS-573A included underwater concrete repairs to the aprons at Piers 1, 2 and 3. This work was completed in 2012.

The east approach bridge over State Route 29 is NJDOT owned and was not part of the inspection.

LOWER TRENTON TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

A bridge officer shelter is located at the northwest Pennsylvania approach of the Lower Trenton Toll-Supported Bridge, installed in 2006.

SIGNIFICANT FINDINGS

Based on the findings of the 2014 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.

The bridge deck is in good condition. The NJ & PA approach roadway is in poor condition with deteriorated and uneven asphalt beyond the bridge approach.

The superstructure is in satisfactory condition. Numerous lower chord gusset plates at the north, center and south trusses exhibit areas of up to 1/4" material losses in all spans. Lower chord members at the south truss typically exhibit material losses up to 3/16". Up to 5/16" pack rust was noted at the lower chord members between the north and south plates and angle members with areas of minor material losses to the plates. Truss members above the deck exhibit paint chalking with the chalking more severe at the top plate at the upper chord where heavy bird droppings are common.

The "Trenton Makes the World Takes" sign located on the downstream truss of the bridge has been reported as experiencing numerous letter outings and determined to be underperforming especially during and after periods of poor weather. These reports appear related to the nature of the neon lighting source and associated electrical components.

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. The pier concrete aprons were not visible at the time of inspection due to high water level.

An underwater inspection was performed in 2012 under Contract No. C-605A. The substructure units below the waterline were found to be in fair condition. For additional information see the final Contract No. C-605A report.

LOWER TRENTON TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall satisfactory condition. The floor tiles in the shelter bathroom are in poor condition. The concrete sidewalk and curbs surrounding the shelter are in poor condition exhibiting spall at the south side and around the manhole cover. The corner of the asphalt driveway for the shelter exhibits settlement.

CONCLUSIONS

Based on the findings of the 2014 inspections, the bridge is capable of safely supporting the posted load.

LOWER TRENTON TOLL-SUPPORTED BRIDGE

The structure is in overall satisfactory condition.

- Items to be included in future repair contract:
  - Repoint masonry joints at substructure units (500 LF)
  - Resurface the New Jersey and Pennsylvania approach roadway
  - Replace "Trenton Makes" sign lighting system

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

LOWER TRENTON TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall satisfactory condition.

- Items to be included in future repair contract:
  - Rebuild all areas of cracked, spalled and settled concrete at the Pennsylvania approach sidewalk and curbs.

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

2015-2016 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 2015	2016
	Bridges, Roadways, Sidewalks, and Approaches			
	In 1997 this bridge was rehabilitated.			
639LT	**Lower Trenton TSB Approach Roadways Improvements**	*$4,028,826*	$3,830,673	$0
670	**Lower Trenton Toll Supported Bridge "Trenton Makes" Sign Replacement**	*$658,000*	$114,000	$544,000
	BRIDGES SUB TOTAL	***$4,686,826***	**$3,944,673**	**$544,000**
	Facilities and Grounds			
LTTSB	**Unforeseen Projects**	*$390,933*	$25,000	$25,821
	FACILITIES AND GROUNDS SUB TOTAL	***$390,933***	**$25,000**	**$25,821**
	TOTAL COST	***$5,077,759***	**$3,969,673**	**$569,821**

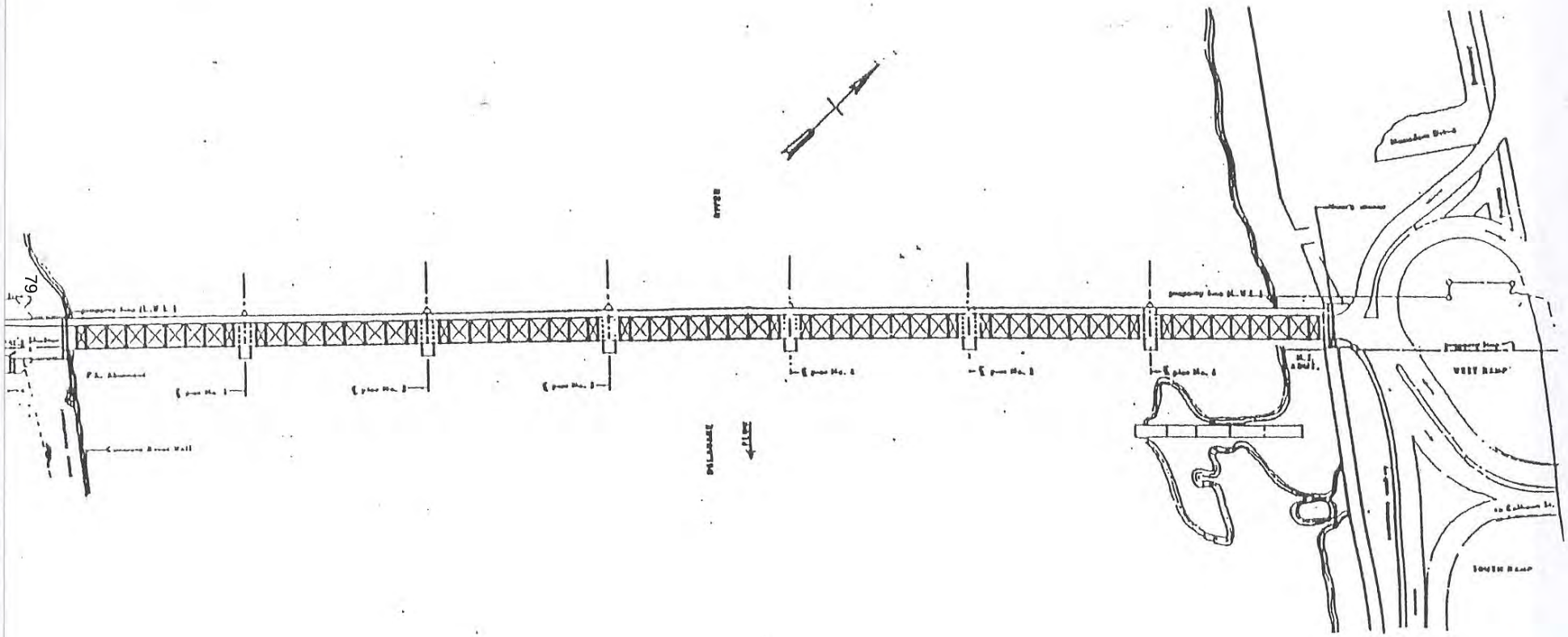
CALHOUN STREET

TOLL-SUPPORTED BRIDGE

(Structure No. 60)

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
BOROUGH OF MORRISVILLE

STATE OF NEW JERSEY
COUNTY OF MERCER
CITY OF TRENTON



CALHOUN STREET TOLL SUPPORTED BRIDGE

GENERAL

CALHOUN STREET TOLL-SUPPORTED BRIDGE
(7 span, wrought iron Phoenix Pratt 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 on the bridge roadway.

A comprehensive rehabilitation of the structure was completed under Contract No. TS-447A in 2010. Major work items performed during this rehabilitation included floorsystem, deck and sidewalk replacement, truss repairs, cleaning and painting of existing superstructure steel, substructure repairs and approach roadway work.

Contract No. T/TS-476A-1 Substructure Repair and Scour Remediation - District 1, included underwater concrete repairs to the footings at Piers 4, 5 and 6. This work was completed in 2010. Contract No. T/TS-573A included underwater footing repairs at Piers 1, 2 and 3, and was completed in 2012.

CALHOUN STREET TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

A bridge officer shelter is located at the southwest Pennsylvania approach and the southeast New Jersey approach of the Calhoun Street Toll-Supported Bridge.

SIGNIFICANT FINDINGS

Based on the findings of the 2014 inspections, the bridge is capable of safely supporting the posted load.

CALHOUN STREET TOLL-SUPPORTED BRIDGE
(7 span, wrought iron Phoenix Pratt Truss)

The structure is in overall good condition.

The deck is in good condition.

The approach roadways are in good condition.

The superstructure and substructure are in good condition.

An underwater inspection was performed in 2011 under Contract No. C-605A. The substructure units below the waterline were found to be in satisfactory condition. For additional information see the final Contract No. C-605A report.

CALHOUN STREET TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall satisfactory condition. There is evidence of water infiltration through the roof with water staining noted in the ceiling insulation and tiles. The east shelter window leaks and the floor tiles are in poor condition. The vinyl flooring throughout the shelter is delaminating. The exterior floor drain is clogged and can potentially lead to flooding problems in the shelter basement. The steps at the base of the shelter foundation exhibit movement creating a gap between the steps and the shelter.

The New Jersey officer shelter is in overall good condition.

CONCLUSIONS

Based on the findings of the 2014 inspections, the bridge is capable of safely supporting the posted load.

CALHOUN STREET TOLL-SUPPORTED BRIDGE

The structure is in overall good condition.

- Items to be included in future repair contract:
  - Replace the missing stones at substructure units (4 SF)
  - Remove debris at substructure units (25 CY)

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

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 *2014 Annual Maintenance Report*.

2015-2016 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 2015	2016
	Bridges, Roadways, Sidewalks, and Approaches			
	The bridge was rehabilitated in 2010			
	BRIDGES SUB TOTAL	***$0***	**$0**	**$0**
	Facilities and Grounds			
CSTSB	**Unforeseen Projects**	*$212,727*	$15,000	$15,493
	FACILITIES AND GROUNDS SUB TOTAL	***$212,727***	**$15,000**	**$15,493**
	TOTAL COST	***$212,727***	**$15,000**	**$15,493**

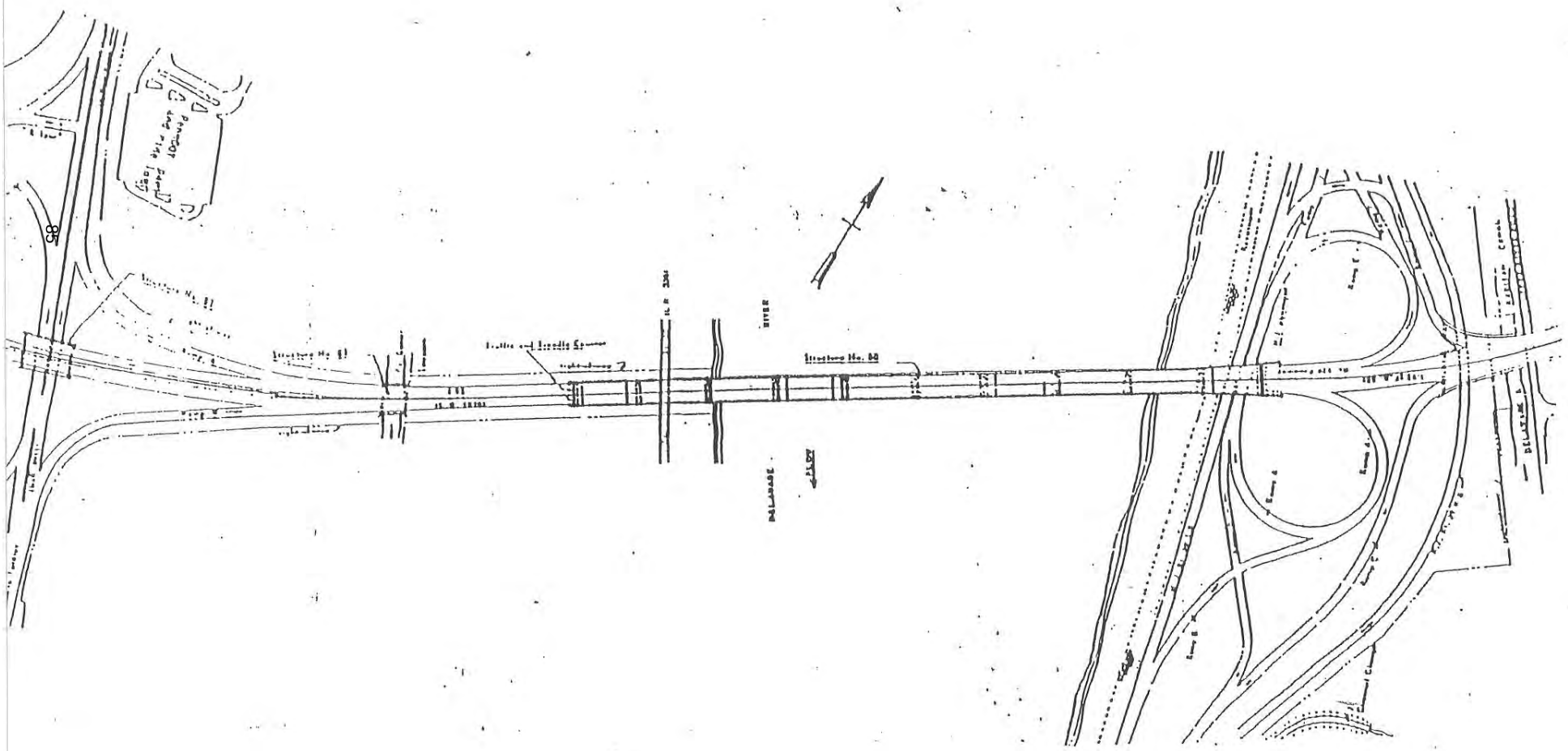
SCUDDER FALLS

TOLL-SUPPORTED BRIDGE

(Structure Nos. 80, 81 & 82)

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
TOWNSHIP OF LOWER MAKEFIELD

STATE OF NEW JERSEY
COUNTY OF MERCER
TOWNSHIP OF EWING



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 steel 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 1,744 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 deck joints were replaced in 2006 under Contract TS-393C.

Based upon conclusions contained in its 2002 Southerly Crossings Corridor Study. the Commission will replace the existing Scudder Falls Bridge. The Replacement Project will also re-construct and widen the Pennsylvania and New Jersey approach roadways; and, reconstruct and reconfigure the Taylorsville Road interchange in Pennsylvania and the NJ Route 29 Interchange in New Jersey. The Commission completed the Environmental Documentation and Preliminary Design phase of the Project in 2012 with the issuance of Federal approval for the project. The Commission has initiated the necessary long-lead work tasks including archaeological investigations, environmental permitting, right-of-way acquisition, and stormwater management design required for plans to replace the Scudder Falls Bridge.

The bridge replacement project is projected to be the largest single capital undertaking in the Commission's history – approximately $344 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 one of the most heavily travelled river crossings among the 20 bridges in the Commission's system.

The Pennsylvania Turnpike Commission has begun construction of a new interchange, which will provide a direct link from the Turnpike to I-95 in Bucks County. Once completed the Pennsylvania turnpike will be re-designated as I-95 from the new interchange east to the connection with the New Jersey Turnpike at the Delaware River. The existing I-95 roadway north of the new interchange through Bucks County including the Scudder Falls Bridge is currently conditionally approved by AASHTO to be re-designated as I-395. The states continue to discuss the anticipated route number revision with a decision anticipated in the near future. The Pennsylvania Turnpike Commission interchange project is currently under construction and is scheduled to be completed in 2017.

The proposed Scudder Falls Bridge Replacement Project area would extend 4.4 miles along I-95 – from the Route 332 interchange in Bucks County, Pennsylvania to the Bear Tavern Road interchange in Mercer County, New Jersey. 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 lanes northbound for entry/exit travel, and one auxiliary lane southbound 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
- Noise-abatement walls along the New Jersey and Pennsylvania approach roadways.

To fully finance the multi-faceted project, the Commission's traffic, revenue and financing analysis has indicated a need to toll the facility at some future date due to the absence of federal and state transportation funding. The Commission will implement All Electronic Tolling (AETC) on the new Scudder Falls Bridge in the southbound direction only. This will be the Commission's first AET facility, which will collect tolls at prevailing highway speeds, eliminating the need for a traditional toll plaza. The FHWA has determined there is no need for a tolling agreement for the facility.

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. This structure will be replaced with a new, wider structure as part of the Scudder Falls Bridge Replacement project.

The deck was replaced in 1982.

TAYLORSVILLE ROAD OVERPASS
(3 span, simply supported, steel multi-stringer)

Taylorsville Road Overpass (Structure No. 82) carries Interstate 95 over Taylorsville 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 length of the structure is 138 feet. This structure will be replaced as part of the Scudder Falls Bridge Replacement project. The new structure will be wider and longer due to the widening of Taylorsville Road as part of the Scudder Falls Bride Replacement project.

SIGNIFICANT FINDINGS

Based on the findings of the 2014 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 fair condition.

The deck is in fair condition. The top of deck typically exhibits numerous transverse cracks. Numerous concrete patches were noted throughout the top of deck with several deteriorated patches. The underside of deck exhibits random spalls and transverse cracking with exposed and corroded reinforcement up to 15% of the total deck area.

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 spalls and medium to wide cracks.

The superstructure is in fair condition. Several stringers exhibit horizontal cracks in the web and material losses at the bottom flange in Spans 2, 5, 6, 8 and 9 adjacent to the retrofit bearings. Floorbeam 3 in Span 6 exhibits a crack in the tie plate over the south girder which is arrested by the connection bolt hole. There have been no signs of crack propagation since the previous inspection. Sheared anchor bolts are present at the south tie plate of Floorbeam 2 in Span 3 (1 of 8), the north tie plate of Floorbeam 1 in Span 4 (1 of 8), the north tie plate of Floorbeam 6 in Span 5 (1 of 8), the north tie plate of Floorbeam 2 in Span 6 (1 of 8), and the north tie plate of Floorbeam 2 in Span 9 (3 of 8). The structural steel members exhibit large areas of peeling paint and surface rust with minor material losses. Light to moderate surface rust was noted in hangers and pin washers with minor isolated material losses arrested with paint in hanger plates.
The substructure is in good condition.

An underwater inspection was performed in 2013 under Contract No. C-605A. The substructure units below the waterline were found to be in good condition. For additional information see the final Contract No. C-605A report.

PENNSYLVANIA CANAL OVERPASS
(1 span, simply supported, steel multi-stringer)

The structure is in overall fair condition.

The deck and approach roadway are in good condition.

The superstructure is in fair condition. Heavy laminar rust is typical at the stringer ends and bearings. Up to 1/16" material loss was noted at the bottom flange and base of web at Stringers S1, and S7 through S15.

The substructure is in satisfactory condition. Areas of spalling with exposed reinforcement were noted on the abutments.

TAYLORSVILLE ROAD OVERPASS
(3 span, steel multi-stringer)

The structure is in overall fair condition.

The deck is in satisfactory condition. The underside of deck exhibits areas of fine mapcracking with efflorescence and water stains in all spans. The top of deck exhibits minor asphalt wearing with several longitudinal and transverse cracks.

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 base of web. Stringer S14 in Span 2 exhibits moderate impact damage (up to 3" out of plane bending) 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. Stringer S3 (2 of 2), Stringer S13 (2 of 2), and Stringer S14 (1 of 2) exhibit sheared anchor bolts at the east abutment.

The substructure is in fair condition. The east abutment backwall exhibits a spall with exposed reinforcement and hollow concrete at the north end. Fine to medium vertical cracks were noted at several substructure units. Failed concrete repairs with exposed rusted reinforcement was noted at the underside of Pier 2 cap and the corner of Column 1.

CONCLUSIONS

Based on the findings of the 2014 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 fair condition. Due to the age and deteriorating condition, the concrete bridge deck is approaching the end of its useful service life. In the absence of the bridge replacement project, a bridge deck condition survey should be performed in the near future to better determine the extent of deterioration and remaining service life. Non Destructive Testing (NDT) of the pin and hanger system should be performed concurrently with the bridge deck condition survey.

- Items to be included in future repair contract (in the absence of the bridge replacement project):
    - Replace the sheared anchor bolts with A325 high strength bolts at several tie plates (8 total)
    - Re-attach all disconnected bridge rails, replace all cracked sections of the bridge railing, and replace all missing sections of the bridge railing
    - Clean and paint the steel superstructure (275,000 SF)
    - Clean and coat the underdeck spalling (30 SF)
    - Concrete bridge deck replacement
    - Spall repair at substructure units (25 SF)
    - Repoint stone masonry at substructure units (275 LF)
    - Remove debris at substructure units (226 CY)
    - Place riprap at substructure units (80 CY)

The existing deck is over 50 years old, has exceeded its expected useful life, and requires ongoing lane closings for the repair of deck spalls. The deck deterioration is accelerating quickly with some recent spalls penetrating the full depth of the deck. Replacement of the concrete deck is estimated to cost approximately $45-50 million. Because of the type of bridge superstructure details, the deck replacement would require reducing the number of lanes to one lane in each direction for staged construction for a duration of 24 to 30 months resulting in significant regional traffic delays.

In 2014 the Commission completed a study to determine the repairs to the Scudder Falls Bridge. This study was prompted by the deteriorating condition of the bridge deck, and increasing number of deck repairs by the Commission's Maintenance Forces over the past few years. As a result of the Study, the Commission is preparing construction plans for a deck repair project, to be performed in 2015. The Repair contract will address the deck spall repairs only, and is intended to extend the useful life of the bridge deck until the Replacement Bridge can be constructed.

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

PENNSYLVANIA CANAL OVERPASS

The structure is in overall fair condition.

- Items to be included in future repair contract (in the absence of the bridge replacement project):
    - Clean and paint the bearings throughout the structure (30 total)
    - Clean and paint the steel superstructure (8,400 SF)
    - Clean and epoxy coat the bridge seats (740 SF)

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

TAYLORSVILLE ROAD OVERPASS

The structure is in overall fair condition.

- Items to be included in future repair contract (in the absence of the bridge replacement project):
    - Clean and paint the bearings throughout the structure (90 total)
    - Clean and paint the steel superstructure (18,100 SF)
    - Remove any loose concrete surrounding the spalls at the east abutment and Pier 2, clean and epoxy coat any exposed reinforcement and patch (60 SF)
    - Clean and epoxy coat the bridge seats (800 SF)

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

2015-2016 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 2015	2016
	Bridges, Roadways, Sidewalks, and Approaches			
393	**Prelim. Engineering & Environmental Doc. for the Scudder Falls (I-95) Improvements**	*$13,583,321*	$258,678	$0
660	**I-95/Scudder Falls Replacement**	*$327,484,128*	$10,522,124	$21,985,335
677	**Scudder Falls Bridge Interim Deck Repairs**	*$3,262,539*	$2,156,465	$321,748
	BRIDGES SUB TOTAL	***$344,329,989***	**$12,937,268**	**$22,307,083**
	Facilities and Grounds			
SFTSB	**Unforeseen Projects**	*$553,414*	$75,000	$77,463
	FACILITIES AND GROUNDS SUB TOTAL	***$553,414***	**$75,000**	**$77,463**
	TOTAL COST	***$344,883,403***	**$13,012,268**	**$22,384,546**

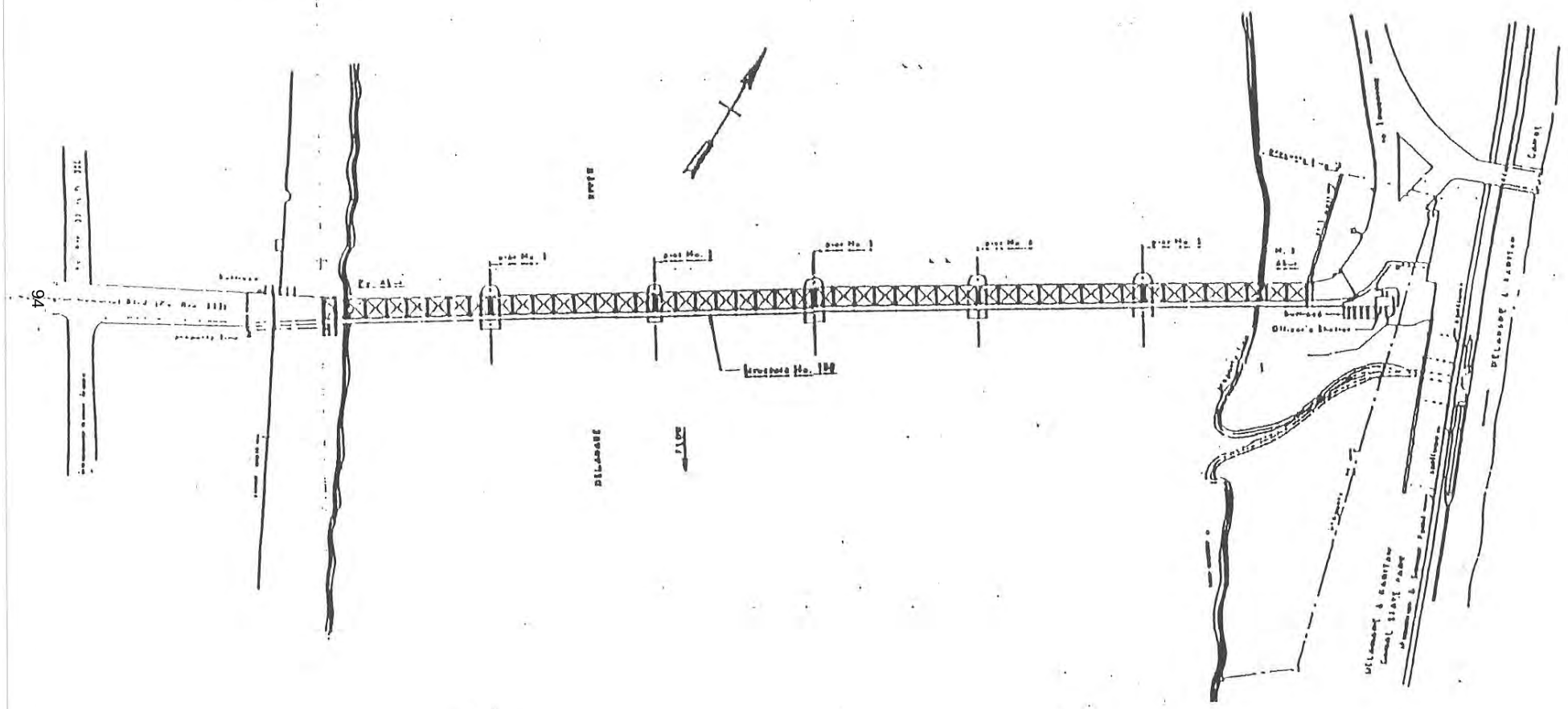
WASHINGTON CROSSING

TOLL-SUPPORTED BRIDGE

(Structure No. 100)

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

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



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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 for the bridge roadway.

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 due to post flood damage.

The structure was rehabilitated under Contract No. TS-442A in 2010. This contract included drainage repairs to the Pennsylvania abutment, reconstruction of abutment backwalls and deck joints, miscellaneous substructure and superstructure repairs and re-facing of Pier 2 to match the historic appearance of the other piers, and pedestrian sidewalk repairs.

Contract No. T/TS-573A, Substructure Repair & Scour Remediation, Toll & Toll-Supported Bridges, Districts 1, 2 & 3 included underwater scour remediation around the aprons at Piers 3, 4 & 5 and masonry repointing and stone replacement at Pier 5. This contract work was completed in 2012.

WASHINGTON CROSSING TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

A bridge officer shelter is located at the southeast approach corner of the Washington Crossing Toll-Supported Bridge.

SIGNIFICANT FINDINGS

Based on the findings of the 2014 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.

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 lower chord gusset plates typically exhibit areas of 1/8" material loss with several exhibiting vertical bending / bowing. Light to moderate rust was noted at the floorsystem in all spans. The top flange of all floorbeams between Stringers S5 through S7 exhibit up to 1/8" pitting.

The substructure is in good condition.

An underwater inspection was performed in 2011 under Contract No. C-605A. The substructure units below the waterline were noted to be in satisfactory condition. For additional information see the final Contract No. C-605A report.

WASHINGTON CROSSING TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall good condition.

CONCLUSIONS

Based on the findings of the 2014 inspections, the bridge is capable of safely supporting the posted load.

WASHINGTON CROSSING TOLL-SUPPORTED BRIDGE

The structure is in overall fair condition.

- Items to be included in future repair contract:
  - Clean and paint the steel superstructure
  - Straighten and strengthen the bent and bowed gusset plates
  - Repair structural steel including floorsystem and lower chord members
  - Replace concrete bag scour protection at substructure units (160 bags)

For a list of maintenance repair items, see the *2014 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 *2014 Annual Maintenance Report*.

2015-2016 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 2015	2016
	Bridges, Roadways, Sidewalks, and Approaches			
	Phase 1 rehabilitation was completed in 2010.			
671	**Washington Crossing Toll-Supported Bridge Priority Repairs**	*$418,000*	$418,000	$0
	BRIDGES SUB TOTAL	***$418,000***	**$418,000**	**$0**
	Facilities and Grounds			
WCTSB	**Unforeseen Projects**	*$189,227*	$15,000	$15,493
	FACILITIES AND GROUNDS SUB TOTAL	***$189,227***	**$15,000**	**$15,493**
	TOTAL COST	***$607,227***	**$433,000**	**$15,493**

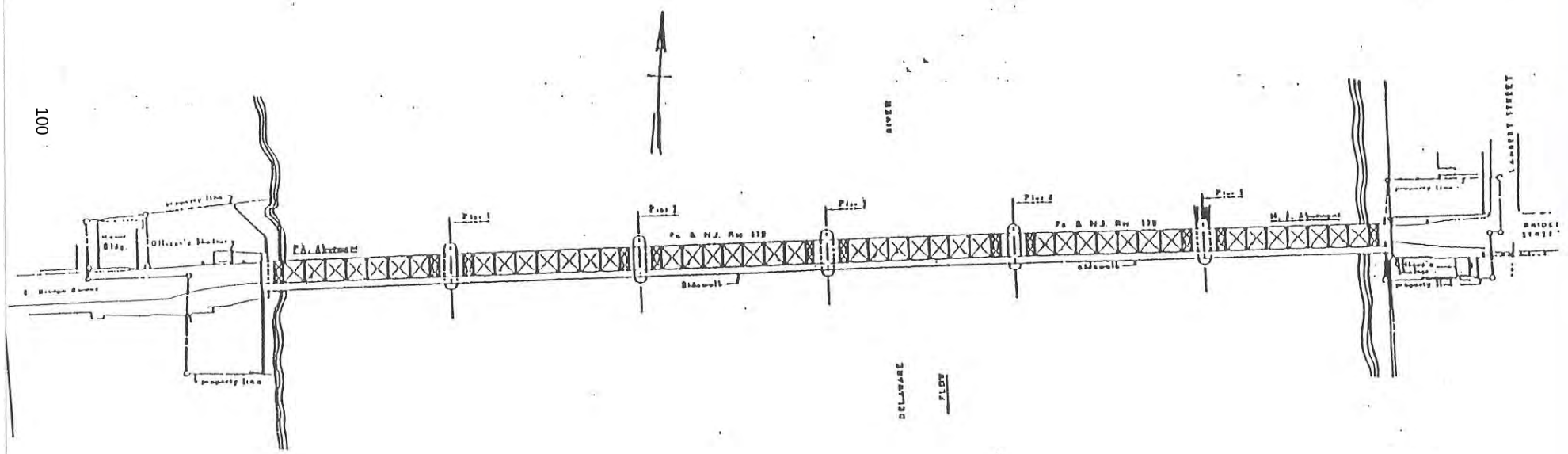
NEW HOPE-LAMBERTVILLE

TOLL-SUPPORTED BRIDGE

(Structure No. 120)

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
BOROUGH OF NEW HOPE

STATE OF NEW JERSEY
COUNTY OF HUNTERDON
CITY OF LAMBERTVILLE



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 1,056 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. Major work items performed under this contract included floorsystem, deck and sidewalk replacement, superstructure and substructure repairs and cleaning and painting of existing structural steel. Priority repairs to Pier 2 were completed in 2007 under Contract No. DB-457B.

Contract No. T/TS-476A-1 Substructure Repair & Scour Remediation - District 1, included above water repairs to all five (5) piers and both abutments including masonry repointing and replacement of stone masonry. Spall repairs were also completed at Pier 5. This work was completed in 2010. Contract No. T/TS-573A included replacement of stone masonry and repointing at the NJ abutment. This work was completed in 2012.

NEW HOPE-LAMBERTVILLE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

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

SIGNIFICANT FINDINGS

Based on the findings of the 2014 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.

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 paint. Minor isolated areas of rust were noted throughout the floor system.

The substructure is in good condition.

An underwater inspection was performed in 2012 under Contract No. C-605A. The substructure units below the waterline were found to be in satisfactory condition. For additional information see the final Contract No. C-605A report.

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 poor condition. The exterior exhibits cracks in the brick around the windows and corners due to rusting and/or expansion of the shelf angles and lintels above the windows. The eaves at the roof are rotting and the interior exhibits cracks in the walls around the windows, water damage and rotting door frames.

CONCLUSIONS

Based on the findings of the 2014 inspections, the bridge is capable of safely supporting the posted load.

NEW HOPE-LAMBERTVILLE TOLL-SUPPORTED BRIDGE

The structure is in overall satisfactory condition.

- Items to be included in future repair contract:
  - Replace the deteriorated anchor bolts at the following locations:
    - North truss bearing over west abutment in Span 1 (1 total)
    - South truss bearing over west abutment in Span 1 (3 total)
    - North truss bearing over Pier 1 in Span 1 (2 total)
    - South truss bearing over Pier 1 in Span 2 (1 total)
    - South truss bearing over Pier 3 in Span 4 (1 total)
    - South truss bearing over Pier 4 in Span 5 (1 total)
  - Spall repair at substructure units (4 SF)
  - Repoint stone masonry at substructure units (150 LF)
  - Remove debris at substructure units (33 CY)

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

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 *2014 Annual Maintenance Report*.

The firehouse is in overall poor condition. It is currently being used as a light equipment storage area.

- Items to be included in future repair contract:
  - Consideration should be given to renovating the firehouse to bring it up to current code standards if the usage is to be changed

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

2015-2016 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 2015	2016
	Bridges, Roadways, Sidewalks, and Approaches			
	The bridge was rehabilitated in 2004			
	BRIDGES SUB TOTAL	***$0***	**$0**	**$0**
	Facilities and Grounds			
NHLTSB	**Unforeseen Projects**	*$315,379*	$25,000	$25,821
648	**New Hope Old Firehouse Inspection & Study**	*$30,204*	$6,041	$0
	FACILITIES AND GROUNDS SUB TOTAL	***$345,583***	**$31,041**	**$25,821**
	TOTAL COST	***$345,583***	**$31,041**	**$25,821**

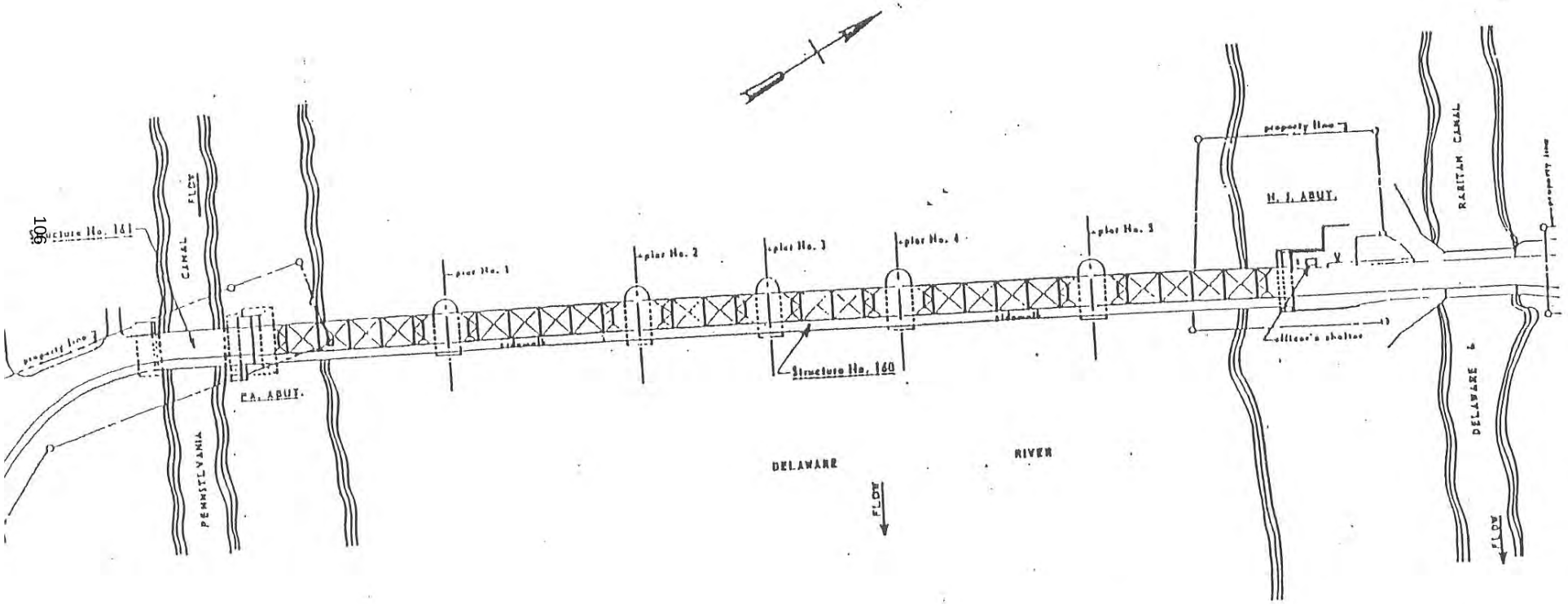
CENTRE BRIDGE-STOCKTON

TOLL-SUPPORTED BRIDGES

(Structure Nos. 160 & 161)

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
TOWNSHIP OF SOLEBURY
CENTRE BRIDGE

STATE OF NEW JERSEY
COUNTY OF HUNTERDON
TOWNSHIP OF DELAWARE
BOROUGH OF STOCKTON



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 with 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 foot vertical clearance for the bridge roadway.

A comprehensive rehabilitation of the Centre Bridge-Stockton Toll-Supported Bridge was completed in 2007 under Contract No. TS-429A. Rehabilitation work included floor system replacement with galvanized steel stringers and floorbeams, deck replacement, sidewalk replacement, truss bearing replacement, cleaning and painting of truss members and substructure spall repairs.

Contract No. T/TS-476A-1 Substructure Repair & Scour Remediation - District 1, included underwater repairs to all five (5) piers including partially grouted riprap around and under portions of the pier aprons. This contract also included above water spall repairs at all five piers and both abutments. This work was completed in 2010.

CENTRE BRIDGE-STOCKTON TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

A bridge officer shelter is located at the northeast approach corner of the Centre Bridge-Stockton Toll-Supported Bridge.

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.

The Pennsylvania Canal Overpass railing and stairway were replaced in 2007 under Contract TS-429A. The Canal Overpass was replaced in 1990 under Contract No. TS-303.

SIGNIFICANT FINDINGS

Based on the findings of the 2014 inspections, the main river bridge and the approach structure are capable of safely supporting the posted load.

CENTRE BRIDGE-STOCKTON TOLL-SUPPORTED BRIDGE
(6 span, riveted steel Warren Truss)

The structure is in overall satisfactory condition.

The deck and approach roadway are in good condition.

The superstructure is in satisfactory condition. Many lower chord gusset plate's exhibit areas of 1/8" material losses. The north truss lower chord typically exhibits up to 1/8" material loss and edge loss to the horizontal top angles at both the inboard and outboard sides adjacent to connections with gusset plates. These material losses have been arrested by paint.

The substructure is in satisfactory condition. Deteriorated concrete patches, spalls and hollow sounding concrete were noted at several pier cap areas.

An underwater inspection was performed in 2012 under Contract No. C-605A. The substructure units below the waterline were found to be in fair condition. For additional information see the final Contract No. C-605A report.

CENTRE BRIDGE-STOCKTON TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall good condition. The Pennsylvania approach roadway and numerous drainage inlets are in poor condition.

PENNSYLVANIA CANAL OVERPASS
(1 span, prestressed concrete adjacent box beams)

The structure is in overall satisfactory condition. Cracking with efflorescence and delaminated areas of concrete were noted on the concrete abutments.

The deck, and superstructure are in good condition.

CONCLUSIONS

Based on the findings of the 2014 inspections, the main river bridge and the approach structure are capable of safely supporting the posted load.

CENTRE BRIDGE-STOCKTON TOLL-SUPPORTED BRIDGE

The structure is in overall satisfactory condition.

- Items to be included in future repair contract:
    - Spall repair at substructure units (30 SF)
    - Gusset plate strengthening

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

CENTRE BRIDGE-STOCKTON TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall good condition.

- Items to be included in a future repair contract:
    - Mill and repave Pennsylvania approach roadway.
    - Replace deteriorated drainage inlets

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

PENNSYLVANIA CANAL OVERPASS

The structure is in overall good condition.

- Items to be included in future repair contract:
    - Remove the unsound concrete from the north and south ends of the east and west abutment breastwalls and patch with concrete (20 SF)
    - Clean and epoxy coat the bridge seats and base of access stairs (120 SF)

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

2015-2016 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 2015	2016
	Bridges, Roadways, Sidewalks, and Approaches			
	The bridge was rehabilitated in 2007			
685	**CB-S TSB Approach Pavement & Stormwater Inlet Improvements**	*$478,500*	$478,500	$0
	BRIDGES SUB TOTAL	***$478,500***	**$478,500**	**$0**
	Facilities and Grounds			
CBSTSB	**Unforeseen Projects**	*$315,379*	$25,000	$25,821
	FACILITIES AND GROUNDS SUB TOTAL	***$315,379***	**$25,000**	**$25,821**
	TOTAL COST	***$793,879***	**$503,500**	**$25,821**

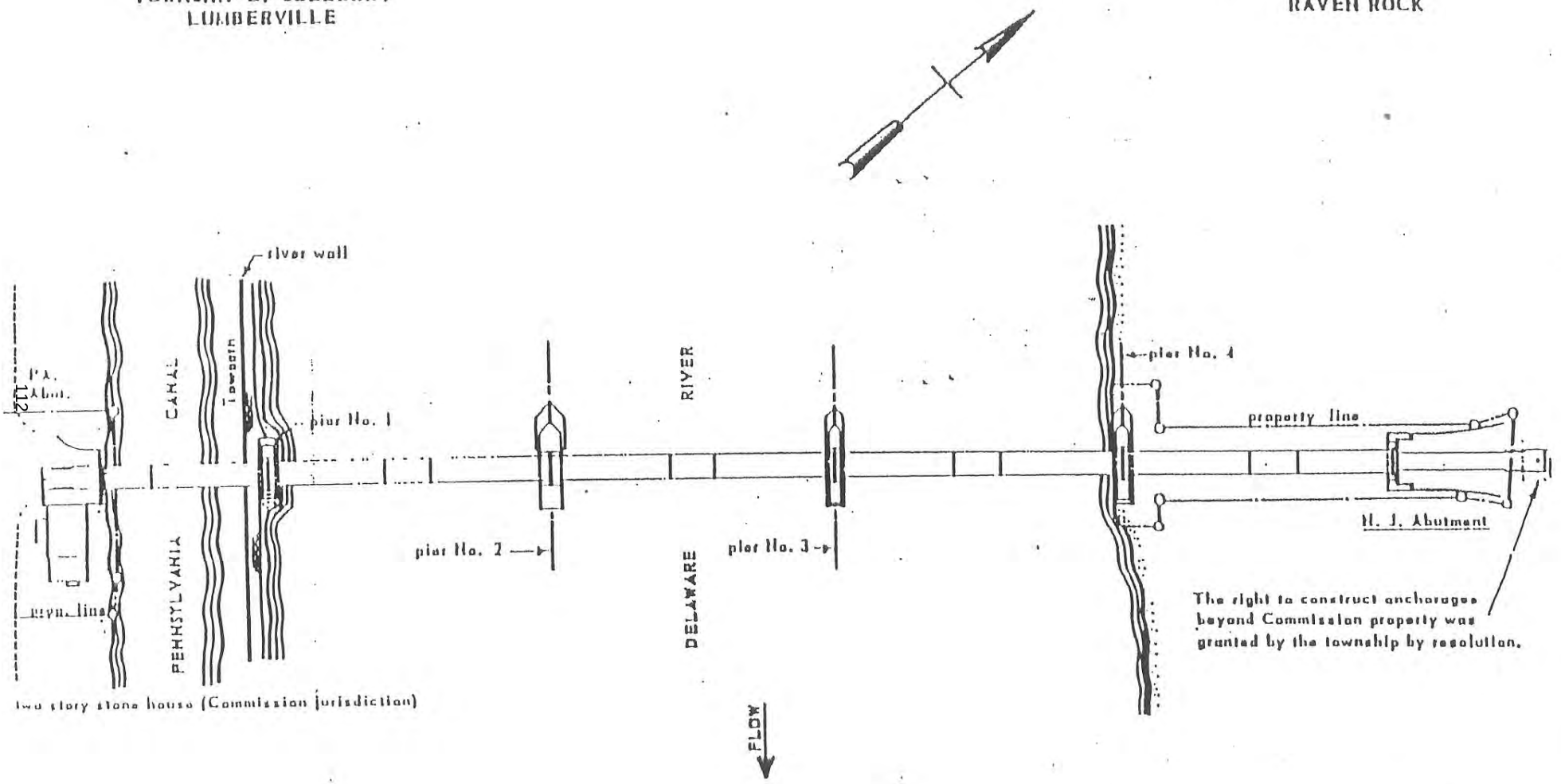
LUMBERVILLE-RAVEN ROCK

TOLL-SUPPORTED BRIDGE

(Structure No. 180)

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
TOWNSHIP OF SOLEBURY
LUMBERVILLE

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



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 693 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.

Contract No. T/TS-573A Substructure Repairs & Scour Remediation, Toll & Toll-Supported Bridges, Districts 1, 2 & 3 included underwater repairs to the aprons and footings at Piers 1, 2 and 3 including tremie concrete fill, toe wall and apron repairs. This contract also included above water work at Piers 1, 2, 3 and 4 including masonry repointing, spall repairs and replacement of stone masonry. This work was completed in 2012.

A comprehensive rehabilitation of the Lumberville Raven Rock Toll Supported Bridge was completed in 2013 under Contract No. TS-443A. The rehabilitation work included structural steel repairs, cleaning and painting of all structural steel, substructure repairs and reconstruction of Pennsylvania retaining wall.

LUMBERVILLE-RAVEN ROCK TOLL-SUPPORTED BRIDGE FACILITY AND GROUNDS

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

SIGNIFICANT FINDINGS

Based on the findings of the 2014 inspections, the bridge is capable of safely supporting pedestrian loading.

LUMBERVILLE-RAVEN ROCK TOLL-SUPPORTED BRIDGE
(5 span, suspension)

The structure is in overall good condition.

The deck, superstructure and substructure are in good condition.

An underwater inspection was performed in 2011 under Contract No. C-605A. The substructure units below the waterline were found to be in satisfactory condition. For additional information see the final Contract No. C-605A report.

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 missing and displaced chimney bricks.

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CONCLUSIONS

Based on the findings of the 2014 inspections, the bridge is capable of safely supporting pedestrian loading.

LUMBERVILLE-RAVEN ROCK TOLL-SUPPORTED BRIDGE

The structure is in overall good condition.

- Items to be included in future repair contract:
  - Remove debris at substructure units (12 CY)
  - Place riprap at substructure units where needed

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

LUMBERVILLE-RAVEN ROCK TOLL-SUPPORTED BRIDGE FACILITY AND GROUNDS

The house and retaining wall are in overall poor condition. The future use of the house should be evaluated.

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

2015-2016 CAPITAL PLAN ESTIMATED EXPENDITURES

Lumberville-Raven Rock Toll-Supported Pedestrian Bridge

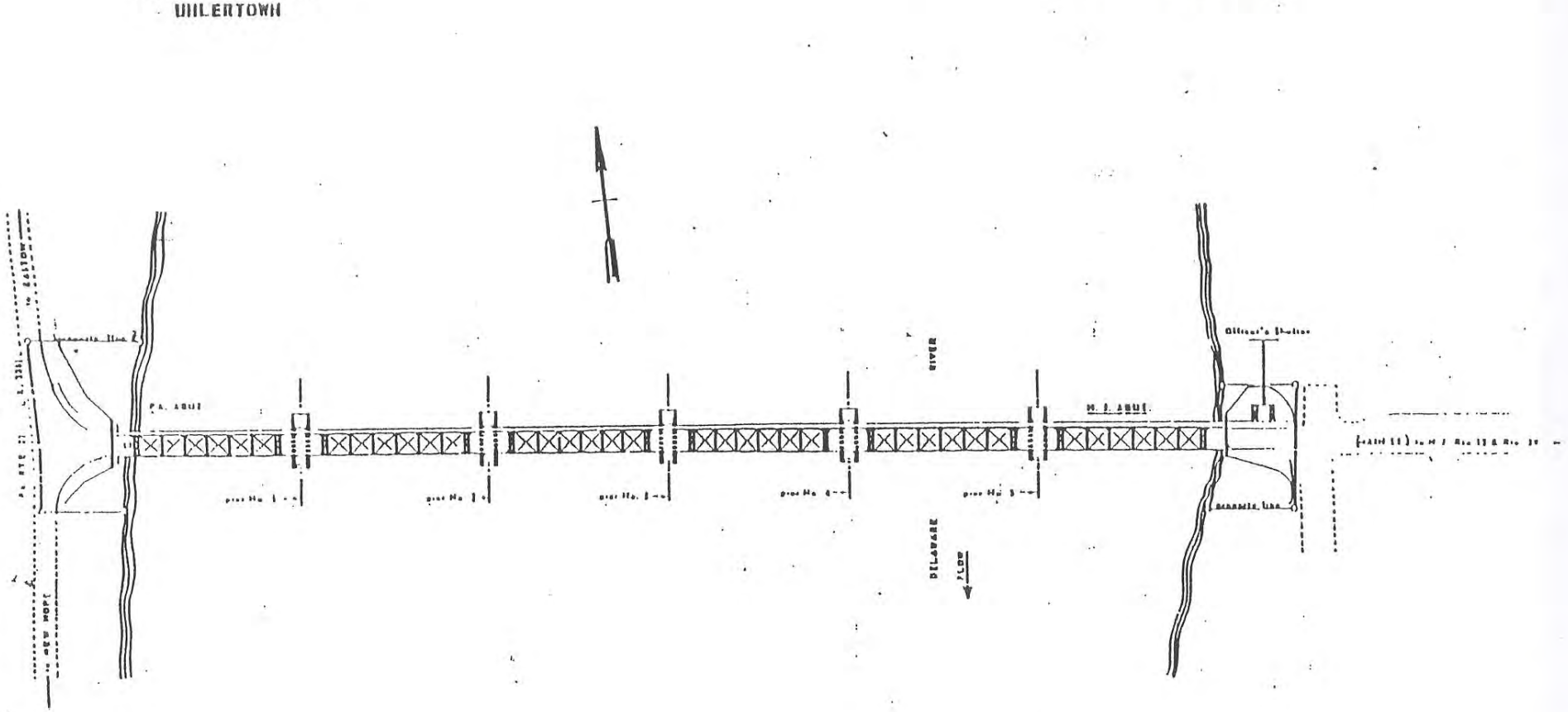
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS
FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	*Program Cost*	General Reserve Fund 2015	2016
	Bridges, Roadways, Sidewalks, and Approaches			
	The bridge was rehabilitated in 2013			
	BRIDGES SUB TOTAL	***$0***	**$0**	**$0**
	Facilities and Grounds			
LRRTSB	**Unforeseen Projects**	*$126,152*	$10,000	$10,328
	FACILITIES AND GROUNDS SUB TOTAL	***$126,152***	**$10,000**	**$10,328**
	TOTAL COST	***$126,152***	**$10,000**	**$10,328**

UHLERSTOWN-FRENCHTOWN

TOLL-SUPPORTED BRIDGE

(Structure No. 220)



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 951 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, a 15 mph speed limit, and a 12 foot 6 inch vertical clearance for the bridge roadway.

The structure was rehabilitated in 2001 under Contract No. TS-363. Major work items included floorsystem, deck and sidewalk replacement, cleaning and painting of truss members and substructure repointing.

Contract No. T/TS-476A-2 Substructure Repair & Scour Remediation - Districts 2 & 3, included above water repairs to all five (5) piers and the NJ abutment including masonry repointing, epoxy injection crack sealing and replacement of stone masonry. Spall repairs were also completed at Piers 1 and 4. This work was completed in 2010.

UHLERSTOWN-FRENCHTOWN TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

A bridge officer shelter is located at the northeast approach corner of the Uhlerstown-Frenchtown Toll-Supported Bridge.

SIGNIFICANT FINDINGS

Based on the findings of the 2014 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 2012 under Contract No. C-605A. The substructure units below the waterline were found to be in satisfactory condition. For additional information see the final Contract No. C-605A report.

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 2014 inspections, the bridge is capable of safely supporting the posted load.

UHLERSTOWN-FRENCHTOWN TOLL-SUPPORTED BRIDGE

The structure is in overall good condition.

- Items to be included in future repair contract:
  - Spall repair at substructure units (5 SF)
  - Remove debris at substructure units (3 CY)
  - Place riprap at substructure units (105 CY)
  - Epoxy injection crack seal at substructure units (50 LF)

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

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 *2014 Annual Maintenance Report*.

2015-2016 CAPITAL PLAN ESTIMATED EXPENDITURES

Uhlerstown-Frenchtown Toll-Supported Bridge

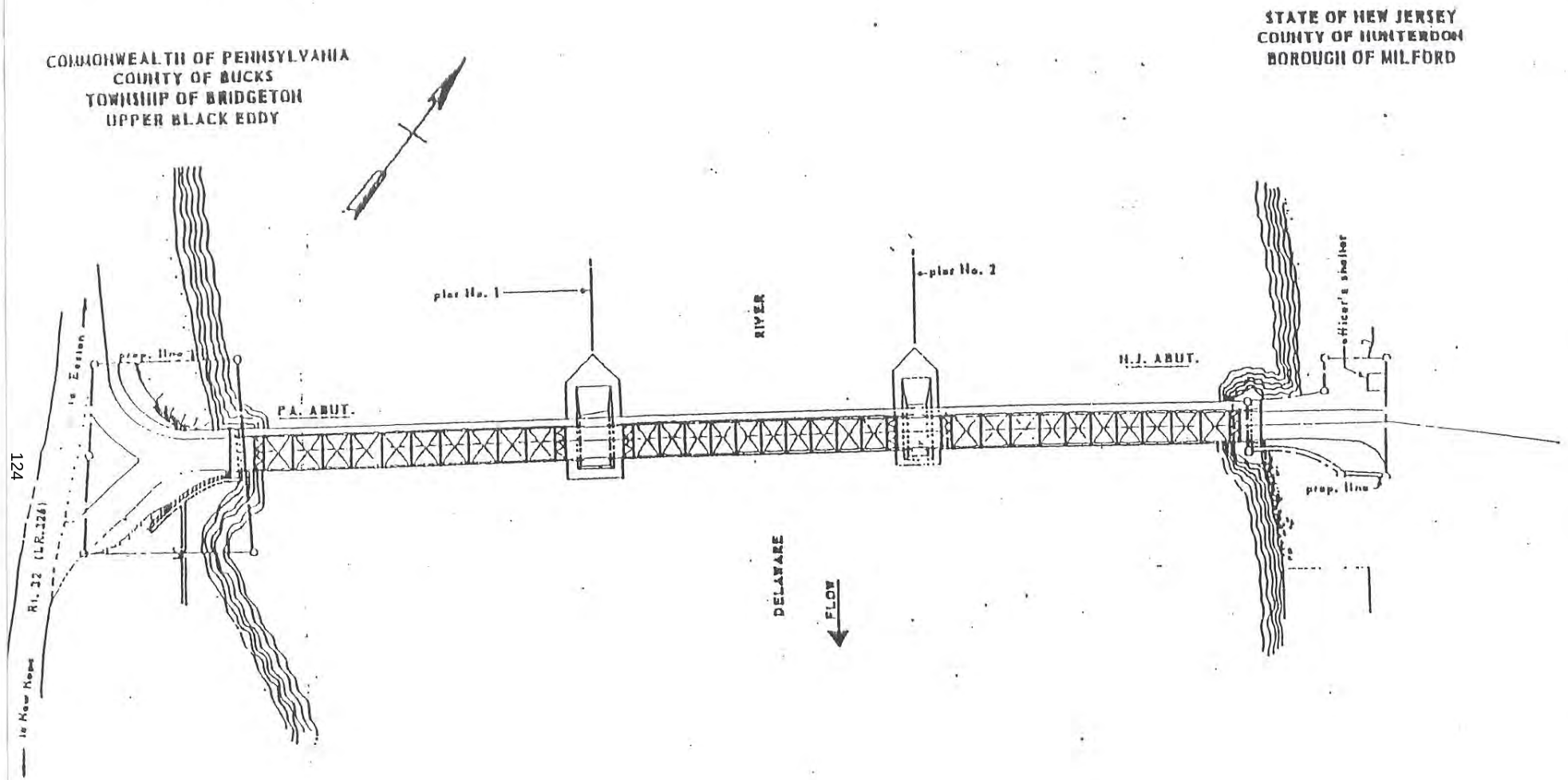
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS
FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	*Program Cost*	General Reserve Fund 2015	2016
	Bridges, Roadways, Sidewalks, and Approaches			
	The bridge was rehabilitated in 2001.			
	BRIDGES SUB TOTAL	***$0***	**$0**	**$0**
	Facilities and Grounds			
UFTSB	**Unforeseen Projects**	*$315,379*	$25,000	$25,821
	FACILITIES AND GROUNDS SUB TOTAL	***$315,379***	**$25,000**	**$25,821**
	TOTAL COST	***$315,379***	**$25,000**	**$25,821**

UPPER BLACK EDDY-MILFORD

TOLL-SUPPORTED BRIDGE

(Structure No. 240)



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 original 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 No. 347.

A comprehensive rehabilitation was completed in 2011 under Contract No. TS-444A. Major work items included floorsystem, deck (concrete filled steel grid) and sidewalk replacement, cleaning and painting of truss members and substructure repointing.

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

A bridge officer shelter is located at the northeast approach corner of the Upper Black Eddy-Milford Toll-Supported Bridge.

SIGNIFICANT FINDINGS

Based on the findings of the 2014 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 good condition.

The deck and approach roadways are in very good condition.

The superstructure and substructure are in good condition.

An underwater inspection was performed in 2011 under Contract No. C-605A. The substructure units below the waterline were found to be in good condition. For additional information see the final Contract No. C-605A report.

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 2014 inspections, the bridge is capable of safely supporting all legal loads.

UPPER BLACK EDDY-MILFORD TOLL-SUPPORTED BRIDGE

The structure is in overall good condition.

- Items to be included in future repair contract:
    - Remove debris at substructure units (2 CY)

For a list of maintenance repair items, see the *2014 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 *2014 Annual Maintenance Report*.

2015-2016 CAPITAL PLAN ESTIMATED EXPENDITURES

Upper Black Eddy-Milford Toll-Supported Bridge

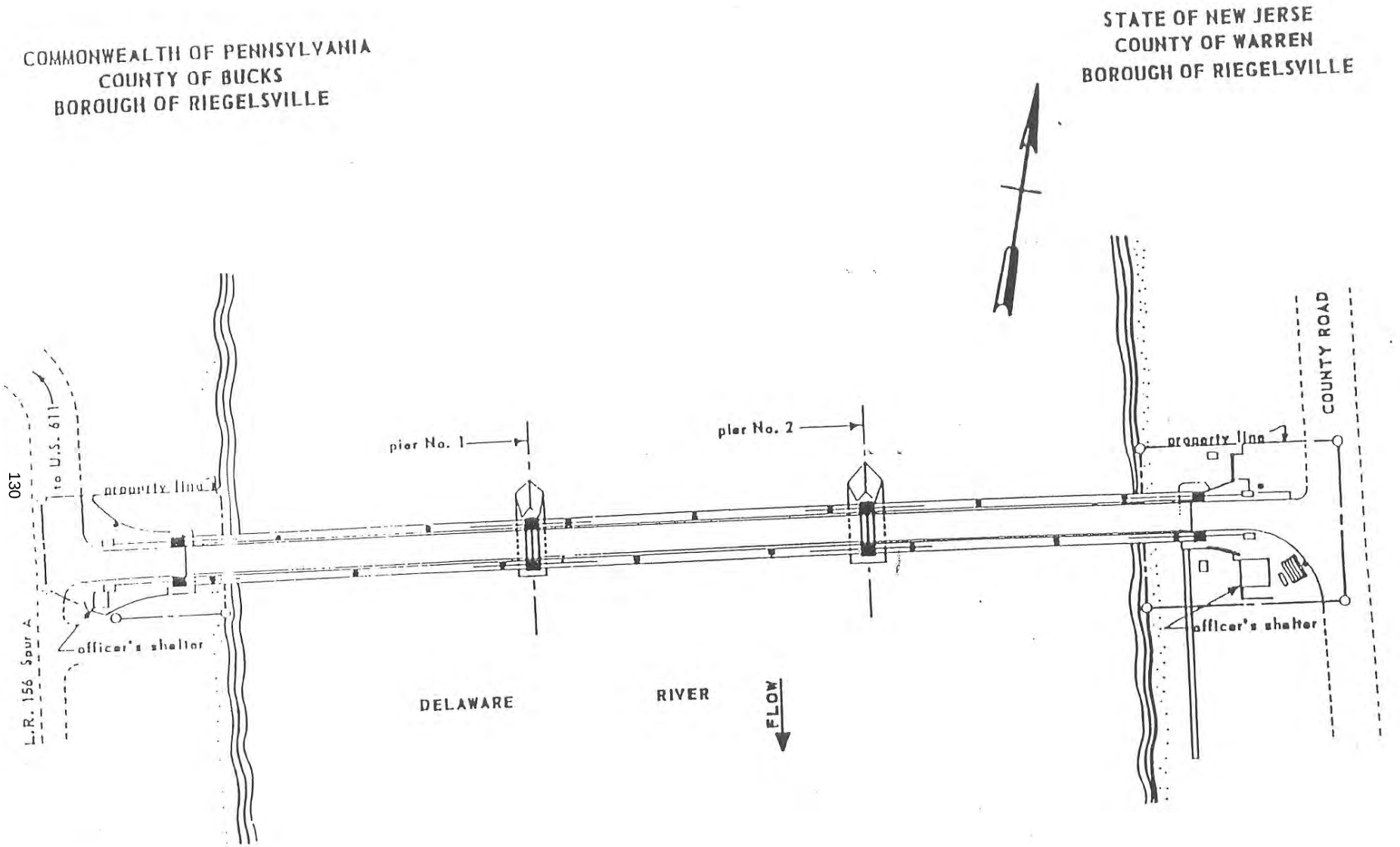
ESTIMATED COST OF RECOMMENDED IMPROVEMENTS
FUNDED BY THE GENERAL RESERVE FUND

Contract No.	Bridge and Roadway Recommended Improvements	*Program Cost*	General Reserve Fund 2015	2016
	Bridges, Roadways, Sidewalks, and Approaches			
	The bridge was rehabilitated in 2010.			
	BRIDGES SUB TOTAL	***$0***	**$0**	**$0**
	Facilities and Grounds			
UBEMTSB	**Unforeseen Projects**	*$189,227*	$15,000	$15,493
	FACILITIES AND GROUNDS SUB TOTAL	***$189,227***	**$15,000**	**$15,493**
	TOTAL COST	***$189,227***	**$15,000**	**$15,493**

RIEGELSVILLE

TOLL-SUPPORTED BRIDGE

(Structure No. 260)



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 581 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 composite 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 3 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 2 and concrete crack repairs at the anchorages. The bridge was painted by contract in 1985. A cleaning and pointing contract was completed for the substructure in 1998. Contract No. TS-461A repaired the damaged concrete aprons and additional damage from the Flood of June 2006.

Contract No. T/TS-476A-2 Substructure Repair & Scour Remediation - Districts 2 & 3, included below water repairs to both piers including concrete apron repairs, epoxy injection crack sealing, tremie concrete and concrete bag remediation. This work was completed in 2010.

In 2010, the structure underwent a complete rehabilitation under Contract No. TS-445A. This rehabilitation included floorsystem replacement, full cleaning and painting of the superstructure members and substructure repairs and roadway approach work.

RIEGELSVILLE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

A bridge officer shelter is located at the southwest Pennsylvania and southeast New Jersey approach corners of the Riegelsville Toll-Supported Bridge.

SIGNIFICANT FINDINGS

Based on the findings of the 2014 inspections, the bridge is capable of safely supporting the posted load.

RIEGELSVILLE TOLL-SUPPORTED BRIDGE
(3 span, suspension)

The structure is in overall good condition.

The deck and approach roadways are in good condition.

The substructure is in good condition.

An underwater inspection was performed in 2011 by under Contract No. C-605A. The substructure units below the waterline were found to be in fair condition. For additional information see the final Contract No. C-605A report.

RIEGELSVILLE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall good condition.

The New Jersey officer shelter is in overall poor condition. The interior flooring is sagging due to the deterioration of the floor joists due to water damage. The floor is being temporarily supported. The foundation is cracking and settling.

CONCLUSIONS

Based on the findings of the 2014 inspections, the bridge is capable of safely supporting the posted load.

RIEGELSVILLE TOLL-SUPPORTED BRIDGE

The structure is in overall good condition.

- Items to be included in future repair contract:
  - Repoint stone masonry at substructure units (25 LF)
  - Remove debris at substructure units (20 CY)
  - Place riprap at substructure units (32 CY)

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

RIEGELSVILLE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall good condition.

The New Jersey officer shelter is in overall poor condition. The shelter should be replaced.

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

2015-2016 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 2015	2016
	Bridges, Roadways, Sidewalks, and Approaches			
	The bridge was rehabilitated in 2010.			
	BRIDGES SUB TOTAL	***$0***	**$0**	**$0**
	Facilities and Grounds			
RTSB	**Unforeseen Projects**	*$189,227*	$15,000	$15,493
	FACILITIES AND GROUNDS SUB TOTAL	***$189,227***	**$15,000**	**$15,493**
	TOTAL COST	***$189,227***	**$15,000**	**$15,493**

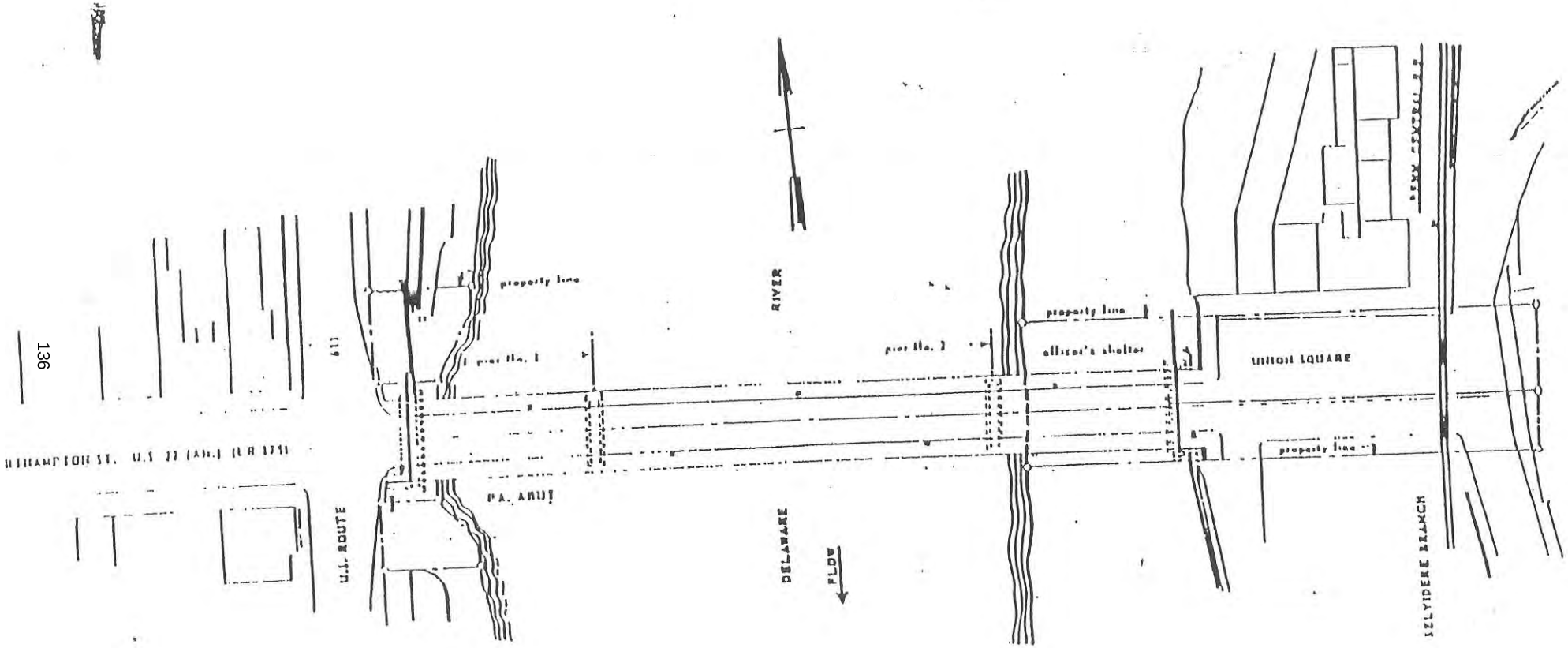
NORTHAMPTON STREET

TOLL-SUPPORTED BRIDGE

(Structure No. 280)

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF NORTHAMPTON
CITY OF EASTON

STATE OF NEW JERSEY
COUNTY OF WARREN
TOWN OF PHILLIPSBURG



NORTHAMPTON STREET TOLL SUPPORTED BRIDGE

GENERAL

NORTHAMPTON STREET TOLL-SUPPORTED BRIDGE
(3 span, double-cantilever)

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 1896, with a major rehabilitation in 2002 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.

Contract No. T/TS-476A-2 Substructure Repair & Scour Remediation - Districts 2 & 3, included under water repairs to both piers including concrete apron repairs, epoxy injection crack sealing, tremie concrete and concrete bag remediation. This contract also included masonry repointing at both abutments. This work was completed in 2010.

NORTHAMPTON STREET TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

A bridge officer shelter is located at the southwest Pennsylvania and northeast New Jersey approach corners of the Northampton Street Toll-Supported Bridge.

SIGNIFICANT FINDINGS

Based on the findings of the 2014 inspections, the bridge is capable of safely supporting the posted load.

NORTHAMPTON STREET TOLL-SUPPORTED BRIDGE
(3 span, double-cantilever truss)

The structure is in overall fair condition.

The deck and approach roadways are in good condition.

The superstructure is in fair condition. The floorbeams and stringers typically exhibit 1/8" material loss at the bottom flange and base of web. Several stringers exhibit minor impact damage. Stringer S9 at panel point L10 is bent up to 5" to the south due to impact damage, and the 3rd riser beam from the west exhibits a full length cracked weld at the east side with 3 of 4 missing connection bolts. There are numerous small holes throughout the stringers and the floorbeams more prevalent at connection locations. Impact damage is present at the lower chord in several locations throughout the north and south trusses in Span 2. The upper chord eyebars are loose at both the north and south trusses at members U11U10' and U11U10. These eyebars move up to 1/16" under live load at panel point U11. During temperatures greater than 100 degrees, the north truss upper chord member U10'U11 exhibits bowing of up to 5 ¼" to the south. This bowing appears to be a result of thermal expansion of the bridge and is exaggerated due to possible corrosion at the pin nuts not allowing the eyebar movement to take place. There are 2 steel wire safety cables that run through the cantilever floorbeam brackets at both the north and south overhangs. These cables exhibit light corrosion throughout.

An underwater inspection was performed in 2011 under Contract No. C-605A. The substructure units below the waterline were found to be in satisfactory condition. For additional information see the final Contract No. C-605A report.

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 2014 inspections, the bridge is capable of safely supporting the posted load.

NORTHAMPTON STREET TOLL-SUPPORTED BRIDGE

The structure is in overall fair condition.

- Items to be included in future repair contract:
    - Replace the damaged cross bracing members
    - Clean the eyebar pins in U10' and U11 to allow for free movement of upper chord members
    - Floorsystem repairs
    - Bearing repairs
    - Repoint stone masonry at substructure units (30 LF)
    - Repair outlet pipe at substructure units (8 LF)
    - Replace deteriorated and non-functioning ornamental fiber optic lighting on truss eyebars.
    - Replace decking on both sidewalks

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

NORTHAMPTON STREET TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The Pennsylvania officer shelter is in overall fair condition.

The New Jersey officer shelter is in overall good condition.

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

2015-2016 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 2015	2016
	Bridges, Roadways, Sidewalks, and Approaches			
	The bridge was rehabilitated in 2002.			
	BRIDGES SUB TOTAL	***$0***	**$0**	**$0**
	Facilities and Grounds			
NHSTSB	**Unforeseen Projects**	*$388,253*	$25,000	$25,821
	FACILITIES AND GROUNDS SUB TOTAL	***$388,253***	**$25,000**	**$25,821**
	TOTAL COST	***$388,253***	**$25,000**	**$25,821**

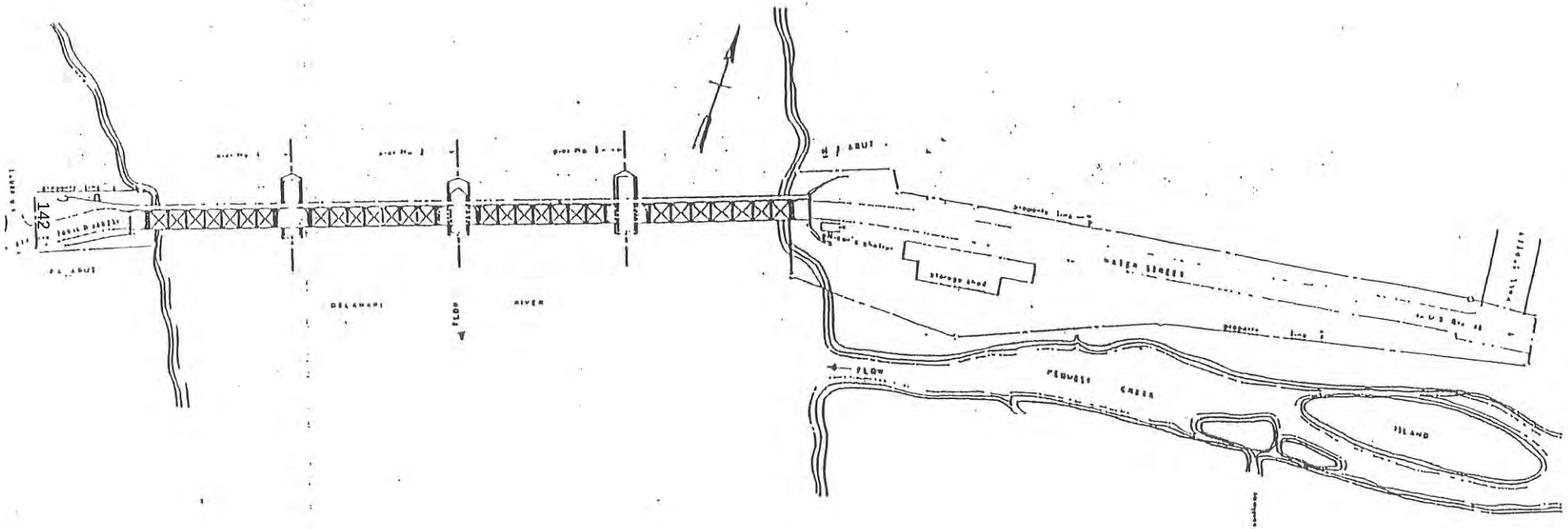
RIVERTON-BELVIDERE

TOLL-SUPPORTED BRIDGE

(Structure No. 320)

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

STATE OF NEW JERSEY
COUNTY OF WARREN
TOWN OF BELVIDERE



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.

Comprehensive bridge rehabilitation was completed under Contract No. TS-371A in 2007. Major work items included floor system and sidewalk replacement, cleaning and painting of the superstructure, deck replacement, structural steel repairs, and substructure repairs and Pennsylvania approach repaving.

Contract No. T/TS-476A-2 Substructure Repair & Scour Remediation - Districts 2 & 3, included spall repairs and epoxy injection crack seal repairs to the aprons at all three (3) piers. Also included in this contract was tremie concrete and concrete bag remediation to the footing at Pier 2 and partially grouted riprap around the aprons at Piers 1 and 3. This work was completed in 2010.

RIVERTON-BELVIDERE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

A commission owned storage garage and officer shelter is located at the southeast corner of the bridge.

Contract TS-505A on the New Jersey approach roadway included crack sealing and overlay of the existing concrete roadway, repair and/or replacement of the sidewalks and curbs and upgrade of the guide rail to current standards. This was completed in 2013.

The storage garage roof was removed and replaced in 2014 through Contract T-437A.

SIGNIFICANT FINDINGS

Based on the findings of the 2014 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.

The South Truss end diagonal at the Pennsylvania Abutment has sustained vehicle impact damage to the top cover plate and inboard angles. This damaged member should be monitored during future inspections and should be repaired / strengthened in a future repair contract.

An underwater inspection was performed in 2011 under Contract No. C-605A. The substructure units below the waterline were found to be in satisfactory condition. For additional information see the final Contract No. C-605A report.

RIVERTON-BELVIDERE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall good condition.

At the time of inspection, the storage garage was observed to be in overall poor condition due to numerous holes and broken panels with vegetation growth throughout the existing roof. The conditions were addressed during the fall of 2014 through Contract T-437A.

Storm-water runoff has caused areas of localized soil erosion along the New Jersey and Pennsylvania approaches.

CONCLUSIONS

Based on the findings of the 2014 inspections, the bridge is capable of safely supporting the posted load.

RIVERTON-BELVIDERE TOLL-SUPPORTED BRIDGE

The structure is in overall good condition.

- Items to be included in future repair contract:
    - Install riprap channel protection around the east and west abutment footings (120 CY)
    - Remove debris at substructure units (20 CY)
    - Perform critical member strengthening at truss member locations as necessary.

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

RIVERTON-BELVIDERE TOLL-SUPPORTED BRIDGE FACILITIES AND GROUNDS

The New Jersey officer shelter is in overall good condition.

The storage garage is in overall fair condition.

The slopes adjacent to the New Jersey and Pennsylvania approach roadway are in need of stabilization due to storm-water runoff. This work should be performed in a future repair contract.

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

2015-2016 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 2015	2016
	Bridges, Roadways, Sidewalks, and Approaches			
	The bridge was rehabilitated in 2007			
650	**Riverton – Belvidere TSB Critical Members Strengthening**	*$1,872,552*	$980,950	$891,602
	BRIDGES SUB TOTAL	***$1,872,552***	**$980,950**	**$891,602**
	Facilities and Grounds			
RBTSB	**Unforeseen Projects**	*$315,379*	$25,000	$25,821
651	**Riverton – Belvidere TSB PA & NJ Approach Slope Stabilization**	*$274,130*	$237,029	$37,101
	FACILITIES AND GROUNDS SUB TOTAL	***$589,509***	**$262,029**	**$62,922**
	TOTAL COST	***$2,462,061***	**$1,242,979**	**$954,525**

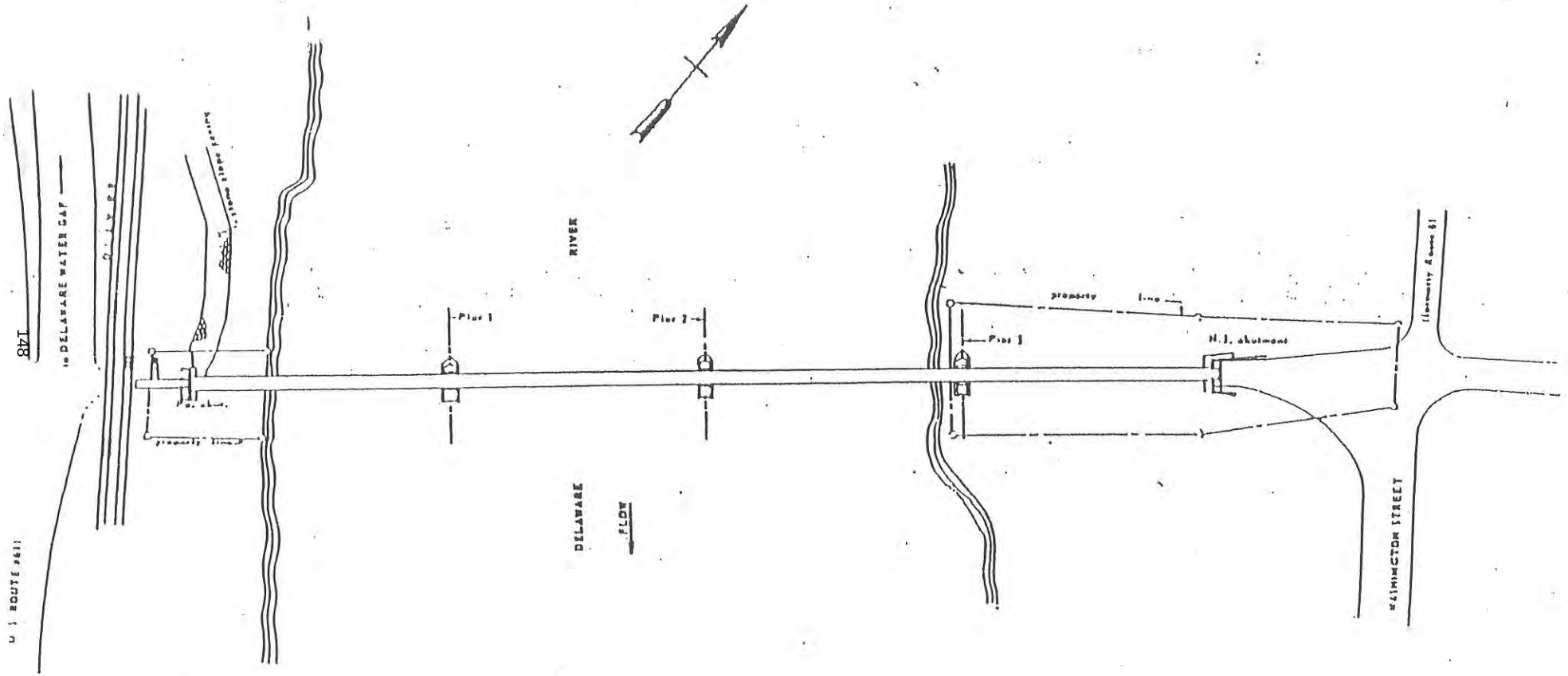
PORTLAND-COLUMBIA

TOLL-SUPPORTED BRIDGE

(Structure No. 360)

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF NORTHAMPTON
BOROUGH OF PORTLAND

STATE OF NEW JERSEY
COUNTY OF WARREN
TOWN OF COLUMBIA



PORTLAND – COLUMBIA TOLL SUPPORTED BRIDGE

GENERAL

PORTLAND-COLUMBIA TOLL-SUPPORTED BRIDGE
(4 span, continuous, steel thru-deck girder)

The Portland-Columbia Toll-Supported Pedestrian 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 774 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 vehicular traffic was diverted to the Toll Bridge.

This bridge was last cleaned and painted in 1998 under Contract No. 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.

Contract No. T/TS-476A-2 Substructure Repair & Scour Remediation, Toll & Toll-Supported Bridges, Districts 1, 2 & 3 included underwater repairs to all three (3) piers including tremie concrete and concrete bag remediation under the footings and aprons. This contract also included epoxy injection crack sealing of all 3 aprons, masonry repointing at Pier 1 and partially grouted riprap around the apron at Pier 3. This work was completed in 2010.

SIGNIFICANT FINDINGS

Based on the findings of the 2014 inspections, the bridge is capable of safely supporting pedestrian loading.

PORTLAND-COLUMBIA TOLL-SUPPORTED BRIDGE
(4 span, continuous, steel thru-deck girder)

The structure is in overall satisfactory condition.

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. No movement was noted since the previous inspection. 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 2011 under Contract No. C-605A. The substructure units below the waterline were found to be in good condition. For additional information see the final Contract No. C-605A report.

CONCLUSIONS

Based on the findings of the 2014 inspections, the bridge is capable of safely supporting pedestrian loading.

PORTLAND-COLUMBIA TOLL-SUPPORTED BRIDGE

The structure is in overall satisfactory condition.

- Items to be included in future repair contract:
    - Remove unsound concrete, clean exposed reinforcement, and patch areas of incipient spalling throughout the underdeck (250 SF)
    - Patch the spalled/hollow concrete at the east abutment backwall (30 SF)
    - Remove debris at substructure units (2 CY)
    - Replace missing stone at substructure unit (1 SF)

For a list of maintenance repair items, see the *2014 Annual Maintenance Report*.

2015-2016 CAPITAL PLAN ESTIMATED EXPENDITURES

Portland-Columbia Toll-Supported 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 2015	2016
	Bridges, Roadways, Sidewalks, and Approaches			
	Improvements planned in 2017-2018			
	BRIDGES SUB TOTAL	***$0***	**$0**	**$0**
	Facilities and Grounds			
PCTSB	**Unforeseen Projects**	*$148,230*	$10,000	$10,328
	FACILITIES AND GROUNDS SUB TOTAL	***$148,230***	**$10,000**	**$10,328**
	TOTAL COST	***$148,230***	**$10,000**	**$10,328**

2015-2016 CAPITAL PLAN
VEHICLES & EQUIPMENT

2015 VEHICLES & EQUIPMENT
SUMMARY BY DISTRICT

DISTRICT	Est. Purchase $	Est. Sale $	Est. Net $
Trenton-Morrisville	$ 283,500	$ 56,750	$ 226,750
New Hope-Lambertville	$ 131,000	$ 35,000	$ 96,000
Southern Div. Toll-Supported	$ -	$ -	$ -
District 1 Total	$ 414,500	$ 91,750	$ 322,750
Interstate 78	$ 373,000	$ 11,500	$ 361,500
Easton-Phillipsburg	$ 99,000	$ -	$ 99,000
Northern Div. Toll-Supported	$ 80,000	$ -	$ 80,000
District 2 Total	$ 552,000	$ 11,500	$ 540,500
Portland-Columbia	$ 155,500	$ -	$ 155,500
Delaware Water Gap	$ 345,500	$ 6,500	$ 339,000
Milford-Montague	$ 6,000	$ -	$ 6,000
District 3 Total	$ 507,000	$ 6,500	$ 500,500
TOTAL	**$ 1,473,500**	**$ 109,750**	**$ 1,363,750**

2015 VEHICLES & EQUIPMENT $ 1,473,500

2015-2016 CAPITAL PLAN
VEHICLES & EQUIPMENT

TRENTON - MORRISVILLE

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
E-ZPass Transponders	E-ZPass		New Items	$6,000		$6,000
2015 Ford Explorer	ENG		2003 Ford Crown Victoria	$40,000	$2,500	$37,500
		2FAHP71WX3X155659	Serial No. / VIN			
		PA MG 2053A	License Plate No.			
		63,470	Mileage			
		N/A	Hours			
		10004	Commission ID No.			
2015 Toro CM-958H-PED Concrete Mixer	T-M		1998 Stone Concrete Mixer	$5,500	$750	$4,750
		3498283	Serial No.			
		SG28072	License Plate No.			
			Mileage			
		234	Hours			
		20058	Commission ID No.			
2015 Caterpillar 908H2 Wheel Loader	T-M		*2004 CAT 420DIT Loader	$97,000	$40,000	$57,000
		CAT420DLBLN11025	Serial No.			
		SG23141	License Plate No.			
			Mileage			
		2,680	Hours			
		20,132	Commission ID No.			
2015 Caterpillar 259D Skid Steer	T-M		*2004 ASV RC30	$65,000	$7,000	$58,000
		RSA00674/RC30	Serial No.			
			License Plate No.			
			Mileage			
		700	Hours			
		20,138	Commission ID No.			
2015 Ford F-250 Utility Body	T-M		New Item	$70,000	$6,500	$63,500
Motorist Assist Program (MAP) Vehicle			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Estimated Total	**$283,500**	$56,750	$226,750

2015-2016 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
E-ZPass Transponders	E-ZPass		New Items	$6,000		$6,000
2015 Equipment Trailer	NHL		New Item	$5,000		$5,000
2015 Altec Lift Truck AT40G	NHL		2004 Ford F-550 Lift Truck	$120,000	$35,000	$85,000
		1FDAF56P94EC04336	Serial No.			
		NJ SG-23291	License Plate No.			
		71,950	Milage			
		1,025	Hours			
		20133	Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Estimated Total	**$131,000**	$35,000	$96,000

2015-2016 CAPITAL PLAN
VEHICLES & EQUIPMENT

SOUTHERN DISTRICT TOLL SUPPORTED BRIDGES

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
No New Items Requested this Year						
			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
			Estimated Total			

2015-2016 CAPITAL PLAN
VEHICLES & EQUIPMENT

INTERSTATE 78

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
E-ZPass Transponders	E-ZPass		New Items	$6,000		$6,000
Brine Trailer	I-78		New Item	$60,000		$60,000
2015 Ford F-250 Utility Body			New Item	$70,000	$6,500	$63,500
Motorist Assist Program (MAP) Vehicle			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
2016 Mack Granite	I-78	15033	1997 Ford F-800	$198,000	$5,000	$193,000
		1FDXF80EXVVA16641	Serial No.			
		SG12123	License Plate No.			
		29,950	Mileage / Hrs			
			Hours			
		15,033	Commission ID No.			
2015 Scorpion Model C TL3-125 Attenuator	I-78	20148	Safe-Top	$33,000		$33,000
		258161-0025	Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
		20,148	Commission ID No.			
Trailer, Equipment	I-78	20109	Belmont UT616TASS	$6,000		$6,000
		1D991620410028158	Serial No.			
		SG20649	License Plate No.			
			Mileage			
			Hours			
		20,109	Commission ID No.			
			Estimated Total	**$373,000**	$11,500	$361,500

2015-2016 CAPITAL PLAN
VEHICLES & EQUIPMENT

EASTON - PHILLIPSBURG

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
E-ZPass Transponders	E-ZPass		New Items	$6,000		$6,000
Ferris Zero Turn Mower Plus Accessories	E-P			$18,000		$18,000
Bobcat Track Loader	E-P		New Item	$75,000		$75,000
Plus Accessories & Trailer			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Estimated Total	**$99,000**		$99,000

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2015-2016 CAPITAL PLAN
VEHICLES & EQUIPMENT

NORTHERN DISTRICT TOLL SUPPORTED BRIDGES

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
2015 Ford F-350 Utility Body Truck	E-P	12020	2007 Ford F-350 Utility Truck	$80,000		$80,000
		1FTWW31P47EB14683	Serial No.			
		NJ-SG29883	License Plate No.			
		72,000	Mileage			
		4,500	Hours			
		12020	Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
			Estimated Total	**$80,000**		$80,000

2015-2016 CAPITAL PLAN
VEHICLES & EQUIPMENT

PORTLAND - COLUMBIA

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
E-ZPass Transponders	E-ZPass		New Items	$6,000		$6,000
2015 John Deere 310 Backhoe			New Item	$149,500		$149,500
with Breakerhead			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
			Estimated Total	**$155,500**		$155,500

2015-2016 CAPITAL PLAN
VEHICLES & EQUIPMENT

DELAWARE WATER GAP

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
E-ZPass Transponders	E-ZPass		New Items	$6,000		$6,000
DWG Stakebody Modifications	DWG		New Items	$70,000		$70,000
(for improved cone laying function)						
2015 Mack Dump Truck	DWG		New Item	$199,500		$199,500
with plow & spreader			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
2015 Ford F-250 Utility Body			New Item	$70,000	$6,500	$63,500
Motorist Assist Program (MAP) Vehicle			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
		Need	Serial No.			
		all	License Plate No.			
		this	Mileage			
			Hours			
		info	Commission ID No.			
			Estimated Total	**$345,500**	**$6,500**	$339,000

2015-2016 CAPITAL PLAN
VEHICLES & EQUIPMENT

MILFORD - MONTAGUE

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
E-ZPass Transponders	E-ZPass		New Items	$6,000		$6,000
			Serial No.			
			License Plate No.			
			Mileage / Hrs			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Serial No.			
			License Plate No.			
			Mileage			
			Hours			
			Commission ID No.			
			Estimated Total	**$6,000**		$6,000

2015-2016 CAPITAL PLAN
SUMMARY

Delaware River Joint Toll Bridge Commission

CAPITAL PROGRAM ESTIMATED EXPENDITURES

	2015	*2016*	*2 YR. TOTAL*
Toll Bridge Facilities	$12,827,302	$27,704,406	$40,531,708
Toll-Supported Bridge Facilities	$19,307,460	$24,094,804	$43,402,264
Commission Initiatives & System-Wide Projects	$18,052,319	$17,945,086	$35,997,405
Subtotal	***$50,187,081***	***$69,744,296***	***$119,931,377***

VEHICLE / EQUIPMENT GROSS PURCHASES

	2015	*2016*	*2 YR. TOTAL*
Vehicles and Maintenance Equipment	$1,473,500	$1,500,000	$2,973,500
Subtotal	***$1,473,500***	***$1,500,000***	***$2,973,500***

	2015	*2016*	*2 YR. TOTAL*
TOTAL 2015 - 2016 CAPITAL PLAN	***$51,660,581***	***$71,244,296***	***$122,904,877***

2015-2016 CAPITAL PLAN
SUMMARY

Delaware River Joint Toll Bridge Commission

TOLL BRIDGES	***2015***	***2016***	***2 YR. TOTAL***
Trenton-Morrisville	$1,818,468	$15,684,329	$17,502,797
New Hope-Lambertville	$75,000	$216,036	$291,036
Interstate 78	$1,238,690	$9,457,379	$10,696,069
Easton-Phillipsburg	$2,571,793	$1,867,046	$4,438,839
Portland-Columbia	$6,216,339	$51,642	$6,267,981
Delaware Water Gap	$407,012	$376,332	$783,344
Milford-Montague	$500,000	$51,642	$551,642
Subtotal	***$12,827,302***	***$27,704,406***	***$40,531,708***

TOLL-SUPPORTED BRIDGES	***2015***	***2016***	***2 YR. TOTAL***
Lower Trenton	$3,969,673	$569,821	$4,539,494
Calhoun Street	$15,000	$15,493	$30,493
Scudder Falls	$13,012,268	$22,384,546	$35,396,814
Washington Crossing	$433,000	$15,493	$448,493
New Hope-Lambertville	$31,041	$25,821	$56,862
Centre Bridge-Stockton	$503,500	$25,821	$529,321
Lumberville-Raven Rock	$10,000	$10,328	$20,328
Uhlerstown-Frenchtown	$25,000	$25,821	$50,821
Upper Black Eddy-Milford	$15,000	$15,493	$30,493
Riegelsville	$15,000	$15,493	$30,493
Northampton Street	$25,000	$25,821	$50,821
Riverton-Belvidere	$1,242,979	$954,525	$2,197,503
Portland-Columbia	$10,000	$10,328	$20,328
Subtotal	***$19,307,460***	***$24,094,804***	***$43,402,264***

	2015	***2016***	***2 YR. TOTAL***
COMMISSION INITIATIVES & SYSTEM-WIDE PROJECTS	***$18,052,319***	***$17,945,086***	***$35,997,405***
VEHICLES & MAINTENANCE EQUIPMENT	***$1,473,500***	***$1,500,000***	***$2,973,500***
SUBTOTAL TOLL AND TOLL-SUPPORTED BRDIGES AND COMMISSION INITIATVES & SYSTEM-WIDE PROJECTS	***$51,660,581***	***$71,244,296***	***$122,904,877***

2015-2016 CAPITAL PLAN
SUMMARY

Delaware River Joint Toll Bridge Commission

BRIDGES, ROADWAYS, SIDEWALKS, & APPROACHES SUMMARY

DISTRICT I	***2015***	***2016***	***2 YR. TOTAL***
Trenton-Morrisville Toll Bridge	$587,689	$4,506,453	$5,094,141
Lower Trenton Toll-Supported Bridge	$3,944,673	$544,000	$4,488,673
Calhoun Street Toll-Supported Bridge	$0	$0	$0
Scudder Falls Toll-Supported Bridge	$12,937,268	$22,307,083	$35,244,351
Washington Crossing Toll-Supported Bridge	$418,000	$0	$418,000
New Hope-Lambertville Toll-Supported Bridge	$0	$0	$0
New Hope Lambertville Toll Bridge	$0	$0	$0
Centre Bridge-Stockton Toll-Supported Bridge	$478,500	$0	$478,500
Lumberville-Raven Rock Toll-Supported Bridge	$0	$0	$0
District I Total	***$18,366,129***	***$27,357,536***	***$45,723,664***

DISTRICT II	***2015***	***2016***	***2 YR. TOTAL***
Uhlerstown-Frenchtown Toll-Supported Bridge	$0	$0	$0
Upper Black Eddy-Milford Toll-Supported Bridge	$0	$0	$0
Riegelsville Toll-Supported Bridge	$0	$0	$0
Interstate 78 Toll Bridge	$370,337	$4,287,541	$4,657,879
Northampton Street Toll-Supported Bridge	$0	$0	$0
Easton-Phillipsburg Toll Bridge	$1,421,668	$0	$1,421,668
Riverton-Belvidere Toll-Supported Bridge	$980,950	$891,602	$1,872,552
District II Total	***$2,772,955***	***$5,179,144***	***$7,952,099***

2015-2016 CAPITAL PLAN
SUMMARY

Delaware River Joint Toll Bridge Commission

BRIDGES, ROADWAYS, SIDEWALKS, & APPROACHES SUMMARY

DISTRICT III	***2015***	***2016***	***2 YR. TOTAL***
Portland-Columbia Toll Bridge	$5,716,339	$0	$5,716,339
Portland-Columbia Toll-Supported	$0	$0	$0
Delaware Water Gap Toll Bridge	$42,012	$298,869	$340,881
Milford-Montague Toll Bridge	$0	$0	$0
District III Total	***$5,758,351***	***$298,869***	***$6,057,220***

	2015	***2016***	***2 YR. TOTAL***
BRIDGES, ROADWAYS, SIDEWALKS & APPROACHES TOTAL	***$26,897,436***	***$32,835,548***	***$59,732,984***

FACILITIES AND GROUNDS SUMMARY

DISTRICT I	***2015***	***2016***	***2 YR. TOTAL***
Trenton-Morrisville Toll Bridge	$1,230,779	$11,177,876	$12,408,656
Lower Trenton Toll-Supported Bridge	$25,000	$25,821	$50,821
Calhoun Street Toll-Supported Bridge	$15,000	$15,493	$30,493
Scudder Falls Toll-Supported Bridge	$75,000	$77,463	$152,463
Washington Crossing Toll-Supported Bridge	$15,000	$15,493	$30,493
New Hope-Lambertville Toll-Supported Bridge	$31,041	$25,821	$56,862
New Hope Lambertville Toll Bridge	$75,000	$216,036	$291,036
Centre Bridge-Stockton Toll-Supported Bridge	$25,000	$25,821	$50,821
Lumberville-Raven Rock Toll-Supported Bridge	$10,000	$10,328	$20,328
District I Total	***$1,501,820***	***$11,590,152***	***$13,091,972***

FACILITIES AND GROUNDS SUMMARY

DISTRICT II	***2015***	***2016***	***2 YR. TOTAL***
Uhlerstown-Frenchtown Toll-Supported Bridge	$25,000	$25,821	$50,821
Upper Black Eddy-Milford Toll-Supported Bridge	$15,000	$15,493	$30,493
Riegelsville Toll-Supported Bridge	$15,000	$15,493	$30,493
Interstate 78 Toll Bridge	$868,352	$5,169,838	$6,038,190
Northampton Street Toll-Supported Bridge	$25,000	$25,821	$50,821
Easton-Phillipsburg Toll Bridge	$1,150,125	$1,867,046	$3,017,171
Riverton-Belvidere Toll-Supported Bridge	$262,029	$62,922	$324,951
District II Total	***$2,360,506***	***$7,182,433***	***$9,542,939***

2015-2016 CAPITAL PLAN
SUMMARY

Delaware River Joint Toll Bridge Commission

FACILITIES AND GROUNDS SUMMARY

DISTRICT III	***2015***	***2016***	***2 YR. TOTAL***
Portland-Columbia Toll Bridge	$500,000	$51,642	$551,642
Portland-Columbia Toll-Supported Bridge	$10,000	$10,328	$20,328
Delaware Water Gap Toll Bridge	$365,000	$77,463	$442,463
Milford-Montague Toll Bridge	$500,000	$51,642	$551,642
District III Total	***$1,375,000***	***$191,076***	***$1,566,076***

	2015	***2016***	***2 YR. TOTAL***
FACILITIES AND GROUNDS TOTAL	***$5,237,326***	***$18,963,661***	***$24,200,988***

2015-2016 CAPITAL PLAN
SUMMARY

Delaware River Joint Toll Bridge Commission

EQUIPMENT PURCHASES

2015 VEHICLE & EQUIPMENT PURCHASES

Toll Facility	Estimated Purchase Price of New Units	Estimated Sell Price of Used Units	Estimated Net Cost
Trenton-Morrisville	$283,500	$56,750	$226,750
New Hope-Lambertville	$131,000	$35,000	$96,000
Interstate Route 78	$373,000	$11,500	$361,500
Easton-Phillipsburg	$99,000	$0	$99,000
Portland-Columbia	$155,500	$0	$155,500
Delaware Water Gap	$345,500	$6,500	$339,000
Milford-Montague	$6,000	$0	$6,000
Southern - Toll-Supported Bridges	$0	$0	$0
Northern - Toll-Supported Bridges	$80,000	$0	$80,000
	$1,473,500	$109,750	$1,363,750

TOTAL 2015 GROSS VEHICLE & EQUIPMENT PURCHASES **$1,473,500**

ESTIMATED 2016 GROSS VEHICLE & EQUIPMENT PURCHASES* ***$1,500,000***

**The 2015 V & E purchases above are based upon the "actual" estimates listed in the "Vehicle & Equipment" section of the 2014 General Engineering Annual Inspection Report. The 2016 V & E purchases of $1.5M above are estimates of anticipated replacements/cost of new items for 2016 and are subject to change pending the 2015*

SCHEDULE OF INSURANCE

I. CURRENT SCHEDULE OF INSURANCE (2014)

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 25ft), 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
$	5,000	Medical Payments
$	50,000	Hired Car Physical Damage Coverage
ACV or Cost of Repair		Comprehensive & Collision (Stated Amount - $100,000 maximum)

Deductible on Comprehensive and Collision

$	1,000	PPTs & Light Trucks
$	3,000	Medium Trucks
$	5,000	Heavy & Extra Heavy Trucks

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.

D. Building & Contents Insurance

$	53,628,447	Blanket Limit
$	1,000,000	Business Interruption & Extra Expense
$	250,000	Debris Removal, Additional Expense
$	1,000,000	Off Premise Utility Interruption
	Policy Limit	Fire Department Service Charge
$	5,000,000	Flood (excludes Flood Zones A or V)
$	5,000,000	Earthquake
	Policy Limit	Terrorism
$	10,000	All Perils Deductible except flood and earthquake
$	100,000	Flood and Earthquake Deductible

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 (various sublimits apply).

Boiler & Machinery Coverage insured under separate policy

E. Equipment Floater Limits (Separate from Building Policy)

$	3,030,429	Specific Limits Apply Per Schedule
$	90,000	Miscellaneous Unscheduled Tools, limited to $2,500 per item
$	50,000	Leased/Rented Equipment – per occurrence
$	2,500	Deductible except flood and earthquake

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

All Perils Deductible except flood and earthquake - 1% of the value of the structure (bridge is separate structure from approach as scheduled) subject to a minimum of $50,000
Loss of Revenue – 5 day waiting period

Flood Coverage - $250,000,000 Annual Aggregate - Multiple Policies
Earthquake Coverage – $150,000,000 Annual Aggregate - Multiple Policies
Sublimits apply to Debris Removal, Contamination, & Pollution Clean-Up/Removal – Land/Water

G. Public Officials / Employment Practices Liability

$	10,000,000	Each Loss
$	10,000,000	Aggregate

Retention

$	0	Non-Indemnifiable Loss
$	50,000	Corporate Reimbursement and Organization 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
$	250,000	Money Order and Counterfeit Currency & Credit, Debit, Charge Card Forgery, $1,000 Deductible
$	5,000,000	Employee Dishonesty, $50,000 Deductible
$	5,000,000	Computer Fraud Including Wire Transfer Fund, $50,000 Deductible

Coverage includes all locations.

J. Professional Architects and Engineers

$	1,000,000	per Occurrence/Aggregate

Retention

$	50,000	Each Claim

K. Pollution Legal Liability (3 Year Policy)

$	3,000,000	per Occurrence/Aggregate

Retention

$	25,000	Each Incident

II. INSURANCE REQUIREMENTS FOR 2014

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 2014 Estimated Replacement Costs for the twenty Toll and Toll-Supported Bridges and their approach structures are listed below:

TOLL FACILITY		BRIDGE		APPROACH STRUCTURES
Trenton-Morrisville	$	50,000,000	$	23,900,000
New Hope-Lambertville	$	49,300,000	$	10,900,000
Interstate Route 78	$	57,800,000	$	39,100,000
Easton-Phillipsburg	$	11,700,000	$	12,500,000
Portland-Columbia	$	21,100,000	$	4,500,000
Delaware Water Gap	$	78,000,000	$	0
Milford-Montague	$	17,900,000	$	0
SUBTOTALS	*$*	*285,800,000*	*$*	*90,900,000*

SCHEDULE OF INSURANCE

TOLL-SUPPORTED FACILITY		BRIDGE		APPROACH STRUCTURES
Lower Trenton	$	20,600,000	$	0
Calhoun Street	$	12,200,000	$	0
Scudder Falls	$	50,900,000	$	6,500,000
Washington Crossing	$	6,400,000	$	0
New Hope-Lambertville	$	10,200,000	$	0
Centre Bridge-Stockton	$	8,300,000	$	800,000
Lumberville-Raven Rock *	$	2,900,000	$	0
Uhlerstown-Frenchtown	$	8,100,000	$	0
Upper Black Eddy-Milford	$	7,300,000	$	0
Riegelsville	$	4,600,000	$	0
Northampton Street	$	8,600,000	$	0
Riverton-Belvidere	$	5,600,000	$	0
Portland-Columbia *	$	3,900,000	$	0
SUBTOTALS	*$*	*149,600,000*	*$*	*7,300,000*

* Pedestrian Bridge

Total (All Bridges) Replacement Cost for 2014 = $ 533,600,000

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 2014 revenues presented below.

TOLL FACILITY		2014 ANTICIPATED REVENUE
Trenton-Morrisville	$	14,700,453
New Hope-Lambertville	$	3,078,444
Interstate Route 78	$	56,671,290
Easton-Phillipsburg	$	9,407,942
Portland-Columbia	$	2,157,490
Delaware Water Gap	$	31,326,881
Milford-Montague	$	1,487,527
(Total Toll Revenue)	**$**	**118,830,027**
Interest on Investments	$	822,653
Toll Violation Enforcement Revenue	$	1,921,871
EZ Pass Account Service Fee	$	901,000
Other Income	$	414,000
(TOTAL PROJECTED REVENUE - 2012)	**$**	**122,889,551**

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.

SCHEDULE OF INSURANCE

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 $5,000,000 per accident in Business Travel Accident 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 $53,628,447. 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 and includes personal property, electronic surveillance system and EZPass equipment at 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 2014 are as follows:

LOCATION	2014 ESTIMATED REPLACEMENT VALUE	
Trenton-Morrisville	$	11,591,000
New Hope-Lambertville	$	6,804,000
Interstate 78	$	7,546,000
Easton-Phillipsburg	$	6,161,000
Portland-Columbia	$	3,627,000
Delaware Water Gap	$	5,714,000
Milford-Montague	$	3,451,000
Belvidere (Storage Bldg.)	$	290,000
New Hope Toll Supported (Garage)	$	204,000
15 Toll Supported Bridge Officer Shelters	$	245,000
Lumberville-Raven Rock (Bridge Tender house)	$	301,000
TOTAL	**$**	**45,934,000**

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.

III. CONCLUSIONS AND RECOMMENDATIONS FOR 2014

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 2015 anticipated revenues in conformance with the Bridge System Revenue Bond Resolutions.

- The Blanket Building and Contents Insurance should be adjusted to reflect the 2015 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

EXCELLENT - New bridge.

VERY GOOD - No problems noted.

GOOD - Some minor problems.

SATISFACTORY - Some minor deterioration of structural elements.

FAIR - Minor section loss, deterioration, spalling and/or scour of primary structural elements.

POOR - Advanced section loss, deterioration, spalling and/or scour of primary structural elements.

SERIOUS - Seriously deteriorated primary structural elements.

CRITICAL - Facility should be closed until repairs are performed.

IMMENENT FAILURE - Facility is closed. Study of repairs is feasible.

FAILED - 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.

Delaware River Joint Toll Bridge Commission

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
Taylorsville 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
Uhlerstown-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