

**RHODE ISLAND TURNPIKE AND BRIDGE AUTHORITY
NEWPORT/PELL BRIDGE
TEN YEAR RENEWAL AND REPLACEMENT PLAN - Approved by Board September 23, 2009**

PROJECT				ESTIMATED PROJECT EXPENDITURE FOR FISCAL YEAR (\$1000)										TOTAL PROJECT COSTS (\$1000)
Item	Priority	DESCRIPTION	TYPE (See Notes)	July 2009- June 2010	July 2010- June 2011	July 2011- June 2012	July 2012- June 2013	July 2013- June 2014	July 2014- June 2015	July 2015- June 2016	July 2016- June 2017	July 2017- June 2018	July 2018- June 2019	
1	2	Bridge Deck Evaluation (concrete) and Full Depth Replacement	Study/Rehab											0
		Engineering/Technical Support	(Deck)							100				100
Project Total													100	
2	1	Bridge Deck Sealing (concrete)	Maint/Rehab					425					425	850
		Engineering/Technical Support	(Deck)					15					15	30
Project Total													880	
3	1	Bridge Deck Slab Partial Depth Rehabilitation (Hydrodemolition) (concrete)	Maint/Rehab						3,650	3,650				7,300
		Engineering/Technical Support	(Deck)					300	400	400			300	1,400
Project Total													8,700	
4	1	Bridge Deck Patching Roadway/Approaches (concrete)	Maint/Rehab	240	240	240	240	240	240	240	120	120	120	2,040
		Engineering/Technical Support	(Deck)	15	15	15	15	15	15	15	15	15	15	150
Project Total													2,190	
5	2	Bridge Deck Joint and Header Repairs (concrete)	Maint/Rehab							500				500
		Engineering/Technical Support	(Deck)							50				50
Project Total													550	
6	1	Rehabilitation of West Approach Roadway Pavement (asphalt)	Maint/Rehab					2,000						2,000
		Engineering/Technical Support	(Roadway)					200						200
Project Total													2,200	
7	2	Rehabilitation of Structure "E" Bridge Deck (concrete)	Study/Rehab	30							30			60
		Engineering/Technical Support	(Deck)											0
Project Total													60	
8	1	Removal of loose haunches (combine with appropriate contracts) (concrete)	Maint.			150	150	150						450
		Engineering/Technical Support	(Deck)			0	0	0						0
Project Total													450	

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9	2	Concrete repairs on piers, abutments and anchorages	Maint/Rehab									500	500	1,000
		Engineering/Technical Support	(Sub Structure)								60	35	35	130
Project Total													1,130	
10	2	Placing Protective Concrete Jacketing on West Prot. Cells	Maint/Rehab									850		850
		Engineering/Technical Support	(Sub structure)								60	100		160
Project Total													1,010	
11	1	Painting of steel superstructure	Maint.	5,940	11,880	15,030	15,750	12,600	11,700	11,700				84,600
		Engineering/Technical Support	(Paint)	660	1,320	1,670	1,750	1,400	1,300	1,300				9,400
				Main Spans		MS & EA	East Approach	West Approach		Project Total				94,000
12	1	Steel Superstructure Repairs/Retrofits	Maint/Rehab	2,700	5,400	4,000	1,000	750	500	500				14,850
		Engineering/Technical Support	(Steel super structure)	300	600	400	100	75	50	50				1,575
				Main Spans		MS & EA	East Approach	West Approach		Project Total				16,425
13	2	Main Cable Unwrapping, Inspection, Testing & Repairs	Upgrade											0
		Engineering/Technical Support	(Steel specialty)								150	3,450	Needs to be det'd by 2018 insp.	3,600
Project Total													3,600	
14	2	Tower Link Repairs and Cable Bent Pin Repairs	Maint.					250						125
		Engineering/Technical Support	(Steel specialty)					20						15
Project Total													410	

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15	2	Seismic Vulnerability Study and Upgrade	Upgrade							3,000	3,000	4,200	4,200	14,400
		Engineering/Technical Support	(Sub structure/ super structure/ bearings)					525	425	150	150	220	220	1,690
													16,090	
16	1	Security Assessment, Security Cameras and Security Monitoring - Bridge Armoring	Upgrade			Bridge Armoring to be Implemented as soon as funds are available								0
		Engineering/Technical Support	(Safety)											0
													Project Total	0
17	1	FCM and Underwater Inspections	Maint.	900	750		750		750		750		750	4,650
													Project Total	4,650
18	3	Archive original design dwgs & shop drawings	Upgrade		50		50		50		50		50	250
		Engineering/Technical Support	(Admin)											0
													Project Total	250
19	1	Rehabilitation of Admin Bldg & Grounds	Rehab.		255	850	650							1,755
		Engineering/Technical Support	(Admin/ safety)		20	55	35							110
													Project Total	1,865
20	1	Study/Implementation of Adding a Median Barrier	Upgrade						5,200					5,200
		Engineering/Technical Support	(Safety)					150	520					670
													Project Total	5,870
21	2	Rocker Bearing Repairs/Resetting	Repair			100			100				100	300
		Engineering/Technical Support	(Bearings)			20			20				20	60
													Project Total	360
22	2	Miscellaneous Maint & Repairs	Maint.	100	100	100	100	100	100	100	100	100	100	1,000
													Project Total	1,000
TOTAL EST'D EXPENDITURE BY FISCAL YEAR				10,885	20,630	22,630	20,590	19,215	25,020	21,755	4,485	9,590	6,990	

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MOUNT HOPE TOTALS				5,816	7,245	3,696	2,278	11,011	8,512	4,423	4,058	496	285	\$47,820
RITBA TOTALS BOTH BRIDGES				16,701	27,875	26,326	22,868	30,226	33,532	26,178	8,543	10,086	7,275	\$209,610
TOTAL FOR BOTH BRIDGES THROUGH YEAR 5													123,996	

NOTES ON REVISIONS TO ANNUAL EXPENDITURES COMPARED TO THE JULY 8, 2009 BOARD APPROVED 2009 TEN YEAR PLAN FOR ITEMS AND YEARS HIGHLIGHTED IN RED

ITEM 6 - Approach pavement has failed and presents a ride quality issue that may generate complaints, however this is not currently a safety issue and has been deferred from year 2 to year 5 to minimize earlier year costs. Deferring to beyond the first five years is not recommended since this may escalate to a safety issue and require repairs in this time frame.

ITEM 8 - Haunch removal in Years 1 and 2 are covered by costs in Items 11 and 12. Years 3 through 5 have been reduced based on recent inspections
ITEMS 11 AND 12 - A sixth and seventh year was added to the steel repairs and protective coating contracts assuming that no TIGER Grant funds are received for this work. Deferment of painting from a five year to seven year program results in additional steel repair costs that are approximated and included under Item 12.

ITEM 16 - Costs for security cameras and monitoring were removed assuming that Port Security Grants are successful and cover these costs.

ITEM 20 - Median Barrier installation costs moved from Year 2 to Year 6 assuming that no TIGER Grant funds are received for this work. This work is recommended to be performed as soon as any funds become available.

ITEM 21 - No Rocker Bearing repairs/resetting are required this Fiscal Year.

- NOTES:
- 1 All estimates are preliminary budget estimates based on available information and indicate the approximate magnitude of cost.
 - 2 Projects identified under maintenance category are repairs required for the preservation of structure integrity.
 - 3 Projects identified under maintenance/rehab category are for preservation of structural integrity on a scale larger than typical repairs.
 - 4 Projects identified under upgrade are for bridge system preservation, updating to current standards and for significant improvement in level of service.
 - 5 The above listing is exclusive of recurring general maintenance of bridge and other facilities and annual inspection projects.
 - 6 Detail project scoping will be performed on a project basis.
 - 7 Engineering/Technical Support costs for this Ten-Year Plan have been projected as a percentage of the estimated construction cost.

For Maintaining Structural Integrity

Upgrade/Improvement

For Meeting Standards/Safety

Priority - 1 High, 2 Medium, 3 Low

RHODE ISLAND TURNPIKE AND BRIDGE AUTHORITY

MOUNT HOPE BRIDGE

TEN-YEAR RENEWAL AND REPLACEMENT PLAN (in 2009 Dollars) - Approved by Board September 23, 2009

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1	1	Tower Pier and Anchorage Rehabilitation & Bridge Scour Remediation ⁸	Upgrade	4,500										4,500
		Engineering/ Tech. Support		400										400
Project Total													4,900	
2	1	Engineering and Underwater Inspection Specialist	Insp.		77					77			77	231
Project Total													231	
3	1	Security Assessment Study & Upgrades (incl. Cameras) - Bridge Armoring	Upgrade	250	250	Bridge Armoring to be Implemented as soon as funds are available							500	
		Engineering/Tech. Support		20	10									30
Project Total													530	
4	1	Fracture Critical Biennial and Annual Inspections	Insp.	220	32	220	32	220	32	220	32	220	32	1,260
Project Total													1,260	
5	2	On-Call Deck Maintenance ⁶	Maint./Rehab	90		90		90		90		90		450
		Engineering/Tech. Support	Rehab	10		10		10		10		10		50
Project Total													500	
6	2	Future Repairs / Minor Rehabilitation	Maint./Rehab	160	160	160	160	160	160	160	160	160	160	1,600
		Engineering/Tech. Support		16	16	16	16	16	16	16	16	16	16	160
Project Total													1,760	
7	2	Seismic Vulnerability Study and Retrofit ¹⁰	Upgrade						3,500	3,500	3,500			10,500
		Engineering/Tech. Support			400				350	350	350			1,450
Project Total													11,950	
8	3	Approach Pavement Replacement	Maint./Upgrade						140					140
		Engineering/Tech. Support							14					14
Project Total													154	
9	2	Roadway Deck - Remove Concrete Overfill & Replace with Pavement ⁹	Maint.					4,650						4,650
		Engineering/Tech. Support					20	465						485
Project Total													5,135	

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MOUNT HOPE BRIDGE

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10	1	Superstructure Painting & Steel Repairs & Catwalk Upgrade(Zone Painting Contracts)	Maint.		5,000	3,000		5,000	4,000					17,000
		Engineering/Tech. Support		150	400	200	150	400	300					1,600
Project Total													18,600	
11	2	Cable Inspection (8 Panels Including Backstays)	Insp.				1,500							1,500
		Engineering/Tech. Support					400							400
Project Total													1,900	
12	3	Anchorage Dehumidification System	Upgrade	Scope of work to be determined by study.									0	
		Engineering/ Tech. Support												0
Project Total													0	
13	1	Cable Bent Legs Interior Painting and Rehabilitation	Upgrade		700									700
		Engineering/ Tech. Support			200									200
Project Total													900	
TOTAL ESTIMATED EXPENDITURE PER FISCAL YEAR				5,816	7,245	3,696	2,278	11,011	8,512	4,423	4,058	496	285	
													\$47,820	

Notes:

- 1 All estimates are preliminary budget estimates based on available information and indicate the approximate magnitude of anticipated cost.
- 2 Projects identified under maintenance category are for the preservation of structural integrity.
- 3 Projects identified under upgrade are for bridge system preservation, updating to current standards and for improvement in level of service.
- 4 Detail project scoping will be performed on a project basis.
- 5 Engineering/Technical Support costs for all projects have been projected as 10% of the estimated construction cost.

For Maintaining Structural Integrity

Upgrade/Improvement

For Meeting Standards/Safety

Priority - 1 High, 2 Medium, 3 Low