Appendix J: Cultural Resources Reports

HISTORICAL PERSPECTIVES INC.



Architectural Resources Survey Staten Island North Shore Bus Rapid Transit (BRT) Project Staten Island, Richmond County, New York

NYSOPRHP 19PR05262

Architectural Resources Survey Staten Island North Shore Bus Rapid Transit (BRT) Project Staten Island, Richmond County, New York

NYSOPRHP 19PR05262

Prepared For:

MTA New York City Transit Capital Program Management New York City Transit 2 Broadway, B6.12 New York, NY 10004

Prepared By:

Historical Perspectives, Inc. P.O. Box 529 Westport, CT 06881

August 2020

Management Summary

SHPO Project Review Number (if available): 19PR05262

Involved State and Federal Agencies: MTA New York City Transit

Phase of Survey: Architectural Resources Survey

Location Information

Location: Properties adjacent to Richmond Terrace and former North Shore SIRT ROW Minor Civil Division: 08501, Staten Island County: Richmond

Survey Area

Length: ca. 5.2 miles Width: varies Number of Acres Surveyed: ca. 214 acres

USGS 7.5 Minute Quadrangle Map: Elizabeth and Jersey City

Results of Architectural Survey

Number of buildings/structures/cemeteries within project area: Of the 720 lots within the project area, 459 lots are improved with one or more buildings and/or structures. Some lots have multiple buildings/structures. Bridges crossing over the open cut within the project area on city streets are unlotted.

Number of buildings/structures/cemeteries adjacent to project area: numerous; municipal, residential, commercial, and industrial area.

Number of previously determined NRHP listed or eligible buildings/structures/cemeteries/districts:

Section 1:	Staten Island Borough Hall (listed), Richmond County Courthouse (listed), 120 th
	Police Precinct (eligible), Staten Island Family Courthouse (eligible)
Section 2:	Neville House (eligible), Sailors' Snug Harbor Historic District (listed)
Section 3:	Kreuzer-Pelton House (listed)
Section 4:	John DeGroot House (eligible), Reformed Church on Staten Island (listed), three
	buildings within the Port Richmond Historic District (eligible)
Section 5:	Industrial/office building at 137 (aka 141) Lake Avenue (eligible)
Section 6:	Summerfield United Methodist Church (eligible)
Number of ide	ntified eligible buildings/structures/cemeteries/districts:
Section 1:	None
Section 2:	Several additional potentially eligible structures identified along the shoreline of the
	Sailors' Snug Harbor S/NRHP-listed Historic District
Section 3:	One potentially S/NRHP eligible building at 1550 Richmond Terrace.
Section 4:	None
Section 5:	None
Section 6:	Associated parsonage of the S/NRHP eligible Summerfield United Methodist
	Church on the same lot may be a contributing resource

Report Authors(s): Historical Perspectives, Inc.

Date of Report: August 2020

Executive Summary

The MTA New York City Transit (MTA-NYCT) is advancing the environmental analysis of the Staten Island North Shore Bus Rapid Transit (BRT) Project (Proposed Project), which assesses the implementation of new or enhanced public transit service along the North Shore of Staten Island between South Avenue (West Shore Plaza) and St. George (St. George Terminal) in Richmond County, New York. The approximately 8-mile proposed transit alignment would be comprised of approximately 4.8 miles of former North Shore Staten Island Rapid Transit Railway (SIRT) right-of-way (ROW) (which offered passenger and freight service, ending in 1953 and 1989, respectively), and approximately 3.2 miles of City roadways such as Richmond Terrace (0.5 miles) and South Avenue (2.7 miles).

The Proposed Project is divided into seven discrete "sections." Each section and associated study area contains generally similar land uses, and/or reflects a section of the alignment that is distinct from an engineering standpoint. The sections are: Section 1, St. George; Section 2, New Brighton Waterfront; Section 3, West Brighton Waterfront; Section 4, Viaduct; Section 5, Open Cut; Section 6, Arlington Station; and Section 7, South Avenue. Within these sections, the Proposed Project will include a dedicated busway, new stations, construction staging areas, and associated infrastructure. Richmond Terrace is proposed to be widened at several discrete locations in Section 1, adjacent to the 120th Police Precinct and the Staten Island Family Courthouse. Two options are proposed for portions of Section 2 along the Sailors' Snug Harbor waterfront: an on-shore raised busway and a raised busway within the Kill Van Kull.

A series of consultations with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP or SHPO) determined that an Architectural Survey was necessary for the Proposed Project and that the study area or Area of Potential Effects (APE) for Architectural Resources would be 90 feet from the Proposed Project in all areas to account for potential construction-related impacts, except surrounding Sailors' Snug Harbor, where the study area or APE would be expanded to 400 feet to account for potential visual and contextual project impacts on this State/National Register of Historic Places (S/NRHP) listed Historic District, which is also a National Historic Landmark (NHL) and a New York City Landmark (NYCL). The Proposed Project is defined as the area that could be affected by ground disturbance associated with project development, including construction staging areas. Additionally, SHPO concurred with the project team that the portion of the proposed project along South Avenue to West Shore Plaza (Section 7), where there would be no construction impacts, could be eliminated from the APE.

The results of the Architectural Survey indicated that all sections contain architectural resources either listed on, eligible for, or potentially eligible for the S/NRHP within the 90-foot Architectural APE. Some of these resources are also NHLs and NYCLs. Depending on the degree of vibration from the Proposed Project, there could be construction-related physical impacts to these architectural resources. If these impacts cannot be avoided, then they will need to be mitigated through the implementation of a Construction Protection Plan. Additionally, the NYC Building Code (DOB TPPN #10/88) provides a measure of protection for S/NRHP-listed historic resources located within 90 linear feet of a proposed construction site. The 120th Police Precinct Building and the Staten Island Family Courthouse in Section 1 will be affected when Richmond Terrace is widened and their entry steps will need to be reconfigured. However, both the SHPO and the LPC have indicated that they have no architectural concerns for potential impacts to these buildings.

Finally, because the North Shore Branch of the SIRT, which is located in all six sections of the project area, does not appear to collectively meet criteria for S/NRHP eligibility, no further study or mitigation is recommended for this resource.

The Proposed Project alternatives in Section 2 each include construction of a raised busway that would be above the elevation of Richmond Terrace in the vicinity of Sailors' Snug Harbor. The Proposed Project would be visible from a number of contributing resources within the overall Sailors' Snug Harbor S/NRHP Historic District, including Buildings A-E, the chapel, the two gatehouses, the iron fence, and the ferry landing. The SHPO has indicated that the proposed undertaking would have an Adverse Effect upon the setting of Sailors' Snug Harbor, an NHL (Brazee 2020a).

The elevated busway would alter the setting of the waterfront portion of Sailors' Snug Harbor and the viewscape from the portion of Sailors' Snug Harbor on the south side of Richmond Terrace. Sailors' Snug Harbor historically maintained a prominent place along the Kill Van Kull shoreline, and views to and from the resource

along this waterway were important to the setting for the former sailors housed at this institution. If these impacts cannot be avoided, then mitigation alternatives will need to be developed to address these visual and contextual impacts.

Depending on the degree of construction vibrations, the Proposed Project could also have physical impacts on the stone lookout structure and the stone retaining walls along the waterfront that are part of the Sailors' Snug Harbor shoreline. If these impacts cannot be avoided, then they would need to be mitigated through the implementation of a Construction Protection Plan. If these resources cannot be protected because they are within the construction footprint of the alternatives, additional mitigation will need to be developed, in consultation with SHPO, LPC, and other consulting parties.

Table of Contents

Management Sur	nmary	i
Executive Summ	ary	ii
Table of Contents	5	iv
I.	Introduction	1
	A. Proposed Project	1
	B. Regulatory Background	2
	C. SHPO Consultation and Establishment of Area of Potential Effects	2
	D. Project Section Descriptions	3
II.	Methodology	4
III.	Previous Investigations	5
IV.	Historic Context	5
V.	Survey Results	8
	A. Types of Architectural Resources	8
	B. Criteria of Eligibility	
	C. Section 1: St. George	
	D. Section 2: New Brighton Waterfront	
	E. Section 3: West Brighton Waterfront	
	F. Section 4: Viaduct	16
	G. Section 5: Open Cut	
	H. Section 6: Arlington Station	
	I. North Shore Staten Island Railway	
VI.	Conclusions and Recommendations	
	A. Sections 1-6: 90-foot Architectural APE	
	B. Section 2: 400-foot Architectural APE	29
VII.	References	31

Figures

Photographs

Appendix A: Project plans (VHB and STV 2020)

Appendix B: Selected Sailors' Snug Harbor and North Shore Staten Island Rapid Transit Railway Historic Images

Appendix C: Architectural Resources Database by Section

Figures

- 1. Architectural APE on *Elizabeth and Jersey City N.J.-N.Y.* 7.5 Minute Topographical Quadrangle (U.S.G.S. 2016).
- 2a Architectural APE for Section 1 (HPI 2020 and VHB 2020).
- 2b Architectural APE for Section 2 (HPI 2020 and VHB 2020).
- 2c Architectural APE for Section 3 and the east part of Section 4 (HPI 2020 and VHB 2020).
- 2d Architectural APE for the west part of Section 4 and the east part of Section 5 (HPI 2020 and VHB 2020).
- 2e Architectural APE for the west part of Section 5 and Section 6 (HPI 2020 and VHB 2020).
- 3. Potential Staging Locations Overview (VHB and STV 2020).
- 4. Section Overview Map (VHB 2020).
- 5. Architectural APE on *A Map of New York & Staten Island and Part of Long Island* (Taylor and Skinner 1781).
- 6. Architectural APE on *Map of Staten Island or Richmond County* (Butler 1853).
- 7. Architectural APE on *Map of the City of New-York and Environs* (Walling 1860).
- 8. Architectural APE on Map of Staten Island (Richmond Co.) New York... (Dripps 1872).
- 9a-d. Architectural APE on Atlas of Staten Island, Richmond County, New York (Beers 1887).
- 10a-g. Architectural APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).
- 11a Historic Resources in Section 1 (HPI 2020 and VHB 2020).
- 11b Historic Resources in Section 2 (HPI 2020 and VHB 2020).
- 11c Historic Resources in Section 3 and the east part of Section 4 (HPI 2020 and VHB 2020).
- 11d Historic Resources in the west part of Section 4 and the east part of Section 5 (HPI 2020 and VHB 2020).
- 11e Historic Resources in the west part of Section 5 and Section 6 (HPI 2020 and VHB 2020).

Photographs (see Photograph keys prior to Photographs for locations)

Section 1

- Photograph 1.1. View from Staten Island Ferry Terminal complex looking southeast at northeastern boundary of APE. Staten Island Borough Hall is in left background.
- Photograph 1.2. Richmond Terrace, view looking northeast. Modern Staten Island Outlet is on left.
- Photograph 1.3. Modern Staten Island Yankees stadium on Richmond Terrace. View looking northwest.
- Photograph 1.4. Modern parking garage on Richmond Terrace. View looking southeast.
- Photograph 1.5. Former railroad alignment under pavement in North Shore Waterfront Esplanade Park, with Richmond Terrace on left. View looking northwest.
- Photograph 1.6. Staten Island Borough Hall, 10 Richmond Terrace. View looking southwest.
- Photograph 1.7. Richmond County Courthouse, 18 Richmond Terrace. View looking northwest.
- Photograph 1.8. 36-78 Richmond Terrace. Streetscape view looking southwest.
- Photograph 1.9. Commercial buildings on Richmond Terrace. View looking southwest.
- Photograph 1.10. 120th Police Precinct building, 78 Richmond Terrace. View looking northwest.
- Photograph 1.11. Staten Island Family Courthouse, 100 Richmond Terrace. View looking west.
- Photograph 1.12. Commercial buildings on Richmond Terrace. View looking northwest.
- Photograph 1.13. 198 and 204 Richmond Terrace. View looking west.
- Photograph 1.14. Modern apartment building at 224 Richmond Terrace. View looking west.
- Photograph 1.15. Residential properties on Richmond Terrace. View looking west.
- Photograph 1.16. 260 Richmond Terrace (red building on left). View looking southwest.
- Photograph 1.17. NYCHA Richmond Terrace Houses. View looking southwest to Jersey Street from Westervelt Avenue.

Section 2

- Photograph 2.1. Bank Street, looking west from the foot of Jersey Street to 15 Bank Street.
- Photograph 2.2. Smoke stack, Richmond Terrace, view looking northeast.
- Photograph 2.3. 506 Richmond Terrace. View looking southeast.
- Photograph 2.4. 514 Richmond Terrace, looking southwest at York Avenue.
- Photograph 2.5. 536 Richmond Terrace (residence on hill), view looking southeast.

- Photograph 2.6. Concrete warehouse on south side of Richmond Terrace between York Avenue and Franklin Avenue. View looking southwest.
- Photograph 2.7. Proposed staging area on the south side of Richmond Terrace near Franklin Avenue, with houses in the background on Van Buren Street. View looking south.
- Photograph 2.8. The south side of Richmond Terrace looking southwest at Lafayette Avenue.
- Photograph 2.9. Richmond Terrace, between Lafayette and Clinton Avenues, view looking southwest.
- Photograph 2.10. 772, 776, 778, and 782 Richmond Terrace. View looking southwest.
- Photograph 2.11. 2 Clinton Avenue and 794 Richmond Terrace. View looking southwest.
- Photograph 2.12. The Neville House at 806 Richmond Terrace, view looking south.
- Photograph 2.13. 814 Richmond Terrace, view looking southwest.
- Photograph 2.14. Sailors' Snug Harbor, view looking southwest.
- Photograph 2.15. Sailors' Snug Harbor gatehouse on Richmond Terrace. View looking southwest.
- Photograph 2.16. Sailors' Snug Harbor Buildings T (left background) and E (right). View looking southwest.
- Photograph 2.17. Sailors' Snug Harbor Building D. View looking southwest.
- Photograph 2.18. Sailors' Snug Harbor Building C. View looking southwest.
- Photograph 2.19. Sailors' Snug Harbor Building B. View looking southwest.
- Photograph 2.20. Sailors' Snug Harbor Building A. View looking southwest.
- Photograph 2.21. Sailors' Snug Harbor, view looking northwest toward Richmond Terrace and Kill Van Kull.
- Photograph 2.22. Former railroad tracks on north side of Richmond Terrace at Sailors' Snug Harbor. View looking north.
- Photograph 2.23. Sailors' Snug Harbor historic viewing platform on north side of Richmond Terrace. View looking south.
- Photograph 2.24. Modern dock at Sailors' Snug Harbor on north side of Richmond Terrace. Former railroad tracks are under vegetation. View looking north.
- Photograph 2.25. Shoreline at Sailors' Snug Harbor. View looking east with Atlantic Salt facility in upper left background.
- Photograph 2.26. Shoreline at Sailors' Snug Harbor. View looking west.
- Photograph 2.27. Former railroad tracks and stone retaining wall at Sailors' Snug Harbor, with Richmond Terrace in the background. View looking southwest.
- Photograph 2.28. Stone retaining wall at Sailors' Snug Harbor, at base of paved paths. View looking south.
- Photograph 2.29. Paved paths leading to the Sailors' Snug Harbor shoreline, with Richmond Terrace on the right. View looking east.

Photograph 2.30. Blue Restaurant at 1115 Richmond Terrace. View looking northwest.

- Photograph 2.31. Gas station on the north side of Richmond Terrace, view looking northwest near Bard Avenue.
- Photograph 2.32. 1126 Richmond Terrace. View looking south.
- Photograph 2.33. Con Edison building on Richmond Terrace, view looking southwest near Bard Avenue.
- Photograph 2.34. Con Edison parking lot on the north side of Richmond Terrace. View looking northwest.

Section 3

- Photograph 3.1. Caddell Dry Dock and Repair Company's buildings on the north side of Richmond Terrace. View looking northwest from just west of N. Burgher Avenue.
- Photograph 3.2. Caddell Dry Dock and Repair Company buildings at 1515 Richmond Terrace and Quinlan Fuel Oil and Heating buildings at 1473 Richmond Terrace. View looking northeast.
- Photograph 3.3. Caddell Dry Dock and Repair Company buildings at 1515 Richmond Terrace. View looking north from Broadway at Richmond Terrace.
- Photograph 3.4. Detail of Caddell Dry Dock and Repair Company entrance. The new project alignment will cross this parking lot; the former railroad was located further to the north, in front of the gray building in the background. View looking north.
- Photograph 3.5. Caddell Dry Dock and Repair Company, 1515 Richmond Terrace, view looking northwest from west of Broadway.
- Photograph 3.6. Caddell Dry Dock and Repair Company buildings. View looking east from the access road and parking lot for Heritage Park.
- Photograph 3.7. Fence outside Caddell Dry Dock and Repair Company. Building on right is 1535 Richmond Terrace. View looking southeast near Barrett Lane.
- Photograph 3.8. Heritage Park, view looking northwest.
- Photograph 3.9. 1643 and 1652 Richmond Terrace, view looking northeast.
- Photograph 3.10. The Kreuzer-Pelton House, 1262 Richmond Terrace, view looking southeast.
- Photograph 3.11. Buildings at 1380, 1388, and 1390 Richmond Terrace. View looking southwest.
- Photograph 3.12. 1390 Richmond Terrace. View looking southwest.
- Photograph 3.13. 1410 Richmond Terrace. View looking southeast.
- Photograph 3.14. 1550 Richmond Avenue, Restoration Workshop building. View looking southwest.
- Photograph 3.15. 1 Van Street/AKA 1564-1568 Richmond Terrace. View looking southeast.

Section 4

Photograph 4.1. John DeGroot House, 1674 Richmond Terrace, corner of Alaska Street, view looking southeast from Richmond Terrace.

- Photograph 4.2. 1689 and 1691 Richmond Terrace. View looking northwest.
- Photograph 4.3. 1740 Richmond Terrace. View looking southeast.
- Photograph 4.4. Port Richmond Water Pollution Control Plant at 1789 Richmond Terrace with viaduct in the far background. View looking north.
- Photograph 4.5. 1957 Richmond Terrace with the viaduct in the left background. View looking northeast.
- Photograph 4.6. 1972 and 1978 Richmond Terrace at the intersection of Heberton Avenue. View looking west.
- Photograph 4.7. 16 Park Avenue, north of the viaduct. View looking southwest.
- Photograph 4.8. Park Avenue south of the viaduct. 60 Park Avenue (Block 1004, Lot 27) and 56 Park Avenue (Block 1004, Lot 24). View looking west.
- Photograph 4.9. Park Avenue south of the viaduct. 55, 57, and 61 Park Avenue (Block 1006, Lots 6, 8, and 10). View looking southeast.
- Photograph 4.10. Church Street north of the viaduct. 52-54 Church Street, circa 1931 public bathroom. View looking southwest.
- Photograph 4.11. Church Street north of the viaduct, 52- 54 Church Street (Block 1004, Lots 15 and 19). View looking southwest.
- Photograph 4.12. Port Richmond Avenue north of the viaduct. 61 Port Richmond Avenue (Block 1004, Lot 12). View looking southeast.
- Photograph 4.13. Port Richmond Avenue north of the viaduct. From Right: 64, 68, 70, and 76 Port Richmond Avenue (Block 1073, Lots 90, 92, 93, and 94). View looking southwest.
- Photograph 4.14. Port Richmond Avenue north of the viaduct, 54 Port Richmond Avenue, Reformed Church of Staten Island (Block 1073, Lot 75). View looking west from Church Street.
- Photograph 4.15. Port Richmond Avenue, south of the viaduct. From right: 90, 98, 102, 104, 108-110, and 114 Port Richmond Avenue (Block 1073, Lots 104, 107, 110, and 116). View looking southeast.
- Photograph 4.16. Port Richmond Avenue south of the viaduct. From left: 81, 91, 93, 97, and 99 Port Richmond Avenue (Block 1004, Lot 1, 7, 10, and 11). View looking northeast.
- Photograph 4.17. Port Richmond Avenue at Ann Street, south of the viaduct. From left: 81 Port Richmond Avenue and 103, 99, 97, 95, 91, and 85 Ann Street (Block 1004, Lots 40, 37, 37, 36, 35, and 32). View looking northeast.
- Photograph 4.18. Maple Avenue south of the viaduct, rear of 108 Port Richmond Avenue. View looking northeast.
- Photograph 4.19. Maple Avenue south of the viaduct. From left: 66 and 62 Maple Avenue (Block 1074, Lots 89 and 86). View looking northwest.
- Photograph 4.20. Maple Avenue north of the viaduct. From right: 47-51 Maple Avenue (Block 1073, Lots 23 and 24). View looking northeast.
- Photograph 4.21. Maple Avenue north of the viaduct, 39 Maple Avenue. View looking northeast.

- Photograph 4.22. Maple Avenue north of the viaduct. From left: 50, 48, 42, and 40 Maple Avenue (Block 1074, Lots 82, 81, 79, and 77). View looking northwest.
- Photograph 4.23. Grove Avenue between Faber Street and Maple Avenue. At left is 59 Grove Avenue (Block 1074, Lot 9). View looking northeast.
- Photograph 4.24. Faber Street south of the viaduct. From left: 71 Faber Street (Block 1074, Lot 11) and 59 Grove Avenue (Block 1074, Lot 9). View looking northeast.
- Photograph 4.25. Faber Street south of the viaduct. 78 Faber Street (Block 1076, Lot 1). View looking northwest.
- Photograph 4.26. Faber Street north of the viaduct. From right: 55, 51, 47, and 45 Faber Street (Block 1074, Lots 15, 18, 20, and 22). View looking northeast.
- Photograph 4.27. Faber Street north of the viaduct. 56, 60, and 64 Faber Street (Block 1076, Lots 58, 56, and 53). View looking southwest.
- Photograph 4.28. 48 and 52 Larkin Street (Block 1076, Lots 39 and 42). View looking southwest.
- Photograph 4.29. Sharpe Avenue north of the viaduct. From right: 49, 47, and 43 Sharpe Avenue (Block 1076, Lots 28, 26, and 22). View looking northeast.
- Photograph 4.30. Sharpe Avenue north of the viaduct. From right: 46, 50, 52, and 56 Sharpe Avenue (Block 1084, Lots 97, 98, 100, and 102). View looking southwest.
- Photograph 4.31. Sharpe Avenue south of the viaduct. From right: 68, 72, 78, and 82 Sharpe Avenue (Block 1084, Lots 107, 110, and 113). View looking southwest from Grove Avenue.
- Photograph 4.32. Sharpe Avenue at Grove Avenue, south of the viaduct. 100 and 98 Grove Avenue (Block 1079, Lots 40 and 41). View looking southeast.
- Photograph 4.33. Sharpe Avenue south of the viaduct at Grove Avenue. 97 Grove Avenue in foreground (Block 1076, Lot 14). View looking northeast.
- Photograph 4.34. Grove Avenue, between Faber Street and Sharpe Avenue. From right: 78 Faber Street, 79, 87, and 97 Grove Avenue (Block 1076, Lots, 1, 3, 8, and 14). View looking northwest with Bayonne Bridge at rear.
- Photograph 4.35. Treadwell Avenue north of the viaduct. From left: 46, 42, and 38 Treadwell Avenue (Block 1086, Lots 88, 86, and 84). View looking southwest.
- Photograph 4.36. Treadwell Avenue north of the viaduct. From left: 41, 39, 37, and 35 Treadwell Avenue (Block 1084, Lots 45, 48, 50, and 53). View looking northeast.
- Photograph 4.37. Treadwell Avenue south of the viaduct. From left: 61, 63, 65, 67, and 71 Treadwell Avenue (Block 1084, Lots 41, 40, 39, 38, and 36). View looking northeast.
- Photograph 4.38. Treadwell Avenue south of the viaduct. 62, 66, and 68 Treadwell Avenue. View looking southwest.
- Photograph 4.39. 31 Slaight Street. View looking northwest.
- Photograph 4.40. Nicholas Avenue south of the viaduct and rear of 31 Slaight Street (Block 1086, Lot 8). View looking northeast.

- Photograph 4.41. Nicholas Avenue south of the viaduct at Slaight Street. View looking northwest from Slaight Street.
- Photograph 4.42. Nicholas Avenue north of the viaduct. From right: 61, 41, and 35 Nicholas Avenue (Block 1086, Lots 32, 29, and 27). View looking northeast.
- Photograph 4.43. 60 Nicholas Avenue. View looking northwest from under the viaduct, looking at the rear of Riverside Lane.
- Photograph 4.44. Riverside Lane north of the viaduct. 60 Nicholas Avenue and 24 through 67 Riverside Lane (Block 1116, Lots 100, 102, 104, 104, 108, 114, 116, 118, 120, 122, 124, 125, 126, 127, 144, 145, 146, 147, 148, 153, 154, and 155). View southwest from Nicholas Avenue.
- Photograph 4.45. John Street south of the ROW. From right: 125, 119, 117, and 115 John Street (Block 1121, Lots 56, 68, 69, and 71). View looking northeast.
- Photograph 4.46. John Street north of the ROW. From left: 83 and 89 John Street (Block 1121, Lots 92 and 95). View looking southeast.

Section 5

- Photograph 5.1. John Street north of the ROW. From left: 94 and 92 John Street (Block 1122, Lots 108 and 105). View looking northwest.
- Photograph 5.2. 120 John Street south of the ROW (Block 1123, Lot 120). View looking southwest from John Street.
- Photograph 5.3. Eaton Place south of the ROW. From right: 129, 127, 125, and 121 Eaton Place (Block 1124, Lots 13, 14, 15, and 7501). View looking northeast.
- Photograph 5.4. Morningstar Road south of the ROW. From left: 146, 142, 140, and 132 Morningstar Road and overpass (Block 1152, Lots 85, 84, 83, and 79). View looking northwest.
- Photograph 5.5. Morningstar Road south of the ROW. From left: 135 and 127 Morningstar Road (Block 1125, Lots 8 and 10). View looking northeast.
- Photograph 5.6. Morningstar Road overpass above the open cut. 21 through 31 Shaina Court beyond the bridge (Block 1152, Lots 66, 68, 69, 70, 71, and 72). View looking southwest.
- Photograph 5.7. La Salle Street at Morningstar Road north of the ROW. 15-21 Shaina Court (Block 1152, Lots, 63, 64, 66, and 67). View looking southwest.
- Photograph 5.8. Morningstar Road north of the ROW. 88 Morningstar Road (Block 1149, Lot 91). View looking northwest from La Salle Street.
- Photograph 5.9. Morningstar Road north of the ROW, with the Bayonne Bridge approach overhead. New building (no address) being constructed and 73 Morningstar Road (Block 1125, Lots 28 and 29). View looking northeast.
- Photograph 5.10. Newark Avenue north of the ROW with the Bayonne Bridge approach on the left. From right: 81, 73, 67, and 65 Newark Avenue (Block 1123, Lots 3, 4, 7, and 10). View looking northeast.
- Photograph 5.11. Winant Street north of the ROW. 40 La Salle Street at the edge of APE (Block 1155, Lot 85). View looking southwest.

- Photograph 5.12. Winant Street north of the ROW. 111 Winant Street (Block 1152, Lot 47). View looking southeast.
- Photograph 5.13. Winant Street north of the ROW. 113 Winant Street (Block 1152, Lot 42). View looking northeast.
- Photograph 5.14. Dead end of Pulaski Avenue south of the ROW (Block 1152, Lot 31). View looking northeast.
- Photograph 5.15. Granite Avenue bridge over the ROW. 133 Granite Avenue (Block 1115, Lot 71) in the distance. View looking southeast.
- Photograph 5.16. Granite Avenue north of the ROW. 124 Granite Avenue (Block 1156, Lot 1). View looking southwest.
- Photograph 5.17. Housman Avenue north of the ROW at Gigi Street. 124 Housman Avenue (Block 1158, Lot 103). View looking northwest.
- Photograph 5.18. Gigi Street and Wright Avenue north of the ROW. 93 and 91 Wright Avenue (Block 1158, Lots 1 and 7). View looking northeast.
- Photograph 5.19. Wright Avenue north of the ROW. 94 Wright Avenue (Block 1159, Lot 100). View looking northwest.
- Photograph 5.20. Lake Avenue on the north side of the overpass over the ROW. 97 Lake Avenue (Block 1159, Lot 1). View looking northeast.
- Photograph 5.21. Lake Avenue at the overpass on the north side of the ROW. From left: 104-92 Lake Avenue (Block 1160, Lots 117, 114, 113, 112, 111, 110, and 109). View looking northwest.
- Photograph 5.22. Lake Avenue south of the overpass. 125 Lake Avenue (Block 1161, Lot 21). View looking southeast.
- Photograph 5.23. 141 (aka 137) Lake Avenue (Block 1161, Lot 20). View looking southeast.
- Photograph 5.24. Lake Avenue on the south side of the overpass. From left: 128 and 120 Lake Avenue (Block 1165, Lots 56 and 52). View looking northwest.
- Photograph 5.25. Simonson Avenue at the northern edge of the overpass. From right: 97 and 93 Simonson Avenue (Block 1160, Lots 3 and 4). View looking northeast.
- Photograph 5.26. Simonson Avenue at the northern edge of the overpass. From left: 98 and 94-88 Simonson Avenue (Block 1186, Lots 117, 115, and 114). View looking northwest.
- Photograph 5.27. Simonson Avenue south of the overpass. From right: 129, 125, and 121-119 Simonson Avenue (Block 1156, Lots, 32, 35, 37, and 39). View looking northeast.
- Photograph 5.28. Simonson Avenue south of the overpass. 126 Simonson Avenue (Block 1186, Lot 124). View looking northwest.
- Photograph 5.29. Van Name Avenue north of the overpass. From right: 99, 93, and 87 Van Name Avenue (Block 1186, Lots 9, 11, and 13). View looking northeast.
- Photograph 5.30. Van Name Avenue north of the ROW. 96 and 90 Van Name Avenue (Block 1188, Lots 117 and 114). View looking west.

- Photograph 5.31. Beamer Court north of the ROW. 40 and 50 Beamer Court (Block 1188, Lots 254 and 252). View looking west.
- Photograph 5.32. Heusden Street south of the ROW, between Van Name and Simonson Avenues. From left: 19 and 17 Heusden Street (Block 1186, Lots 1 and 129). View looking northeast from the intersection of Van Name Avenue.
- Photograph 5.33. 32 and 28 Heusden Street at the intersection of Van Name Avenue (Block 1190, Lots 28 and 30). View looking southeast.
- Photograph 5.34. South side of Heusden Street south of the ROW. From left: 34 through 58 Heusen Street (Block 1192, Lots 48, 46, 45, 42, 41, 40, 39, and 38). View looking southeast.
- Photograph 5.35. Intersection of Heusden Street and Van Pelt Avenue south of the ROW. 109 Van Pelt Avenue (Block 1192, Lot 26). View looking southeast.
- Photograph 5.36. Van Pelt and Linden Avenues. 110 and 114 Van Pelt Avenue (Block 1215, Lots 49 and 50). View looking southwest.
- Photograph 5.37. Van Pelt Avenue at the northern edge of the overpass. 89 Van Pelt Avenue (Block 1188, Lot 2). View looking northeast.
- Photograph 5.38. Van Pelt Avenue north of the ROW. 92 and 88 Van Pelt Avenue (Block 1121, Lots 150 and 148). View looking northwest.
- Photograph 5.39. Erastina Place north of the ROW. 89 Erastina Place (Block 1211, Lot 21). View looking southeast.
- Photograph 5.40. Erastina Place north of the ROW. 98 Erastina Place (Block 1212, Lot 98). View looking northwest.
- Photograph 5.41. Linden Avenue south of the ROW. From left: 14 and 18 Linden Avenue (Block 1215, Lots 45 and 48). View looking southeast.
- Photograph 5.42. Linden Avenue and Maple Parkway south of the ROW. 2, 12, 16 and 14 Maple Parkway (Block 1212, Lots, 19, 13, 15, and 12). View looking southwest.
- Photograph 5.43. De Hart Avenue, southern edge of the overpass at the ROW. 2, 12, 16 and 14 Maple Parkway (Block 1212, Lots, 19, 13, 15, and 12). View looking northeast.
- Photograph 5.44. De Hart Avenue on the southern edge of the overpass at the ROW. From left: 116 and 112 De Hart Avenue (Block 1213, Lots 145 and 143). View looking northwest.
- Photograph 5.45. Northern edge of the overpass at the ROW on De Hart Avenue. From right: 95, 91 and 87 De Hart Avenue (Block 1212, Lots 25, 26 and 29). View looking northeast.
- Photograph 5.46. Northern edge of the overpass at the ROW on De Hart Avenue. 100 De Hart Avenue. View looking southwest.
- Photograph 5.47. Union Avenue on the north side of the ROW. 101 and 99 Union Avenue (Block 1213, Lots 28 and 29). View looking northeast.
- Photograph 5.48. Union Avenue on the north side of the ROW. From left: 104 and 100 Union Avenue (Block 1226, Lots 51 and 47). View looking northwest.

- Photograph 5.49. Union Avenue south of the ROW. From left: 119, 121, 127, and 129 Union Avenue (Block 1213, Lots 18, 17, 16, and 15). View looking southeast.
- Photograph 5.50. Union Avenue south of the ROW. 130 Union Avenue (Block 1226, Lot 57). View looking northwest.
- Photograph 5.51. Bush Avenue north of the ROW. From right: 111 and 109 Bush Avenue (Block 1226, Lots 31 and 32). View looking southeast.
- Photograph 5.52. Bush Avenue north of the ROW. From left: 112 and 110 Bush Avenue (Block 1227, Lots 114 and 112). View looking west.
- Photograph 5.53. Harbor Road north of the ROW. From right: 111 and 109 Harbor Road (Block 1227, Lots 3 and 4). View looking northeast.
- Photograph 5.54. Harbor Road south of the ROW. Coal silos at 151 Harbor Road (Block 1226, Lot 7). View looking northeast.

Section 6

- Photograph 6.1. Harbor Road north of the ROW. Summerfield Methodist Church at 100 Harbor Road (Block 1236, Lot 164). View looking northwest.
- Photograph 6.2. The same view of the church from 1899. Note the original parsonage house on the right.
- Photograph 6.3. Harbor Road north of the ROW. Summerfield Methodist Church parsonage house at 100 Harbor Road (Block 1236, Lot 164). View looking west.
- Photograph 6.4. Harbor Road south of the ROW. From right: 124, 126, 128, 130, and 132 Harbor Road (Block 1243, Lots 46, 47, 48, 49, and 149). View looking northeast.
- Photograph 6.5. Lockman Avenue and Lockman Loop intersection south of the ROW. 20 Lockman Loop (Block 1243, Lot 20). View looking southeast.
- Photograph 6.6. Lockman Avenue at Roxbury Street, south of the ROW. NYCHA Mariners Harbor public housing complex (Block 1245, Lot 1). View looking southwest.
- Photograph 6.7. Roxbury Street south of the ROW. NYCHA Mariners Harbor public housing complex (Block 1245, Lot 1). View looking southeast.
- Photograph 6.8. Grandview Avenue and Roxbury Street south of the ROW. From right: 310, 312, 314, and 316 Grandview Avenue (Block 1261, Lots 93, 94, 96, and 98). View looking southeast.
- Photograph 6.9. South Avenue south of the ROW. 285, 281, 273, 263, and 271 South Avenue (Block 1261, Lots 66, 65, 71, 76, and 78). View looking northeast.
- Photograph 6.10. Railroad property south of the ROW with industrial building (Block 1288, Lot 217). View looking west.
- Photograph 6.11. South Avenue at the edge of the overpass north of the ROW. 237 South Avenue (Block 1257, Lot 9). View looking northeast.
- Photograph 6.12. Grandview Avenue north of and abutting the ROW. From left: 246 and 244 Grandview Avenue (Block 1257, Lots 83 and 72). View looking northwest.

- Photograph 6.13. Grandview Avenue north of and abutting the ROW. 243 Grandview Avenue on left (Block 1256, Lot 39). View looking northeast.
- Photograph 6.14. Davidson Street north of the ROW. 82 Davidson Street (Block 1256, Lot 92). View looking southwest.
- Photograph 6.15. Davidson Street north of the ROW. 60 Davidson Street (Block 1256, Lot 40). View looking southeast.
- Photograph 6.16. Andros Avenue north of the ROW. 141 Andros Avenue (Block 1237, Lot 100). View looking southeast.
- Photograph 6.17. Lockman Place north of the ROW. 7 Lockman Place (Block 1236, Lot 120). Note rear of the Summerfield Methodist Church at left. View looking southeast.
- Photograph 6.18. Lockman Place north of the ROW. From left: 4, 3 and 1 Lockman Place (Block 1236, Lots 124, 125, and 127). View looking southwest.

North Shore Staten Island Rapid Transit Railway Existing Conditions Photographs

- Photograph R.1. Section 1, North Shore Waterfront Esplanade Park and Bank Street. The former railroad tracks are no longer extant. View looking southeast.
- Photograph R.2. Section 1, North Shore Waterfront Esplanade Park and Bank Street. The former railroad tracks are no longer extant. View looking northwest.
- Photograph R.3. Section 1 terminus, Bank Street at Jersey Street. The railroad tracks were under the newly paved areas. View looking northeast.
- Photograph R.4. Section 2, remains of the railroad tracks in the wooded area north of Richmond Terrace. View looking north.
- Photograph R.5. Section 2, north of Richmond Terrace at Sailors' Snug Harbor modern dock. Remains of the railroad tracks are located under the vegetation, where the man in the blue shirt is gesturing. View looking north.
- Photograph R.6. Section 2, remains of the railroad tracks north of Richmond Terrace at Sailors' Snug Harbor waterfront. View looking southwest.
- Photograph R.7. Section 2. Pedestrian path along the shoreline at Sailors' Snug Harbor. Remains of the railroad tracks are within the woods on the right. View looking east.
- Photograph R.8. Section 2, former railroad tracks along the Sailors' Snug Harbor scoured shoreline. Note the erosion of the beach. View looking west.
- Photograph R.9. Section 2, rear of Blue Restaurant at 1115 Richmond Terrace showing the reconstructed railroad tracks. View looking east.
- Photograph R.10. Section 2. Remains of the railroad tracks to the north of the Con Edison parking lot. View looking west.
- Photograph R.11. Section 3, former railroad tracks embedded in the pavement in front of the gray building of the Caddell Dry Dock and Repair Company yard. View looking north.

- Photograph R.12. Section 4, conditions on top of the viaduct near the Port Richmond Wastewater Pollution Control Plant. View looking east.
- Photograph R.13. Section 4, detail of the viaduct near Richmond Terrace. View looking northeast.
- Photograph R.14. Section 4, the viaduct crossing at Richmond Terrace. View looking northwest.
- Photograph R.15. Section 4, detail of the viaduct underside crossing Port Richmond Avenue. View looking west.
- Photograph R.16. Section 4, former station remains on top of the viaduct near Sharpe Avenue. View looking southeast.
- Photograph R.17. Section 4, former station remnants on top of the viaduct near Sharpe Avenue. View looking northwest.
- Photograph R.18. Section 5, remains of the open cut filled with water under the Bayonne Bridge approach. View looking southwest.
- Photograph R.19. Section 4, the open cut near Morningstar Road, with station remnants. View looking west.
- Photograph R.20. Section 5, the open cut filled with water near Winant Street. View looking southwest.
- Photograph R.21. Section 5, the open cut between Van Pelt Avenue and Van Name Avenue. View looking east.
- Photograph R.22. Section 5, station remnants within the open cut between De Hart Avenue and Van Pelt Avenue. View looking southeast.
- Photograph R.23. Section 6, active tracks under the Harbor Road overpass. View looking west.
- Photograph R.24. Section 6, active tracks at the South Avenue overpass. View looking east.
- Photograph R.25. Section 6, active tracks at the South Avenue overpass. View looking west.

I. Introduction

A. Proposed Project

The MTA New York City Transit (MTA-NYCT) is advancing the environmental analysis of the Staten Island North Shore Bus Rapid Transit (BRT) Project (Proposed Project), which assesses the implementation of new or enhanced public transit service along the North Shore of Staten Island between South Avenue (West Shore Plaza) and St. George (St. George Terminal) in Richmond County, New York (Figures 1, 2a-e, and Appendix A). The approximately 8-mile proposed transit alignment would be comprised of approximately 4.8 miles of former North Shore Staten Island Rapid Transit Railway (SIRT) right-of-way (ROW) (which offered passenger and freight service, ending in 1953 and 1989, respectively), and approximately 3.2 miles of City roadways such as Richmond Terrace (0.5 miles) and South Avenue (2.7 miles).

The Proposed Project's Basis of Design report describes the general features of the proposed BRT:

The proposed alignment is comprised of varying types of right-of-way (ROW) segments including at-grade, elevated viaduct and below-grade open-cut sections, with street running portions along South Avenue and an exclusive two-lane median busway on Richmond Terrace between Nicholas Street and the St. George Terminal. On the portion of the proposed alignment that uses the former North Shore Railroad right-of-way (NSRR ROW), the proposed BRT service would operate within a two-lane, dedicated busway with the potential passing lanes at certain stations. Access to the proposed busway would be provided at four locations: in Arlington, at Bard Avenue, at an extended Alaska Street, and at Nicholas Street in St. George.

As the BRT service travels west from the existing bus terminal at St. George, the BRT would operate on Richmond Terrace in a new, approximately 0.5-mile exclusive dedicated median busway. The exclusive BRT alignment would transition from Richmond Terrace to the former NSRR ROW at Nicholas Street via a new ramp. The at-grade segment of the former NSRR ROW generally abuts the waterfront as it travels west. The North Shore's shoreline has been notably altered because of both continuous natural erosion and severe weather events. Additionally, larger vessels passing through the Kill van Kull because of the Bayonne Bridge modification are anticipated to further exacerbate erosion. At present, the former NSRR ROW and bulkhead near Sailors' Snug Harbor has sustained substantial storm damage and has largely been submerged by the Kill van Kull.

At Heritage Park, the at-grade segment of the exclusive BRT alignment would transition to the former North Shore Railroad viaduct structure (for approximately 1.2 miles) that extends past the NYCDEP Port Richmond Wastewater Treatment Plant (WWTP) and Bodine Creek, shifting slightly inland as it crosses through Port Richmond and over Richmond Terrace. East of the Bayonne Bridge, near John Street, the viaduct transitions to the ROW's open-cut section that extends west toward the existing Arlington Yard freight terminal. The open-cut section is approximately 0.9 miles long with varying widths and is situated between 20 feet to 30 feet below grade. In the western section of the open cut near Van Name and Union Avenues, the BRT would be situated to safely coexist with the existing Arlington Yard rail freight service. Near Roxbury Street, the proposed alignment would leave the open-cut and rise to grade as it transitions to Arlington Station. It would then transition through Arlington where it would join South Avenue from a proposed driveway north of Brabant Street where it would operate without exclusive lanes in mixed traffic along South Avenue to West Shore Plaza.

The proposed BRT service would re-purpose and utilize the existing taxi stand on the bus deck of the St. George Terminal as its eastern terminus and the existing West Shore Plaza shopping center as the western terminus. In between these termini, six new BRT stations, with amenities such as platforms and shelters, and three existing, on-street stops along South Avenue, would be served. The specific locations and layouts of the proposed stations has been determined based on their ability to maximize the transportation goals of the project while minimizing environmental impacts, where practicable (VHB and STV 2020:1-2).

The proposed project also includes the widening of Richmond Terrace by 6 feet on the east side of the street between Schuyler Street and Wall Street, by 12 feet on the west side of the street between Wall Street and Hamilton Avenue, and by 4 feet between Hamilton Avenue and Stuyvesant Place (Appendix A). The 12-foot widening section will affect the properties occupied by the 120th Police Precinct building and the Staten Island Family Courthouse. The steps of both buildings will need to be reconfigured in order to accommodate the road widening. Both buildings are eligible for the State/National Register of Historic Places (S/NRHP) and are New York City Landmarks (NYCLs).

In addition to the proposed alignment and stations, there are also 18 potential construction staging locations for the project, as depicted in the project's *Basis of Design* report (Figure 3). Many of these construction staging areas are within the "constructive way" for the project, or within areas that will be used for constructing the proposed project. Other construction staging areas outside of the "constructive way" are privately held parcels that would be leased only for the duration of the project construction.

B. Regulatory Background

The MTA-NYCT is preparing a Draft Environmental Impact Statement (DEIS) for the Proposed Project in accordance with New York's State Environmental Quality Review Act (SEQRA) and New York City's Environmental Quality Review (CEQR). The Proposed Project may also seek federal funding from the Federal Transit Administration (FTA); thus, the DEIS is being prepared to be consistent with the requirements of the National Environmental Policy Act (NEPA) of 1969, (42 U.S.C. 4321 et seq.), as amended. As part of any future NEPA process, the Proposed Project would be subject to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR Part 800), which mandates that federal agencies consider the effects of their actions on any properties listed on or determined eligible for listing on the S/NRHP and afford the federal Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings. This analysis of historic and cultural resources is therefore also consistent with Section 106 requirements.

C. SHPO Consultation and Establishment of Area of Potential Effects

In August 2019, the project team began consultations with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP or SHPO) under SEQRA. On October 4, 2019, SHPO representatives joined project team members on a field visit to view the Proposed Project. Based on the results of the field visit and supporting documentation about the Proposed Project, on October 30, 2019, SHPO issued a response indicating that a Phase IA Archaeology Survey and an Architectural Survey were necessary (Brazee 2019a). The present report constitutes the required Architectural Survey. The Phase IA Archaeological Survey will be submitted as a separate, stand-alone report.

After subsequent discussions by the project team with SHPO and submission of additional project materials, SHPO issued a supplemental response, indicating that the study area or Area of Potential Effects (APE) for Architectural Resources would be 90 feet from the Proposed Project in all areas to account for potential construction-related impacts, except surrounding Sailors' Snug Harbor, where the study area or APE would be expanded to 400 feet to account for potential visual and contextual project impacts on this S/NRHP listed Historic District, which is also a National Historic Landmark (NHL) and a NYCL (Figures 2a-e). The Proposed Project is defined as the area that could be affected by ground disturbance associated with project development, including construction staging areas. Additionally, SHPO concurred with the project team that the portion of the proposed project along South Avenue to West Shore Plaza (Section 7, below), where there would be no construction impacts, could be eliminated from the APE (Brazee 2019b).

As part of a separate effort, in June 2019, AKRF conducted an architectural survey of waterfront neighborhoods throughout Staten Island under a larger OPRHP initiative to create consistent and up-to-date historic resources survey information for areas in New York City and Long Island that are vulnerable to storm damage (AKRF 2019). That architectural study, which was in response to Superstorm Sandy, resulted in the submission to SHPO of both

Reconnaissance-level and Intensive-level historic resource forms across much of the northern shore of Staten Island. Large portions of the North Shore BRT study area were included in the 2019 architectural survey. As a result of subsequent consultation by the project team, SHPO concurred that those locations included as part of the 2019 architectural survey would not need to be reevaluated or updated as part of the current study (Mackey 2019).

On January 24, 2020, the FTA formally initiated consultation with SHPO under Section 106 of the NHPA (Burns 2020).

On June 4, 2020, the project team submitted a viewshed analysis, including renderings, for the two project options proposed along the shoreline at Sailors' Snug Harbor to SHPO for review. On July 3, 2020, the SHPO responded:

We have reviewed the viewshed analysis for Sailors' Snug Harbor and the memorandum of project design options that were provided to our office on June 4, 2020. Based upon our review, the proposed undertaking would have an Adverse Effect upon the setting of Sailors' Snug Harbor, a National Historic Landmark (Brazee 2020a).

On June 29, 2020, the project team submitted a viewshed analysis, including renderings, for the widening of Richmond Terrace at the 120th Police Precinct building and the Staten Island Family Courthouse. On July 22, 2020, the SHPO responded:

We have reviewed the description and renderings illustrating the proposed changes to the stairs and cheek/retaining walls at both the 120th Police Precinct and the Richmond County Courthouse, provided to our office on June 29th, 2020. We understand that the existing steps have been replaced at both buildings. Based upon this, and upon our assessment of the visual impacts to the historic buildings as illustrated in the renderings, we have no concerns with this component of the proposed project (Brazee 2020b).

Identical submissions by the project team of the two sets of viewsheds and renderings to the New York City Landmarks Preservation Commission (LPC) did not result in any additional comments for architectural resources (Santucci 2020).

D. Project Section Descriptions

To facilitate the analysis for the North Shore BRT project area, the proposed alignment has been divided into seven sections (Figure 4). Each section and associated study area contains generally similar land uses, and/or reflects a section of the alignment that is distinct from an engineering standpoint.

Section 1: St. George

This section comprises the area along Richmond Terrace from the St. George Terminal west to Jersey Street. Land uses in this section include the commercial and retail area near the terminal, a variety of civic and community uses, the North Shore Esplanade Park, and residential development south of Richmond Terrace. The section is approximately 0.9 mile long.

Section 2: New Brighton Waterfront

This section, which runs primarily along the Kill Van Kull shoreline in the New Brighton neighborhood, extends from Jersey Street west to Davis Avenue. It encompasses the northern portions of the New Brighton neighborhood and the Snug Harbor Cultural Center and Botanical Garden. Land uses in this area are primarily residential and park; however, the eastern part of the shoreline area is occupied by Atlantic Salt, a large industrial facility, and a Con Edison facility is located south of the shoreline and east of Davis Avenue. This section is approximately 1.2 miles long.

Section 3: West Brighton Waterfront

Section 3 generally parallels the shoreline from Davis Avenue to the foot of Alaska Street, where the former ROW transitions from at-grade to an extant viaduct structure south of Heritage Park. Land uses in this area include singleand multi-family residences south of Richmond Terrace in the West Brighton neighborhood, marine industrial uses (Caddell Dry Dock and TP Marine Electric) along the waterfront, and industrial and commercial uses between the waterfront and Richmond Terrace. This section is approximately 0.7 mile long.

Section 4: Viaduct

This section follows the existing viaduct portion of the ROW from Alaska Street west to John Street. The eastern portion encompasses open space west of Heritage Park and industrial uses, including the Port Richmond Water Pollution Control Plant. The portion of Section 4 west of where the viaduct crosses Richmond Terrace contains a mixture of residential, commercial, and light industrial uses, becoming mostly residential further to the west. Richmond High School and associated sports fields are located at the westernmost end of this section, which is approximately 1.2 miles long.

Section 5: Open Cut

Section 5 follows a section of the former ROW that lies within an open cut approximately 30 feet deep, running from John Street west to Union Avenue. This section encompasses mainly residential land uses in the Mariners Harbor neighborhood, interspersed with commercial development. This section is approximately 0.8 mile long.

Section 6: Arlington Station

This section follows the former railroad ROW along an at-grade section from Harbor Road to South Avenue, where the BRT route would turn south to Cable Way/Netherland Avenue. Land uses along the ROW and on the east side of South Avenue are primarily residential, including the New York City Housing Authority Mariner's Harbor complex, with some industrial uses north of the ROW and east of South Avenue. The area west of South Avenue has large undeveloped swaths, interspersed with large-scale retail and commercial uses. This section is approximately 0.54 miles long.

Section 7: South Avenue

South of Cable Way/Netherland Street the BRT would be located within South Avenue to West Shore Plaza. In the area south of the Staten Island Expressway, both sides of South Avenue are characterized by undeveloped land (including some wetland areas) and large-scale office park, hotel, and retail development. This section is approximately 2.58 miles long. As noted above, this section has been eliminated from the APE.

II. Methodology

The architectural survey methodology consisted of background data collection and field inspections. The initial task for the project was to collect information on previously documented architectural and historic resources within the APE. These materials included historic site and district forms and surveys, designation reports, and context material on file at the SHPO and LPC. Additional data were collected at the Staten Island Museum archives and the Staten Island Historical Society at the Historic Richmond Town archives. To further document the history of the architectural resources, research included use of the New York City Department of Buildings (DOB) databases, the New York City Municipal Archives historic tax photographs collection, and various historic maps, historic photographs, and historic and modern aerial photographs. A selection of historic maps is included with this report. More detailed Sanborn Insurance Company maps were reviewed from 1898 through 2007, which were included in three Corridor Assessments for the project (VHB and STV 2019a, 2019b, 2019c). Due to the large number of Sanborn maps covering the project area, however, they are not reproduced again in this report. Primary and secondary sources were consulted as warranted. A selection of historic photographs, primarily for the Sailors' Snug Harbor historic district resources and for the overall SIRT alignment, is presented in Appendix B.

The project team conducted intensive field inspections of the APE over the course of several days in October and November 2019 and January 2020. All publicly accessible areas within the 90-foot buffer APE along the majority of the BRT alignment and within the 400-foot buffer APE at Sailors' Snug Harbor were visually inspected and photographed. Those areas that could not be accessed during the field inspections (generally surrounded by private land, such as within the Caddell Dry Docks property along the waterfront) were photographed from the nearest streets and those photographs were supplemented with views from other field visits, such as the MTA-led inspection of the viaduct and open cut sections undertaken in 2018.

All lots that are within the 90-foot and 400-foot APE are listed in Appendix C, by section. The list and attributes of the lots derives from the New York City MapPLUTO open source database. The initial database was compiled by VHB and was updated with existing conditions and status by HPI. The lots are organized primarily by block and lot, as not all lots have official addresses, and those lots that do have city-assigned addresses do not always match the current addresses shown on the buildings or the historic addresses assigned to the buildings over time. Appendix C provides data including ownership, general improvements on each lot, whether the built resource has been previously identified by either the SHPO or LPC, whether the resource was included in the study area for the 2019 waterfront survey by AKRF, and for those lots that have buildings or structures on them, the results of the present survey.

III. Previous Investigations

Portions of the APE have been part of previous historic resources investigations. The Staten Island Architectural Survey, headed by Barnett Shepherd of the Staten Island Institute of Arts and Sciences (SIIAS), surveyed many of the architectural resources within the APE in the late 1970s. The work resulted in photographs, research, and documentation forms, copies of which, known as "blue forms," were filed with SHPO and are available via their electronic Cultural Resources Information System (CRIS). The purpose of that study was to inventory the historic buildings; some of the resources are also State and National Register of Historic Places (S/NRHP) listed or eligible and some are New York City Landmarks (NYCLs). Many of the remainder of the resources that were surveyed as part of that effort were entered into CRIS with an "undetermined" classification, and have never been formally evaluated for S/NRHP eligibility or NYCL inclusion. As part of the current study, all those resources within the APE noted as "undetermined" have been evaluated for S/NRHP eligibility.

Also during the late 1970s, a comprehensive multi-volume historic structures report was completed for Sailors' Snug Harbor in Section 2 (Gibson et al. 1979). Some of the buildings within the complex had been identified as NYCLs in the mid-1960s; others were identified in the 1970s and 1980s. Historic American Buildings Survey (HABS) documentation for the facility was completed in 1968. Today, Sailors' Snug Harbor is both an S/NRHPlisted historic district (90NR01018) and an NHL. Additional individual resources have been designated as NYCLs and S/NRHP resources in other sections of the APE, as detailed in Tables 1-6 and Appendix C.

There have been several cultural resources studies completed in areas overlapping the APE that addressed both archaeological and historic resources. The Cross Harbor Freight Movement Project (Hartgen 2002) resulted in the identification of several historic resources abutting the former SIRT alignment at Lake Avenue in Section 5. The Port Richmond Commercial Historic District in Section 4 was determined S/NRHP-eligible in 2017 by SHPO.

Last, as noted in the Introduction, in 2019 AKRF conducted an architectural survey of waterfront neighborhoods throughout Staten Island in response to Superstorm Sandy, which resulted in the submission of both Reconnaissance-level and Intensive-level historic resource forms across much of the northern shore of Staten Island, including a number within the current APE (AKRF 2019). Those lots that were part of the 2019 study coverage are noted in Appendix C.

IV. Historic Context

Staten Island was the most sparsely settled portion of New York City during early Euro-American settlement. In 1630, while under Dutch rule, Michael Pauw purchased land from the Native Americans. Five years later, he sold it to the Dutch West India Company, which sold land rights to Pietersz De Vries in 1639. Native hostilities and Governor Kieft's War forced the abandonment of these settlements in 1643. In 1657, the Dutch repurchased the

island. However, when the British gained control of the island in 1664, only a small group of settlers were present at South Beach on the northeastern shore.

In a 1690 treaty English Governor Lovelace extinguished all Native American rights to Staten Island. Labadist missionaries traveling through Staten Island in 1679 observed that "there are now about a hundred families on the island, of which the English constitute the least portion, and the Dutch and French divide between them about equally the greatest portion. They have neither church nor minister and live rather far from each other" (Dankers and Sluyter 1867:142). From 1668-1712, Staten Island was divided into numerous small land patents, which were granted to individuals. Along the north shore of Staten Island, a map showing these patents indicates that the project area was attributed to more than a dozen different people (Skene 1907).

Development on the north shore of Staten Island focused on the waterfront. What is now Richmond Terrace was originally a Native American trail, which skirted the natural shoreline prior to landfilling. Known simply as the Shore Road, the earliest settlements were along this road, often in proximity to the natural creeks that crossed it and emptied into the Kill Van Kull. One of the early grantees was John Palmer, who obtained a tract in 1676 that encompassed most of what is now known as West Brighton. By 1672, Palmer had constructed one of Staten Island's first tide mills, later known as Dongan's lower mill, at the mouth of what was later known as the Clove Valley Creek or Bodine's Creek (Leng and Davis 1930, Vol. II:610). Other mills along the project corridor included A. Crocheron's Mill near the New Brighton shoreline, and the Mill on the Dock in between the Crocheron and Palmer mills (McMillen 1933). By the late eighteenth century, maps and reconstructions show that there were a number of structures located along the landward side of Richmond Terrace, as well as two ferries operating on the Kill Van Kull (Anglo-Hessian 1780-1783; Taylor and Skinner 1781 [Figure 5]; McMillen 1949). During the Revolutionary War and the British occupation of Staten Island, many of the houses were occupied by troops. Much of what would become the BRT alignment was still under water at this time, however.

The north shore of Staten Island began to develop further around 1819, when Factoryville (the original name for West Brighton) came into existence with the purchase of a former mill at the foot of Broadway by Barrett, Tileston and Company, who established the Staten Island Dyeing and Printing Establishment and diverted water from the Clove Valley Creek northeast towards the Kill Van Kull to form the factory's pond. The factory lured many settlers to the north shore of Staten Island (Leng and Delavan 1924:22; Leng and Davis 1930, Vol. II:616-617). The other industry that affected the north shore during this period was the harvesting of oysters along the Kill Van Kull, which began in earnest in the late 1820s, developed into a significant trade by the 1840s, and continued as a major source of livelihoods through the nineteenth century (Leng and Delevan 1924:22).

The combination of the factories, the oyster harvesting, and the associated maritime industrial and commercial ventures on the north shore drew both working class families and upper class proprietors. Many of the wealthy owners of the businesses constructed large houses along Richmond Terraces, known for a time as "Captains' Row." Real estate speculators began constructing housing stock along the shoreline as well. These developments at New Brighton dated to the 1830s and 1840s. The community of Port Richmond, which began as a stagecoach stop and ferry landing location during the colonial era, continued to expand during the nineteenth century, becoming a commercial hub on the north shore.

Sailors' Snug Harbor, a retirement community for aging sailors, was established in 1831 within the project area at New Brighton and expanded to its present size over the course of the nineteenth century. The facility, which is now listed on the S/NRHP, is an NHL and a NYCL, has been studied and documented extensively over many decades, as detailed below. Appendix B includes a selection of historic images and photographs of Sailors' Snug Harbor depicting the overall facility as well as the waterfront area, which is the area of focus for this study.

Historic maps from the nineteenth century showed the pace of construction along the project alignment (U.S.C.S. 1835-1836a, 1835-1836b; Blood 1845). The 1850 Dripps map and the updated 1853 Butler map (Figure 6) illustrated development along Richmond Terrace across most of the north shore, with additional concentrations of buildings at New Brighton, Factoryville, and Port Richmond. The western portion of the study area, southwest of Port Richmond, was largely undeveloped during this period, except along a few north-south streets crossing the alignment. Similar conditions were shown on the historic maps from the late 1850s through the 1870s (U.S.C.S. 1856, 1857; Walling 1859, 1860 [Figure 7]; Dripps 1872 [Figure 8], Beers 1874).

The project area character changed considerably with the construction of the North Shore Branch of the Staten Island Rapid Transit Railroad Company (SIRT) incorporated in 1880. In conjunction with the Baltimore and Ohio Railroad (B&O), the company constructed the North Shore Branch in 1886 as an entirely at-grade, double-tracked railroad from St. George Station on the east to Elm Park Station on the west. The line subsequently opened further west to Arlington Station in 1889 and to Port Ivory, beyond the project limits, in 1906 (Leigh and Matus 2002). Original passenger stations, consisting of stand-alone buildings adjacent to the tracks, were located at St. George, New Brighton, Sailors' Snug Harbor, Livingston, West New Brighton, Port Richmond, Tower Hill, Elm Park, Mariner's Harbor, and Arlington. Passenger platforms generally were located on both sides of the railroad tracks at each station. A 500-foot long railroad swing bridge over the Arthur Kill was constructed in 1888, connecting the North Shore Branch with New Jersey. This bridge, which is outside of the APE, was replaced in 1959 with a vertical lift truss bridge, which has been determined individually eligible for the S/NRHP by both the New Jersey Historic Preservation Office (HPO) and the New York SHPO (Howe 2008). Appendix B includes a selection of historic photographs of the North Shore Branch of the SIRT in the APE.

The 1887 Beers map (Figure 9a-d) illustrated both the increased development along the project area corridor, as well as the new route of the SIRT along the north shore. The railroad was constructed on filled areas along the natural Kill Van Kull shoreline from St. George to the Sailors' Snug Harbor boat dock, and then primarily on man-made raised earthen causeways through the water to Bodine Creek. Southwest of Richmond Terrace near Port Richmond, the alignment moved inland, onto firm ground. The railroad tracks cut through the relatively dense Port Richmond neighborhood, but then emerged to mostly undeveloped land to the west.

The introduction of piped water and electricity to Staten Island in the 1880s and sewers in the 1890s ushered in another building boom, with new construction replacing older housing and commercial stock during these decades (Leng and Delevan 1924:26-29). After consolidation of Staten Island with the rest of New York City in 1898, additional resources and infrastructure contributed to more development. The St. George area, surrounding the ferry to Manhattan, became the new civic center for Staten Island, with the present municipal buildings, including Staten Island Borough Hall, the Staten Island Courthouse, the 120th Police Precinct building, and the Staten Island Family Courthouse constructed during the first decades of the twentieth century. The SIRT yards at St. George were also constructed outboard of Richmond Terrace during this period. As new streets with city water and sewer availability under them were added to the project area, particularly west of Port Richmond, new housing, commercial establishments, and industrial facilities were constructed along them. Much of the building stock in this area dates from the turn of the twentieth century through the first half of the twentieth century.

The 1907 Robinson map (Figure 10a-g), the series of topographic maps made by the Borough of Richmond, and the subsequent 1917 Bromley map, among others, showed the pace of construction across the project area after consolidation. In addition, after 1881, portions of the Kill Van Kull bulkhead line had been extended north of the line of the existing railroad tracks, and water grants were made to owners of the shorefront property in the mid-1880s after the railroad had opened. The 1907 Robinson map illustrated the various water grants, and confirms that these areas, particularly the marshlands around Bodine Creek, were beginning to be filled in by their owners. In 1916, however, water pollution became so bad that the Department of Health condemned the oyster beds, effectively ending an era (Smith 1970:152). After this time, shipbuilding and repair became the primary industry of Staten Island (WPA 1982: 601). The Caddell Dry Dock and Repair Facility on the north side of Richmond Terrace near Broadway moved to its current location in 1916, taking over a defunct shipyard location (Urban 2009:7). The company improved and expanded its operations to its present two yards over the course of the twentieth century, and has been in continual operation for over a hundred years.

During the 1920s and 1930s, the project area experienced more changes. Staten Island became tied to Manhattan through regular ferry service, and to New Jersey by a series of bridges – the Goethals Bridge in 1928, the Outerbridge Crossing in 1928, and the Bayonne Bridge in 1931. In 1925, with hopes of connecting to the BMT subway line in Brooklyn via a tunnel at St. George under the Narrows, the SIRT completed electrification of its railroad lines. This entailed track rehabilitation, a new signal system, new railroad cars, and higher platforms at the stations to accommodate elevated railroad car doors (Leigh and Matus 2002). The following year, in 1926, New York State passed the "State Grade Crossings Act," which called for the elimination of at-grade crossings in populated areas (Roess and Sansone 2012:238). In response to this act, construction began in 1934 on the viaduct in Section 4 and the open cut in Section 5. The viaduct carried the railroad over cross streets, while the open cut routed

the railroad under them, where new street overpasses were built. New stations and platforms were constructed along the top of the viaduct and within the open cut.

Historic maps and photographs (Appendix B) showed that the new viaduct and open cut were located immediately adjacent to the existing at-grade tracks, so that construction of the new components could proceed without disruption to the active trains. When the viaduct formally opened in February 1937, newspaper accounts claimed that at one mile in length, it was the longest grade crossing elimination unit in the United States. Once the viaduct and open cut were completed, the old tracks were removed or covered over. With time, the original railroad stations from the pre-grade separation era were demolished.

Passenger service on the North Shore SIRT was discontinued in 1953, a result of decreased ridership led by the shift to use of buses rather than trains. The opening of the Verrazano Narrows Bridge in 1964, which connected Staten Island to Brooklyn, further changed the character of the area as the island became increasingly suburbanized, with a greater reliance on automobiles. A new wave of building occurred during the last quarter of the twentieth century as older building stock was replaced and additional neighborhoods opened up for development. Freight service on the North Shore SIRT continued until 1989, but after that, too, was eliminated, the industrial waterfront continued to decline. In 2007, freight service resumed on an approximately one-mile stretch of the North Shore SIRT from the Arthur Kill lift bridge to the Union Avenue overpass, servicing the Howland Hook Marine Terminal.

Today, the project area contains a mixture of building types, ages, and neighborhood compositions, as detailed in the Project Section Descriptions, above, and the Survey Results, below.

V. Survey Results

A. Types of Architectural Resources

There are a number of different categories of architectural resources within the six surveyed sections of the APE.

• Municipal

The municipal buildings within the APE include resources within Section 1 at St. George, namely Staten Island Borough Hall, the Richmond County Courthouse, the 120th Precinct Police Headquarters, and the Staten Island Family Courthouse. A Con Edison utility complex is located in Section 2 and the Port Richmond Water Pollution Control Plant is located in Section 3.

• Residential

By far the largest category of architectural resources within the overall APE is residential buildings. These include single-family homes, multiple family homes, private apartment buildings, and New York City Housing Authority (NYCHA) public housing complexes. The earliest of these residences date to the pre-Revolutionary era and the latest are of modern construction, some being erected at the time of the site visits. Residential resources are located in all six sections.

• Residential/commercial

Many resources throughout the APE consist of mixed residential and commercial buildings, which have retail businesses on the ground floor and apartments on the upper floors. These buildings often date to the late nineteenth and early twentieth centuries, but usually have been modified for modern usages. These types of buildings occur in all six sections.

• Commercial and Industrial

There is a wide span of commercial and industrial concerns across the APE. Commercial businesses range from small retail stores, bodegas, restaurants, and gas stations across the APE to the newly constructed outlet mall on Richmond Terrace in Section 1. There are also a number of maritime concerns, including the Atlantic Salt complex in Section 2, the large Caddell Dry Dock facility in Section 3, and various smaller retail and repair facilities along

the north side of Richmond Terrace in Sections 3 and 4. Sections 4, 5, and 6 contain various small and medium sized materials-stockpiling yards, fuel companies, and warehouses.

Religious

There are two churches within the APE. The Reformed Church of Staten Island and its associated cemetery, which dates to 1844, are in Section 4. The Summerfield United Methodist Church, which dates to 1869, is in Section 6.

• Transportation

The Staten Island Ferry terminal is located in Section 1, at the far eastern end of the proposed BRT alignment. The former North Shore Branch of the Staten Island Railroad and its associated structures, which constitutes the majority of the ROW, is located in all six sections.

• Recreational

The newly constructed Staten Island Yankees baseball stadium is located in Section 1. There is parkland along portions of the ROW, including the North Shore Esplanade in Section 1, portions of the waterfront along Sailors' Snug Harbor in Section 2, and Heritage Park in Section 3. Most of the parkland does not contain buildings or structures.

• Institutional

Within Section 2, Sailors' Snug Harbor represents the largest former Institutional facility. Once the campus for aged sailors, the complex now contains various cultural centers including the Staten Island Museum and the Staten Island Botanical Garden.

B. Criteria of Eligibility

The various types of buildings and structures within the APE, as described above, were surveyed and evaluated so as to identify those historic properties that are or could be eligible for the S/NRHP. There are three S/NRHP criteria that generally apply to historic properties. Under Criterion A historic properties may be significant for their association with important events or themes associated with an area's historic development. Under Criterion B, historic properties may be significant if they are associated with individuals whose specific contributions to history can be identified and documented. Under Criterion C, historic properties may be significant as a representative example of an architectural style or be the work of a master. Historic properties may be eligible for listing individually or as part of a district.

All historic properties significant under Criterion A or B should retain integrity of location, design, setting, materials, workmanship, feeling, and association. Historic properties significant under Criterion C should retain the specific features that are characteristic of their type or style. Historic districts as a whole should retain sufficient historic integrity that the properties still possess its feeling as a cohesive historic environment, even if historic properties do not meet the threshold on their own.

C. Section 1: St. George

Existing Conditions

The beginning of Section 1 is at the entrance to the Staten Island Ferry Terminal on Richmond Terrace. The alignment then runs northwest along the existing paved roadway of Richmond Terrace as far as Nicholas Street. At Nicholas Street, the alignment descends to the paved North Shore Esplanade, where it then runs along the former SIRT ROW and through the North Shore Waterfront Esplanade Park to Jersey Street. The alignment within the North Shore Waterfront Esplanade Park to Jersey Street by parkland. Architectural conditions within the 90-foot study area for Section 1 contain a mixture of municipal, transportation, commercial, and residential resources (Figure 11a).

On the east and north side of Richmond Terrace, resources include the Staten Island Ferry Terminal complex (Photograph 1.1), a modern outlet shopping mall (Photograph 1.2), the modern Staten Island Yankees stadium (Photograph 1.3), and an associated newly constructed multiple-story parking garage (Photograph 1.4). The North Shore Waterfront Esplanade Park does not contain any buildings (Photograph 1.5).

On the west and south side of Richmond Terrace are S/NRHP-listed and -eligible and NYCL municipal buildings including the Staten Island Borough Hall (built 1903; Photograph 1.6), the Richmond County Courthouse (built 1913; Photograph 1.7), the 120th Precinct police headquarters (built 1920-1923; Photograph 1.10); and the Staten Island Family Courthouse (built 1930-1931; Photograph 1.11). Of these buildings, the Staten Island Family Courthouse and the 120th Precinct police headquarters will be physically affected by the proposed widening of Richmond Terrace, which will entail the limited taking of property along the street frontage for additional parking. The stairs leading to both buildings will need to be modified. Generally undistinguished commercial, mixed-use commercial, and residential buildings are interspersed between and adjacent to the municipal buildings (Photographs 1.8, 1.9, and 1.12).

Further to the west, there are a number of multi-story residential properties on the south side of Richmond Terrace, consisting of large residences and apartment buildings. Two of them, at 204 and 198 Richmond Terrace, are noted as undetermined by SHPO (Photograph 1.13). Constructed before 1874, these Second Empire style houses were once part of a series of similar residences on this hillside, but are now the only vestiges of this block. As noted below, they have been heavily modified from their original form. A modern high-rise apartment building has been erected on the same side of the street (Photographs 1.13 and 1.14). On the block between Nicholas Street and St. Peters Place, there are a number of additional residences of various ages; the older ones have been architecturally modified (Photograph 1.15). One of these, the early twentieth-century residence at 260 Richmond Terrace is noted as undetermined by SHPO but has also been significantly modified (Photograph 1.16). The New York City Housing Authority Richmond Terrace Houses are located on the south side of Richmond Terrace between Westervelt Avenue and Jersey Street (Photograph 1.17). The buildings were completed in 1964, and although over 50 years old, are architecturally undistinguished.

Resource Summary

There are 53 individual lots within the 90-foot APE for Section 1. Of those, 31 lots contain improvements that were evaluated as part of the current project.

SHPO and LPC previously documented seven historic resources within the 90-foot study area for Section 1. They are listed in Table 1, below, and on accompanying Figure 11a. SHPO and LPC status of the resources are indicated in the table; for those resources noted as undetermined, the present survey's recommendation is given. AKRF did not include Section 1 in their 2019 architectural survey. As such, the entire Section 1 Architectural APE was evaluated as part of the Proposed Project. No additional S/NRHP eligible resources were identified in Section 1 as part of the current survey. Those resources that were previously recorded but have been demolished and are no longer S/NRHP listed or eligible are not included in the table.

Map number on	Site name and	Location	Date	Status
-		Location	Date	Status
Figure 11a	number(s)			
1-A	Staten Island	Block 1, Lot 7; 10	1903	S/NRHP listed,
	Borough Hall	Richmond Terrace		NYCL
	90NR01036			
	08501.000998			
	LP-1206			
1-B	Richmond County	Block 1, Lot 12;	1913	S/NRHP listed,
	Courthouse	18 Richmond		NYCL
	90NR01036	Terrace		
	08501.000999			
	LP-1207			

Table 1 Architectural Resources within the 90-foot Section 1 APE

Map number on Figure 11a	Site name and number(s)	Location	Date	Status
1-C	120th Police Precinct 08501.001000 LP-2058	Block 9, Lot 28; 78 Richmond Terrace	1920-1923	S/NRHP eligible, NYCL
1-D	Staten Island Family Courthouse 08501.001001 LP-2057	Block 9, Lot 22; 100 Richmond Terrace	1930-1931	S/NRHP eligible, NYCL
1-E	Residence 08501.001003	Block 13, Lot 73; 198 Richmond Terrace	Pre-1874	Undetermined, recommended not S/NRHP eligible
1-F	Residence 08501.001004	Block 13, Lot 71; 204 Richmond Terrace	Pre-1874	Undetermined, recommended not S/NRHP eligible
1-G	Residence 08501.001007	260 Richmond Terrace	Between 1907-1917	Undetermined, recommended not S/NRHP eligible

At one time there were five adjacent residences along the south side of Richmond Terrace between Stuyvesant Place and Nicholas Street; in 2000 SHPO indicated four of the five houses might constitute a potential historic district. Since that time, three of the five houses have been demolished. The remaining two Second Empire era houses, at 204 and 198 Richmond Terrace, appear to have been heavily modified since their original construction and do not appear to be S/NRHP eligible, either individually or as a reduced size district. Another residence, at 260 Richmond Terrace, also previously recorded as undetermined by SHPO, also appears to have been heavily modified and does not appear to be S/NRHP eligible.

D. Section 2: New Brighton Waterfront

Existing Conditions

Section 2 extends from Jersey Street to Davis Avenue along Richmond Terrace, roughly paralleling the shoreline (see Figure 11b). It follows the former SIRT ROW, generally on landfilled areas. The eastern portion of Section 2 contains primarily industrial and commercial resources, including, on the north, the Atlantic Salt Company, which occupies most of the northern side of Richmond Terrace. The Atlantic Salt Company is a large and once-rambling industrial complex that originated as a plaster manufacturing site in the nineteenth century. Many of the buildings in the historic complex have been demolished, some as recently as July 2019 (they are still shown as extant on project maps). Several buildings remain, including a three-story, concrete building on Bank Street that dates from before 1917 (Photograph 2.1). A portion of the alignment at the Atlantic Salt facility runs through this existing warehouse building, which will be retained. There is also a tall brick smokestack ringed with cell panels (Photograph 2.2), but the once sprawling complex has lost most of its original and historic character. Salt yards comprise the remainder of the northern side of this complex.

The southern side of Richmond Terrace within the 90-foot APE from Jersey Street to Tysen Street has vestiges of nineteenth-century commercial and residential stock, little of which survives with a high degree of architectural integrity. The area has and continues to transition to modern industrial and commercial uses. Two resources at the eastern end of Section 2, 506 and 514 Richmond Terrace (Photographs 2.3 and 2.4) near York Avenue, were noted as undetermined by SHPO and illustrate the late nineteenth century, low rise mixed-used commercial and residential buildings that once characterized the street. These have been significantly architecturally compromised. One circa 1870 residence, at 536 Richmond Terrace west of York Avenue, sits on a high bluff but is obscured from the street by dense vegetation (Photograph 2.5). Also noted by SHPO as undetermined, its condition could not be accurately assessed from the street level due to visual impediments.

Continuing to the west, past a one-story concrete warehouse (Photograph 2.6), a construction staging area is proposed on a vacant lot at the southeast corner of Richmond Terrace and Franklin Avenue (Photograph 2.7). The area surrounding the lot is characterized by unremarkable modern industrial and commercial uses including one-

story industrial properties, a green market, empty lots and a gasoline service station. Residential stock along Van Buren Street to the south of the construction staging area within the APE consists of heavily altered early twentieth-century houses (Photograph 2.7).

From Lafayette Avenue to Tysen Street, the APE extends into the front lot lines of the properties on the south side of Richmond Terrace (Photograph 2.8). The block between Lafayette and Clinton Avenues is characterized by older commercial and combined commercial and residential stock, interspersed with empty lots. The buildings are two and three story, late nineteenth and early twentieth-century buildings with commercial space on the ground floor and residences above. Vestiges of detail at the upper stories survive, but the first-floor commercial spaces have all been insensitively remodeled and in some cases all the historic detail has been obliterated. None of the resources, including two properties at 776 and 748 Richmond Terrace noted by SHPO as undetermined, survive with a high degree of architectural integrity or appear to possess eligibility for the S/NRHP (Photographs 2.9 and 2.10).

The final block in this eastern portion of Section 2 is bounded by Clinton Avenue and Tysen Street. It too is characterized by a mixture of commercial and residential properties, interspersed with empty lots. 2 Clinton Avenue and 794 Richmond Terrace, the latter noted as undetermined by SHPO (Photograph 2.11), are late-nineteenth century mixed-use buildings that have been stripped of any architectural integrity. The Neville House, at 806 Richmond Terrace near Tysen Street, is a pre-Revolutionary dwelling that is listed on the S/NRHP and is an NYCL (Photograph 2.12). The last building on the block is 814 Richmond Terrace (Photograph 2.13), a one-story commercial building that has been inappropriately remodeled, and lacks architectural integrity.

From Tysen Street to the western end of Snug Harbor Road the alignment passes through New York City owned parkland associated with the S/NRHP-listed Sailors' Snug Harbor Cultural Center Historic District, which is also an NYCL (Individual and Interior) and a NHL. There are a number of contributing resources to this large historic district along the Richmond Terrace frontage and within the 400-foot APE. These include Buildings A-E, the chapel, two gatehouses, the iron fence along Richmond Terrace, and the ferry landing (Photographs 2.14 through 2.21). This area recently was studied by AKRF in their 2019 architectural assessment.

Along the shoreline of Sailors' Snug Harbor, where the Proposed Project will be constructed, one set of the former SIRT tracks (there were once two sets of tracks) is visible within the woodland in places along this portion of the section (Photograph 2.22). Across from the gatehouse at Sailors' Snug Harbor on Richmond Terrace, there is a stone lookout platform with flanking stairways that lead down to the waterfront and a modern dock, constructed in the 1990s (Photographs 2.23 and 2.24). An embossed tablet facing the shoreline reads "SAILORS SNUG HARBOR." The area within the Kill Van Kull water along this portion of the section contains the alternative that would be located offshore rather than on firm ground (Photographs 2.25 and 2.26). The shoreline here contains a piled stone bulkhead, as well as wooden pilings within the water, west of the modern dock. This area also contains a series of dressed ashlar stone retaining walls between Richmond Terrace and the shoreline (Photograph 2.27). One section of the wall contains a portion that juts out and has an embossed notation that says "S. S. HARBOR" (Photograph 2.28).

Additional paved pathways lead down from Richmond Terrace along the retaining walls to the waterfront, and then along the waterfront (Photograph 2.29). Across from the two ends of the horseshoe shaped Snug Harbor Road in the area where a perennial stream discharges into the Kill Van Kull, the former landfilled area supporting the railroad tracks has eroded away. Although the official S/NRHP boundary of Sailors' Snug Harbor ends at the southern side of Richmond Terrace, it is possible that some of these waterfront elements, such as the stone lookout platform and stairs, and the paths and retaining walls leading to the former dock area, could be considered contributing resources to this larger historic district.

The APE from the west end of Snug Harbor Road to Bard Avenue passes behind a restaurant and a gas station on the north side of Richmond Terrace (Photographs 2.30 and 2.31). On the south side of Richmond Terrace there is a heavily modified late nineteenth-century residence at 1126 Richmond Terrace at Bard Avenue (Photograph 2.32). The one-block section from Bard Avenue to Davis Avenue contains a series of Con Edison buildings located south of Richmond Terrace (Photograph 2.33). The original building dates to 1925 but it was significantly enlarged in the 1990s. There is an associated Con Edison facility surface parking lot north of Richmond Terrace (Photograph 2.34), which will be used first as a construction staging area and later as a commuter parking lot. The original SIRT tracks ran to the north of the parking lot; one set is still visible.

Resource Summary

There are 71 individual lots within the 90-foot and 400-foot APE for Section 2. Of those, 42 lots contain improvements that were evaluated as part of the current project.

SHPO and LPC have previously documented eight historic resources within the 90-foot and 400-foot study area for Section 2. They are listed in Table 2, below, and on accompanying Figure 11b. SHPO and LPC status of the resources are indicated in the table; for those resources noted as undetermined, the present survey's recommendation is given. Those resources that were previously recorded but have been demolished and are no longer S/NRHP listed or eligible are not included in the table.

Map number on	Site name and	Location	Date	Status
Figure 11b	number(s)			
2-A	08501.000766	Block 52, Lot 76; 506 Richmond Terrace	Ca. 1870s	Undetermined, recommended not S/NRHP eligible
2-B	08501.000767	Block 62, Lot 106; 514 Richmond Terrace	Ca. 1890s	Undetermined, recommended not S/NRHP eligible
2-C	08501.000768	Block 62, Lot 11; 536 Richmond Terrace	Ca. 1870	Undetermined, unable to make recommendation due to blocked visibility
2-D	08501.000769	Block 69, Lot 117; 748 Richmond Terrace	Ca. 1910s	Undetermined, recommended not S/NRHP eligible
2-Е	08501.000770	Block 69, Lot 105; 776 Richmond Terrace	Ca. 1910s	Undetermined, recommended not S/NRHP eligible
2-F	08501.000771	Block 70, Lot 31; 794 Richmond Terrace	Ca. 1880s	Undetermined, recommended not S/NRHP eligible
2-G	Neville House 90NR01028 08501.000772 LP-0334	Block 70, Lot 24; 806 Richmond Terrace	Ca. 1770	S/NRHP eligible, NYCL
2-Н	Sailors' Snug Harbor 90NR01018 Multiple USNs for contributing resources within district.	Blocks 70, 75 and 76, multiple lots	Includes Buildings A-E, chapel, gatehouses, iron fence, and ferry landing. Initial building on site in 1831.	S/NRHP listed, NHL, LPC individual and interior landmark; some waterfront elements may be considered additional contributing resources

Table 2 Architectural Resources within the 90-foot and 400-foot Section 2 APE

The eastern portion of Section 2, from Jersey Street to Tysen Street, was not included in AKRF's 2019 architectural survey and was evaluated as part of this Proposed Project. No additional S/NRHP eligible resources were identified in the eastern portion of Section 2 as part of this project. Five resources previously recorded as undetermined by SHPO have been heavily modified since their original construction and do not appear to be S/NRHP eligible. A sixth resource previously recorded as undetermined, at 536 Richmond Terrace, could not be evaluated due to blocked visibility.

The portion of Section 2 from Tysen Street to Davis Avenue and including Sailors' Snug Harbor was included in the 2019 AKRF architectural study. Here, the Architectural APE expands to 400 feet to consider the visual and contextual impacts of the Proposed Project on this significant historic resource. The S/NRHP listed Historic District contains a number of contributing resources within the 400-foot APE. These resource listings were updated in CRIS as part of the 2019 AKRF survey. Additionally, the architectural survey completed as part of this project suggests that the stone lookout platform pathways and retaining walls on the north side of Richmond Terrace may constitute additional contributing resources to this historic district.

E. Section 3: West Brighton Waterfront

Existing Conditions

Section 3 continues southwest along the former SIRT ROW alignment between Richmond Terrace and the Kill Van Kull shoreline, generally on landfilled areas. From Davis Avenue to N. Burger Avenue it follows the former SIRT ROW, but west of N. Burger Avenue the alignment shifts closer to Richmond Terrace and south of the ROW, before rejoining the ROW east of Alaska Street. The alignment passes through working industrial waterfront businesses including the large Caddell Dry Dock and Repair Company facility and the TP Marine Electric facility. Within the Caddell Dry Dock plant, a land swap is planned that will shift the alignment to some areas that currently contain standing structures and transfer the ROW lands to the facility, in order to allow continuous access to the dry docks along the waterfront. Near Alaska Street, the section passes New York City owned Heritage Park.

Section 3 predominantly contains industrial, commercial, and multi-family residential resources (see Figure 11c). The Caddell Dry Dock and Repair Company, a large shipyard that occupies most of the north side of Section 3, dominates the northern side of Richmond Terrace. Caddell's two yards are not contiguous and extend between Richmond Terrace and the shoreline from Davis Avenue to west of Elm Street (East Yard) and then again from east of Broadway west to Barrett Lane (West Yard). The Caddell property is characterized by one- and two-story gable-roofed utilitarian industrial structures of either sheet or corrugated metal, or masonry buildings resurfaced with stucco. Land between the Caddell yards has commercial uses fronting Richmond Terrace and industrial marine uses shoreward. The building stock is characterized by low-rise, industrial buildings with limited architectural interest or significance (Photographs 3.1 through 3.7).

Two buildings within the Caddell Dry Dock complex were surveyed in the past and were noted as undetermined by SHPO. The 2019 AKRF survey included this large facility, indicating:

The large industrial sites, particularly those in Mariner's Harbor, Port Ivory/Howland Hook, Old Place, and Bloomfield, lack architectural integrity, do not have a distinct style, and are not representative of an innovative construction method (AKRF 2019:2-20).

The AKRF survey did not recommend that the Caddell Dry Dock and Repair Company complex or the two previously undetermined buildings within it were S/NRHP eligible. SHPO concurred with the study, although the resource entries were not updated at the time to clarify that they are not S/NRHP eligible.

West of the Caddell facility is the public Heritage Park on the shoreline (Photograph 3.8) and several modern automotive garages on the north side of Richmond Terrace near Alaska Street (Photograph 3.9).

The south side of Richmond Terrace in Section 3 contains a combination of residential and commercial properties of varied age, type, and condition. Near the eastern end of Section 3, at 1262 Richmond Terrace near Pelton Avenue, there is one resource within the 90-foot APE, the Kreuzer-Pelton House, which is S/NRHP listed and an NYCL. The house sits prominently on a diagonal orientation to the street grid, set back from the road and above a stone retaining wall (Photograph 3.10).

Further west, the south side of Richmond Terrace from Bement Avenue to Broadway includes only a few building lots at 1380, 1388, and 1390 Richmond Terrace (Photographs 3.11 and 3.12), as well as 1410 Richmond Terrace (Photograph 3.13). All are commercial buildings; those at 1380, 1388, and 1410 Richmond Terrace have experienced significant alterations. The building at 1390 Richmond Terrace and Elm Street was previously noted by

SHPO as undetermined, but presently is covered completely with protective netting for renovation work. As the building details are not visible beneath the netting, it could not be reevaluated for this study.

Another resource on the south side of Richmond Terrace in Section 3 that SHPO noted as undetermined is at 1550 Richmond Terrace near Barrett Lane (Photograph 3.14). This building recently housed the Restoration Workshop facility. It is a three-story brick commercial and industrial building that was constructed by 1885. Simply detailed, the ground floor shop windows have been partially enclosed with safety grates; an entry to the upper stories is located at the west and is topped with a simple, granite lintel. The four bays of the second and third floors have tall, narrow windows with 2/2 sash, all capped with decorative gabled hoods with bas-relief decoration in a foliate motif. The roofline is simply articulated as a stepped parapet. Side elevations have been surfaced with stucco. The building survives with a high degree of integrity and is a rare survivor from a period of nineteenth-century commercial prosperity and development in New Brighton. It may be potentially eligible for the S/NRHP.

The final resource on the south side of Richmond Terrace noted as undetermined by SHPO is immediately west of the Restoration Workshop, at 1 Van Street/AKA 1564-1568 Richmond Terrace (Photograph 3.15). This building has been significantly compromised in the intervening years. Industrial, corrugated metal cladding has obscured all of the decoration at the windows and entries. Many windows have been removed or replaced with smaller windows and the ground floor storefronts have been obliterated. Only the decorative cornices at the eave survive. The building does not appear to be eligible for inclusion in the S/NRHP.

Resource Summary

There are 86 individual lots within the 90-foot APE for Section 3. Of those, 35 of the lots contain improvements that were evaluated as part of the current project.

SHPO and LPC previously have documented six historic resources within the 90-foot study area for Section 3. They are listed in Table 3, below, and on accompanying Figure 11c. SHPO and LPC status of the resources are indicated in the table; for those resources noted as undetermined, the present survey's recommendation is given. Those resources that were previously recorded but have been demolished and are no longer S/NRHP listed or eligible are not included in the table.

Map number on	Site name and number(s)	Location	Date	Status
Figure 11c				
3-A	Kreuzer-Pelton House	Block 149, Lot 1;	Built 1722, 1770	S/NRHP listed, NYCL
	90NR01014	1262 Richmond	and 1836	
	08501.001436	Terrace		
	LP-0341			
3-B	08501.001439	Block 158, Lot 6;	Ca. 1910s	Undetermined, unable
		1390 Richmond		to make
		Terrace		recommendation due to
				netting covering
				building
3-С	Caddell Dry Dock	Block 185, Lot 10;	Former building	Undetermined, former
	08501.001443	1517 Richmond	now replaced with	building razed,
		Terrace	newer building	recommended not
				S/NRHP eligible
3-D	Caddell Dry Dock	Block 185, Lot 21;	Ca. 1880s	Undetermined,
	08501.001445	1535 Richmond		recommended not
		Terrace		S/NRHP eligible
3-Е	Restoration Workshop	Block 186, Lot 10;	By 1885	Undetermined,
	08501.001449	1550 Richmond		recommended
		Terrace		potentially S/NRHP
				eligible

Table 3 Architectural Resources within the 90-foot Section 3 APE

Map number on Figure 11c	Site name and number(s)	Location	Date	Status
3-F	08501.001446	Block 186, Lot 1; 1 Van Street, AKA 1564-1568 Richmond Terrace	Ca. 1880s	Undetermined, recommended not S/NRHP eligible

The majority of Section 3, including all the areas on the north side of Richmond Terrace, was included in the 2019 AKRF architectural study. Several lots are outside that study area, and they have been evaluated as part of this project. As noted above, one resource has been recommended as potentially S/NRHP eligible as part of the Proposed Project, the former Restoration Workshop building at 1550 Richmond Terrace, which was built by 1885 and is an example of the type of commercial building constructed as part of the nineteenth-century Factoryville community (Photograph 3.14).

F. Section 4: Viaduct

Existing Conditions

Section 4 is bounded by Alaska Street on the east and John Street on the west and encompasses the extant raised viaduct section of the project (see Figures 11c and 11d). The viaduct begins west of Heritage Park, behind the Port Richmond Water Pollution Control Plant, and extends southwest over and just beyond Nicholas Avenue to the beginning of the SIRT ROW open cut. There are several staging areas within Section 4 on both the north and south sides of the existing ROW, including areas bordering Richmond Terrace between Alaska Street and Taylor Street, south of Richmond Terrace at Park Avenue, and south of the viaduct at Maple Avenue and Nicholas Avenue.

The resources within the 90-foot APE along the viaduct in Section 4 consist of low-rise municipal, industrial, and commercial buildings from the eastern boundary at Alaska Street to the viaduct's crossing of Richmond Terrace. The majority of the building stock in this area consists of brick and cinderblock warehouses and other industrial buildings. The exception is the Second Empire style John DeGroot House at 1674 Richmond Terrace near Alaska Street on the south side of Richmond Terrace, which is S/NRHP-eligible and a NYCL (Photograph 4.1).

Two former commercial buildings, at 1689 and 1691 Richmond Terrace just west of Alaska Street, were recorded in 1979 and are noted by SHPO as undetermined, but since that time their original features have been significantly altered, including sealing the first floor entrance on one building and the sealing of the entire front elevation behind a brick façade in the second building (Photograph 4.2). An early twentieth-century mixed-use residential and commercial building at 1740 Richmond Terrace has had numerous alterations and an addition as well (Photograph 4.3)

The Port Richmond Water Pollution Control Plant (previously determined not eligible for the S/NRHP) occupies a large area east of Bodine Creek. Other than via a glimpse from the entry drive to the plant (Photograph 4.4), the viaduct is not visible from a public vantage point until Richmond Terrace approaches Heberton Avenue, where 1957 Richmond Terrace (Photograph 4.5), a two-story, utilitarian, cinderblock, warehouse and office building, sits on a lot abutting the viaduct. Opposite this, 1972 and 1978 Richmond Terrace (Photograph 4.6) sit just southwest of the viaduct, and are low-rise residential buildings either of recent vintage or older and architecturally compromised.

The portion of Section 4 southwest of Richmond Terrace crosses through the southern end of the S/NRHP eligible Port Richmond Historic District, which contains several contributing resources within the APE. The S/NRHP listed Reformed Church on Staten Island and its cemetery are also within both the historic district and the Section 4 APE. As the viaduct crosses west of Richmond Terrace, the area transitions to building stock comprised primarily of multi- and single-family housing to Nicholas Avenue, where the viaduct terminates.

Because the viaduct crosses through the Section 4 neighborhood blocks, there are buildings densely located on both the north and south sides of the ROW that are within the APE. Given the large number of buildings within the 90-foot APE, and the fact that most have not been fully documented in the past, they are described generally along each street crossing the APE, from east to west.

The intersection of the viaduct with Park Avenue includes a large modern industrial facility to the north at 16 Park Avenue (Photograph 4.7). To the south of the intersection, Park Avenue is developed primarily with late nineteenthcentury properties. These include a residence at 56 Park Avenue with a modern commercial garage at 60 Park Avenue (Photograph 4.8), and 55, 57 and 61 Park Avenue, which are two-and-one-half story gable or hipped-roof structures and have been insensitively remodeled to lack architectural integrity (Photograph 4.9).

On the south side of Church Street, between Park Avenue and Port Richmond Avenue, only one building is of architectural interest. This is at 52 Church Street, a circa 1930 public bathroom or water closet (W.C.) constructed in conjunction with the Port Richmond SIRT station at the viaduct (Photograph 4.10). The one story, hip-roofed, brick structure is simply detailed with high windows articulated as Romanesque arches separated by round columns with capitals with acanthus leaf decoration. The windows have been filled in. As will be described below, the North Shore SIRT itself is recommended not eligible for the S/NRHP and this associated resource does not possess distinctive characteristics or represent the work of a master and is not individually eligible. It is connected to a pair of attached, two-story, metal-clad industrial buildings at 52-54 Church Street (Photograph 4.11) with modern garage doors and new windows.

The north side of the viaduct at Port Richmond Avenue is built up entirely with commercial resources, some of which are eligible for the S/NRHP as part of the Port Richmond Historic District. 61 Port Richmond Avenue (Photograph 4.12), a two-part, block-shaped masonry commercial structure, was originally a pair of late-nineteenth century wooden framed commercial buildings that were stripped of all architectural integrity during a recent remodeling. Although noted by SHPO as undetermined, it appears not to be eligible for the S/NRHP.

A row of commercial structures opposite, (Photograph 4.13), 64, 68, and 70 Port Richmond Avenue, are contributing resources to the S/NRHP eligible Port Richmond Historic District. Inventory forms for these buildings were updated on CRIS in March 2019 as part of the AKRF study. The buildings are two stories in height and surfaced with brick. They all have ground floor storefronts with roll down metal gates, double hung sash at second floor and distinct rooflines. 64 Port Richmond Avenue is two bays, with paired segmental arch parapets that enframe oval modillions; beneath, each bay of the second story is articulated with triple windows flanked by decorative brickwork. 68 Port Richmond Avenue is identically detailed and they seem to have been built, and read, as a block. 70 Port Richmond Avenue is slightly taller and topped by a prominent, projecting bracketed and dentilled cornice; the second story sash is enframed by a brick surround and topped by a recessed, stepped course.

The adjacent property at 54 Port Richmond Avenue (Photograph 4.14) is the Reformed Church of Staten Island and associated cemetery, dating to 1844 and is individually eligible for the S/NRHP, a NYCL, and part of the Port Richmond Historic District. New photographs of the church were uploaded to CRIS as part of the AKRF study.

Port Richmond Avenue buildings south of the viaduct, (Photographs 4.15 and 4.16) consist of one, two, and threestory mixed use commercial and residential resources that date from the early to mid twentieth-century, but which do not retain sufficient integrity to be considered eligible for the S/NRHP. Ann Street, which runs along the south side of the APE between Port Richmond Avenue and Church Street (Photograph 4.17), contains a series of late nineteenth-century wood framed buildings. With the exception of 81 Port Richmond Avenue, which appears to be an abandoned property that was built as residential with a later commercial addition at the street corner, the properties are alternating gable and flat roofed dwellings, which have been converted to multi-family use and insensitively remodeled with treatments including the application of synthetic and stucco surfaces, enclosure of porches, replacement of windows, and removal of decorative trim, eliminating potential for any architectural significance. A three-story commercial building at 128 Port Richmond Avenue, at the northwest corner of Grove Avenue, has been determined not eligible for the S/NRHP by SHPO. The south side of Grove Avenue between Port Richmond Avenue and Maple Avenue contains heavily altered commercial buildings from the same era.

Moving west, Maple Avenue south of the viaduct is also built up with a combination of commercial and residential properties lacking historical and architectural significance. At the east side of Maple Avenue (Photograph 4.18), is the parking lot and loading dock at the rear of 108 Richmond Avenue. The west side of Maple Avenue contains 55 Maple Avenue, a nineteenth-century gabled dwelling with an enclosed porch and rear addition; and 64 Maple Avenue, a cinderblock garage with a parapet roof with the viaduct in the background (Photograph 4.19).
The east side of Maple Avenue north of the viaduct (Photograph 4.20 and 4.21) is developed with a large, modern apartment building, 47-51 Maple Avenue, immediately adjacent to the viaduct, and a late nineteenth-century residential dwelling at 39 Maple Avenue. Opposite, the west side of Maple Avenue, 40 through 50 Maple Avenue (Photograph 4.22) is built up with late nineteenth-century, gable roofed residences that have lost original detailing, leaving only their massing to reveal their nineteenth-century origins.

The stretch of Grove Avenue between Maple Avenue and Faber Street is developed with a mix of commercial and residential building types, of which only one, a large wood-frame residential building at 59 Grove Avenue (Photograph 4.23) that has been swathed in synthetic siding, is located within the APE.

Faber Street south of the viaduct on the east side contains a residential property, 71 Faber Street, (Photograph 4.24) which sits immediately adjacent to the viaduct and consists of a two-and-one-half-story gabled residence set back from the street, in front of which is a one-story addition, all surfaced in synthetic siding and surrounded by an iron fence. Opposite, the west side has a lot at 78 Faber Street (Photograph 4.25), with what appears to be a temporary, aluminum building adjacent to the viaduct, and a nineteenth-century, frame building extending to the Grove Avenue line, which has been swathed in synthetic siding.

North of the viaduct, both sides of Faber Street are built up with residential stock which either dates from the late nineteenth-century, such as 55, 51, 47 and 45 Faber Street (Photograph 4.26) and 60 and 64 Faber Street (Photograph 4.27) which have been insensitively modified, or residential stock that dates from the twenty-first century, such as 56, 54 and 52 Faber Street.

Larkin Street, north of the viaduct, is beyond the APE, but two properties, 48 and 52 Larkin Street (Photograph 4.28) are on long lots that extend back southward to the APE. These late nineteenth-century properties retain original massing, but have lost all architectural detail and integrity.

Sharpe Avenue, north of the viaduct, is built up with late nineteenth-century, two-and-one-half-story, gable-roofed residences that retain original massing, but have generally lost detail as a result of porch enclosures and resurfacing with synthetic siding. On the east side are 49, 47, and 43 Sharpe Avenue (Photograph 4.29). The west side contains 46, 50, 52, and 56 Sharpe Avenue (Photograph 4.30) that have been similarly modified.

South of the viaduct, Grove Avenue meets Sharpe Avenue in a "T" intersection. Sharpe Avenue is developed with late nineteenth-century residential properties of varied scale, massing and building type. Structures at 68, 72, 78 and 82 Sharpe Avenue (Photograph 4.31) on the west side of the street constitute a row of two and two-and-one-half story residential properties that retain original massing, but little original material or detailing. Building stock is more varied on the east side of Sharpe Avenue. At 100 and 98 Grove Avenue (Photograph 4.32), a double, gable-roofed house with a one-story, flat roofed, possibly commercial addition to the east has been completely re-sided and porches have been enclosed. Opposite this, abutting the viaduct, is a three-story, masonry apartment building, 79 Grove Avenue, (Photograph 4.33) which has been completely resurfaced with stucco and brick and for which the decorative detail meant to distinguish the first floor from the second, as well as the cornice have also been resurfaced with masonry.

Grove Avenue, between Faber Street and Sharp Avenue (Photograph 4.34), contains 78 Faber Street and 87 Grove Avenue with 97 Grove Avenue at the rear, is developed with a late nineteenth-century, mixed-use apartment and commercial building. The building, designated as 78 Faber Street, retains only a bracketed cornice, and, together with a low-rise, one-story and two-story industrial building complex, has been re-surfaced in stucco and remodeled with 87 Grove Avenue, which dates to the mid twentieth-century.

Treadwell Avenue north of the viaduct is built up with two-and-one-half-story, gable-roofed residences that date from the late nineteenth-century and which do not survive with a great degree of architectural integrity or interest. These include 38, 42 and 46 Treadwell Avenue (Photograph 4.35), and 41, 39, 37 and 35 Treadwell Avenue (Photograph 4.36).

South of the viaduct, the east side of Treadwell Avenue is similarly developed with late nineteenth-century residences, generally two-and-one-half stories in height which survive with little architectural integrity or interest. They include 61, 63, 65, 67, and 71 Treadwell Avenue (Photograph 4.37). The west side of Treadwell Avenue,

(Photograph 4.38) contains a residential garage nestled against the viaduct and associated with a late nineteenthcentury residence at 68 Treadwell Avenue, and several contemporary attached townhouses at 62 and 66 Treadwell Avenue.

Continuing west towards Nicholas Avenue, some resources on Slaight Street project into the APE. These include a late twentieth-century townhouse complex at 31 Slaight Street (Photographs 4.39 and 4.40). Opposite this complex, on the west side of Nicholas Avenue south of the viaduct, is vacant land slated for a staging area (Photograph 4.41).

Slaight Street north of the viaduct is built up with residential properties, most of which were recently constructed. These include 51 Nicholas Street (Photograph 4.42) and a complex of detached rowhouses completed between 2014 and 2018, at 60 Nicholas Avenue and 24 through 67 Riverside Lane (Photographs 4.43 and 4.44). The viaduct ends behind 24 Riverside Lane, beginning the transition to the open cut.

The eastern side of John Street is the western boundary of Segment 4. John Street is physically blocked from pedestrian traffic by a concrete barrier and fence protecting the depressed railroad ROW, but is connected via a pedestrian bridge, though the bridge is in Section 5. The south side of John Street, south of the railroad ROW is built up with houses from the late nineteenth and early twentieth centuries that retain original front gable massing, but have lost architectural detail and original materials, such as 125, 119, 117, and 115 John Street (Photograph 4.45).

Building stock on the east side of John Street north of the railroad ROW is residential and consists of a late nineteenth-century, multi-family dwelling at 89 John Street that does not retain architectural integrity and a new building that replaced an earlier one at 83 John Street, which is a three-family, brick dwelling (Photograph 4.46).

Resource Summary

There are 235 individual lots within the 90-foot APE for Section 4. Of those, 185 lots contain improvements that were evaluated as part of the current project.

SHPO and LPC previously have documented eight historic resources within the 90-foot study area for Section 4. They are listed in Table 4, below, and on accompanying Figures 11c and 11d. SHPO and LPC status of the resources are indicated in the table; for those resources noted as undetermined, the present survey's recommendation is given. Those resources that were previously recorded but have been demolished and are no longer S/NRHP listed or eligible are not included in the table.

Table 4 Architectural Resources within the 90-foot Section 4 APE					
Map number on Figures 11c and 11d	Site name and number(s)	Location	Date	Status	
4-A	08501.001456	Block 185, Lot 177; 1689 Richmond Terrace	Ca. 1900	Undetermined, recommended not S/NRHP eligible	
4-B	08501.001457	Block 185, Lot 178; 1691 Richmond Terrace	Ca. 1900	Undetermined, recommended not S/NRHP eligible	
4-C	John DeGroot House 08501.001454 LP-2179	Block 188, Lot 40; 1674 Richmond Terrace	Ca. 1870	S/NRHP eligible, NYCL	
4-D	08501.002162	Block 1004, Lot 12; 61 Port Richmond Avenue	By 1885	Undetermined, recommended not S/NRHP eligible	
4-E	Reformed Church on Staten Island and Cemetery 08501.002160 04NR05269 LP-02384	Block 1073, Lot 75; 54 Port Richmond Avenue	1844	S/NRHP listed, NYCL, within the S/NRHP- eligible Port Richmond Historic District	

Table 4 Architectural Resources within the 90-foot Section 4 APE

Map number on Figures 11c and 11d	Site name and number(s)	Location	Date	Status
4-F	08501.003935	Block 1073, Lot 90; 64 Port Richmond Avenue	1931	S/NRHP eligible as a contributing resource to the Port Richmond Historic District
4-G	08501.003934	Block 1073, Lot 92; 68 Port Richmond Avenue	1931	S/NRHP eligible as a contributing resource to the Port Richmond Historic District
4-H	08501.003933	Block 1073, Lot 93; 70 Port Richmond Avenue	Ca. 1910	S/NRHP eligible as a contributing resource to the Port Richmond Historic District

The majority of Section 4 was included in the 2019 AKRF architectural study. Those lots that are outside that study area have been evaluated as part of this project.

As noted above, the 90-foot study area for Section 4 contains two architectural resources determined eligible for the S/NRHP and a NYCL: the John DeGroot House at 1674 Richmond Terrace near Alaska Street, and the Reformed Church on Staten Island and its associated cemetery, at 54 Port Richmond Avenue. Three architectural resources, 64, 68, and 70 Port Richmond Avenue, were reevaluated as part of the 2019 AKRF study, and have been determined eligible as contributing resources to the S/NRHP-eligible Port Richmond Commercial Historic District (AKRF 2019).

No other architectural resources within the 90-foot study area were found to be eligible or potentially eligible for the S/NRHP by AKRF in 2019 or as part of the present survey. One resource previously recorded as undetermined, at 61 Port Richmond Avenue, is recommended as not eligible for the S/NRHP due to significant alterations. Two additional commercial resources, previously recorded as undetermined, at 1689 and 1691 Richmond Terrace have experienced very significant changes in the years since they were recorded in the late 1970s, as noted above including obliteration of the first floor entrance on one building and the sealing of the entire front elevation behind a brick façade in the second building. They, too, are recommended as not eligible for the S/NRHP.

All remaining resources that are old enough to be considered for S/NRHP eligibility have been heavily modified and altered and do not retain adequate historic fabric to be considered individually eligible for S/NRHP consideration. Further, the neighborhoods within the 90-foot study area, with the exception of the Port Richmond Historic District, do not meet criteria for eligibility as historic districts.

G. Section 5: Open Cut

Existing Conditions

Section 5 contains the open cut from John Street on the east to Harbor Road on the west (see Figures 11d and 11e). Nine bridges on the through streets span the open cut; several streets terminate immediately north or south of the span. The bridges were originally constructed at the same time as the open cut in the mid-1930s, have either been extensively reconstructed or fully replaced since the 1980s, according to the Basis of Design report for this project (VHB and STV 2020). Remains of railroad stations are located within the cut near Morningstar Road (the Elm Park station), Lake Avenue, and Van Pelt Avenue (the Mariners Harbor station). One proposed staging area is located south of the open cut west of Granite Avenue. The buildings in the 90-foot Section 5 APE consist predominantly of single and multi-family residential housing stock, but also include some commercial, manufacturing, and offices uses, and a small amount of retail.

Because the open cut crosses through the Section 5 neighborhood, there are buildings densely located on both the north and south sides of the ROW that are within the APE. Given the large number of buildings within the 90-foot

APE, and the fact that the large majority have not been documented in the past, they are described generally along each street crossing the APE, from east to west.

John Street is the eastern terminus of Section 5. Here, north of the ROW is developed with late nineteenth-century, gable-roofed residences at 94 and 92 John Street (Photograph 5.1) that sit beneath the access to the raised Bayonne Bridge. Altered with porch enclosures, modern window replacements and synthetic siding; they do not survive architecturally intact. John Street traverses the ROW via a pedestrian bridge, from which the open cut can be viewed. A house at 120 John Street (Photograph 5.2), immediately south of the cut, is a new single-family residence of modern design. Several houses along the east side of Eaton Place, south of the open cut are of similar and undistinguished early twentieth-century design with later alterations (Photograph 5.3).

Moving west, Morningstar Road south of the ROW and just west of the Bayonne Bridge access is a commercial district. The buildings at 146, 142, 140, and 132 Morningstar Road (Photograph 5.4) and 135 and 137 Morningstar Road (Photograph 5.5) are late nineteenth or early twentieth-century commercial properties that have been modernized with new siding, fenestration, and the obfuscation of projecting cornice decoration with siding, which has stripped the buildings of any architectural integrity. North of the ROW to the west of Morningstar Road is a twenty-first-century residential complex: 23 through 31 Shaina Court (Photograph 5.6), and 15 through 21 Shaina Court (Photograph 5.7). Further north, 88 Morningstar Road is a brick, mansard-roofed residence that retains no original architectural features (Photograph 5.8). To the east on Morningstar Road, at the intersection of Newark Avenue, is a residence that was under construction at the time of the site visit (Photograph 5.9).

Threading back northeast under the Bayonne Bridge access along Newark Avenue, is a series of gable and jerkinhead-roofed detached residences, 81, 73, 67, and 65 Newark Avenue (Photograph 5.10), which date from the late nineteenth and early twentieth centuries and which have been insensitively remodeled, and which thus do not survive with architectural integrity.

Still north of the ROW, moving from Morningstar Road west along La Salle Street, the building at 40 La Salle Street (Photograph 5.11) is a modern cinderblock warehouse on a large lot. Turning south towards the open cut, down Winant Street, are: 109-111 Winant Street (Photograph 5.12) a contemporary double house; and 113 Winant Street (Photograph 5.13), a nondescript, mid twentieth-century Colonial Revival brick utility building that abuts the ROW.

On the south side of the ROW, at the northern end of Pulaski Avenue, is a vacant lot on the west and the rear of the lot associated with a manufacturing facility at 154 Morningstar Road (Photograph 5.14).

The ROW at the Granite Avenue overpass is abutted by lots, small portions of which are in the APE. A newly constructed commercial storage building at 133 Granite Avenue is near the overpass (Photograph 5.15). To the north of the ROW is 124 Granite Avenue, a blocky, brick commercial building with a large parking lot (Photograph 5.16).

Housman and Wright Avenues terminate north of the ROW, with buildings in the APE too young to be eligible for the S/NRHP. Two large, late twentieth-century, two-story buildings, 124 Housman Avenue (Photograph 5.17) and 91-93 Wright Avenue (Photograph 5.18), occupy the full block opposite a fence leading to the ROW. Directly opposite is another late twentieth-century office building, 94 Wright Avenue (Photograph 5.19).

Moving west, Lake Avenue north of the ROW is built up with residential stock. 97 Lake Avenue (Photograph 5.20) is a late nineteenth-century, two-and-one-half story, gable-roofed residence that retains its original massing, but has lost significant architectural detail through porch enclosure, replacement sash, and obscuring of eave details by synthetic siding. Across the street, 92 - 104 Lake Avenue is a row of late twentieth-century, two-story, attached town houses (Photograph 5.21).

Development on Lake Avenue south of the ROW is both residential and commercial in nature. The east side of Lake Avenue is developed with several early twentieth-century commercial buildings. One of these, at 125 Lake Avenue (Photograph 5.22), is a two-story, five-bay, central entry brick building with double hung windows with segmental arched lintels. It was identified in 1979 and in 2003 was determined not eligible for the S/NRHP by the SHPO. The adjoining building, 141 Lake Avenue, was determined S/NRHP eligible that same year (Photograph

5.23). It is a two-story brick industrial building in the Art Moderne Style. It has curved edges and an emphasis on horizontal banding in the brickwork and steel windows. The west side of the block is entirely residential in nature. 120 Lake Avenue (Photograph 5.24) is a late nineteenth-century, flat roofed Italianate style dwelling that has been greatly modified with faux stone and clapboard synthetic siding, replacement windows and doors, and has been stripped of any original detail or character.

Simonson Avenue at the northern side of the ROW is built up primarily with late nineteenth-century residential stock. 97 Simonson Avenue is a modest, late nineteenth-century, Italianate style residence that retains its original massing and some porch and window details, but that does not possess architectural characteristics sufficient to warrant eligibility for the S/NRHP (Photograph 5.25). 93 Simonson Avenue dates from the mid twentieth-century and is a non-descript, one-story, hipped roof house with replacement windows, and siding (Photograph 5.25). Opposite, on the west side of Simonson Avenue, is another hipped roofed, one-story, mid twentieth-century residence, 98 Simonson Avenue, and a row of closely spaced, front gable, two-and-one-half story residences, dating from the last quarter of the nineteenth century, which have all been modified with porch enclosures, and modern siding and windows. One of these, 94 Simonson Avenue (Photograph 5.26), is within the APE.

Simonson Avenue south of the ROW is also characterized by residential resources that date from the late nineteenthcentury but which do not survive with a high degree of architectural detail or integrity. On the east, 119-121, 125, and 129 Simonson Avenue (Photograph 5.27), are all two-and-one-half story, front gable residences on which siding obfuscates original materials and which have received inappropriate window replacements and porch modifications including enclosures and replacement of original porch supports. Opposite, on the west side of Simonson Avenue at the corner of Heusden Street, is a circa 1880, three-story Italianate residence at 126 Simonson Avenue (Photograph 5.28), that has been insensitively modified with modern fenestration, asbestos siding, and the replacement of porch elements with modern and inappropriate elements. Only the massing and vestigial brackets at the eaves are evidence of the building's history. Additionally, a one-story, flat roofed garage addition has been appended to the north between the house and the ROW.

Van Name Avenue north of the ROW is developed with residential properties. 87 Van Name Avenue, is a late nineteenth-century, gabled dwelling that has lost architectural integrity due to resurfacing with synthetic siding, inappropriate window replacement, and porch enclosure. Continuing south, adjacent to the ROW, are two new (2014) residences at 93 and 99 Van Name Avenue (Photograph 5.29). Opposite, on the west side, are a series of early twentieth-century gabled one- and two-family residences facing Van Name Avenue and also at the western end of Beamer Court, which runs parallel to the ROW: 90 and 96 Van Name Avenue (Photograph 5.30); and 40 and 50 Beamer Court (Photograph 5.31).

Van Name Avenue south of the ROW intersects with Heusden Street. Turning east toward Simonson Avenue, Heusden Street is developed with two modest early twentieth-century residences, both with detached garages, that back up to the ROW, 19 and 17 Heusden Street (Photograph 5.32). 126 Simonson Avenue (discussed above) fills out the block. Heusden Street between Van Name and Simonson Avenues is built up with small scale, one- and two-family residences that date from the early twentieth century. 32 Heusden Street is a brick two-story two-family house, and 28 Heusden Street is a two-story hipped roof residence (Photograph 5.33). In both cases, windows, porches, and entry doors have been replaced and neither is of adequate architectural interest or integrity to be considered eligible for the S/NRHP.

Moving west from the northwestern intersection of Van Name Avenue and Heusden Street along Heusden Street to Van Pelt Avenue, south of the ROW is lined with a chain-link and stockade fencing. The south side of the Heusden Street intersection is included in the APE and consists primarily of late twentieth-century and early twenty-first-century single family residences, bracketed by resources that date from the early twentieth century, 34 through 58 Heusden Street (Photograph 5.34), but which do not survive with architectural integrity.

At Van Pelt Avenue, south of the ROW, Heusden Street transitions to Linden Avenue. The intersection is characterized by commercial resources on the south and a narrow strip at the ROW to the north. At the southeast corner is 100 Van Pelt Avenue (Photograph 5.35) a two story, wood frame Italianate mixed-use commercial and residential building that has been significantly compromised and currently retains only its original massing and a few brackets at the eave. At the southwest corner, 110 and 114 Van Pelt Avenue (Photograph 5.36) are a pair of two-story, flat roofed, Italianate mixed use commercial and residential properties whose storefronts have been

inappropriately remodeled, with infill materials and windows, and whose upper stories have been compromised by the addition of new windows and in the case of 114 Van Pelt Avenue, obscuration of the cornice detail with angled siding. The north side of the intersection abuts the ROW and the overpass. Immediately adjacent to and north of the ROW are residential resources that date from the mid nineteenth-century at 89 Van Pelt Avenue (Photograph 5.37) and 92 Van Pelt Avenue (Photograph 5.38); both are cross gable-roofed, Cape Cod style houses that do not embody distinctive characteristics sufficient to warrant eligibility for the S/NRHP.

Westward, Erastina Place terminates north of the ROW and is built up with residential stock from the early twentieth-century. 89 Erastina Place (Photograph 5.39) and 98 Erastina Place (Photograph 5.40) are both hipped-roofed American Four Square houses that retain original massing, but have been insensitively modernized with porch enclosures, newer siding that hides the original surface and detailing, and replacement sashes.

Moving to the south of the ROW, the south side of Linden Avenue between Van Pelt Avenue and Maple Parkway is built up with long, one-story commercial structures at 14 and 18 Linden Avenue (Photograph 5.41), which date from the middle of the twentieth century and survive in deteriorated condition. Linden Avenue terminates at Maple Parkway where the area transitions to a residential neighborhood with old and new residences. 2 Maple Parkway (Photograph 5.42) is a late nineteenth-century, two-and-one-half story dwelling which has been modified with a porch enclosure, and modern replacement windows and siding. 14 to 16 Maple Parkway is a trio of recently constructed attached dwellings (Photograph 5.42). The properties at 2, 12, 14, and 16 Maple Parkway go through to the street behind, De Hart Avenue (Photograph 5.43). Opposite these, the west side of De Hart Avenue is also built up with residential stock: the properties that abut the ROW, 116 and 112 De Hart Avenue (Photograph 5.44), date from 2004.

Traveling north across the ROW, De Hart Avenue is predominantly built up with residential stock lacking architectural distinction. On the east side of the street 95, 91, and 87 De Hart Avenue (Photograph 5.45) are three properties of varying dates. 95 De Hart Avenue, abutting the ROW, was built in 2010; 91 and 87 De Hart Avenue date from the early twentieth-century, and have been remodeled with applied siding and new windows that have compromised the architectural integrity of the structures. The lot immediately north of the ROW on the west side of the street, 100 De Hart Avenue (Photograph 5.46) is the site of a commercial lumber supply facility.

Union Avenue on the north side of the ROW also is primarily built up with residential stock that dates from the early twentieth-century and that survives in poor condition. 101 and 99 Union Avenue (Photograph 5.47) are modest, gable roofed buildings. 101 Union Avenue is in deteriorated condition and appears abandoned. 99 Union Avenue has been compromised with synthetic siding that covers the façade and eave detail and has an insensitive porch enclosure. 104-106 Union Avenue (Photograph 5.48) is a blocky two-story, brick duplex residence that has lost original detail by application of synthetic siding and modern windows and doors; it retains a projecting, modillioned and dentilled cornice with a delicate Adamesque swag frieze. A one-story, rock face block outbuilding on the property abuts the ROW. To its north is a rambling one-story series of stucco-surfaced, mid twentieth-century garage buildings at 100 Union Avenue, which form a commercial complex.

Union Avenue south of the ROW has a combination of residential and commercial resources. 119 Union Avenue, set back from the road and abutting the ROW, and 121 Union Avenue (Photograph 5.49) are two-story, single-family dwellings constructed in 2004. 127 and 129 Union Avenue are two-and-one-half-story, front gable roofed residences that have been compromised by the enclosure of front porches, application of synthetic siding and the replacement of original sash with modern windows. On the west side of Union Avenue, adjacent to the ROW is a large one-story commercial building, 130 Union Avenue (Photograph 5.50) that is part of a discontinued coal and lumber yard that occupied most of the block and extended west to Harbor Road; it was formerly associated with coal towers westward on Harbor Road. Though this building may have been part of an office that existed as early as 1937, if so, it has been substantially enlarged and modified and does not embody distinctive characteristics of any architectural style sufficiently to qualify for eligibility for the S/NRHP.

Bush Avenue terminates north of the ROW and the properties abutting the ROW and in the APE are all new dwellings constructed in 2004: 111 and 109 Bush Avenue (Photograph 5.51); and 112 and 114 Bush Avenue (Photograph 5.52).

The east side of Harbor Road forms the western boundary of Section 5. To the north of the ROW is a late nineteenth-century double house, 109 - 111 Harbor Road (Photograph 5.53), that has been stripped of all architectural detail. To the south of the ROW is a lot at 151 Harbor Road that contains a large concrete-constructed coal silo complex, erected in ca. 1936 (Photograph 5.54). It was originally a part of a now defunct lumber yard; the former buildings as documented on a 1951 Sanborn map no longer exist; thus the coal silo complex no longer has the association with the original facility and does not appear to be eligible for the S/NRHP.

Resource Summary

There are 220 individual lots within the 90-foot APE for Section 5. Of those, 131 lots contain improvements that were evaluated as part of the current project.

SHPO and LPC previously have documented one historic resource within the 90-foot study area for Section 5. The resource is listed in Table 5, below, and on accompanying Figures 11d and 11e. SHPO and LPC status of the resource is indicated in the table. Those resources that were previously recorded but have been demolished and are no longer S/NRHP listed or eligible are not included in the table.

Table 5 Architectural Resources within the 90-100t Section 5 AFE					
Map number on	Site name and number(s)	Location	Date	Status	
Figure 11d					
5-A	Industrial/office building	Block 1161, Lot	Ca. 1930-1940	S/NRHP eligible as 137	
	08501.002793	20; 141 Lake		Lake Avenue	
		Avenue			

Table 5 Architectural Resources within the 90-foot Section 5 APE

AKRF did not cover Section 5 in their 2019 architectural study, and as such it was fully evaluated as part of the present project. Within this section, previously unevaluated resources that are old enough to be considered for S/NRHP eligibility have been heavily modified and altered and do not retain adequate historic fabric to be considered potentially individually eligible. No collections of properties were found to meet the criteria for eligibility as S/NRHP or LPC Historic Districts.

Last, as noted above there are nine bridges that cross the open cut, located at (from east to west) John Street, Morningstar Road, Granite Avenue, Lake Avenue, Simonson Avenue, Van Name Avenue, Van Pelt Avenue, De Hart Avenue, and Union Avenue. Because all of these bridges have either been extensively reconstructed or fully replaced since the 1980s, they do not appear to qualify for S/NRHP eligibility, either individually or as part of a district.

H. Section 6: Arlington Station

Existing Conditions

Section 6 follows the former ROW along an at-grade section from Harbor Road west to South Avenue, where the BRT route would turn south to Cable Way/Netherland Avenue (Figure 11e). Land uses along the ROW and on the east side of South Avenue are primarily residential, including the New York City Housing Authority Mariner's Harbor complex, with some industrial uses north of the ROW and east of South Avenue. Portions of this section are still in use as an active railway. Due to the height of the cross street overpasses, there are high retaining walls along some portions of Section 6. The APE terminates at South Avenue, where the former Arlington Station was located and where the present project proposes a new station and parking lot. The station area is a gravel-covered lot used for storage and stockpiling of materials. Two staging areas are proposed in this section, one at the east end and one at the west end, within land that will be used for the project construction. The depressed SIRT ROW bisects the neighborhood, with no streets crossing the alignment via an overpass between Harbor Road and South Avenue. The neighborhood surrounding the Section 6 APE contains a mixture of late nineteenth and early twentieth-century residential, commercial, and industrial buildings.

Between Harbor Road and South Avenue, Section 6 is physically bifurcated by the ROW. Only Harbor Road and South Avenue cross the section via overpasses. These two bridges were originally constructed at the same time as the open cut in the mid-1930s and have either been extensively reconstructed or fully replaced since the 1980s,

according to the Basis of Design report for this project (VHB and STV 2020). Thus, the description will begin north of the ROW at Harbor Road and continue in a clockwise direction, cross south along Harbor Road, and then continue west to South Avenue. Last, the description will then turn back east at South Avenue to complete the description of the northern side of the ROW.

North of the ROW, at 100 Harbor Road, is the Summerfield Methodist Church (Photograph 6.1). While it has been determined eligible for the S/NRHP, there is little information filed with the SHPO for this property, and so the description has been updated for this project.

The Summerfield Methodist Church was built in 1869 and is an example of the eclectic use of architectural stylistic elements, which are primarily a combination of Greek Revival and Italianate influences. Oriented with a gable facing the street, the three-bay center-entry building is set on a stone block foundation with simple windows with flat limestone lintels and sills, with stained glass. The entry, a one-story, gabled roofed enclosed portico, originally had a closed bed pedimented gable end with a simple square door. That was modified to incorporate Colonial Revival elements: the gable end was opened to form an open gable end with returns and a dentiled cornice; and the entry was modified to include a delicate, Adamesque fanlight with a key stone surround above the entry door.

The upper portion of the building has a tower bay that projects from the building plane from above the entry through the roof. It has an elongated, round arched window; drip moldings enframe a stained-glass window with a circular glass at top and simple, panes below. According to historic photographs (Photograph 6.2), originally the drop molding enframed a rose window that sat above paired arched sash. Above this is an oculus window in the portion of the tower bay within the gable end. The tower bay is flanked by incised wooden pilasters. The tower is constructed as a cross gabled platform; eaves of each gable flare out and are enlivened with a dentil course. Above this, a narrow tower closely replicated the tower bay, with narrow, round windows with drop molding flanked by incised corner pilasters on all four sides; this is all and all capped by a cross arched roof that mimicked the cross gable done below; with small spires at each corner. Above the cross-gable base, the tower has been replaced by a simpler hipped roof structure with round arched openings with simple rail balustrade.

The tower bay is flanked by incised columns that match those on the tower; those are in turn flanked by elongated round windows that match those on the tower bay; the original windows were small round arched windows above paired round arched sash, but these have all been replaced by stained glass windows. The corners of the building are defined by wider incised wooden pilasters. The side bay pilasters rise to the gable end, which is articulated as a closed bed pediment with an ogee and dentil molded cornice that is punctured by the tower bay.

Five elongated round arched windows with drip molding are found along each side of the building. The original windows had small round arched windows above paired round arched sash, but these have all been replaced by stained glass windows. A cornice with a dentil course extends around the sides and the rear. The rear of the building is articulated as an open bed pediment with returns and also has a dentil cornice. The building has been resurfaced with synthetic siding, but which was applied so as not to hide architectural details and could be removed for a more thorough restoration.

The Summerfield Methodist Church has an associated parsonage house on the same lot, located north of the church building (Photograph 6.3). The parsonage is Colonial Revival in style and postdates the church. An 1889 photograph (Photograph 6.2) depicts an earlier gable roofed dwelling with a two-story porch at the site of the current parsonage. This parsonage house appears to have been constructed in the first decade of the twentieth- century. The parsonage has not been evaluated for S/NRHP eligibility in the past, but may be eligible as a contributing resource to the Summerfield Methodist Church complex.

The house is two-and-one-half-stories, and the gambrel-roofed building is three bays wide with an asymmetrically massed ground floor. The entry is articulated as double doors with glass windows that sit beneath a simple horizontal glass transom topped by a dentilled cornice. To its left is a narrow, tall window and the window and entry door are sheltered by a simple two bay porch with boxed posts and a dentilled cornice. To the east of the entry, the ground floor is entirely composed of a flat-roofed bay window that extends from the foundation and that is topped by a dentilled cornice. The second story has paired sash within a single surround above the porch bay, and separate pared sash to the north. The gambrel end is articulated as a closed bed gambrel, supported by a modillioned and dentilled cornice, with a dentilled cornice at the eave and a horizontal tri-partite shed dormer window with a

dentilled eave punctuating the gambrel end. The house rests on a stucco foundation and sits on a lot above street level with an ashlar retaining wall and cast stone pillars and is accessed by a stone staircase. Like its associated building, the church, the parsonage has been resurfaced with synthetic siding, but the siding was applied so as not to hide the architectural details, and could be removed for a more thorough restoration.

South of the ROW, the west side of Harbor Road is developed with a modern group of attached residences at 124 - 132 Harbor Road (Photograph 6.4), built in 2005.

Further west, between Harbor Road and Lockman Avenue there is a low-rise, two-story multi-family apartment complex at 20 Lockman Loop, built in in 1992 (Photograph 6.5). The block between Lockman Avenue and Grandview Avenue, south of Roxbury Street and opposite the ROW is developed with twelve mid-rise apartment buildings of the Mariners Harbor New York City Housing Authority complex that dates from 1953 (Photograph 6.6 and 6.7). The complex has been determined by SHPO as not eligible for the S/NRHP. Grandview Avenue, south of the ROW is built up with late twentieth-century, gable-roofed, duplex residences at 310, 312, 314, and 316 Grandview Avenue (Photograph 6.8).

The APE widens at South Avenue to accommodate the proposed station. The east side of South Avenue, north of Brabant Street up to the ROW, is developed with a mix of late nineteenth and early twentieth-century commercial and residential buildings that survive with little architectural integrity. 285, 281, 263, and 271 South Avenue (Photograph 6.9) retain original massing, but surface materials have been covered with stucco or synthetic siding, windows have been replaced and porches removed or enclosed. The west side of South Avenue, south of the ROW where a new station is proposed, is primarily vacant land (Photograph 6.10) with a utilitarian brick structure that postdates 1957.

North of the ROW, the east side of South Avenue contains 237 South Avenue, an early twentieth-century, Colonial Revival building (Photograph 6.11). This building is noted as undetermined by SHPO, but it is clear that the building has been substantially altered by comparison with the 1979 photograph in the CRIS database. Asymmetrically massed, one corner of the oblong building was angled at the south corner and that narrow angled bay served as the place of entry. The entry door and surround have been replaced and a modillioned cornice that spanned the façade and entry bay between the first and second stories has been removed. Store windows at the ground floor and double hung windows at the second story have been covered over. The building has been resurfaced with synthetic siding. All that remains of the historic fabric is the entablature that extends along the east (front) and south eaves of the building, articulated as a frieze with an Adamesque swag motif topped by an egg and dart course, above which projecting brackets support an ogee cornice. South Avenue north of the ROW is vacant land.

Circling back eastward, Grandview Avenue north of the ROW is built up with residential stock. 246 and 244 Grandview Avenue (Photograph 6.12) are late nineteenth-century dwellings that have been stripped of architectural detail and resurfaced with synthetic materials. One, 246, appears to be abandoned. On the west side of the street, 243 Grandview Avenue (Photograph 6.13) is noted as undetermined by SHPO. The building is a five-bay, tan brick residence with classical details including simple limestone lintels and sills on the second floor, a dentilled course beneath a limestone cornice beneath a gabled parapet, and a brick round arched entry surround with a lighter brick and limestone voussoir. The fanlight has been filled in and the entry door itself replaced with a security door. Since the original 1979 documentation, the building's side porches have been enclosed and its windows and doors replaced. Additionally, the property is now flanked by corrugated steel security fences accessed by rolling metal garage door-like gates that significantly compromise the setting of the house. The early twentieth-century building does not possess architectural characteristics or intact setting that could warrant eligibility for the S/NRHP.

Several warehouses are on long lots that front on Davidson Street and their rear yards extend into the APE. Two buildings, both addressed 82 Davidson Street (Photograph 6.14) are large, long, narrow warehouses surfaced with corrugated steel. The structure to the west is flat roofed, while the one to the east is gabled and sits on a brick base, which extends eastward to form a shallow one-story flat roofed wing. Parts of these buildings appear on a 1937 Sanborn map, but their configurations have been modified and surfaces replaced in a patchwork of metal materials. This property was documented on the 1937 Sanborn map as the Buffalo Tank Corporation, but by the 1951 Sanborn map update was attributed to the Bethlehem Steel Corporation.

60 Davidson Street (Photograph 6.15) is another collection of utilitarian warehouse buildings. The tallest is gableroofed with a monitor that extends along the ridge line, and shed roofed wings of various heights, depths, and surfaces with a combination of brick, metal, and concrete materials projecting along the sides. Sanborn Maps indicate that all of these building post-date 1937; like the adjacent warehouses, their configurations have been modified and surfaces replaced in a patchwork of metal materials. According to the 1937 Sanborn map, the site was part of the United Ship Yards Foundry Division, but by 1951 it was a part of Bethlehem Steel Corporation. Finally, 141 Andros Avenue (Photograph 6.16), just east of Davidson Street and Andros Avenue, dates from the mid twentieth-century, and is a large, oblong, utilitarian, gable-roofed two-and one-half story factory building surfaced with corrugated metal; a span of multi-pane windows lights the west elevation. The collection of warehouses sited between the ROW and Davidson Street, has been significantly added to and modified over time. The buildings do not possess characteristics to meet S/NRHP criteria for eligibility.

Lockman Place, north of the ROW and backing up to the Summerfield Methodist Church on Harbor Road, is developed with modest, late nineteenth or early twentieth-century dwellings such as 7 Lockman Place (Photograph 6.17) and 4, 3, and 1 Lockman Place (Photograph 6.18). These small, two-and-one-half-story, three-bay, side entry, front gable roofed residences have all suffered inappropriate modern siding, window replacement, porch enclosures and do not survive with adequate integrity for S/NRHP eligibility.

Resource Summary

There are 59 individual lots within the 90-foot APE for Section 6. Of those, 35 lots contain improvements that were evaluated as part of the current project.

SHPO and LPC previously have documented three historic resources within the 90-foot study area for Section 6. They are listed in Table 6, below, and on accompanying Figure 11e. SHPO and LPC status of the resources are indicated in the table; for those resources noted as undetermined, the present survey's recommendation is given. Those resources that were previously recorded but have been demolished and are no longer S/NRHP listed or eligible are not included in the table.

Tuble officiation	ii ai Kesources within the J	o loor section o lin L		
Map number on	Site name and number(s)	Location	Date	Status
Figure 11e				
6-A	Summerfield United	Block 1236, Lot	1869	S/NRHP eligible,
	Methodist Church	164; 100 Harbor		associated parsonage on
	08501.000556	Road		the lot may be a
				contributing element
6-B	08501.000648	Block 1257, Lot 9;	Ca. 1920s	Undetermined,
		237 South Avenue		recommended not
				S/NRHP eligible
6-C	08501.000548	Block 1256, Lot	Ca. 1920s	Undetermined,
		39; 243 Grandview		recommended not
		Avenue		S/NRHP eligible

Table 6 Architectural Resources within the 90-foot Section 6 APE

Section 6 was not covered in the 2019 AKRF architectural survey, and as such was fully evaluated as part of the present project. One resource, the Summerfield Methodist Church at 100 Harbor Road, was previously determined S/NRHP eligible. The associated parsonage on the same lot, dating to ca. 1909, survives with a high degree of original character and may be a contributing element of this overall resource.

Two additional resources, at 243 Grandview Avenue and 237-239 South Avenue, were noted by SHPO as undetermined. Both resources have been architecturally compromised in the intervening years, and neither retains sufficient integrity to be considered individually eligible for the S/NRHP.

No other resources were found to be eligible or potentially eligible individually for the S/NRHP. Resources that are old enough to be considered for S/NRHP eligibility have been heavily modified and altered and do not retain adequate historic fabric. No collections of properties were found to meet criteria for eligibility as S/NRHP Historic Districts.

Last, as noted above, there are two bridges that cross the open cut, located at (from east to west) Harbor Road and South Avenue, which have been extensively reconstructed or fully replaced since the 1980s. Neither of the bridges appear to qualify for S/NRHP eligibility, either individually or as part of a district.

I. North Shore Staten Island Railway

The Proposed Project will utilize the existing, unused former Staten Island Railway's North Shore Branch ROW. This ROW includes at-grade railroad tracks or former track locations in Sections 1, 2, and 3, an elevated viaduct containing railroad tracks in Section 4, an open cut containing railroad tracks in Section 5, and a return to at-grade railroad tracks in Section 6.

The present condition of the former SIRT ROW varies across the APE. In Section 1, the former railroad is no longer extant after construction of the North Shore Esplanade Park (Photographs R.1, R.2, and R.3). There are no visible tracks within the park and no remnants of the former New Brighton Station at Westervelt Avenue. Section 2 runs through the Atlantic Salt facility and past Sailors' Snug Harbor. Within the Atlantic Salt facility, the tracks are either covered over or embedded in pavement. The Sailors' Snug Harbor station, previously located near Tysen Street, has been removed and no visible traces remain. Along the shoreline at Sailors' Snug Harbor, only one set of tracks is still partially visible within the wooded area north of Richmond Terrace; the second set is no longer visible or removed (Photographs R.4, R.5, R.6, and R.7). Between the two ends of the horseshoe-shaped Snug Harbor Road, the shoreline and former ROW has significantly washed away, leaving one set of tracks suspended above the scoured waterfront (Photograph R.8). A small section behind the Blue Restaurant near Bard Avenue has been reconstructed (Photograph R.9). The Livingston Station, once located at Bard Avenue, has been demolished. The tracks continue along the waterfront near the Con Edison parking lot (Photograph R.10).

In Section 3, the railroad tracks run through the industrial working waterfront, where they are either covered over or embedded in the pavement (Photograph R.11). The West New Brighton Station, once located between N. Burgher Avenue and Broadway, has been demolished, and no remains are visible.

Section 4 contains the extant viaduct, completed in 1936, which would be reused for the Proposed Project (Photographs R.12 through R.17). The pre-grade separation stations along this section were removed after the viaduct was completed. There were elevated stations on the top of the viaduct at Port Richmond Avenue and between Treadwell and Sharpe Avenues (the Tower Hill Station). These elevated stations are in poor condition due to over 30 years of abandonment and exposure to the elements. The top of the viaduct is covered with dense vegetation and debris, although the railroad tracks are still visible in many places.

Section 5 contains the open cut, also completed in 1936 and which would be reused for the Proposed Project (Photographs R.18 through R.22). The pre-grade separation stations along this section were removed after the open cut was completed. New stations and passenger platforms were constructed in conjunction with the open cut at Elm Park (Morningstar Road), Lake Avenue, Mariner's Harbor (Van Pelt Avenue), and Harbor Road. At Elm Park, a brick station house was constructed on the east side of Morningstar Road at the overpass level, but was removed in the 1980s. The stations within the open cut are in significant disrepair after 30 years of abandonment and exposure to the elements. Trees and other vegetation have grown throughout the open cut area, obscuring the railroad tracks and the embankments. In some locations, there are large pools of standing water.

Section 6 contains a short stretch of trackage that was reactivated in 2007 (Photographs R.23 through R.25). It is slightly lower in elevation than surrounding properties. South Avenue has been elevated via an overpass. The former Arlington Station on the west side of South Avenue was razed in the 1950s after passenger service ceased.

The North Shore Branch of the SIRT has changed greatly since the late nineteenth-century. The route was constructed in the 1880s, but other than the alignment itself, little remains of the original railroad features. The original tracks were reconfigured in 1926 when the railroad converted from steam to electricity. New station platforms were constructed at that time to accommodate higher railroad car doors. During the 1930s, when grade separation occurred, creation of the viaduct and open cut required the demolition of the original stations and the construction of new ones. Over time, all of the stations east of the viaduct were demolished as well. Today, none of the original 1880s components of the North Shore Branch are extant.

Since freight service ended in 1987, the condition of the overall railroad has deteriorated greatly. Those partially extant stations along the viaduct and open cut are in significant decay, and vegetation and standing water has taken over much of the alignment. Along the Kill Van Kull shoreline, much of the land and fill beneath the alignment has washed away, leaving twisted iron railroad tracks suspended above the eroded beach. Those portions of the alignment that pass through active industrial concerns, such as the Caddell Dry Dock facility and the Atlantic Salt facility, have been subsumed into the surrounding pavement or covered over. Of the components that comprise the North Shore Branch, only the concrete and steel superstructure of the viaduct remains in serviceable condition, and it is intended to be reused for the Proposed Project.

The North Shore Branch of the SIRT, from St. George to the Arthur Kill, does not appear to collectively meet criteria for S/NRHP eligibility. There is a lack of surviving historic resources from either the railroad or stations dating to original construction or later 1930s grade safety modifications. The components of the SIRT do not survive with adequate integrity to convey the historic significance of the railroad. Further, the setting has been compromised. The only surviving physical resource, the 1936 viaduct, is utilitarian in design and neither possessed nor survives with characteristics that embody the work of a master or with a high degree of integrity. While certainly providing significant safety benefits, the viaduct and the open cut served to sever the connection between the flanking neighborhoods and resources on its north and south sides.

VI. Conclusions and Recommendations

A. Sections 1-6: 90-foot Architectural APE

The results of the Architectural Survey indicated that all sections contain architectural resources either listed on, eligible for, or potentially eligible for the S/NRHP within the 90-foot Architectural APE. Some of these resources are also NHLs and NYCLs. Depending on the degree of vibration from the Proposed Project, there could be construction-related physical impacts to these architectural resources. If these impacts cannot be avoided, then they will need to be mitigated through the implementation of a Construction Protection Plan. Additionally, the NYC Building Code (DOB TPPN #10/88) provides a measure of protection for S/NRHP-listed historic resources located within 90 linear feet of a proposed construction site. The 120th Police Precinct Building and the Staten Island Family Courthouse in Section 1 will be affected when Richmond Terrace is widened and their entry steps will need to be reconfigured. However, both the SHPO and the LPC have indicated that they have no architectural concerns for potential impacts to these buildings (Brazee 2020b, Santucci 2020).

Finally, because the North Shore Branch of the SIRT, which is located in all six sections of the project area, does not appear to collectively meet criteria for S/NRHP eligibility, no further study or mitigation is recommended for this resource.

B. Section 2: 400-foot Architectural APE

The Proposed Project alternatives in Section 2 each include construction of a raised busway that would be above the elevation of Richmond Terrace in the vicinity of Sailors' Snug Harbor. The Proposed Project would be visible from a number of contributing resources within the overall Sailors' Snug Harbor S/NRHP Historic District, including Buildings A-E, the chapel, the two gatehouses, the iron fence, and the ferry landing. The SHPO has indicated that the proposed undertaking would have an Adverse Effect upon the setting of Sailors' Snug Harbor, an NHL (Brazee 2020a).

The elevated busway would alter the setting of the waterfront portion of Sailors' Snug Harbor and the viewscape from the portion of Sailors' Snug Harbor on the south side of Richmond Terrace. Sailors' Snug Harbor historically maintained a prominent place along the Kill Van Kull shoreline, and views to and from the resource along this waterway were important to the setting for the former sailors housed at this institution. If these impacts cannot be avoided, then mitigation alternatives will need to be developed to address these visual and contextual impacts.

Depending on the degree of construction vibrations, the Proposed Project could also have physical impacts on the stone lookout structure and the stone retaining walls along the waterfront that are part of the Sailors' Snug Harbor shoreline. If these impacts cannot be avoided, then they would need to be mitigated through the implementation of a Construction Protection Plan. If these resources cannot be protected because they are within the construction footprint of the alternatives, additional mitigation will need to be developed, in consultation with SHPO, LPC, and other consulting parties.

VII. REFERENCES

AKRF, Inc.

2019 Architectural Resources Survey Summary, Historic Resources Survey of Selected Waterfront Communities: Staten Island, New York. Prepared for the New York State Office of Parks, Recreation and Historic Preservation.

Anglo-Hessian Map

1780-83 Plan (No. 31) du Camp Anglo-Hessois dans Staten Island, Baie de New York de 1780 à 1783.

Beers, F.W.

1874 Map of the City Of New-York and Its Environs from Actual Surveys, from official records and surveys; compiled and drawn by F. W. Beers. J.B. Beers and Co., New York.

Beers, J.B.

1887 Atlas of Staten Island, Richmond County, New York, from official records and surveys; compiled and drawn by J.B. Beers and Company. J.B. Beers and Co., New York.

Blood, C.H.

1845 Staten Island: Map of New Brighton, Tompkinsville, Stapleton and Clifton; shewing the surrounding neighbourhood.

Borough of Richmond, Topographical Survey

1907-12 Borough of Richmond, Topographical Survey. Various sheets.

Brazee, Olivia

- 2019a Olivia Brazee, SHPO to Linda Tonn, MTA/NYCT Capital Program, October 20, 2019.
- 2019b Olivia Brazee, SHPO to Linda Tonn, MTA/NYCT Capital Program, December 11, 2019.
- 2020a Olivia Brazee, SHPO to Linda Tonn, MTA-NYCT Capital Program, July 3, 2020.
- 2020b Olivia Brazee, SHPO to Linda Tonn, MTA-NYCT Capital Program, July 22, 2020.

Bromley, G.W.

1917 Atlas of the City of New York, Borough of Richmond, Staten Island. From actual surveys and original plans, by George W. and Walter S. Bromley. G.W. Bromley and Co., Philadelphia.

Burns, Donald

2020 Donald Burns, FTA to Olivia Brazee, SHPO. January 24, 2020.

Butler, James

1853 Map of Staten Island or Richmond County, New York. James Butler, C.E.

City of New York, Department of Buildings

1898- Indexed records. <<u>http://www.nyc.gov/html/dob/html/bis.html</u>>. present

Dankers, Jasper and Peter Sluyter

1867 Journal of Voyage to New York and a Tour in Several of the American Colonies in 1670-80. Translated from the original manuscript in Dutch for the Long Island Historical Society. Edited by H. C. Murphy. Long Island Historical Society, NY.

Dripps, Matthew

¹⁸⁵⁰ Map of Staten Island or Richmond County. M. Dripps, New York.

- 1872 Map of Staten Island, Richmond County, New York. M. Dripps, New York.
- Gibson, David, Barnett Shepherd, and Steven Bauer
- 1979 Sailors' Snug Harbor, An Historic Structures Report. Five volumes. Prepared by David Gibson and Associates.
- Hartgen Archaeological Associates
- 2002 Phase IA Literature Review and Archeological Sensitivity Assessment, Cross Harbor Freight Movement Project: Port Ivory Yard, Arlington Yard, Eleven Railroad Crossings and Proposed Tunnel, Staten Island, Richmond County, New York.

Howe, Kathy

2008 Kathy Howe, SHPO. Resource Evaluation, Staten Island Railway Lift Truss Bridge over the Arthur Kill between Staten Island and New Jersey.

Leigh, Irvin and Paul Matus

- 2002 Staten Island Rapid Transit, The Essential History. The Third Rail Online. http://thethirdrail.net/0201/sirt1.html. Accessed February 21, 2020.
- Leng, Charles W. and William T. Davis
- 1930 Staten Island and Its People, A History, 1609-1929. Lewis Historical Publishing Company, Inc., New York.

Leng, Charles W. and Edward C. Delavan, Jr.

1924 *A Condensed History of Staten Island (Borough of Richmond, New York City).* The Staten Island Edison Corporation, Staten Island, New York.

Mackey, Linda

2019 Linda Mackey, SHPO to Julie Abell Horn, HPI. December 20, 2019.

McMillen, Loring

- 1933 *A Map of Staten Island During the Revolution 1775-1783*. Compiled from The Taylor & Skinner Map 1781, Plan No. 31 du Camp Anglo-Hessois dans Staten Island de 1780 a 1782 and The Hessian Map 1777.
- 1949 "Old Mills of Staten Island." The Staten Island Historian. July-September, 1949. Vol. X, No. 3.

New York Times

1937 Staten Island Opens Mile-Long Viaduct; Thirty-Four Grade Crossings Are Eliminated. February 26, 1937.

Robinson, Edward

1907 Atlas of the Borough of Richmond, City of New York. E. Robinson, New York.

Roess, Roger P. and Gene Sansone

2012 The Wheels That Drove New York: A History of the New York City Transit System. Springer, Heidelberg, Germany.

Santucci, Gina

2020 Environmental Review, SI North Shore Bus Rapid Transit System (BRT). Gina Santucci, LPC. July 27, 2020.

Skene, Frederick

1907 *Map of Staten Island, Richmond Co., N.Y. showing the Colonial Land Patents from 1668-1712.* On file at the Staten Island Historical Society.

Smith, Dorothy Valentine

1970 Staten Island, Gateway to New York. Chilton Book Company, Philadelphia.

Taylor, George and Andrew Skinner

1781 A Map of New York & Staten Island and Part of Long Island.

United States Coast Survey (U.S.C.S.) 1835-6a *Staten Island (from Kill van Kull to the Narrows).* Washington, D.C.

1835-6b Staten Island (area north of Prall's Island).

- 1856 Staten Island, New York Harbor, From New Brighton to Fresh Kills. Washington, D.C.
- 1857 Northwest Part of Staten Island and Bergen Point.

United States Geological Survey (U.S.G.S.)

- 2016 Elizabeth, N.J.-N.Y. 7.5 Minute Topographic Quadrangle.
- 2016 Jersey City, N.J-N.Y. 7.5 Minute Topographic Quadrangle.

Urban, Erin

2009 Caddell Dry Dock: 100 Years Harborside. The Noble Maritime Collection, Staten Island, New York.

VHB and STV

- 2019a Corridor Assessment of Staten Island North Shore Bus Rapid Transit (BRT) Project Section 1 North Shore of Staten Island, New York Between St. George Terminal and the Intersection of Richmond Terrace and Jersey Street. Prepared for MTA New York City Transit.
- 2019b Corridor Assessment of Staten Island North Shore Bus Rapid Transit (BRT) Project Section 2 North Shore of Staten Island, New York Between Jersey Street and Alaska Street. Prepared for MTA New York City Transit.
- 2019c Corridor Assessment of Staten Island North Shore Bus Rapid Transit (BRT) Project Section 3 North Shore of Staten Island, New York Between Alaska Street and South Avenue. Prepared for MTA New York City Transit.
- 2020 Basis of Design Report, Contract Number B-62040/B-80143, CM-0143 Environmental and Engineering Services for the Staten Island North Shore Bus Rapid Transit System in the Borough of Staten Island, New York. Prepared for MTA New York City Transit.

Walling, H.F.

- 1859 Map of Staten Island, Richmond County, New York, from surveys under the direction of H.F. Walling. D.A. Fox, New York.
- 1860 Map of the City of New-York and Environs.

Works Progress Administration (WPA).

1982 *The WPA Guide to New York City.* Originally published: Revised edition. Random House, New York, 1939. Reprint, with an introduction by William H. Whyte. Random House, New York.

Figures



Figure 1: Architectural APE on *Elizabeth and Jersey City N.J.-N.Y.* 7.5 Minute Topographical Quadrangle (U.S.G.S. 2016).

0 1200 2400 4800 Feet







Figure 2a: Architectural APE for Section 1 (HPI 2020 and VHB 2020).









PROPOSED STATION AREA

1 BLOCK NUMBER

Potential Staging Locations Overview



Figure 3: Potential Staging Locations Overview (VHB and STV 2020).



Figure 4: Section Overview Map (VHB 2020).



Figure 5: Architectural APE on A Map of New York & Staten Island and Part of Long Island (Taylor and Skinner 1781).









Figure 6: Architectural APE on Map of Staten Island or Richmond County (Butler 1853).









Figure 7: Architectural APE on Map of the City of New-York and Environs (Walling 1860).









Figure 8: Architectural APE on Map of Staten Island (Richmond Co.) N.Y... (Dripps 1872).









Figure 9a: Architectural APE on Atlas of Staten Island, Richmond County, New York (Beers 1887).

400 600 800 1000 FEET 200



Staten Island, Richmond County, New York

 $\langle Hp \rangle$

Figure 9b: Architectural APE on Atlas of Staten Island, Richmond County, New York (Beers 1887).

0 300 600 900 1200 1500 FEET



Figure 9c: Architectural APE on Atlas of Staten Island, Richmond County, New York (Beers 1887).

0 200 400 600 800 1000 FEET







Figure 9d: Architectural APE on Atlas of Staten Island, Richmond County, New York (Beers 1887).

0 250 500 750 1000 1250 FEET





Figure 10a: Architectural APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).

0 200 400 600 800 1000 FEET

PLATE_1.		
0		1
	77 418	1851
6		1147
107 1851 (Q)	668	(10)
oge . 1891 (5) Statutions East.	698	ença
(99) A 1007 T J. Crabbre	- 124	089.5
U S. N. Havens	985 ····	1882
(V) John S. Westervett	- 658	1807
W Sarah M. Green	701	1802
H.F.L.		1869
Daniel Low	- (8)	1863
and and a second second		1885
These E Davis		1887
JA		
Sill in .		
9/1/1/		
il an in		
1 and All		
MUNINT C		
To MAN GEORES		
Conservations of the se		
Atten) A		
In all of the man		
the all and the second second		
In an all all and a second		
	2	
THEME I IF A		
11113	5	
the s	1	
0	1	
7 00/	1	
	1	
	1	
		1
R 1		X
GOVERNIASH		
TATE		
DEFE		
B T	1	
Pixe Hal	1	
1 1		
41.		
and a series of the series of	1	
TOTAL O PIER No. 2	2	
Key	75	7
- •	SL	
-		
Architectural APE		
	d	
(90-foot radius)		
	1	1
~		
Section divisions	1	
	3	
Copyright second in 1907 by E. Robinson		
	_	
N	*	
N G	T	λ
	1ก	Ψ
		//
	ſ	/



Figure 10b: Architectural APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).

0 200 400 600 800 1000 FEET



Figure 10c: Architectural APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).


Architectural Resources Survey Staten Island North Shore Bus Rapid Transit (BRT) Project Staten Island, Richmond County, New York

Figure 10d: Architectural APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).





Staten Island North Shore Bus Rapid Transit (BRT) Project Staten Island, Richmond County, New York

Figure 10f: Architectural APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).

0 200 400 600 800 1000 FEET



Staten Island North Shore Bus Rapid Transit (BRT) Project Staten Island, Richmond County, New York

Figure 10f: Architectural APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).

0 200 400 600 800 1000 FEET



Architectural Resources Survey Staten Island North Shore Bus Rapid Transit (BRT) Project Staten Island, Richmond County, New York

2.

Figure 10g: Architectural APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).

0 200 400 600 800 1000 FEET





Figure 11a: Historic Resources in Section 1 (HPI 2020 and VHB 2020).



- Kreuzer-Pelton House, 1262 Richmond Terrace (S/NRHP-listed, NYCL) 3-A
- 3-C
- 3-D
- 3-F
- **4-**A
- **4-B** Commercial, 1691 Richmond Terrace (undetermined)
- 4-C



Figure 11c: Historic Resources in Section 3 and the east part of Section 4 (HPI 2020 and VHB 2020).





1 BLOCK NUMBER

Photographs



Photograph key for Section 1 (HPI 2020 and VHB 2020).





Photograph key for Section 3 and the east part of Section 4 (HPI 2020 and VHB 2020).





1 BLOCK NUMBER

Section 1 Photographs



Photograph 1.1. View from Staten Island Ferry Terminal complex looking southeast at northeastern boundary of APE. Staten Island Borough Hall is in left background.



Photograph 1.2. Richmond Terrace, view looking northeast. Modern Staten Island Outlet is on left.



Photograph 1.3. Modern Staten Island Yankees stadium on Richmond Terrace. View looking northwest.



Photograph 1.4. Modern parking garage on Richmond Terrace. View looking southeast.



Photograph 1.5. Former railroad alignment under pavement in North Shore Waterfront Esplanade Park, with Richmond Terrace on left. View looking northwest.



Photograph 1.6. Staten Island Borough Hall, 10 Richmond Terrace. View looking southwest.



Photograph 1.7. Richmond County Courthouse, 18 Richmond Terrace. View looking northwest.



Photograph 1.8. 36-78 Richmond Terrace. Streetscape view looking southwest.



Photograph 1.9. Commercial buildings on Richmond Terrace. View looking southwest.



Photograph 1.10. 120th Police Precinct building, 78 Richmond Terrace. View looking northwest.





Photograph 1.12. Commercial buildings on Richmond Terrace. View looking northwest.



Photograph 1.13. 198 and 204 Richmond Terrace. View looking west.





Photograph 1.15. Residential properties on Richmond Terrace. View looking west.



Photograph 1.16. 260 Richmond Terrace (red building on left). View looking southwest.



Photograph 1.17. NYCHA Richmond Terrace Houses. View looking southwest to Jersey Street from Westervelt Avenue.

Section 2 Photographs



Photograph 2.1. Bank Street, looking west from the foot of Jersey Street to 15 Bank Street.



Photograph 2.2. Smoke stack, Richmond Terrace, view looking northeast.



Photograph 2.3. 506 Richmond Terrace. View looking southeast.



Photograph 2.4. 514 Richmond Terrace, looking southwest at York Avenue.



Photograph 2.5. 536 Richmond Terrace (residence on hill), view looking southeast.



Photograph 2.6. Concrete warehouse on south side of Richmond Terrace between York Avenue and Franklin Avenue. View looking southwest.



Photograph 2.7. Proposed staging area on the south side of Richmond Terrace near Franklin Avenue, with houses in the background on Van Buren Street. View looking south.



Photograph 2.8. The south side of Richmond Terrace looking southwest at Lafayette Avenue.



Photograph 2.9. Richmond Terrace, between Lafayette and Clinton Avenues, view looking southwest.



Photograph 2.10. 772, 776, 778, and 782 Richmond Terrace. View looking southwest.



Photograph 2.11. 2 Clinton Avenue and 794 Richmond Terrace. View looking southwest.



Photograph 2.12. The Neville House at 806 Richmond Terrace, view looking south.



Photograph 2.13. 814 Richmond Terrace, view looking southwest.



Photograph 2.14. Sailors' Snug Harbor, view looking southwest.



Photograph 2.15. Sailors' Snug Harbor gatehouse on Richmond Terrace. View looking southwest.



Photograph 2.16. Sailors' Snug Harbor Buildings T (left background) and E (right). View looking southwest.



Photograph 2.17. Sailors' Snug Harbor Building D. View looking southwest.



Photograph 2.18. Sailors' Snug Harbor Building C. View looking southwest.


Photograph 2.19. Sailors' Snug Harbor Building B. View looking southwest.



Photograph 2.20. Sailors' Snug Harbor Building A. View looking southwest.



Photograph 2.21. Sailors' Snug Harbor, view looking northwest toward Richmond Terrace and Kill Van Kull.



Photograph 2.22. Former railroad tracks on north side of Richmond Terrace at Sailors' Snug Harbor. View looking north.



Photograph 2.23. Sailors' Snug Harbor historic viewing platform on north side of Richmond Terrace. View looking south.



Photograph 2.24. Modern dock at Sailors' Snug Harbor on north side of Richmond Terrace. Former railroad tracks are under vegetation. View looking north.



Photograph 2.25. Shoreline at Sailors' Snug Harbor. View looking east with Atlantic Salt facility in upper left background.



Photograph 2.26. Shoreline at Sailors' Snug Harbor. View looking west.



Photograph 2.27. Former railroad tracks and stone retaining wall at Sailors' Snug Harbor, with Richmond Terrace in the background. View looking southwest.



Photograph 2.28. Stone retaining wall at Sailors' Snug Harbor, at base of paved paths. View looking south.



Photograph 2.29. Paved paths leading to the Sailors' Snug Harbor shoreline, with Richmond Terrace on the right. View looking east.



Photograph 2.30. Blue Restaurant at 1115 Richmond Terrace. View looking northwest.



Photograph 2.31. Gas station on the north side of Richmond Terrace, view looking northwest near Bard Avenue.



Photograph 2.32. 1126 Richmond Terrace. View looking south.



Photograph 2.33. Con Edison building on Richmond Terrace, view looking southwest near Bard Avenue.



Photograph 2.34. Con Edison parking lot on the north side of Richmond Terrace. View looking northwest.

Section 3 Photographs



Photograph 3.1. Caddell Dry Dock and Repair Company's buildings on the north side of Richmond Terrace. View looking northwest from just west of N. Burgher Avenue.



Photograph 3.2. Caddell Dry Dock and Repair Company buildings at 1515 Richmond Terrace and Quinlan Fuel Oil and Heating buildings at 1473 Richmond Terrace. View looking northeast.



Photograph 3.3. Caddell Dry Dock and Repair Company buildings at 1515 Richmond Terrace. View looking north from Broadway at Richmond Terrace.



Photograph 3.4. Detail of Caddell Dry Dock and Repair Company entrance. The new project alignment will cross this parking lot; the former railroad was located further to the north, in front of the gray building in the background. View looking north.



Photograph 3.5. Caddell Dry Dock and Repair Company, 1515 Richmond Terrace, view looking northwest from west of Broadway.



Photograph 3.6. Caddell Dry Dock and Repair Company buildings. View looking east from the access road and parking lot for Heritage Park.



Photograph 3.7. Fence outside Caddell Dry Dock and Repair Company. Building on right is 1535 Richmond Terrace. View looking southeast near Barrett Lane.



Photograph 3.8. Heritage Park, view looking northwest.



Photograph 3.9. 1643 and 1652 Richmond Terrace, view looking northeast.



Photograph 3.10. The Kreuzer-Pelton House, 1262 Richmond Terrace, view looking southeast.



Photograph 3.11. Buildings at 1380, 1388, and 1390 Richmond Terrace. View looking southwest.



Photograph 3.12. 1390 Richmond Terrace. View looking southwest.



Photograph 3.13. 1410 Richmond Terrace. View looking southeast.



Photograph 3.14. 1550 Richmond Avenue, Restoration Workshop building. View looking southwest.



Photograph 3.15. 1 Van Street/AKA 1564-1568 Richmond Terrace. View looking southeast.

Section 4 Photographs



Photograph 4.1. John DeGroot House, 1674 Richmond Terrace, corner of Alaska Street, view looking southeast from Richmond Terrace.



Photograph 4.2. 1689 and 1691 Richmond Terrace. View looking northwest.



Photograph 4.3. 1740 Richmond Terrace. View looking southeast.



Photograph 4.4. Port Richmond Water Pollution Control Plant at 1789 Richmond Terrace with viaduct in the far background. View looking north.



Photograph 4.5. 1957 Richmond Terrace with the viaduct in the left background. View looking northeast.



Photograph 4.6. 1972 and 1978 Richmond Terrace at the intersection of Heberton Avenue. View looking west.



Photograph 4.7. 16 Park Avenue, north of the viaduct. View looking southwest.



Photograph 4.8. Park Avenue south of the viaduct. 60 Park Avenue (Block 1004, Lot 27) and 56 Park Avenue (Block 1004, Lot 24). View looking west.



Photograph 4.9. Park Avenue south of the viaduct. 55, 57, and 61 Park Avenue (Block 1006, Lots 6, 8, and 10). View looking southeast.



Photograph 4.10. Church Street north of the viaduct. 52-54 Church Street, circa 1931 public bathroom. View looking southwest.



Photograph 4.11. Church Street north of the viaduct, 52- 54 Church Street (Block 1004, Lots 15 and 19). View looking southwest.



Photograph 4.12. Port Richmond Avenue north of the viaduct. 61 Port Richmond Avenue (Block 1004, Lot 12). View looking southeast.



Photograph 4.13. Port Richmond Avenue north of the viaduct. From Right: 64, 68, 70, and 76 Port Richmond Avenue (Block 1073, Lots 90, 92, 93, and 94). View looking southwest.



Photograph 4.14. Port Richmond Avenue north of the viaduct, 54 Port Richmond Avenue, Reformed Church of Staten Island (Block 1073, Lot 75). View looking west from Church Street.



Photograph 4.15. Port Richmond Avenue, south of the viaduct. From right: 90, 98, 102, 104, 108-110, and 114 Port Richmond Avenue (Block 1073, Lots 104, 107, 110, and 116). View looking southeast.



Photograph 4.16. Port Richmond Avenue south of the viaduct. From left: 81, 91, 93, 97, and 99 Port Richmond Avenue (Block 1004, Lot 1, 7, 10, and 11). View looking northeast.



Photograph 4.17. Port Richmond Avenue at Ann Street, south of the viaduct. From left: 81 Port Richmond Avenue and 103, 99, 97, 95, 91, and 85 Ann Street (Block 1004, Lots 40, 37, 37, 36, 35, and 32). View looking northeast.



Photograph 4.18. Maple Avenue south of the viaduct, rear of 108 Port Richmond Avenue. View looking northeast.



Photograph 4.19. Maple Avenue south of the viaduct. From left: 66 and 62 Maple Avenue (Block 1074, Lots 89 and 86). View looking northwest.



Photograph 4.20. Maple Avenue north of the viaduct. From right: 47-51 Maple Avenue (Block 1073, Lots 23 and 24). View looking northeast.



Photograph 4.21. Maple Avenue north of the viaduct, 39 Maple Avenue. View looking northeast.



Photograph 4.22. Maple Avenue north of the viaduct. From left: 50, 48, 42, and 40 Maple Avenue (Block 1074, Lots 82, 81, 79, and 77). View looking northwest.



Photograph 4.23. Grove Avenue between Faber Street and Maple Avenue. At left is 59 Grove Avenue (Block 1074, Lot 9). View looking northeast.



Photograph 4.24. Faber Street south of the viaduct. From left: 71 Faber Street (Block 1074, Lot 11) and 59 Grove Avenue (Block 1074, Lot 9). View looking northeast.



Photograph 4.25. Faber Street south of the viaduct. 78 Faber Street (Block 1076, Lot 1). View looking northwest.



Photograph 4.26. Faber Street north of the viaduct. From right: 55, 51, 47, and 45 Faber Street (Block 1074, Lots 15, 18, 20, and 22). View looking northeast.



Photograph 4.27. Faber Street north of the viaduct. 56, 60, and 64 Faber Street (Block 1076, Lots 58, 56, and 53). View looking southwest.



Photograph 4.28. 48 and 52 Larkin Street (Block 1076, Lots 39 and 42). View looking southwest.



Photograph 4.29. Sharpe Avenue north of the viaduct. From right: 49, 47, and 43 Sharpe Avenue (Block 1076, Lots 28, 26, and 22). View looking northeast.



Photograph 4.30. Sharpe Avenue north of the viaduct. From right: 46, 50, 52, and 56 Sharpe Avenue (Block 1084, Lots 97, 98, 100, and 102). View looking southwest.



Photograph 4.31. Sharpe Avenue south of the viaduct. From right: 68, 72, 78, and 82 Sharpe Avenue (Block 1084, Lots 107, 110, and 113). View looking southwest from Grove Avenue.



Photograph 4.32. Sharpe Avenue at Grove Avenue, south of the viaduct. 100 and 98 Grove Avenue (Block 1079, Lots 40 and 41). View looking southeast.



Photograph 4.33. Sharpe Avenue south of the viaduct at Grove Avenue. 97 Grove Avenue in foreground (Block 1076, Lot 14). View looking northeast.



Photograph 4.34. Grove Avenue, between Faber Street and Sharpe Avenue. From right: 78 Faber Street, 79, 87, and 97 Grove Avenue (Block 1076, Lots, 1, 3, 8, and 14). View looking northwest with Bayonne Bridge at rear.



Photograph 4.35. Treadwell Avenue north of the viaduct. From left: 46, 42, and 38 Treadwell Avenue (Block 1086, Lots 88, 86, and 84). View looking southwest.



Photograph 4.36. Treadwell Avenue north of the viaduct. From left: 41, 39, 37, and 35 Treadwell Avenue (Block 1084, Lots 45, 48, 50, and 53). View looking northeast.


Photograph 4.37. Treadwell Avenue south of the viaduct. From left: 61, 63, 65, 67, and 71 Treadwell Avenue (Block 1084, Lots 41, 40, 39, 38, and 36). View looking northeast.



Photograph 4.38. Treadwell Avenue south of the viaduct. 62, 66, and 68 Treadwell Avenue. View looking southwest.



Photograph 4.39. 31 Slaight Street. View looking northwest.



Photograph 4.40. Nicholas Avenue south of the viaduct and rear of 31 Slaight Street (Block 1086, Lot 8). View looking northeast.



Photograph 4.41. Nicholas Avenue south of the viaduct at Slaight Street. View looking northwest from Slaight Street.



Photograph 4.42. Nicholas Avenue north of the viaduct. From right: 61, 41, and 35 Nicholas Avenue (Block 1086, Lots 32, 29, and 27). View looking northeast.



Photograph 4.43. 60 Nicholas Avenue. View looking northwest from under the viaduct, looking at the rear of Riverside Lane.



Photograph 4.44. Riverside Lane north of the viaduct. 60 Nicholas Avenue and 24 through 67 Riverside Lane (Block 1116, Lots 100, 102, 104, 104, 108, 114, 116, 118, 120, 122, 124, 125, 126, 127, 144, 145, 146, 147, 148, 153, 154, and 155). View southwest from Nicholas Avenue.



Photograph 4.45. John Street south of the ROW. From right: 125, 119, 117, and 115 John Street (Block 1121, Lots 56, 68, 69, and 71). View looking northeast.



Photograph 4.46. John Street north of the ROW. From left: 83 and 89 John Street (Block 1121, Lots 92 and 95). View looking southeast.

Section 5 Photographs



Photograph 5.1. John Street north of the ROW. From left: 94 and 92 John Street (Block 1122, Lots 108 and 105). View looking northwest.



Photograph 5.2. 120 John Street south of the ROW (Block 1123, Lot 120). View looking southwest from John Street.



Photograph 5.3. Eaton Place south of the ROW. From right: 129, 127, 125, and 121 Eaton Place (Block 1124, Lots 13, 14, 15, and 7501). View looking northeast.



Photograph 5.4. Morningstar Road south of the ROW. From left: 146, 142, 140, and 132 Morningstar Road and overpass (Block 1152, Lots 85, 84, 83, and 79). View looking northwest.



Photograph 5.5. Morningstar Road south of the ROW. From left: 135 and 127 Morningstar Road (Block 1125, Lots 8 and 10). View looking northeast.



Photograph 5.6. Morningstar Road overpass above the open cut. 21 through 31 Shaina Court beyond the bridge (Block 1152, Lots 66, 68, 69, 70, 71, and 72). View looking southwest.



Photograph 5.7. La Salle Street at Morningstar Road north of the ROW. 15-21 Shaina Court (Block 1152, Lots, 63, 64, 66, and 67). View looking southwest.



Photograph 5.8. Morningstar Road north of the ROW. 88 Morningstar Road (Block 1149, Lot 91). View looking northwest from La Salle Street.



Photograph 5.9. Morningstar Road north of the ROW, with the Bayonne Bridge approach overhead. New building (no address) being constructed and 73 Morningstar Road (Block 1125, Lots 28 and 29). View looking northeast.



Photograph 5.10. Newark Avenue north of the ROW with the Bayonne Bridge approach on the left. From right: 81, 73, 67, and 65 Newark Avenue (Block 1123, Lots 3, 4, 7, and 10). View looking northeast.



Photograph 5.11. Winant Street north of the ROW. 40 La Salle Street at the edge of APE (Block 1155, Lot 85). View looking southwest.



Photograph 5.12. Winant Street north of the ROW. 111 Winant Street (Block 1152, Lot 47). View looking southeast.



Photograph 5.13. Winant Street north of the ROW. 113 Winant Street (Block 1152, Lot 42). View looking northeast.



Photograph 5.14. Dead end of Pulaski Avenue south of the ROW (Block 1152, Lot 31). View looking northeast.



Photograph 5.15. Granite Avenue bridge over the ROW. 133 Granite Avenue (Block 1115, Lot 71) in the distance. View looking southeast.



Photograph 5.16. Granite Avenue north of the ROW. 124 Granite Avenue (Block 1156, Lot 1). View looking southwest.



Photograph 5.17. Housman Avenue north of the ROW at Gigi Street. 124 Housman Avenue (Block 1158, Lot 103). View looking northwest.



Photograph 5.18. Gigi Street and Wright Avenue north of the ROW. 93 and 91 Wright Avenue (Block 1158, Lots 1 and 7). View looking northeast.



Photograph 5.19. Wright Avenue north of the ROW. 94 Wright Avenue (Block 1159, Lot 100). View looking northwest.



Photograph 5.20. Lake Avenue on the north side of the overpass over the ROW. 97 Lake Avenue (Block 1159, Lot 1). View looking northeast.



Photograph 5.21. Lake Avenue at the overpass on the north side of the ROW. From left: 104-92 Lake Avenue (Block 1160, Lots 117, 114, 113, 112, 111, 110, and 109). View looking northwest.



Photograph 5.22. Lake Avenue south of the overpass. 125 Lake Avenue (Block 1161, Lot 21). View looking southeast.



Photograph 5.23. 141 (aka 137) Lake Avenue (Block 1161, Lot 20). View looking southeast.



Photograph 5.24. Lake Avenue on the south side of the overpass. From left: 128 and 120 Lake Avenue (Block 1165, Lots 56 and 52). View looking northwest.



Photograph 5.25. Simonson Avenue at the northern edge of the overpass. From right: 97 and 93 Simonson Avenue (Block 1160, Lots 3 and 4). View looking northeast.



Photograph 5.26. Simonson Avenue at the northern edge of the overpass. From left: 98 and 94-88 Simonson Avenue (Block 1186, Lots 117, 115, and 114). View looking northwest.



Photograph 5.27. Simonson Avenue south of the overpass. From right: 129, 125, and 121-119 Simonson Avenue (Block 1156, Lots, 32, 35, 37, and 39). View looking northeast.



Photograph 5.28. Simonson Avenue south of the overpass. 126 Simonson Avenue (Block 1186, Lot 124). View looking northwest.



Photograph 5.29. Van Name Avenue north of the overpass. From right: 99, 93, and 87 Van Name Avenue (Block 1186, Lots 9, 11, and 13). View looking northeast.



Photograph 5.30. Van Name Avenue north of the ROW. 96 and 90 Van Name Avenue (Block 1188, Lots 117 and 114). View looking west.



Photograph 5.31. Beamer Court north of the ROW. 40 and 50 Beamer Court (Block 1188, Lots 254 and 252). View looking west.



Photograph 5.32. Heusden Street south of the ROW, between Van Name and Simonson Avenues. From left: 19 and 17 Heusden Street (Block 1186, Lots 1 and 129). View looking northeast from the intersection of Van Name Avenue.



Photograph 5.33. 32 and 28 Heusden Street at the intersection of Van Name Avenue (Block 1190, Lots 28 and 30). View looking southeast.



Photograph 5.34. South side of Heusden Street south of the ROW. From left: 34 through 58 Heusen Street (Block 1192, Lots 48, 46, 45, 42, 41, 40, 39, and 38). View looking southeast.



Photograph 5.35. Intersection of Heusden Street and Van Pelt Avenue south of the ROW. 109 Van Pelt Avenue (Block 1192, Lot 26). View looking southeast.



Photograph 5.36. Van Pelt and Linden Avenues. 110 and 114 Van Pelt Avenue (Block 1215, Lots 49 and 50). View looking southwest.



Photograph 5.37. Van Pelt Avenue at the northern edge of the overpass. 89 Van Pelt Avenue (Block 1188, Lot 2). View looking northeast.



Photograph 5.38. Van Pelt Avenue north of the ROW. 92 and 88 Van Pelt Avenue (Block 1121, Lots 150 and 148). View looking northwest.



Photograph 5.39. Erastina Place north of the ROW. 89 Erastina Place (Block 1211, Lot 21). View looking southeast.



Photograph 5.40. Erastina Place north of the ROW. 98 Erastina Place (Block 1212, Lot 98). View looking northwest.



Photograph 5.41. Linden Avenue south of the ROW. From left: 14 and 18 Linden Avenue (Block 1215, Lots 45 and 48). View looking southeast.



Photograph 5.42. Linden Avenue and Maple Parkway south of the ROW. 2, 12, 16 and 14 Maple Parkway (Block 1212, Lots, 19, 13, 15, and 12). View looking southwest.



Photograph 5.43. De Hart Avenue, southern edge of the overpass at the ROW. 2, 12, 16 and 14 Maple Parkway (Block 1212, Lots, 19, 13, 15, and 12). View looking northeast.



Photograph 5.44. De Hart Avenue on the southern edge of the overpass at the ROW. From left: 116 and 112 De Hart Avenue (Block 1213, Lots 145 and 143). View looking northwest.



Photograph 5.45. Northern edge of the overpass at the ROW on De Hart Avenue. From right: 95, 91 and 87 De Hart Avenue (Block 1212, Lots 25, 26 and 29). View looking northeast.



Photograph 5.46. Northern edge of the overpass at the ROW on De Hart Avenue. 100 De Hart Avenue. View looking southwest.



Photograph 5.47. Union Avenue on the north side of the ROW. 101 and 99 Union Avenue (Block 1213, Lots 28 and 29). View looking northeast.



Photograph 5.48. Union Avenue on the north side of the ROW. From left: 104 and 100 Union Avenue (Block 1226, Lots 51 and 47). View looking northwest.



Photograph 5.49. Union Avenue south of the ROW. From left: 119, 121, 127, and 129 Union Avenue (Block 1213, Lots 18, 17, 16, and 15). View looking southeast.



Photograph 5.50. Union Avenue south of the ROW. 130 Union Avenue (Block 1226, Lot 57). View looking northwest.



Photograph 5.51. Bush Avenue north of the ROW. From right: 111 and 109 Bush Avenue (Block 1226, Lots 31 and 32). View looking southeast.



Photograph 5.52. Bush Avenue north of the ROW. From left: 112 and 110 Bush Avenue (Block 1227, Lots 114 and 112). View looking west.



Photograph 5.53. Harbor Road north of the ROW. From right: 111 and 109 Harbor Road (Block 1227, Lots 3 and 4). View looking northeast.



Photograph 5.54. Harbor Road south of the ROW. Coal silos at 151 Harbor Road (Block 1226, Lot 7). View looking northeast.

Section 6 Photographs



Photograph 6.1. Harbor Road north of the ROW. Summerfield Methodist Church at 100 Harbor Road (Block 1236, Lot 164). View looking northwest.



Photograph 6.2. The same view of the church from 1899. Note the original parsonage house on the right.



Photograph 6.3. Harbor Road north of the ROW. Summerfield Methodist Church parsonage house at 100 Harbor Road (Block 1236, Lot 164). View looking west.


Photograph 6.4. Harbor Road south of the ROW. From right: 124, 126, 128, 130, and 132 Harbor Road (Block 1243, Lots 46, 47, 48, 49, and 149). View looking northeast.



Photograph 6.5. Lockman Avenue and Lockman Loop intersection south of the ROW. 20 Lockman Loop (Block 1243, Lot 20). View looking southeast.



Photograph 6.6. Lockman Avenue at Roxbury Street, south of the ROW. NYCHA Mariners Harbor public housing complex (Block 1245, Lot 1). View looking southwest.



Photograph 6.7. Roxbury Street south of the ROW. NYCHA Mariners Harbor public housing complex (Block 1245, Lot 1). View looking southeast.



Photograph 6.8. Grandview Avenue and Roxbury Street south of the ROW. From right: 310, 312, 314, and 316 Grandview Avenue (Block 1261, Lots 93, 94, 96, and 98). View looking southeast.



Photograph 6.9. South Avenue south of the ROW. 285, 281, 273, 263, and 271 South Avenue (Block 1261, Lots 66, 65, 71, 76, and 78). View looking northeast.



Photograph 6.10. Railroad property south of the ROW with industrial building (Block 1288, Lot 217). View looking west.



Photograph 6.11. South Avenue at the edge of the overpass north of the ROW. 237 South Avenue (Block 1257, Lot 9). View looking northeast.



Photograph 6.12. Grandview Avenue north of and abutting the ROW. From left: 246 and 244 Grandview Avenue (Block 1257, Lots 83 and 72). View looking northwest.



Photograph 6.13. Grandview Avenue north of and abutting the ROW. 243 Grandview Avenue on left (Block 1256, Lot 39). View looking northeast.



Photograph 6.14. Davidson Street north of the ROW. 82 Davidson Street (Block 1256, Lot 92). View looking southwest.



Photograph 6.15. Davidson Street north of the ROW. 60 Davidson Street (Block 1256, Lot 40). View looking southeast.



Photograph 6.16. Andros Avenue north of the ROW. 141 Andros Avenue (Block 1237, Lot 100). View looking southeast.



Photograph 6.17. Lockman Place north of the ROW. 7 Lockman Place (Block 1236, Lot 120). Note rear of the Summerfield Methodist Church at left. View looking southeast.



Photograph 6.18. Lockman Place north of the ROW. From left: 4, 3 and 1 Lockman Place (Block 1236, Lots 124, 125, and 127). View looking southwest.

North Shore Staten Island Rapid Transit Railway Existing Conditions Photographs



Photograph R.1. Section 1, North Shore Waterfront Esplanade Park and Bank Street. The former railroad tracks are no longer extant. View looking southeast.



Photograph R.2. Section 1, North Shore Waterfront Esplanade Park and Bank Street. The former railroad tracks are no longer extant. View looking northwest.



Photograph R.3. Section 1 terminus, Bank Street at Jersey Street. The railroad tracks were under the newly paved areas. View looking northeast.



Photograph R.4. Section 2, remains of the railroad tracks in the wooded area north of Richmond Terrace. View looking north.



Photograph R.5. Section 2, north of Richmond Terrace at Sailors' Snug Harbor modern dock. Remains of the railroad tracks are located under the vegetation, where the man in the blue shirt is gesturing. View looking north.



Photograph R.6. Section 2, remains of the railroad tracks north of Richmond Terrace at Sailors' Snug Harbor waterfront. View looking southwest.



Photograph R.7. Section 2. Pedestrian path along the shoreline at Sailors' Snug Harbor. Remains of the railroad tracks are within the woods on the right. View looking east.



Photograph R.8. Section 2, former railroad tracks along the Sailors' Snug Harbor scoured shoreline. Note the erosion of the beach. View looking west.



Photograph R.9. Section 2, rear of Blue Restaurant at 1115 Richmond Terrace showing the reconstructed railroad tracks. View looking east.



Photograph R.10. Section 2. Remains of the railroad tracks to the north of the Con Edison parking lot. View looking west.



Photograph R.11. Section 3, former railroad tracks embedded in the pavement in front of the gray building of the Caddell Dry Dock and Repair Company yard. View looking north.



Photograph R.12. Section 4, conditions on top of the viaduct near the Port Richmond Wastewater Pollution Control Plant. View looking east.



Photograph R.13. Section 4, detail of the viaduct near Richmond Terrace. View looking northeast.



Photograph R.14. Section 4, the viaduct crossing at Richmond Terrace. View looking northwest.



Photograph R.15. Section 4, detail of the viaduct underside crossing Port Richmond Avenue. View looking west.



Photograph R.16. Section 4, former station remains on top of the viaduct near Sharpe Avenue. View looking southeast.



Photograph R.17. Section 4, former station remnants on top of the viaduct near Sharpe Avenue. View looking northwest.



Photograph R.18. Section 5, remains of the open cut filled with water under the Bayonne Bridge approach. View looking southwest.



Photograph R.19. Section 4, the open cut near Morningstar Road, with station remnants. View looking west.



Photograph R.20. Section 5, the open cut filled with water near Winant Street. View looking southwest.



Photograph R.21. Section 5, the open cut between Van Pelt Avenue and Van Name Avenue. View looking east.



Photograph R.22. Section 5, station remnants within the open cut between De Hart Avenue and Van Pelt Avenue. View looking southeast.



Photograph R.23. Section 6, active tracks under the Harbor Road overpass. View looking west.



Photograph R.24. Section 6, active tracks at the South Avenue overpass. View looking east.



Photograph R.25. Section 6, active tracks at the South Avenue overpass. View looking west.

Appendix B: Selected Sailors' Snug Harbor and North Shore Staten Island Rapid Transit Railway Historic Images

Sailors' Snug Harbor Historic Images



Bird's Eye View Sailors' Snug Harbor, S.I.

Bird's Eye View Sailors' Snug Harbor, S.I. Undated image. Multiple sources.



Undated photograph of the Sailors' Snug Harbor waterfront as seen from the Kill Van Kull. Courtesy Staten Island Museum.



Aerial photograph of the north shore of Staten Island including Sailors' Snug Harbor, ca. 1900. Courtesy Staten Island Museum.



Waterfront, Sailors' Snug Harbor, ca. 1915. Multiple sources.





Undated image of Sailors' Snug Harbor boat house. Courtesy Staten Island Museum.



Richmond Terrace at Sailors' Snug Harbor, 1877. Courtesy Brooklyn Public Library.



Stone overlook at Sailors' Snug Harbor, ca. 1878-1885. Courtesy Staten Island Historical Society.

North Shore Staten Island Rapid Transit Railway Historic Images



Livingston, looking toward Sailors' Snug Harbor, showing railroad on earthen causeway on left, undated image. Courtesy Staten Island Museum.



Earthen railroad causeway near Sailors' Snug Harbor, undated photograph. Courtesy Staten Island Museum.



Railroad crossing at Richmond Terrace, 1912. Courtesy Staten Island Museum.



Morningstar Road and the Elm Park station prior to grade elimination, 1935. Courtesy New York Public Library



Mariners' Harbor station prior to grade elimination, undated photograph. Courtesy Staten Island Museum.



Constructing the open cut and the Lake Avenue station in 1936. Courtesy Gary Owens, http://www.gretschviking.net/GOSIRTNorthShore2.htm.



Richmond Terrace, excavating for the viaduct on left in 1935. Courtesy Gary Owens, http://www.gretschviking.net/GOSIRTNorthShore.htm.



Building the viaduct at Maple Avenue in 1935. Courtesy Gary Owens, http://www.gretschviking.net/GOSIRTNorthShore.htm.



The newly constructed viaduct on the left with the older at-grade tracks on the right in 1937. Courtesy Gary Owens, http://www.gretschviking.net/GOSIRTNorthShore.htm.



The newly constructed viaduct in the background and the older trestle in the foreground, crossing Bodine Creek, ca. 1930s. Courtesy Gary Owens, http://www.gretschviking.net/GOSIRTNorthShore.htm.



Park Avenue showing a train on the newly constructed viaduct with the at-grade tracks in front in 1936. Courtesy New York Public Library.



The railroad tracks at St. George after construction of the retaining wall along Richmond Terrace, undated image. Courtesy Brooklyn Public Library.

Appendix C: Architectural Resources Database by Section
BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
2	10	Borough Place	MTA - Staten Island R	Bus terminal ramps			No	Recommend not S/NRHP eligible
2	15	55 Richmond Terrace	St. George Outlet Dev	2 buildings			No	Recommend not S/NRHP eligible
2	18	Richmond Terrace	Richard De Sio	vacant			No	N/A
2	20	75 Richmond Terrace	Department Of Small B	1 building			No	Recommend not S/NRHP eligible
2	21	Borough Place	NYC DOT	vacant			No	N/A
2	22	155 Richmond Terrace	New York Wheel LLC	vacant			No	N/A
2	45	Borough Place	Not On File	vacant			No	N/A
2	599	Borough Place	Parks And Recreation	vacant			No	N/A
2	601	Richmond Terrace	The City Of New York/	vacant			No	N/A
2	726	Richmond Terrace	Parks And Recreation	vacant			No	N/A
2	746	Bank Street	NYC DOT	vacant			No	N/A
2	754	Bank Street	Parks And Recreation	vacant			No	N/A
2	759	7 Bank Street	TRG Waterfront Lender	1 building			No	Recommend not S/NRHP eligible
2	767	Bank Street	TRG Waterfront Lender	vacant			No	N/A
2	775	Bank Street	DCAS	vacant			No	N/A
2	778	Bank Street	DCAS	vacant			No	N/A
2	800	Bank Street	DCAS	vacant			No	N/A
2			DCAS				No	N/A
2	801	Bank Street		vacant		-		
2	830	Richmond Terrace	Antoine Lufty DCAS	vacant Staten Island Borough Hall	90NR01036	la dividual	No No	N/A
1	1			Ũ	08501.000998	Individual Landmark		
7	12	18 Richmond Terrace	DCAS	Richmond County Courthouse	90NR01036 08501.000999	Individual Landmark	No	
7	70	48 Richmond Terrace	Nass Properties, Inc.	1 building			No	Recommend not S/NRHP eligible
7	80	44 Richmond Terrace	Mossi Inn Inc	1 building			No	Recommend not S/NRHP eligible
7	81	42 Richmond Terrace	Cucco Lucille	1 building			No	Recommend not S/NRHP eligible
7	83	40 Richmond Terrace	Benedict Richmond LLC	1 building			No	Recommend not S/NRHP eligible
7	86	36 Richmond Terrace	Benedict Richmond LLC	1 building			No	Recommend not S/NRHP eligible
9	17	10 Hamilton Avenue	DCAS	2 buildings			No	Recommend not S/NRHP eligible
9	22	100 Richmond Terrace	City Of New York (Dca	Staten Island Family Courthouse	S/NRHP eligible 08501.001001	Individual Landmark	No	
9	28	78 Richmond Terrace	Police Department	120th Police Precinct	S/NRHP eligible 08501.001000	Individual Landmark	No	
12	1	140 Stuyvesant Place	E & V Management Inc	2 buildings	00001.001000	Lanumark	No	Recommend not S/NRHP eligible
12	8	165 St Marks Place	NYC Housing Development	2 buildings			No	Recommend not S/NRHP eligible
13	60	224 Richmond Terrace	AAB 224 Richmond Terr	former residence, once 216 Richmond Terrace	Not S/NRHP eligible 08501.001006		No	Former residence demolished, new high rise built in 2012
13	68	208 Richmond Terrace	Manor Rd Management	former residence	Not S/NRHP eligible 08501.001005		No	Demolished, not S/NRNP eligible
13	71	204 Richmond Terrace	Robin Levin A/K/A Rob	residence	Undetermined 08501.001004		No	Recommend not S/NRHP eligible
13	73	198 Richmond Terrace	198 Richmond Terrace	residence	Undetermined 08501.001003		No	Recommend not S/NRHP eligible
13	75	194 Richmond Terrace	Liberty Towers Realty	former residence	Not S/NRHP eligible 08501.001002		No	Demolished, not S/NRNP eligible
13	78	188 Richmond Terrace	Liberty Towers Realty	1 building			No	Recommend not S/NRHP eligible
13	79	186 Richmond Terrace	Liberty Towers Realty	1 building		1	No	Recommend not S/NRHP eligible

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
13	80	184 Richmond Terrace	Liberty Towers Realty	1 building			No	Recommend not S/NRHP eligible
13	81	180 Richmond Terrace	Liberty Towers Realty	1 building			No	Recommend not S/NRHP eligible
13	82	178 Richmond Terrace	Liberty Towers Realty	vacant			No	N/A
13	92	Richmond Terrace	Liberty Towers Realty	vacant			No	N/A
13	100	Stuyvesant Place	Liberty Towers Realty	vacant			No	N/A
14	90	266 Richmond Terrace	SCCT General Contract	1 building			No	Recommend not S/NRHP eligible
14	93	260 Richmond Terrace	Carmen Maria Rodrigue	residence	Undetermined 08501.001007		No	Recommend not S/NRHP eligible
14	96	250 Richmond Terrace	Gangadin Esar	1 building			No	Recommend not S/NRHP eligible
14	99	248 Richmond Terrace	248 Richmond Terrace	2 buildings			No	Recommend not S/NRHP eligible
14	102	244 Richmond Terrace	Amstel America LLC	1 building			No	Recommend not S/NRHP eligible
14	103	242 Richmond Terrace	Eileen Harrington	1 building			No	Recommend not S/NRHP eligible
14	104	240 Richmond Terrace	Jarnail Singh	1 building			No	Recommend not S/NRHP eligible
14	105	236 Richmond Terrace	Sato, Fsp, As Trustee	1 building			No	Recommend not S/NRHP eligible
14	108	232 Richmond Terrace	Ferrara, Enrico	2 buildings			No	Recommend not S/NRHP eligible
51	30	43 Jersey Street	NYC Housing Authority	4 buildings			No	Recommend not S/NRHP eligible

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
4	1	Richmond Terrace	Parks And Recreation	vacant			No	N/A
4	10	Richmond Terrace	NY State Public Svce	vacant			No	N/A
4	11	Richmond Terrace	Staten Island Railway	vacant			No	N/A
4	21	561 Richmond Terrace	Regal Estates LLC A	3 buildings			No	Recommend not S/NRHP eligible
4	69	Bank Street	New York State P S C	vacant			No	N/A
4	87	Bank Street	NYC DOT	vacant			No	N/A
4	90	Bank Street	15 Kill Van Kull, LLC	vacant			No	N/A
4	93	15 Bank Street	15 Kill Van Kull, LLC	1 building			No	Recommend not S/NRHP eligible
52	76	506 Richmond Terrace	Four Properties Corp.	Commercial/apartments, 4- story	Undetermined 08501.000766		No	Recommend not S/NRHP eligible
52	78	Richmond Terrace	NYC Housing Authority	vacant			No	N/A
61	40	74 Van Buren Street	Laboard, Arthue	2 buildings			No	Recommend not S/NRHP eligible
61	81	80 Van Buren Street	Fong Development Inc	2 buildings			No	Recommend not S/NRHP eligible
61	82	82 Van Buren Street	82 Van Buren Street L	1 building			No	Recommend not S/NRHP eligible
61	83	84 Van Buren Street	H & W Realty Group, I	1 building			No	Recommend not S/NRHP eligible
61	86	88 Van Buren Street	Adams, Rafal	1 building			No	Recommend not S/NRHP eligible
61	87	92 Van Buren Street	Geoffrey Thatcher	1 building			No	Recommend not S/NRHP eligible
61	88	93 Filmore Street	Peter J. Fonte Jr	1 building			No	Recommend not S/NRHP eligible
61	90	31 Franklin Avenue	Mizzi, Carmen	1 building			No	Recommend not S/NRHP eligible
61	95	27 Franklin Avenue	Halit Bajramovic	2 buildings			No	Recommend not S/NRHP eligible
62	11	536 Richmond Terrace	Richard Karlsson	Residence on hill	Undetermined 08501.000768		No	Could not evaluate due to visibility issues
62	27	572 Richmond Terrace	Coty Enterprises, LTS	1 building			No	Recommend not S/NRHP eligible
62	101	526 Richmond Terrace	Monumental Realty LLC	1 building			No	Recommend not S/NRHP eligible
62	106	514 Richmond Terrace	Exclusive Reatly LLC	Commercial/apartments, 5- story	Undetermined 08501.000767		No	Recommend not S/NRHP eligible
67	80	36 Franklin Avenue	Nasef, Sanad	2 buildings			No	Recommend not S/NRHP eligible
67	142	Richmond Terrace	Consolidated Edison Co. Of NY, Inc	1 building			No	Recommend not S/NRHP eligible
67	150	121 Van Buren Street	GR Island Acquisition	1 building			No	Recommend not S/NRHP eligible
68	1	Richmond Terrace	Regal Estates LLC A	vacant			No	N/A
68	35	Richmond Terrace	The City Of New York/	SIRT tracks			No	Recommend not S/NRHP eligible
68	40	Richmond Terrace	MTA-Staten Island Rai	vacant			No	N/A
68	60	Richmond Terrace	Parks And Recreation	vacant			No	N/A
68	70	Richmond Terrace	The City Of New York/	SIRT tracks			No	Recommend not S/NRHP eligible
68	80	Richmond Terrace	MTA-Staten Island Rail	vacant			No	N/A
68	85	Richmond Terrace	Parks And Recreation	vacant			No	N/A
68	125	565 Richmond Terrace	Regal Estates LLC A	1 building			No	Recommend not S/NRHP eligible
69	75	Van Buren Street	Eviton, Inc	vacant			No	N/A
69	90	251 Van Buren Street	Randall Manor Propert	1 building			No	Recommend not S/NRHP eligible
69	103	782 Richmond Terrace	Randall Manor Management	2 buildings			No	Recommend not S/NRHP eligible
69	104	780A Richmond Terrace	Randall Manor Management	1 building			No	Recommend not S/NRHP eligible
69	105	776 Richmond Terrace	776 Richmond Terrace	Commercial with apartments, 2 story	2 Undetermined 08501.00077		No	Recommend not S/NRHP eligible
69	106	Richmond Terrace	Bedford Avenue Manag	vacant			No	N/A
69	107	772 Richmond Terrace	Four Seas Holdings, L	1 building			No	Recommend not S/NRHP eligible
69	110	Richmond Terrace	Centner, Joseph	vacant			No	N/A
69	111	762 Richmond Terrace	762 Richmond Terace L	1 building			No	Recommend not S/NRHP eligible
69	113	Richmond Terrace	Eviton, Inc	1 building			No	Recommend not S/NRHP eligible
69	115	Richmond Terrace	Eviton, Inc	vacant			No	N/A

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
69	117	748 Richmond Terrace	Liedy Ruth M	Commercial	Undetermined 08501.000769		No	Recommend not S/NRHP eligible
69	118	Richmond Terrace	Liedy Ruth M	vacant			No	N/A
69	119	730 Richmond Terrace	Aaw Richmond Terrace	1 building			No	Recommend not S/NRHP eligible
69	124	Richmond Terrace	Richmond Terrace Deve	vacant			No	N/A
70	20	814 Richmond Terrace	Carob Holdings LLC	2 buildings			No	Recommend not S/NRHP eligible
70	24	806 Richmond Terrace	Lind, Georgia	Neville House	90NR01028 08501.00072	Individual Landmark	No	
70	29	Richmond Terrace	ZNB LLC	Former commercial/residential, now vacant	Undetermined 08501.000771		No	Demolished, not S/NRHP eligible
70	30	Richmond Terrace	Oreckinto, Kevin	Former commercial/residential, now vacant	Undetermined 08501.000771		No	Demolished, not S/NRHP eligible
70	31	794 Richmond Terrace	794 Richmond Terrace	Commercial/residential	Undetermined 08501.000771		No	Recommend not S/NRHP eligible
70	32	2 Clinton Avenue	Ronald Williams	2 buildings			No	Recommend not S/NRHP eligible
70	60	355 Fillmore Street	Parks And Recreation	Sailors Snug Harbor HD	90NR01018 multiple USNs		Yes	
75	1	Richmond Terrace	Parks And Recreation	vacant			Yes	Some waterfront elements may be considered additional contributing resources to the Sailors' Snug Harbor S/NRHP Historic District
75	30	Richmond Terrace	Parks And Recreation	vacant			Yes	Some waterfront elements may be considered additional contributing resources to the Sailors' Snug Harbor S/NRHP Historic District
75	49	1125 Richmond Terrace	Leemilts Petroleum In	1 building			Yes	Recommend not S/NRHP eligible
75	59	1115 Richmond Terrace	1115 Richmond Terrace	1 building			Yes	Recommend not S/NRHP eligible
75	60	Richmond Terrace	NYC DSBS	vacant			Yes	N/A
75	100	Richmond Terrace	The City Of New York/	SIRT tracks			Yes	Recommend not S/NRHP eligible
75	150	Richmond Terrace	Parks And Recreation	vacant			Yes	N/A
75	200	Richmond Terrace	Parks And Recreation	vacant			Yes	N/A
76	1	1000 Snug Harbor Road	Parks And Recreation	Sailors Snug Harbor HD	90NR01018 multiple USNs	Individual and Interior Landmark	Yes	
76	200	1000 Richmond Terrace	Cultural Affairs	Sailors Snug Harbor HD	90NR01018 multiple USNs	Individual and Interior Landmark	Yes	
77	1	1126 Richmond Terrace	Fragoso, Humberto	1 building			Yes	Recommend not S/NRHP eligible
137	1	1165 Richmond Terrace	Consolidated Edison C	8 buildings		1	Yes	Recommend not S/NRHP eligible
184	1	1149 Richmond Terrace	S I Edison Co	vacant			Yes	N/A
184	100	Richmond Terrace	The City Of New York/	SIRT tracks			Yes	Recommend not S/NRHP eligible
184	163	Richmond Terrace	Consolidated Edison C	vacant			Yes	N/A

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
149	1	1262 Richmond Terrace	Karen Bergquist	Kreuzer-Pelton House	90NR01014 08501.001436	Individual Landmark	Yes but form not updated	
149	5	Richmond Terrace	Karen Bergquist	vacant			Yes	N/A
149	32	Richmond Terrace	Walter Cohen	vacant			Yes	N/A
149	36	Richmond Terrace	Consolidated Edison C	vacant			Yes	N/A
149	38	Richmond Terrace	Jacob Perlmutter	vacant			Yes	N/A
150	1	Bement Avenue	Pelton Place LLC	vacant			Yes	N/A
157	1	1388 Richmond Terrace	New York Prime, LLC	4 buildings			No	Recommend not S/NRHP eligible
157	4	1380 Richmond Terrace	Plummer Terrace Realty	1 buildings			No	Recommend not S/NRHP eligible
157	9	1320 Richmond Terrace	1320 Realty LLC	1 buildings			Yes	Recommend not S/NRHP eligible
158	1	1410 Richmond Terrace	Ahmed Ali	1 building			Yes	Recommend not S/NRHP eligible
158	2	Richmond Terrace	Staten Island'S Fines	vacant			Yes	N/A
158	3	Richmond Terrace	Big Sasco Holdings Ll	vacant			Yes	N/A
158	6	1390 Richmond Terrace	Congregation Chasidei	Building covered in netting for renovations	Undetermined 08501.001439		No	Could not evaluate due to netting covering building
184	33	1382 Richmond Terrace	Caddell Drydock Repai	1 building			Yes	Recommend not S/NRHP eligible
184	80	Pelton Place	Caddell Dry Dockrepai	vacant			Yes	N/A
184	100	Richmond Terrace	The City Of New York/	SIRT tracks			Yes	Recommend not S/NRHP eligible
184	142	Richmond Terrace	Caddell Drydock Repai	9 buildings			Yes	Recommend not S/NRHP eligible
184	163	Richmond Terrace	Consolidated Edison C	vacant			Yes	N/A
184	188	Bard Avenue	NYC DSBS	vacant			Yes	N/A
184	225	1441 Richmond Terrace	Block 184 LLC	Former 1-story building, now razed, CRIS entered as 1397 Richmond Terrace based on 1951 Sanborn	Undetermined 08501.001440		Yes	Demolished, not S/NRHP eligible
184	227	Richmond Terrace	Block 184 LLC	vacant			Yes	N/A
184	248	1449 Richmond Terrace	Tatumal, LLC	1 building			Yes	Recommend not S/NRHP eligible
184	254	Richmond Terrace	T F Quinlan Son Inc	vacant			Yes	N/A
184	256	1473 Richmond Terrace	T F Quinlan Son Inc	2 buildings			Yes	Recommend not S/NRHP eligible
184	275	1483 Richmond Terrace	Caddell Drydock Repai	2 buildings			Yes	Recommend not S/NRHP eligible
184	280	Richmond Terrace	Caddell Drydock Repai	vacant			Yes	N/A
184	300	1432 Richmond Terrace	Caddell Drydock Repair Co Inc.	1 building			Yes	Recommend not S/NRHP eligible
184	315	1481 Rear Richmond Terrace	Caddell Drydock Repair Co Inc.	1 building			Yes	Recommend not S/NRHP eligible
184	320	1471 Rear Richmond Terrace	Caddell Drydock Repai	1 building			Yes	Recommend not S/NRHP eligible
184	330	1435 Richmond Terrace	Block 184 LLC	1 building			Yes	Recommend not S/NRHP eligible
184	340	Richmond Terrace	Block 184 LLC	vacant			Yes	N/A
184	360	2945 Richmond Terrace	Caddell Dry Dock & Re	2 buildings	1		Yes	Recommend not S/NRHP eligible
184	400	North Street	The City Of New York/	SIRT tracks	1		Yes	Recommend not S/NRHP eligible
185	1	1551 Richmond Terrace	Caddell Drydock Repai	1 building			Yes	Recommend not S/NRHP eligible
185	10	1517 Richmond Terrace	Caddell Drydock Repai	Former Caddell Dry Dock building, appears to have been replaced with newer warehouse			Yes	Recommend not S/NRHP eligible
185	16	1521 Richmond Terrace	Caddell Drydock Repai	1 building			Yes	Recommend not S/NRHP eligible
185	20	Richmond Terrace	Caddell Dry Dock And	vacant			Yes	N/A

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
185	21	1535 Richmond Terrace	Caddell Drydock Repai	Caddell Dry Dock 2-story brick building, entrance on Richmond Terrace has been bricked over since 1979	Undetermined 08501.001445		Yes	Recommend not S/NRHP eligible
185	25	1551 Richmond Terrace	Caddell Dry Dock And	Former drydock housing, 2-story	Not eligible 08501.001447		Yes	Demolished, not S/NRHP eligible
185	27	1553 Richmond Terrace	Caddell Drydock Repai	Former drydock building, 2-story	Not eligible 08501.001448		Yes	Demolished, not S/NRHP eligible
185	28	Richmond Terrace	Caddell Drydock Repai	vacant			Yes	N/A
185	29	Richmond Terrace	AB40 LLC	vacant			Yes	N/A
185	30	Richmond Terrace	AB40 LLC	vacant			Yes	N/A
185	31	Richmond Terrace	AB40 LLC	vacant			Yes	N/A
185	33	Richmond Terrace	AB40 LLC	vacant			Yes	N/A
185	35	Richmond Terrace	AB40 LLC	vacant			Yes	N/A
185	37	1571 Richmond Terrace	AB40 LLC	Former residential building	Not eligible 08501.00145		Yes	Demolished, not S/NRHP eligible
185	38	Richmond Terrace	AB40 LLC	vacant			Yes	N/A
185	43	1593 Richmond Terrace	NYC Parks	vacant			Yes	N/A
185	45	1595 Richmond Terrace	NYC Parks	vacant			Yes	N/A
185	48	Richmond Terrace	NYC Parks	vacant			Yes	N/A
185	49	Richmond Terrace	Dept Of Parks And Rec	vacant			Yes	N/A
185	52	1615 Richmond Terrace	MBDB LLC	vacant			Yes	N/A
185	100	Richmond Terrace	The City Of New York/	SIRT tracks			Yes	Recommend not S/NRHP eligible
185	101	1515 Richmond Terrace	Caddell Drydock Repai	1 building			Yes	Recommend not S/NRHP eligible
185	116	1567 Richmond Terrace	AB40 LLC	1 building			Yes	Recommend not S/NRHP eligible
185	118	Richmond Terrace	AB40 LLC	vacant			Yes	N/A
185	120	Richmond Terrace	AB40 LLC	1 building			Yes	Recommend not S/NRHP eligible
185	127	Richmond Terrace	NYC Parks	vacant			Yes	N/A
185	129	Richmond Terrace	NYC Parks	vacant			Yes	N/A
185	130	Richmond Terrace	NYC Parks	1 building			Yes	Recommend not S/NRHP eligible
185	132	Richmond Terrace	NYC Parks	vacant			Yes	N/A
185	133	Richmond Terrace	Dept Of Parks And Rec	vacant			Yes	N/A
185	134	Richmond Terrace	The City Of New York/ NYC Parks	vacant			Yes	N/A
185 185	135 150	Richmond Terrace 1633 Richmond Terrace	MBDB LLC	vacant			Yes	N/A N/A
185	150	1641 Richmond Terrace	MBDB LLC	vacant 1 building			Yes	Recommend not S/NRHP eligible
185	152	1641 Richmond Terrace	Ingrassia, Ronald	4 buildings			Yes	Recommend not S/NRHP eligible
185	276	Richmond Terrace	MTA-Staten Island Rai	0			Yes	N/A
185	386	Richmond Terrace	NYC Parks	vacant vacant	+		Yes	N/A
185	390	Richmond Terrace	Dept Of Environmental	viaduct	+		Yes	Recommend not S/NRHP eligible
186	1	1 Van Street	Van Street Realty LLC	Aka 1564-1568 Richmond Terrace, 2 buildings, now with large extension along Richmond Terrace	Undetermined 08501.001446		No	Recommend not S/NRHP eligible
186	10	1550 Richmond Terrace	Matthew Long	Restoration Hardware, 2-story brick with nice details	Undetermined 08501.001449		No	Recommend potentially S/NRHP eligible
186	30	Richmond Terrace	369 Cleveland, LLC	vacant			Yes	N/A
186	37	1532 Richmond Terrace	All New Realty, LLC	1 building			Yes	Recommend not S/NRHP eligible
186	40	Richmond Terrace	Moose Development LLC	vacant			Yes	N/A

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
186	42	Richmond Terrace	Moose Development LLC	vacant			Yes	N/A
186	43	Richmond Terrace	Moose Development LLC	vacant			Yes	N/A
186	44	Richmond Terrace	Moose Development LLC	vacant			Yes	N/A
186	45	Richmond Terrace	Moose Development LLC	vacant			Yes	N/A
187	32	5 Alaska Street	Barba, Bill	1 building			Yes	Recommend not S/NRHP eligible
187	33	3 Alaska Street	Alaska Richmond Terra	1 building			Yes	Recommend not S/NRHP eligible
187	34	1660 Richmond Terrace	Anthony E. Barba	1 building			Yes	Recommend not S/NRHP eligible
187	35	1656 Richmond Terrace	U.S Bank Trust N.A.	1 building			Yes	Recommend not S/NRHP eligible
187	37	1654 Richmond Terrace	Wilmoth Caine	1 building			Yes	Recommend not S/NRHP eligible
187	141	10 Van Street	Tenvan Realty Corp In	1 building			No	Recommend not S/NRHP eligible

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
185	170	Richmond Terrace	NYC Transit	vacant			Yes	N/A
185	171	Richmond Terrace	98 S & S LLC	vacant			Yes	N/A
185	172	1681 Richmond Terrace	98 S & S LLC	1 building			Yes	Recommend not S/NRHP eligible
185	175	Richmond Terrace	Erik Vagle	vacant			Yes	N/A
185	176	1687 Richmond Terrace	Caruso Noele M	Former 3-story building, now vacant lot used as a driveway	Undetermined 08501.001455		Yes	Building demolished, not S/NRHP eligible
185	177	1689 Richmond Terrace	Rucci Oil Co Inc	1 building	Undetermined 08501.001456		Yes	Recommend not S/NRHP eligible
185	178	1691 Richmond Terrace	Rucci Oil Co Inc	1 building	Undetermined 08501.001457		Yes	Recommend not S/NRHP eligible
185	179	1693 Richmond Terrace	Rucci Oil Co Inc	1 building			Yes	Recommend not S/NRHP eligible
185	185	1707 Richmond Terrace	Zaken & Cohen Realty	1 building			Yes	Recommend not S/NRHP eligible
185	201	1741 Richmond Terrace	D/B/A Verizon Wireless	1 building			Yes	Recommend not S/NRHP eligible
185	235	Richmond Terrace	Roci Inc	vacant			Yes	N/A
185	276	Richmond Terrace	MTA-Staten Island Rai	vacant			Yes	N/A
185	386	Richmond Terrace	NYC Parks	vacant			Yes	N/A
185	390	Richmond Terrace	Dept Of Environmental	vacant			Yes	N/A
185	391	Richmond Terrace	Roci, Inc	vacant			Yes	N/A
185	400	1801 Richmond Terrace	Dept Of Environmental	Port Richmond Wastewater Treatment Plant (WWTP)	Not S/NRHP eligible		Yes	
185	468	1869 Richmond Terrace	1869 Richmond Terrace	2 buildings			Yes	Recommend not S/NRHP eligible
185	527	1957 Richmond Terrace	Terrace Development L	4 buildings			Yes	Recommend not S/NRHP eligible
185	531	Richmond Terrace	MTS Group Inc.	1 building			Yes	Recommend not S/NRHP eligible
185	536	Richmond Terrace	The City Of New York/	1 building			Yes	Recommend not S/NRHP eligible
185	539	1983 Richmond Terrace	RTC Richmond Terrace,	9 buildings			Yes	Recommend not S/NRHP eligible
185	548	2015 Richmond Terrace	Moran Shipyard Corp	3 buildings			Yes	Recommend not S/NRHP eligible
185	600	Richmond Terrace	Dept Of Environmental	vacant			Yes	N/A
185	750	1983A Richmond Terrace	RTC Richmond Terrace	1 building			Yes	Recommend not S/NRHP eligible
188	8	1718 Richmond Terrace	Pietra Holdings Corp	3 buildings			Yes	Recommend not S/NRHP eligible
188	25	Richmond Terrace	Pietra Holdings Corp	vacant			Yes	N/A
188	28	1696 Richmond Terrace	JP Stonemart Inc	no info			Yes	N/A
188	33	Richmond Terrace	Parks And Recreation	vacant			Yes	N/A
188	40	1674 Richmond Terrace	Linda Eskenas	John De Groot House	S/NRHP eligible	Individual Landmark	Yes, form updated	
199	39	1744 Richmond Terrace	Agugliaro, Justine	1 building			Yes	Recommend not S/NRHP eligible
199	41	1740 Richmond Terrace	1740 RT LLC	1 building			Yes	Recommend not S/NRHP eligible
1003	26	Richmond Terrace	2020 Waterview LLC	vacant			Yes	N/A
1003	31	16 Park Avenue	Avlm Realty LLC	1 building			Yes	Recommend not S/NRHP eligible
1003	42	Park Avenue	Staten Island Railway	vacant			Yes	N/A
1003	43	55 Church Street	Shaarawy, Ibrahim	8 buildings			Yes	Recommend not S/NRHP eligible
1004	1	81 Port Richmond Ave	Patrick Silvestri Jr	1 building			Yes	Recommend not S/NRHP eligible
1004	2	Richmond Avenue	The City Of New York/	Viaduct			Yes	Recommend not S/NRHP eligible
1004	7	69 Port Richmond Avenue	67 Port Richmond Aven	1 building			Yes	Recommend not S/NRHP eligible
1004	12	61 Port Richmond Avenue	Port Ricmond Realty A	Commercial building, 2-story, significantly altered since 1979	Undetermined 08501.002162		Yes	Recommend not S/NRHP eligible

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
1004	15	54 Church Street	52-54 Church St LLC	2 buildings			Yes	Recommend not S/NRHP eligible
1004	19	52 Church Street	52-54 Church St LLC	1 building			Yes	Recommend not S/NRHP eligible
1004	24	56 Park Avenue	Robert Hetzel	1 building			Yes	Recommend not S/NRHP eligible
1004	27	60 Park Avenue	George Lauro	1 building			Yes	Recommend not S/NRHP eligible
1004	32	85 Ann Street	Anstat Realty, LLC	1 building			No	Recommend not S/NRHP eligible
1004	35	91 Ann Street	U.S. Bank Trust, Na,	1 building			No	Recommend not S/NRHP eligible
1004	36	95 Ann Street	Guddemi Properties, I	1 building			No	Recommend not S/NRHP eligible
1004	37	97 Ann Street	Est. Of Ruby J Colema	2 buildings			No	Recommend not S/NRHP eligible
1004	38	99 Ann Street	John J Barbieri	1 building			No	Recommend not S/NRHP eligible
1004	40	103 Ann Street	Dominick Boyce	1 building			Yes	Recommend not S/NRHP eligible
1005	8	97 Port Richmond Avenue	Frenchies Port Richmo	2 buildings			Yes	Recommend not S/NRHP eligible
1005	10	93 Port Richmond Avenue	Piscicelli Salvatore	1 building			Yes	Recommend not S/NRHP eligible
1005	11	91 Port Richmond Avenue	Tulcingo Realty LLC	1 building			Yes	Recommend not S/NRHP eligible
1006	6	61 Park Avenue	Mercedes Cortez	1 building			Yes	Recommend not S/NRHP eligible
1006	8	57 Park Avenue	John Barbieri	1 building			Yes	Recommend not S/NRHP eligible
1006	10	55 Park Avenue	Wilson, Marie	1 building			Yes	Recommend not S/NRHP eligible
1006	11	Church Street	Ari-Jon Construction	vacant			Yes	N/A
1006	12	Church Street	Staten Island Railway	vacant			Yes	N/A
1006	13	Church Street	Musliovski, Zimi	vacant			Yes	N/A
1006	24	Church Street	S I Edison Cp	vacant			Yes	N/A
1006	25	Church Street	New York City Industr	vacant			Yes	N/A
1006	28	Park Avenue	The City Of New York/	Viaduct			Yes	Recommend not S/NRHP eligible
1006	32	Richmond Terrace	Perfetto Realty Co. I	1 building			Yes	Recommend not S/NRHP eligible
1006	56	Richmond Terrace	Bettina Const Co	vacant			Yes	N/A
1006	60	1976 Richmond Terrace	1978 Richmond Terrace	1 building			Yes	Recommend not S/NRHP eligible
1006	62	1972 Richmond Terrace	1972 Richmond Terrace	1 building			Yes	Recommend not S/NRHP eligible
1006	71	34 Heberton Avenue	Cavagnaro John	2 buildings			Yes	Recommend not S/NRHP eligible
1006	72	36 Heberton Avenue	Fedele Joseph	1 building			Yes	Recommend not S/NRHP eligible
1006	74	50 A Richmond Terrace	Michael Pencak	vacant			Yes	N/A
1073	1	Maple Avenue	Community Health Cent	vacant			Yes	N/A
1073	16	108 Port Richmond Avenue	Vasant Re Corp	vacant			Yes	N/A
1073	20	Maple Avenue	The City Of New York/	Viaduct			Yes	Recommend not S/NRHP eligible
1073	23	51 Maple Avenue	Top Gear Enterprises	1 building			Yes	Recommend not S/NRHP eligible
1073	24	47 Maple Avenue	Top Gear Enterprises	1 building			Yes	Recommend not S/NRHP eligible
1073	27	39 Maple Avenue	Fried, Arlene	1 building			Yes	Recommend not S/NRHP eligible
1073	31	Maple Avenue	Port Ricmond Realty A	vacant			Yes	N/A
1073	75	54 Port Richmond Avenue	Reformed Church On Staten Island	1 building		Individual Landmark	Yes, photos updated	
1073	90	64 Port Richmond Avenue	Island Gates Storefro	Commercial building	S/NRHP eligible		Yes, form updated	
1073	92	68 Port Richmond Avenue	Azzat, Mohamed	Commercial building	S/NRHP eligible		Yes, form updated	
1073	93	70 Port Richmond Avenue	Adeoso, Adepeju Atinu	Commercial building	S/NRHP eligible		Yes, form updated	
1073	94	76 Port Richmond Avenue	Port Richmond Realty	1 building			Yes	Recommend not S/NRHP eligible
1073	97	Port Richmond Avenue	Port Ricmond Realty A	vacant			Yes	N/A
1073	102	Port Richmond Avenue	NYC DSBS	vacant			Yes	N/A

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
1073	104	90 Port Richmond Avenue	Port Richmond Center	1 building			Yes	Recommend not S/NRHP eligible
1073	107	102 Port Richmond Avenue	Port Richmond Center	2 buildings			Yes	Recommend not S/NRHP eligible
1073	110	104 Port Richmond Avenue	Tolona Realty Corp	2 buildings			Yes	Recommend not S/NRHP eligible
1073	116	114 Port Richmond Ave	112-14 Corp	1 building			Yes	Recommend not S/NRHP eligible
1073	117	122 Port Richmond Ave	124-26 Port Richmond	1 building			Yes	Recommend not S/NRHP eligible
1073	121	128 Port Richmond Ave	Grinberg Management	2 buildings	Not S/NRHP eligible 08501.002909		Yes	
1073	200	Port Richmond Avenue	Port Ricmond Realty A	vacant			Yes	N/A
1073	7501	41 Maple Avenue		1 building			Yes	Recommend not S/NRHP eligible
1074	1	41 Grove Avenue	Dada, Moudar	1 building			Yes	Recommend not S/NRHP eligible
1074	2	45 Grove Avenue	Trobel, Gina	1 building			Yes	Recommend not S/NRHP eligible
1074	5	49 Grove Avenue	Castellano, Raymond	1 building			Yes	Recommend not S/NRHP eligible
1074	6	51 Grove Avenue	Romano, David	2 buildings			Yes	Recommend not S/NRHP eligible
1074	7	53 Grove Avenue	Micheal Kramer	1 building			Yes	Recommend not S/NRHP eligible
1074	8	Grove Avenue	Micheal Kramer	vacant			Yes	N/A
1074	9	59 Grove Avenue	Fernandez, Lourdes	1 building			Yes	Recommend not S/NRHP eligible
1074	11	71 Faber Street	Resendiz Rocha, Ricar	1 building			Yes	Recommend not S/NRHP eligible
1074	13	Faber Street	The City Of New York/	Viaduct			Yes	Recommend not S/NRHP eligible
1074	15	55 Faber Street	Nick & Antoinette Cut	1 building			Yes	Recommend not S/NRHP eligible
1074	18	51 Faber Street	George Moore	1 building			Yes	Recommend not S/NRHP eligible
1074	20	47 Faber Street	Rashid, Jamal	2 buildings			Yes	Recommend not S/NRHP eligible
1074	22	45 Faber Street	Wang, Minjie	1 building			Yes	Recommend not S/NRHP eligible
1074	77	40 Maple Avenue	Molinari Margaret	2 buildings			Yes	Recommend not S/NRHP eligible
1074	79	42 Maple Avenue	Morales, Shame	1 building			Yes	Recommend not S/NRHP eligible
1074	81	48 Maple Avenue	Mcgarry, Loretta	1 building			Yes	Recommend not S/NRHP eligible
1074	82	50 Maple Avenue	Nesbitt, Victor	1 building			Yes	Recommend not S/NRHP eligible
1074	83	52 Maple Avenue	52 Maple Ave LLC	1 building			Yes	Recommend not S/NRHP eligible
1074	86	62 Maple Avenue	Fanelli Michael	1 building			Yes	Recommend not S/NRHP eligible
1074	89	66 Maple Avenue	Tang, Wilson	2 buildings			Yes	Recommend not S/NRHP eligible
1074	90	Maple Avenue	Josephine Tang	vacant			Yes	N/A
1076	1	78 Faber Street	Albert Mazzarisi	2 buildings			Yes	Recommend not S/NRHP eligible
1076	3	Grove Avenue	Deborah Mazzarisi	vacant			Yes	N/A
1076	4	Grove Avenue	The City Of New York/	vacant			Yes	N/A
1076	5	79 Grove Avenue	Deborah Mazzarisi	1 building			Yes	Recommend not S/NRHP eligible
1076	6	Grove Avenue	The City Of New York/	vacant			Yes	N/A
1076	8	87 Grove Avenue	Massa, Thomas	1 building			Yes	Recommend not S/NRHP eligible
1076	14	97 Grove Avenue	Mitchell Tyson	1 building			Yes	Recommend not S/NRHP eligible
1076	19	Grove Avenue	The City Of New York/	Viaduct			Yes	Recommend not S/NRHP eligible
1076	22	49 Sharpe Avenue	Parima In	2 buildings			Yes	Recommend not S/NRHP eligible
1076	26	47 Sharpe Avenue	Coley, Sharlene	1 building			Yes	Recommend not S/NRHP eligible
1076	28	43 Sharpe Avenue	Bermejo, Nevin	1 building			Yes	Recommend not S/NRHP eligible
1076	39	52 Larkin Street	Ramon Fernandez	4 buildings			Yes	Recommend not S/NRHP eligible
1076	42	48 Larkin Street	Daniel Delgado	2 buildings			Yes	Recommend not S/NRHP eligible
1076	51	52 Faber Street	Maldonado, Richard H	1 building			Yes	Recommend not S/NRHP eligible
1076	52	54 Faber Street	Santana-Ruiz, Charlis	1 building			Yes	Recommend not S/NRHP eligible
1076	53	56 Faber Street	Anthony Rocco	1 building			Yes	Recommend not S/NRHP eligible

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
1076	56	60 Faber Street	Dawaine E Clark	1 building			Yes	Recommend not S/NRHP eligible
1076	58	64 Faber Street	Cruz, Samuel	1 building			Yes	Recommend not S/NRHP eligible
1076	60	Faber Street	The City Of New York/	vacant			Yes	N/A
1077	19	20 Grove Avenue	Best Wheat Assets LLC	1 building			Yes	Recommend not S/NRHP eligible
1077	22	28 Grove Avenue	Dweck Family Limited	1 building			Yes	Recommend not S/NRHP eligible
1077	28	16 Grove Avenue	Dweck Family Limited	1 building			No	Recommend not S/NRHP eligible
1077	34	140 Port Richmond Ave	Dweck Family Limited	1 building			No	Recommend not S/NRHP eligible
1077	37	146 Port Richmond Ave	Dweck Family Limited	1 building			No	Recommend not S/NRHP eligible
1078	143	36 Grove Avenue	Grinberg M Management	1 building			No	Recommend not S/NRHP eligible
1079	40	100 Grove Avenue	100 Grove Avenue LLC	1 building			Yes	Recommend not S/NRHP eligible
1079	41	98 Grove Avenue	Gotham Realty Associa	1 building			Yes	Recommend not S/NRHP eligible
1079	43	96 Grove Avenue	Grinberg M & Developm	2 buildings			Yes	Recommend not S/NRHP eligible
1079	46	94 Grove Avenue	Frances Edwards	1 building			Yes	Recommend not S/NRHP eligible
1084	36	71 Treadwell Avenue	Corletto, Iris E	2 buildings			Yes	Recommend not S/NRHP eligible
1084	38	67 Treadwell Avenue	Emma Hawkins	1 building			Yes	Recommend not S/NRHP eligible
1084	39	65 Treadwell Avenue	J Wetmore	1 building			Yes	Recommend not S/NRHP eligible
1084	40	63 Treadwell Avenue	Silberberg, Rose	1 building			Yes	Recommend not S/NRHP eligible
1084	41	61 Treadwell Avenue	Walsh, Brian A	1 building			Yes	Recommend not S/NRHP eligible
1084	42	Treadwell Avenue	The City Of New York/	Viaduct			Yes	Recommend not S/NRHP eligible
1084	43	Treadwell Avenue	Staten Island Railway	vacant			Yes	N/A
1084	45	41 Treadwell Avenue	Mildred Jackson	2 buildings			Yes	Recommend not S/NRHP eligible
1084	48	39 Treadwell Avenue	Granger T Barrow	1 building			Yes	Recommend not S/NRHP eligible
1084	50	37 Treadwell Avenue	Besnik Haraqija	1 building			Yes	Recommend not S/NRHP eligible
1084	53	35 Treadwell Avenue	Mohammed, Norene	1 building			Yes	Recommend not S/NRHP eligible
1084	97	46 Sharpe Avenue	Russo, Jorgina	2 buildings			Yes	Recommend not S/NRHP eligible
1084	98	50 Sharpe Avenue	Russo, Trustee, Jorgi	1 buildings			Yes	Recommend not S/NRHP eligible
1084	100	52 Sharpe Avenue	Robbert Carter	2 buildings			Yes	Recommend not S/NRHP eligible
1084	102	56 Sharpe Avenue	Gerardo Brenes % Vilm	1 building			Yes	Recommend not S/NRHP eligible
1084	107	68 Sharpe Avenue	Michael Mitchell	1 building			Yes	Recommend not S/NRHP eligible
1084	110	72 Sharpe Avenue	Edward Curtis Ladner	2 buildings			Yes	Recommend not S/NRHP eligible
1084	113	78 Sharpe Avenue	Mannanice, Donna	2 buildings			Yes	Recommend not S/NRHP eligible
1086	6	11 Slaight Street	Jose Ramirez	1 building			Yes	Recommend not S/NRHP eligible
1086	8	31 Slaight Street	Nicholas Manor Apts L	2 buildings			Yes	Recommend not S/NRHP eligible
1086	22	Nicholas Avenue	The City Of New York/	Viaduct			Yes	Recommend not S/NRHP eligible
1086	27	51 Nicholas Avenue	Castellano, Nadine	1 building			Yes	Recommend not S/NRHP eligible
1086	29	41 Nicholas Avenue	Deangelis, Loretta	1 building			Yes	Recommend not S/NRHP eligible
1086	32	35 Nicholas Avenue	Cesar Velez	1 building			Yes	Recommend not S/NRHP eligible
1086	56	2-34 Port Lane	Kunle O Okunola	vacant	1		Yes	N/A
1086	84	38 Treadwell Avenue	Thomas Jorgensen	1 building			Yes	Recommend not S/NRHP eligible
1086	86	42 Treadwell Avenue	Wiltshire, Roxane	1 building	1		Yes	Recommend not S/NRHP eligible
1086	88	46 Treadwell Avenue	Beverly Donnelly	2 buildings			Yes	Recommend not S/NRHP eligible
1086	91	Treadwell Avenue	Staten Island Railway	vacant	1		Yes	N/A
1086	92	Treadwell Avenue	Staten Island Railway	vacant			Yes	N/A
1086	93	62 Treadwell Avenue	Terzic Mensur	1 building	1		Yes	Recommend not S/NRHP eligible
1086	94	66 Treadwell Avenue	Zcny Properties LLc	1 building			Yes	Recommend not S/NRHP eligible
1086	95	68 Treadwell Avenue	Idowu, Joseph	1 building			Yes	Recommend not S/NRHP eligible

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
1086	98	70 Treadwell Avenue	MTV Development Group	Former residence, now razed	Not S/NRHP eligible 08501.002200		Yes	
1086	99	72 Treadwell Avenue		no info			Yes	N/A
1086	100	74 Treadwell Avenue		no info			Yes	N/A
1086	140	32 Port Lane	Jose F Romero	1 building			Yes	Recommend not S/NRHP eligible
1086	141	36 Port Lane	Gonzalez-Reyes, Josel	1 building			Yes	Recommend not S/NRHP eligible
1086	146	37 Port Lane	Carlos R Santiago	1 building			Yes	Recommend not S/NRHP eligible
1086	150	39 Port Lane	Bankole, Dorcas	1 building			Yes	Recommend not S/NRHP eligible
1087	31	93 Nicholas Avenue	Cato, Robin L	2 buildings			Yes	Recommend not S/NRHP eligible
1116	100	60 Nicholas Avenue	Ren, Meng Jing	1 building			Yes	Recommend not S/NRHP eligible
1116	102	24 Riverside Lane	Yamaki, Edward Moore	1 building			Yes	Recommend not S/NRHP eligible
1116	104	26 Riverside Lane	Morales-Taveras, Nata	1 building			Yes	Recommend not S/NRHP eligible
1116	106	28 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	108	30 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	109	Nicholas Avenue	The City Of New York/	1 building			Yes	Recommend not S/NRHP eligible
1116	110	Nicholas Avenue	The City Of New York/	1 building			Yes	Recommend not S/NRHP eligible
1116	112	Nicholas Avenue	The City Of New York/	1 building			Yes	Recommend not S/NRHP eligible
1116	114	32 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	116	34 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	118	36 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	120	38 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	122	40 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	124	42 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	125	44 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	126	46 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	127	48 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	144	50 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	145	52 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	146	54 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	147	56 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	148	58 Riverside Lane	139 Alvin LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	153	65 Riverside Lane	Ariyibi, Esther	1 building			Yes	Recommend not S/NRHP eligible
1116	154	67 Riverside Lane	Dwm Realty LLC	1 building			Yes	Recommend not S/NRHP eligible
1116	155	Riverside Lane	Nicholas Avenue Estat	vacant			Yes	N/A
1117	37	150 Nicholas Avenue	Bridgeview Apartments	2 buildings			No	Recommend not S/NRHP eligible
1117	49	Nicholas Avenue	Nicholas Avenue Homeo	vacant			Yes	N/A
1117	50	102 Nicholas Avenue	Covington, Lisa	1 building			Yes	Recommend not S/NRHP eligible
1117	51	106 Nicholas Avenue	Bell-Morris, Nina	1 building			Yes	Recommend not S/NRHP eligible
1117	52	108 Nicholas Avenue	Vance E Horne	1 building			Yes	Recommend not S/NRHP eligible
1117	53	112 Nicholas Avenue	Camacho, Jaime D	1 building			Yes	Recommend not S/NRHP eligible
1117	54	114 Nicholas Avenue	Guillermo Arriaga	1 building		ļ	Yes	Recommend not S/NRHP eligible
1117	55	118 Nicholas Avenue	Lola A Hill	1 building			Yes	Recommend not S/NRHP eligible
1117	56	120 Nicholas Avenue	Kolawole Akanmu	1 building			Yes	Recommend not S/NRHP eligible
1117	57	124 Nicholas Avenue	Anthony Burroughs	1 building			Yes	Recommend not S/NRHP eligible
1117	58	126 Nicholas Avenue	Rogers, Denise	1 building			Yes	Recommend not S/NRHP eligible
1117	59	130 Nicholas Avenue	Dorothy D. Nelson	1 building			Yes	Recommend not S/NRHP eligible

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY	SURVEY RESULTS
							SURVEY	
1118	38	Irving Place	The City Of New York/	vacant			No	N/A
1118	40	Irving Place	The City Of New York/	vacant			No	N/A
1118	41	Irving Place	The City Of New York/	vacant			No	N/A
1118	42	Irving Place	Ronald A Radice	vacant			No	N/A
1121	1	67 Innis Street	DCAS/Department Of Ed	6 buildings			No	Recommend not S/NRHP eligible
1121	65	125 John Street	Orea, Juan	2 buildings			No	Recommend not S/NRHP eligible
1121	68	119 John Street	Carmela Wausnock, As	1 building			No	Recommend not S/NRHP eligible
1121	69	117 John Street	Joyce Palmer	1 building			No	Recommend not S/NRHP eligible
1121	71	115 John Street	Heenbunne Kondanna	1 building			No	Recommend not S/NRHP eligible
1121	74	105 John Street	American Sri Lanka Bu	vacant			No	N/A
1121	77	John Street	The City Of New York/	vacant			No	N/A
1121	85	87 John Street	Carlos Santillan	2 buildings			No	Recommend not S/NRHP eligible
1121	86	John Street	The City Of New York/	vacant			No	N/A
1121	91	John Street	The City Of New York/	vacant			No	N/A
1121	92	83 John Street	Early, Michael	Residence	Not S/NRHP eligible 08501.002133		No	
1121	95	77 John Street	Diana Williams	2 buildings			No	Recommend not S/NRHP eligible
1121	98	75 John Street	Kenniff, Steven	1 building			No	Recommend not S/NRHP eligible

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
1123	1	85 Newark Avenue	Hernandez, Odilia	1 building			No	Recommend not S/NRHP eligible
1123	3	81 Newark Avenue	Decofin LLC	1 building			No	Recommend not S/NRHP eligible
1123	4	73 Newark Avenue	Alcivar, Elvis	1 building			No	Recommend not S/NRHP eligible
1123	7	67 Newark Avenue	J Massi Realty, LLC	2 buildings			No	Recommend not S/NRHP eligible
1123	10	65 Newark Avenue	Mary, Patrick	1 building			No	Recommend not S/NRHP eligible
1123	105	92 John Street	Frank Webb	1 Building			No	Recommend not S/NRHP eligible
1123	108	94 John Street	Galarza, Michael	3 buildings			No	Recommend not S/NRHP eligible
1123	112	John Street	Staten Island Railway	vacant			No	N/A
1123	113	John Street	Staten Island Railway	vacant			No	N/A
1123	114	John Street	Grieco Michael	vacant			No	N/A
1123	115	John Street	The City Of New York/	vacant			No	N/A
1123	116	John Street	The City Of New York/	vacant			No	N/A
1123	120	120 John Street	Scartozzi, John	1 building			No	Recommend not S/NRHP eligible
1123	120	133 Eaton Place	Najjar, Devon	2 building			No	Recommend not S/NRHP eligible
1124	13	129 Eaton Place	Rodriguez, Madeline	1 building			No	Recommend not S/NRHP eligible
1124	14	127 Eaton Place	Patricia I Pittman	2 buildings			No	Recommend not S/NRHP eligible
1124	15	125 Eaton Place	Grey Courts Apts	1 buildings			No	Recommend not S/NRHP eligible
1124	18	Eaton Place	Staten Island Railway	vacant			No	N/A
1124	19	Eaton Place	DCAS				No	N/A
1124	20	Eaton Place	MTA - Staten Island R	vacant vacant			No	N/A
1124	20		Staten Island Railway	vacant			No	N/A
		Eaton Place Eaton Place	The City Of New York/				No	N/A
1124 1124	22 23		Staten Island Railway	vacant				N/A
		Eaton Place Eaton Place		vacant			No	
1124	24		Staten Island Railway	vacant			No	N/A
1124	25	Newark Avenue	DCAS	vacant			No	N/A
1124	26	Eaton Place	The City Of New York/	vacant			No	N/A
1124	27	Eaton Place	The City Of New York/	vacant			No	N/A
1124	32	Eaton Place	Staten Island Railway	vacant			No	N/A
1124	36	John Street	DCAS	vacant			No	N/A
1124	37	Eaton Place	Staten Island Railway	vacant			No	N/A
1124	39	John Street	Staten Island Railway	vacant			No	N/A
1124	40	John Street	Staten Island Railway	vacant			No	N/A
1124	41	John Street	Staten Island Railway	vacant			No	N/A
1124	42	John Street	Staten Island Railway	vacant			No	N/A
1124	7501	121 Eaton Place		2 buildings			No	Recommend not S/NRHP eligible
1125	1	Innis Street	Port Of NY Auth	vacant			No	N/A
1125	8	135 Morningstar Road	Richmond Tech Auto In	1 building			No	Recommend not S/NRHP eligible
1125	10	127 Morningstar Road	Avenoso, Libero	2 buildings			No	Recommend not S/NRHP eligible
1125	14	Morningstar Road	The City Of New York/	vacant			No	N/A
1125	17	Morningstar Road	The City Of New York/	vacant			No	N/A
1125	22	Morningstar Road	Staten Island Railway	vacant			No	N/A
1125	25	Morningstar Road	The City Of New York/	vacant			No	N/A
1125	28	Morningstar Road	Grasmere Realty Holdi	vacant			No	N/A
1125	29	73 Morningstar Road	Mathieu, Renee	2 buildings			No	Recommend not S/NRHP eligible
1125	75	Richmond Terrace	Port Of NY Auth	vacant			No	N/A
1149	91	88 Morningstar Road	Camacho, Sergio G	2 buildings			No	Recommend not S/NRHP eligible
1152	31	Winant Street	Stella D'Oro Corp	vacant			No	N/A
1152	34	Winant Street	The City Of New York/	vacant			No	N/A
1152	35	Winant Street	595 Bay Llc	vacant			No	N/A

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
1152	36	Winant Street	The City Of New York/	vacant			No	N/A
1152	42	113 Winant Street	Community Electrin In	1 building			No	Recommend not S/NRHP eligible
1152	47	111 Winant Street	Derrick Edwards	1 building			No	Recommend not S/NRHP eligible
1152	48	109 Winant Street	Aldewyn Sandy	1 building			No	Recommend not S/NRHP eligible
1152	50	107 Winant Street	Taylor, Jessica	1 building			No	Recommend not S/NRHP eligible
1152	60	14 La Salle Street	Eugene Jordan	1 building			No	Recommend not S/NRHP eligible
1152	62	La Salle Street		vacant			No	N/A
1152	63	15 Shaina Court	Xian Chun Ren	1 building			No	Recommend not S/NRHP eligible
1152	64	17 Shaina Court	Nunez, Samuel	1 building			No	Recommend not S/NRHP eligible
1152	65	19 Shaina Court	Martinez, Genova	1 building			No	Recommend not S/NRHP eligible
1152	66	21 Shaina Court	Roberto Ortiz	1 building			No	Recommend not S/NRHP eligible
1152	67	Morningstar Road	The City Of New York/	vacant			No	N/A
1152	68	23 Shaina Court	Nelly Colon	1 building			No	Recommend not S/NRHP eligible
1152	69	25 Shaina Court	Lena D. Searls	1 building			No	Recommend not S/NRHP eligible
1152	70	27 Shaina Court	Grinberg M & Developm	1 building			No	Recommend not S/NRHP eligible
1152		29 Shaina Court		•				
	71	31 Shaina Court	George Clarke	1 building			No No	Recommend not S/NRHP eligible Recommend not S/NRHP eligible
1152	72		Appuhamy, Randeni	1 building				0
1152	73	Morningstar Road	The City Of New York/	vacant			No	N/A
1152	74	Morningstar Road	The City Of New York/	vacant			No	N/A
1152	75	Morningstar Road	The City Of New York/	vacant			No	N/A
1152	76	Morningstar Road	The City Of New York/	vacant			No	N/A
1152	78	Morningstar Road	The City Of New York/	vacant			No	N/A
1152	79	132 Morningstar Road	All New Realty LLC	1 building			No	Recommend not S/NRHP eligible
1152	83	140 Morningstar Road	Mohammad Ismail	1 building			No	Recommend not S/NRHP eligible
1152	84	142 Morningstar Road	A&J Realty Of Staten	1 building			No	Recommend not S/NRHP eligible
1152	85	146 Morningstar Road	Deeper Life Bible Chu	1 building			No	Recommend not S/NRHP eligible
1152	88	150 Morningstar Road	Olivo, Benjamin	1 building			No	Recommend not S/NRHP eligible
1155	71	133 Granite Avenue	Barbro Corporation	1 building			No	Recommend not S/NRHP eligible
1155	79	Granite Avenue	The City Of New York/	vacant			No	N/A
1155	80	Granite Avenue	The City Of New York/	vacant			No	N/A
1155	85	40 La Salle Street	Granite Avenue Prop	9 buildings			No	Recommend not S/NRHP eligible
1155	120	Winant Street	The City Of New York/	vacant			No	N/A
1155	133	Winant Street	The City Of New York/	vacant			No	N/A
1155	134	Winant Street	Barbro Corporation	vacant			No	N/A
1157	1	124 Granite Avenue	124 Granite, LLC	4 buildings			No	Recommend not S/NRHP eligible
1157	60	Housman Avenue	The City Of New York/	vacant			No	N/A
1158	1	93 Wright Avenue	Joseph J Marino Jr	1 building			No	Recommend not S/NRHP eligible
1158	103	104 Housman Avenue	104 Housman Ave LLC	1 building			No	Recommend not S/NRHP eligible
1158	105	Gigi Street	Joseph Panobianco	vacant			No	N/A
1158	112	Housman Avenue	The City Of New York/	vacant			No	N/A
1159	1	97 Lake Avenue	Merlino, Karin U	3 buildings			No	Recommend not S/NRHP eligible
1159	100	94 Wright Avenue	Eden li School Autist	1 building			No	Recommend not S/NRHP eligible
1159	110	Wright Avenue	The City Of New York/	vacant			No	N/A
1160	3	97 Simonson Avenue	Holley, Julia C	1 building			No	Recommend not S/NRHP eligible
1160	6	93 Simonson Avenue	Jodi Rizzo	1 building			No	Recommend not S/NRHP eligible
1160	109	92 Lake Avenue	Crystal Cruz	2 buildings			No	Recommend not S/NRHP eligible
1160	110	94 Lake Avenue	Garcia, Damian Jr.	1 building			No	Recommend not S/NRHP eligible
1160	111	96 Lake Avenue	Cruz, Gamaliel	1 building			No	Recommend not S/NRHP eligible
1160	112	98 Lake Avenue	Chadwick, Rhonda S	1 building			No	Recommend not S/NRHP eligible

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
1160	113	100 Lake Avenue	Celia Novoa	1 building			No	Recommend not S/NRHP eligible
1160	114	102 Lake Avenue	Del Valle, Marta	1 building			No	Recommend not S/NRHP eligible
1160	116	Lake Avenue	E Burstein	vacant			No	N/A
1160	117	104 Lake Avenue	Slupinska , Marianna	1 building			No	Recommend not S/NRHP eligible
1160	118	Lake Avenue	The City Of New York/	vacant			No	N/A
1161	1	125 Lake Avenue	Chayil Properties LLC	Former industrial building	Not S/NRHP eligible 08501.000568		No	
1161	20	141 Lake Avenue	141 Lake Avenue Realty	1 building	S/NRHP eligible as 137 Lake Avenue 08501.002793		No	
1161	43	Granite Avenue	The City Of New York/	vacant			No	N/A
1161	148	Granite Avenue	Staten Island Railway	vacant		1	No	N/A
1161	149	Granite Avenue	The City Of New York/	vacant		1	No	N/A
1161	150	150 Granite Avenue	Person Centered Care	2 buildings			No	Recommend not S/NRHP eligible
1165	32	129 Simonson Avenue	Cleola Morrison	1 building			No	Recommend not S/NRHP eligible
1165	35	125 Simonson Avenue	Cullen , William B I	1 building			No	Recommend not S/NRHP eligible
1165	37	121 Simonson Avenue	Morrison, Karlene M	1 building			No	Recommend not S/NRHP eligible
1165	39	119 Simonson Avenue	Holley, Betty	1 building			No	Recommend not S/NRHP eligible
1165	40	Simonson Avenue	The City Of New York/	vacant			No	N/A
1165	52	120 Lake Avenue	Douglas R. Marshall,	2 buildings			No	Recommend not S/NRHP eligible
1165	56	128 Lake Avenue	135 Lake Avenue Realt	2 buildings			No	Recommend not S/NRHP eligible
1186	1	19 Heusden Street	Yim, Ming	2 buildings			No	Recommend not S/NRHP eligible
1186	2	Van Name Avenue	The City Of New York/	vacant			No	N/A
1186	9	99 Van Name Avenue	Tse, Juan Jose Ng	vacant			No	N/A
1186	11	93 Van Name Avenue	Hall, Michael	1 buildings			No	Recommend not S/NRHP eligible
1186	13	87 Van Name Avenue	Nunez, Maria Jr	2 buildings			No	Recommend not S/NRHP eligible
1186	114	92 Simonson Avenue	Pierce, Katherine	1 building			No	Recommend not S/NRHP eligible
1186	115	94 Simonson Avenue	Dzemovski Arhen	1 building			No	Recommend not S/NRHP eligible
1186	117	98 Simonson Avenue	Thomas M Mccormick	1 building			No	Recommend not S/NRHP eligible
1186	119	Simonson Avenue	The City Of New York/	vacant			No	N/A
1186	124	126 Simonson Avenue	Tabore Mar Thoma Chur	1 building			No	Recommend not S/NRHP eligible
1186	129	17 Heusden Street	Dennis Glanton	2 buildings			No	Recommend not S/NRHP eligible
1188	1	Van Pelt Avenue	The City Of New York/	vacant			No	N/A
1188	2	89 Van Pelt Avenue	Ghignone, Lorraine A	2 buildings			No	Recommend not S/NRHP eligible
1188	9	81 Van Pelt Avenue	Davis, Sonia E	2 buildings			No	Recommend not S/NRHP eligible
1188	114	90 Van Name Avenue	Shackleford, George	1 building			No	Recommend not S/NRHP eligible
1188	117	96 Van Name Avenue	Adediran, Adedamola O	1 building			No	Recommend not S/NRHP eligible
1188	118	20 Beamer Court	Fulmore, Timothy	1 building			No	Recommend not S/NRHP eligible
1188	119	Van Name Avenue	Beamer Court Homeowne	vacant			No	N/A
1188	120	Van Name Avenue	The City Of New York/	vacant			No	N/A
1188	126	Van Name Avenue	Patty'S Flatbed Servi	vacant		1	No	N/A
1188	250	30 Beamer Court	Esther Nortey	1 building		1	No	Recommend not S/NRHP eligible
1188	252	40 Beamer Court	Gloria Morrison	1 building			No	Recommend not S/NRHP eligible
1188	252	50 Beamer Court	Okeiche, Raymund F	1 building			No	Recommend not S/NRHP eligible
1190	28	32 Heusden Street	Meta, Ardian	1 building			No	Recommend not S/NRHP eligible
1190	30	28 Heusden Street	Stivala, Joseph	1 building		+	No	Recommend not S/NRHP eligible
1192	26	109 Van Pelt Avenue	BVA Martiners Realty	2 buildings			No	Recommend not S/NRHP eligible

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
1192	28	Van Pelt Avenue	Adamo, Robert	vacant			No	N/A
1192	29	Van Pelt Avenue	NY State Public Serv	vacant			No	N/A
1192	30	Van Pelt Avenue	MTA - Staten Island R	vacant			No	N/A
1192	34	Van Pelt Avenue	Adamo, Robert	vacant			No	N/A
1192	35	66 Heusden Street	Asghar, Muhsan	1 building			No	Recommend not S/NRHP eligible
1192	38	58 Heusden Street	Frederica Green	1 building			No	Recommend not S/NRHP eligible
1192	39	56 Heusden Street		1 building			No	Recommend not S/NRHP eligible
1192	40	54 Heusden Street	Sanchez, Maritza	1 building			No	Recommend not S/NRHP eligible
1192	41	52 Heusden Street	Jose, Thomas K	1 building			No	Recommend not S/NRHP eligible
1192	42	50 Heusden Street	Iqbal Mohammad S	1 building			No	Recommend not S/NRHP eligible
1192	45	46 Heusden Street	Joanny A Astudillo	1 building			No	Recommend not S/NRHP eligible
1192	46	44 Heusden Street	Myadunna, Anura	1 building			No	Recommend not S/NRHP eligible
1192	48	34 Heusden Street	Carmel Ite Investment	2 buildings			No	Recommend not S/NRHP eligible
1211	1	Van Pelt Avenue	The City Of New York/	vacant			No	N/A
1211	20	Van Pelt Avenue	The City Of New York	vacant			No	N/A
1211	21	89 Erastina Place	Miranda, Jaime I	2 buildings			No	Recommend not S/NRHP eligible
1211	25	85 Erastina Place	Trinidad-Ramos, Debor	2 buildings			No	Recommend not S/NRHP eligible
1211	147	84 Van Pelt Avenue	Yvonne Layne	1 building			No	Recommend not S/NRHP eligible
1211	148	86 Van Pelt Avenue	Martu Jahbateh	3 buildings			No	Recommend not S/NRHP eligible
1211	150	92 Van Pelt Avenue	Figueroa, Priscilla	2 buildings			No	Recommend not S/NRHP eligible
1212	12	14 Maple Parkway	Van Pelt-Berry, Karen	2 buildings			No	Recommend not S/NRHP eligible
1212	15	16 Maple Parkway	Rosas, Pablo	2 buildings			No	Recommend not S/NRHP eligible
1212	17	Maple Parkway	Hasseena Sahoye	vacant			No	N/A
1212	18	De Hart Avenue	Hasseena Sahoye	vacant			No	N/A
1212	19	2 Maple Parkway	James Sahoye	1 building			No	Recommend not S/NRHP eligible
1212	20	De Hart Avenue	The City Of New York/	vacant			No	N/A
1212	21	De Hart Avenue	The City Of New York/	vacant			No	N/A
1212	24	De Hart Avenue	The City Of New York/	vacant			No	N/A
1212	25	95 De Hart Avenue	John, Orpheus	1 building			No	Recommend not S/NRHP eligible
1212	26	91 De Hart Avenue	Swindell, Darryle Jr.	2 buildings			No	Recommend not S/NRHP eligible
1212	29	87 De Hart Avenue	Mimidinovski, Erinda	2 buildings			No	Recommend not S/NRHP eligible
1212	94	86 Erastina Place	Pedro Samuel Munoz	2 buildings			No	Recommend not S/NRHP eligible
1212	98	90 Erastina Place	Lucenti, Louis	2 buildings			No	Recommend not S/NRHP eligible
1212	15	129 Union Avenue	R Caizzo	2 buildings			No	Recommend not S/NRHP eligible
1213	16	127 Union Avenue	Amparo, Virgilio	1 building			No	Recommend not S/NRHP eligible
1213	17	121 Union Avenue	LP & I Construction,	1 building		-	No	Recommend not S/NRHP eligible
1213	18	119 Union Avenue	Williams, Charles L	1 building		-	No	Recommend not S/NRHP eligible
1213	19	Union Avenue	The City Of New York/	vacant			No	N/A
1213	20	Union Avenue	The City Of New York/				No	N/A
1213	20	Union Avenue	The City Of New York/	vacant			No	N/A
1213	25	Union Avenue	Scalici, Jack	vacant			No	N/A
			,	vacant				
1213 1213	28	101 Union Avenue 99 Union Avenue	Scalici, Jack Socolick , Michael	1 building 1 building			No No	Recommend not S/NRHP eligible Recommend not S/NRHP eligible
	29			5				-
1213	129	88 De Hart Avenue	John Wetmore	1 building			No	Recommend not S/NRHP eligible
1213	131	100 De Hart Avenue	Claie Scalici	2 buildings			No	Recommend not S/NRHP eligible
1213	133	De Hart Avenue	The City Of New York/	vacant			No	N/A
1213	142	De Hart Avenue	The City Of New York/	vacant			No	N/A
1213	143	112 De Hart Avenue	Chan, Woon Tak Hui	1 building			No	Recommend not S/NRHP eligible
1213	145	116 De Hart Avenue	Leyva, Leonardo M	1 building			No	Recommend not S/NRHP eligible

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
1213	147	120 De Hart Avenue	James Paliotta	2 buildings			No	Recommend not S/NRHP eligible
1215	40	18 Linden Avenue	Richard Wood	1 building			No	Recommend not S/NRHP eligible
1215	45	14 Linden Avenue	Tomaselli, Vincent	1 building			No	Recommend not S/NRHP eligible
1215	49	110 Van Pelt Avenue	Covenant Chapel (Rede	1 building			No	Recommend not S/NRHP eligible
1215	50	114 Van Pelt Avenue	Simanovsky, Aleksand	1 building			No	Recommend not S/NRHP eligible
1224	55	Bush Avenue		vacant			No	N/A
1224	100	Bush Avenue	The City Of New York/	vacant			No	N/A
1226	7	151 Harbor Road	647-649 Washington Av	1 building			No	Recommend not S/NRHP eligible
1226	11	Harbor Road	647-649 Washington Av	vacant			No	N/A
1226	13	Bush Avenue	The City Of New York/	vacant			No	N/A
1226	14	Bush Avenue	The City Of New York/	vacant			No	N/A
1226	31	111 Bush Avenue	Giambrone, Pietro	1 building			No	Recommend not S/NRHP eligible
1226	32	109 Bush Avenue	Hassan, Marco	1 building			No	Recommend not S/NRHP eligible
1226	33	103 Bush Avenue	Bah, Amadu	1 building			No	Recommend not S/NRHP eligible
1226	34	97 Bush Avenue	Pietro Giambrone	1 building			No	Recommend not S/NRHP eligible
1226	47	100 Union Avenue	Around Town Propertie	4 buildings			No	Recommend not S/NRHP eligible
1226	51	104 Union Avenue	Paccione, Michael	2 buildings			No	Recommend not S/NRHP eligible
1226	54	Union Avenue	The City Of New York/	vacant			No	N/A
1226	57	130 Union Avenue	647-649 Washington Av	3 buildings			No	Recommend not S/NRHP eligible
1226	100	Leyden Avenue	The City Of New York/	vacant			No	N/A
1227	1	Harbor Road	The City Of New York/	vacant			No	N/A
1227	2	Harbor Road	NYC DSBS	vacant			No	N/A
1227	3	111 Harbor Road	George Delgadio	2 buildings			No	Recommend not S/NRHP eligible
1227	4	109 Harbor Road	Galante, Anthony	1 building			No	Recommend not S/NRHP eligible
1227	5	103 Harbor Road	Antonio Miranda Jr	2 buildings			No	Recommend not S/NRHP eligible
1227	110	98 Bush Avenue	Dzemovski, Afordita	1 building			No	Recommend not S/NRHP eligible
1227	112	110 Bush Avenue	Amoroso, Charles	1 building			No	Recommend not S/NRHP eligible
1227	114	112 Bush Avenue	Frieda A Colson-Sykes	1 building			No	Recommend not S/NRHP eligible
1227	115	Bush Avenue	The City Of New York/	vacant			No	N/A

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
1236	100	Harbor Road	The City Of New York/	vacant			No	N/A
1236	117	Harbor Road	DCAS	vacant			No	N/A
1236	120	7 Lockman Place	Heath, Norris	1 building			No	Recommend not S/NRHP eligible
1236	122	5 Lockman Place	Norris Heath	vacant			No	N/A
1236	123	5 Lockman Place	Norris Heath	vacant			No	N/A
1236	124	4 Lockman Place	Hermanstein Williams,	1 building			No	Recommend not S/NRHP eligible
1236	164	100 Harbor Road	Summerfield Me Ch	Summerfield United Methodist Church	S/NRHP eligible 08501.000556		Identified, not updated	Parsonage house may be contributing element
1236	173	Harbor Road	DCAS	vacant			No	N/A
1236	180	Harbor Road	The City Of New York/	vacant			No	N/A
1237	100	141 Andros Avenue	141 Andros Avenue Inc	1 building			No	Recommend not S/NRHP eligible
1237	161	134 Lockman Avenue	Margaret Frierson	1 building			No	Recommend not S/NRHP eligible
1237	164	Lockman Avenue	The City Of New York/	vacant			No	N/A
1237	165	Lockman Avenue	The City Of New York/	vacant			No	N/A
1243	20	20 Lockman Loop	Bushwick Sharp Realty	20 buildings			No	Recommend not S/NRHP eligible
1243	30	Lockman Avenue	Csx Transportation, I	vacant			No	N/A
1243	45	Harbor Road	The City Of New York/	vacant			No	N/A
1243	46	124 Harbor Road	Harbor Road Developme	1 building			No	Recommend not S/NRHP eligible
1243	47	126 Harbor Road		1 building			No	Recommend not S/NRHP eligible
1243	48	128 Harbor Road		1 building			No	Recommend not S/NRHP eligible
1243	49	130 Harbor Road		1 building			No	Recommend not S/NRHP eligible
1243	50	150 Harbor Road	Muniz Vidals, Ariel	2 buildings			No	Recommend not S/NRHP eligible
1243	53	152 Harbor Road	Robles, Jose H	1 building			No	Recommend not S/NRHP eligible
1243	55	156 Harbor Road	Paul Agu	1 building			No	Recommend not S/NRHP eligible
1243	149	132 Harbor Road		1 building			No	Recommend not S/NRHP eligible
1245	1	311 Grandview Avenue	NYC Housing Authority	Mariner's Harbor NYCHA complex	Not S/NRHP eligible 08501.003075		No	
1256	1	Mersereau Avenue	The City Of New York/	vacant			No	N/A
1256	39	243 Grandview Avenue	D & A Grandview LLC	Brick 2-story apartment house	Undetermined 08501.000548		No	Recommend not S/NRHP eligible
1256	92	82 Davidson Street	60 Davidson LLC	5 buildings			No	Recommend not S/NRHP eligible
1257	1	Grandview Avenue	The City Of New York/	vacant			No	N/A
1257	6	South Avenue	Jeffrey D'Albero	vacant			No	N/A
1257	9	237 South Avenue	Jeffrey D'Albero	Brick 2-story mixed use	Undetermined 08501.000648		No	Recommend not S/NRHP eligible
1257	83	246 Grandview Avenue	Jeffrey D'Albero	1 building			No	Recommend not S/NRHP eligible
1261	65	285 South Avenue	Kempster, Robert	2 buildings	T		No	Recommend not S/NRHP eligible
1261	66	281 South Avenue	Nash Estafanous	1 building			No	Recommend not S/NRHP eligible
1261	68	South Avenue	Grinberg Management &	vacant			No	N/A
1261	69	South Avenue	Grinberg Management &	vacant			No	N/A
1261	70	South Avenue	Grinberg Management &	vacant			No	N/A
1261	71	273 South Avenue	Chen, Chaofeng	2 buildings			No	Recommend not S/NRHP eligible
1261	74	265 South Avenue	Tacardon Christine	1 building			No	Recommend not S/NRHP eligible
1261	76	263 South Avenue	Jane Raymond	1 building			No	Recommend not S/NRHP eligible
1261	78	261 South Avenue	Gordon, Grace	1 building			No	Recommend not S/NRHP eligible

BLOCK	LOT	ADDRESS	OWNER NAME	IMPROVEMENTS	SHPO	LPC	2019 SANDY SURVEY	SURVEY RESULTS
1261	79	South Avenue	NYC DSBS	vacant			No	N/A
1261	82	South Avenue	NYC DSBS	vacant			No	N/A
1261	90	Grandview Avenue	NYC DSBS	vacant			No	N/A
1261	93	310 Grandview Avenue	Peggy H Archer	1 building			No	Recommend not S/NRHP eligible
1261	94	312 Grandview Avenue	Brian K. Betts	1 building			No	Recommend not S/NRHP eligible
1261	96	314 Grandview Avenue	Raoji S Patel	1 building			No	Recommend not S/NRHP eligible
1261	98	316 Grandview Avenue	Bagley Janet	1 building			No	Recommend not S/NRHP eligible
1261	99	318 Grandview Avenue	Gaviria, Stella	1 building			No	Recommend not S/NRHP eligible
1261	100	320 Grandview Avenue	Edward Torres	1 building			No	Recommend not S/NRHP eligible
1266	1	229 Arlington Avenue	NY Commercial Lubrica	1 building			No	Recommend not S/NRHP eligible
1266	69	206 South Avenue	Richard Terranova	vacant			No	N/A
1267	1	250 Arlington Avenue	VG Arlington LLC	1 building			No	Recommend not S/NRHP eligible
1268	60	Northfield Avenue	NY State Public Serv	vacant			No	N/A
1268	209	270 South Avenue	Sonny'S Pier LLC	vacant			No	N/A
1268	217	South Avenue	NY State Public Serv	3 buildings			No	Recommend not S/NRHP eligible
1268	220	South Avenue	Sonnys Pier LLC	vacant			No	N/A
1278	460	244 Arlington Avenue	244 Arlington Ave	4 buildings			No	Recommend not S/NRHP eligible
1284	200	Holland Avenue	Staten Island Railway	vacant			No	N/A

HISTORICAL PERSPECTIVES INC.



Phase IA Archaeological Documentary Study Staten Island North Shore Bus Rapid Transit (BRT) Project Staten Island, Richmond County, New York

NYSOPRHP 19PR05262

Phase IA Archaeological Documentary Study Staten Island North Shore Bus Rapid Transit (BRT) Project Staten Island, Richmond County, New York

NYSOPRHP 19PR05262

Prepared For:

MTA New York City Transit Capital Program Management New York City Transit 2 Broadway, B6.12 New York, NY 10004

Prepared By:

Historical Perspectives, Inc. P.O. Box 529 Westport, CT 06881

Authors: Julie Abell Horn, M.A., R.P.A. Cece Saunders, M.A., R.P.A.

August 2020

MANAGEMENT SUMMARY

SHPO Project Review Number (if available): 19PR05262

Involved State and Federal Agencies: MTA New York City Transit

Phase of Survey: Phase IA Archaeological Documentary Study

Location Information

Location: **Portions of Richmond Terrace and former SIRT ROW** Minor Civil Division: **08501, Staten Island** County: **Richmond**

Survey Area

Length: **ca. 5.2 miles** Width: **varies** Number of Acres Surveyed: **ca. 65 acres**

USGS 7.5 Minute Quadrangle Map: Elizabeth and Jersey City

Archaeological Survey Overview Number & Interval of Shovel Tests: N/A Number & Size of Units: N/A Width of Plowed Strips: N/A Surface Survey Transect Interval: N/A

Results of Archaeological Survey Number & name of precontact sites identified: **None** Number & name of historic sites identified: **None** Number & name of sites recommended for Phase II/Avoidance: **None**

Report Authors(s): Julie Abell Horn, M.A., R.P.A. and Cece Saunders, M.A., R.P.A., Historical Perspectives, Inc.

Date of Report: August 2020

EXECUTIVE SUMMARY

The MTA New York City Transit (MTA-NYCT) is advancing the environmental analysis of the Staten Island North Shore Bus Rapid Transit (BRT) Project (Proposed Project), which assesses the implementation of new or enhanced public transit service along the North Shore of Staten Island between South Avenue (West Shore Plaza) and St. George (St. George Terminal) in Richmond County, New York. The approximately 8-mile proposed transit alignment would be comprised of approximately 4.8 miles of former North Shore Staten Island Rapid Transit Railway (SIRT) right-of-way (ROW) (which offered passenger and freight service, ending in 1953 and 1989, respectively), and approximately 3.2 miles of City roadways such as Richmond Terrace (0.5 miles) and South Avenue (2.7 miles).

The Proposed Project is divided into seven discrete "sections." Each section and associated study area contains generally similar land uses, and/or reflects a section of the alignment that is distinct from an engineering standpoint. The sections are: Section 1, St. George; Section 2, New Brighton Waterfront; Section 3, West Brighton Waterfront; Section 4, Viaduct; Section 5, Open Cut; Section 6, Arlington Station; and Section 7, South Avenue. Within these sections, the Proposed Project will include a dedicated busway, new stations, construction staging areas, and associated infrastructure. Richmond Terrace is proposed to be widened at several discrete locations in Section 1, adjacent to the 120th Police Precinct and the Staten Island Family Courthouse. Two options are proposed for portions of Section 2 along the Sailors' Snug Harbor waterfront: an on-shore raised busway and a raised busway within the Kill Van Kull.

In addition to the proposed alignment and stations, there are also 18 potential construction staging locations for the project, as depicted in the project's *Basis of Design* report. Many of these construction staging areas are within the "constructive way" for the project, or within areas that will be used for constructing the proposed project. Other construction staging areas outside of the "constructive way" are privately held parcels that would be leased only for the duration of the project construction.

In August 2019 the project team began consultations with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP or SHPO) under SEQRA. On October 4, 2019, SHPO representatives joined MTA-NYCT, VHB, and Historical Perspectives, Inc. (HPI) on a field visit to view the Proposed Project. Based on the results of the field visit and supporting documentation about the Proposed Project, on October 20, 2019 issued a response indicating that a Phase IA archaeology survey was necessary (Brazee 2019a). The Proposed Project or Archaeological APE is defined as the area that could be affected by ground disturbance associated with project development, including construction staging areas. Additionally, SHPO concurred with the project team that the portion of the proposed project along South Avenue to West Shore Plaza (Section 7, below), where there would be no construction impacts, could be eliminated from the APE (Brazee 2019b). On January 24, 2020, the FTA formally initiated consultation with SHPO under Section 106 of the NHPA (Burns 2020).

Ground disturbance as part of the Proposed Project will vary across the alignment, depending on location and need. Types of ground disturbance will include construction of the proposed raised busway and its foundations along the Kill Van Kull shoreline; construction of retaining walls at various points along the entire alignment; removal of soil in conjunction with the retaining walls, especially south of the active railroad tracks and behind the present retaining wall in Section 6; construction of drainage features spaced along the alignment consisting of either drainage infiltration or drainage detention chambers; and construction of six new bus stations along the alignment. If not already paved, construction staging areas would be stripped of existing topsoil and covered with gravel or pavement. Overall depths of proposed ground disturbance could range from a few inches to 15 feet below grade. Pilings for the raised busway could extend below that depth.

The following conclusions and recommendations are offered.

Section 1: St. George

The archaeological sensitivity for Section 1 is mixed. There has been significant disturbance throughout the area from multiple construction and demolition episodes over time, which likely has destroyed many potential archaeological resources within the Archaeological APE. However, the complete subsurface conditions cannot be known without further study. Given that the Proposed Project includes the construction of retaining walls and drainage features to various depths below the at-grade portion of the bus route in this section between Nicholas

Street and Jersey Street, it is possible that both precontact period and historic period archaeological resources could exist within discrete locations. Soil or geotechnical borings to be taken in these locations for design purposes should be reviewed by a qualified archaeologist to determine whether there is any potential for archaeological resources to be impacted as a result of the Proposed Project. The construction staging areas in Section 1 are within landfilled areas that were previously disturbed.

Within Block 9, where the Richmond Terrace roadway would be widened by 12 feet, necessitating the acquisition of a narrow swath of sloped land in front of the Staten Island Family Courthouse, Phase IB archaeological testing may be warranted if disturbance to the original landform cannot be confirmed to the depth of the planned impacts.

Section 2: New Brighton Waterfront

The archaeological sensitivity for Section 2 is mixed. Archaeologists have studied the span along the Sailors' Snug Harbor waterfront twice in the past. In 1990, archaeologists concluded that the area was too disturbed to contain any historic period archaeological resources, and that potential buried precontact period resources beneath the Kill Van Kull were possible but not probable (LPC 1990). They recommended review of any future soil borings to assess the precontact period archaeological potential along the waterfront, should future development be proposed. In 2002, archaeologists reiterated the potential for precontact archaeological resources beneath the Kill Van Kull, and also indicated the possibility for historic period remains from the Sailors' Snug Harbor boathouse and dock (Hartgen 2002).

Section 2 conditions have deteriorated since 2002. The coastline along this stretch has eroded considerably, scouring the area and lowering the landform by several feet in places. While it is still possible that precontact period archaeological resources could be present under the Kill Van Kull, any potential historic period archaeological resources here appear to have been further disturbed or destroyed.

The Proposed Project calls for the construction of a new elevated busway in this section, which would be supported on pilings. The alternative would construct the busway on the existing land between Richmond Terrace and the Kill Van Kull. Soil or geotechnical borings to be taken in these locations for design purposes should be reviewed by a qualified archaeologist to determine whether there is any potential for precontact period archaeological resources to be impacted as a result of the Proposed Project. Last, all of the construction staging areas in Section 2 have been previously disturbed by multiple building and demolition episodes and are not sensitive for archaeological resources.

Section 3: West Brighton Waterfront

The archaeological sensitivity for Section 3 is mixed. There has been significant disturbance throughout the area from multiple construction and demolition episodes over time, which likely has destroyed many potential archaeological resources within the Archaeological APE. However, the complete subsurface conditions cannot be known without further study. Given that the Proposed Project includes construction of retaining walls and drainage features to various depths below the at-grade portion of the bus route along the length of this section, it is possible that both precontact period and historic period archaeological resources could exist within discrete locations. Soil or geotechnical borings to be taken in these locations for design purposes should be reviewed by a qualified archaeologist to determine whether there is any potential for archaeological resources to be impacted as a result of the Proposed Project. Last, the construction staging areas in Section 3 are within lands previously disturbed from prior construction and demolition episodes. The construction staging area across from Taylor Street was studied by HPI in 2006, confirming disturbance.

Section 4: Viaduct

The archaeological sensitivity for Section 4 is low. Construction of the original railroad alignment and the existing viaduct have caused significant disturbance to the original landform within this section. The Proposed Project plans indicate that there will be new subsurface drainage features installed beneath the viaduct at approximately 333-foot intervals to depths of approximately 3.52 feet below grade, spaced between the existing viaduct concrete supports. The exact locations of the new drainage features have not been confirmed. As the project progresses, if soil or geotechnical borings are taken prior to installation of these drainage features, the soil borings should be reviewed by a qualified archaeologist to determine whether there is any potential for archaeological resources to be impacted as a result of the Proposed Project. All of the proposed construction staging areas within Section 4 are paved lots that have been previously disturbed by multiple building and demolition episodes.

Section 5: Open Cut

The archaeological sensitivity for Section 5 is low. Further, the Proposed Project plans indicate that there will be no new excavation below areas that have already been excavated or disturbed by past construction and demolition episodes, including at the site of construction staging areas.

Section 6: Arlington Station

The archaeological sensitivity for Section 6 is high. The portion of Section 6 south of the active railroad tracks and behind the present retaining wall may contain landforms that were not substantially graded when the railroad tracks were lowered in the 1930s. Given the proximity to former wetlands and a perennial stream in the area now covered by the NYCHA Mariners Harbor complex, which are markers for precontact period archaeological sensitivity, this area south of the railroad tracks may warrant future archaeological testing. If the construction staging area near Lockman Loop will be impacted below the current ground surface, this parcel may warrant future archaeological testing as well. Additionally, the proposed Arlington Station parcel on the west side of South Avenue may be sensitive for precontact period archaeological resources beneath the gravel parking area that covers the lot, given its proximity to wetlands and the former Arlington Station archaeological site. If project impacts extend beneath this gravel surface, archaeological testing may be necessary here as well.

Table	of	Contents
-------	----	----------

Management Summary i						
Executive Summaryii						
Table of Conten	ts	v				
I.	Introduction	1				
	A. Proposed Project	1				
	B. Regulatory Oversight and Project Initiation	2				
	C. Project Section Descriptions					
	D. Archaeological Area of Potential Effects (APE)	4				
II.	Methodology					
III.	Current Conditions	4				
	A. Section 1: St. George	4				
	B. Section 2: New Brighton Waterfront	5				
	C. Section 3: West Brighton Waterfront					
	D. Section 4: Viaduct	6				
	E. Section 5: Open Cut					
	F. Section 6: Arlington Station					
IV.	Topography and Hydrology	6				
	A. Section 1: St. George					
	B. Section 2: New Brighton Waterfront					
	C. Section 3: West Brighton Waterfront	7				
	D. Section 4: Viaduct	7				
	E. Section 5: Open Cut					
	F. Section 6: Arlington Station	7				
V.	Soils	8				
	A. Section 1: St. George					
	B. Section 2: New Brighton Waterfront					
	C. Section 3: West Brighton Waterfront					
	D. Section 4: Viaduct	9				
	E. Section 5: Open Cut	9				
	F. Section 6: Arlington Station					
VI.	Precontact Period Summary					
VII.	Previously Recorded Archaeological Sites					
	A. Section 1: St. George					
	B. Section 2: New Brighton Waterfront					
	C. Section 3: West Brighton Waterfront	11				
	D. Section 4: Viaduct	12				
	E. Section 5: Open Cut					
	F. Section 6: Arlington Station					
VIII.	Previously Recorded Archaeological Surveys	17				
	A. Section 1: St. George					
	B. Section 2: New Brighton Waterfront					
	C. Section 3: West Brighton Waterfront					
	D. Section 4: Viaduct					
	E. Section 5: Open Cut					
	F. Section 6: Arlington Station					
IX.	Historic Period Summary					
	A. General Overview of the Project Area and the North Shore Staten Island Railroad					
	B. Section 1: St. George					
	C. Section 2: New Brighton Waterfront					
	D. Section 3: West Brighton Waterfront	28				
	E. Section 4: Viaduct					

	F. Section 5: Open Cut	29
	G. Section 6: Arlington Station	29
Х.	Conclusions and Recommendations	
	A. Section 1: St. George	30
	B. Section 2: New Brighton Waterfront	
	C. Section 3: West Brighton Waterfront	30
	D. Section 4: Viaduct	31
	E. Section 5: Open Cut	31
	F. Section 6: Arlington Station	
XI.	References	

Figures

Photographs

Appendix A: Project plans (VHB and STV, April 2020)

Appendix B: Soil Borings for Section 6 (HNTB 2008)

Appendix C: Selected Sailors' Snug Harbor and North Shore Staten Island Railroad Historic Photographs

FIGURES

- 1. Archaeological APE on *Elizabeth and Jersey City N.J.-N.Y.* 7.5 Minute Topographical Quadrangles (U.S.G.S. 2016).
- 2a Archaeological APE for Section 1 (HPI 2020 and VHB 2020).
- 2b Archaeological APE for Section 2 (HPI 2020 and VHB 2020).
- 2c Archaeological APE for Section 3 and the east part of Section 4 (HPI 2020 and VHB 2020).
- 2d Archaeological APE for the west part of Section 4 and the east part of Section 5 (HPI 2020 and VHB 2020).
- 2e Archaeological APE for the west part of Section 5 and Section 6 (HPI 2020 and VHB 2020).
- 3. Potential Staging Locations Overview (VHB and STV 2020).
- 4. Section Overview Map (VHB 2020).
- 5. Archaeological APE on New York City Reconnaissance Soil Survey (U.S.D.A. 2006).
- 6. Archaeological APE on *A Map of New York & Staten Island and Part of Long Island* (Taylor and Skinner 1781).
- 7. Archaeological APE on Map of Staten Island or Richmond County (Butler 1853).
- 8. Archaeological APE on *Map of the City of New-York and Environs* (Walling 1860).
- 9. Archaeological APE on Map of Staten Island (Richmond Co.) New York... (Dripps 1872).
- 10a-d. Archaeological APE on Atlas of Staten Island, Richmond County, New York (Beers 1887).
- 11a-g. Archaeological APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).

PHOTOGRAPHS (see Figures 2a-2e for locations)

Photograph 1.

Section 1, Richmond Terrace near the Staten Island Ferry Terminal. View looking northwest.

Thotograph 1.	Section 1, Reminona Terrace near the Staten Island Terry Terminal. Thew looking northwest.
Photograph 2.	Section 1, 120 th Police Precinct building, 78 Richmond Terrace. The roadway is proposed to be widened by 12 feet in front of this building, within the sidewalk and berm. View looking northwest.
Photograph 3.	Staten Island Family Courthouse, 100 Richmond Terrace. The roadway is proposed to be widened by 12 feet in front of this building, within the existing sidewalk and grassy berm. View looking northwest.
Photograph 4.	Section 1, former railroad alignment under pavement in North Shore Waterfront Esplanade Park, with Richmond Terrace on left. View looking northwest.
Photograph 5.	Section 1, North Shore Waterfront Esplanade Park and Bank Street. The former railroad tracks are no longer visible. View looking northwest.
Photograph 6.	Section 1, North Shore Waterfront Esplanade Park and Bank Street. View looking northeast.
Photograph 7.	Section 2, Bank Street, at foot of Jersey Street. Railroad tracks are no longer visible. View looking west.
Photograph 8.	Section 2, proposed staging area on the south side of Richmond Terrace near Franklin Avenue. View looking south.
Photograph 9.	Section 2, former railroad tracks on the north side of Richmond Terrace at Sailors' Snug Harbor. View looking north.
Photograph 10.	Section 2, Sailors' Snug Harbor historic viewing platform on the north side of Richmond Terrace. View looking south.
Photograph 11.	Section 2, modern dock at Sailors' Snug Harbor on the north side of Richmond Terrace. The former railroad tracks are under the vegetation. View looking north.
Photograph 12.	Section 2, the shoreline at Sailors' Snug Harbor. View looking east with the Atlantic Salt facility in the upper left background.
Photograph 13.	Section 2, the shoreline at Sailors' Snug Harbor. View looking west.
Photograph 14.	Section 2, former railroad tracks and stone retaining wall at Sailors' Snug Harbor, with Richmond Terrace in the background. View looking southeast.
Photograph 15.	Section 2, the stone retaining wall at Sailors' Snug Harbor, at the base of the paved paths. View looking south.
Photograph 16.	Section 2, paved paths leading to the Sailors' Snug Harbor shoreline, with Richmond Terrace on the right. View looking east.
Photograph 17.	Section 2, pedestrian path along the shoreline at Sailors' Snug Harbor. Remains of the railroad tracks are within the woods on the right. View looking east.
Photograph 18.	Section 2, former railroad tracks along the Sailors' Snug Harbor scoured shoreline. Note the erosion of the beach. View looking west.

- Photograph 19. Section 2, rear of Blue Restaurant at 1115 Richmond Terrace showing the reconstructed railroad tracks. View looking east.
- Photograph 20. Section 2, remains of the railroad tracks to the north of the Con Edison parking lot. View looking west.
- Photograph 21. Section 2, the Con Edison parking lot on the north side of Richmond Terrace that is proposed to serve first as a construction staging area and later a commuter parking lot. View looking northwest.
- Photograph 22. Section 3, the former railroad tracks are embedded in the pavement in front of the gray building of the Caddell Dry Dock and Repair Company yard in the background. The Archaeological APE runs through the foreground of the image. View looking north.
- Photograph 23. Section 3, Caddell Dry Dock and Repair Company buildings. The former railroad tracks were located next to these buildings. View looking east from the access road and parking lot for Heritage Park.
- Photograph 24. Section 3, Heritage Park, view looking northwest.
- Photograph 25. Section 4, the proposed access drive across from Alaska Street, now used as a paved parking lot. View looking northwest.
- Photograph 26. Section 4, the Port Richmond Water Pollution Control Plant at 1789 Richmond Terrace with the viaduct in the far background. View looking north.
- Photograph 27. Section 4, the viaduct near its crossing of Richmond Terrace. View looking northeast.
- Photograph 28. Section 4, the viaduct crossing at Richmond Terrace. View looking northwest.
- Photograph 29. Section 4, detail of the viaduct underside crossing Port Richmond Avenue. View looking west.
- Photograph 30. Section 4, the viaduct crossing at Faber Street. View looking northeast.
- Photograph 31. Section 4, the end of the viaduct at Nicholas Avenue and Slaight Street. View looking northwest.
- Photograph 32. Section 5, remains of the open cut filled with water under the Bayonne Bridge approach. View looking southwest.
- Photograph 33. Section 5, the open cut near Morningstar Road, with station remnants. View looking west.
- Photograph 34. Section 5, the open cut between Van Pelt Avenue and Van Name Avenue. View looking east.
- Photograph 35. Section 5, station remnants within the open cut between De Hart Avenue and Van Pelt Avenue. View looking southeast.
- Photograph 36. Section 6, active tracks under the Harbor Road overpass. View looking west.
- Photograph 37. Section 6, active tracks west of the South Avenue overpass. View looking west.
- Photograph 38. Section 6, the proposed Arlington Station parcel west of South Avenue. View looking north.

I. Introduction

A. Proposed Project

The MTA New York City Transit (MTA-NYCT) is advancing the environmental analysis of the Staten Island North Shore Bus Rapid Transit (BRT) Project (Proposed Project), which assesses the implementation of new or enhanced public transit service along the North Shore of Staten Island between South Avenue (West Shore Plaza) and St. George (St. George Terminal) in Richmond County, New York (Figures 1, 2a-e, and Appendix A). The approximately 8-mile proposed transit alignment would be comprised of approximately 4.8 miles of former North Shore Staten Island Rapid Transit Railway (SIRT) right-of-way (ROW) (which offered passenger and freight service, ending in 1953 and 1989, respectively), and approximately 3.2 miles of City roadways such as Richmond Terrace (0.5 miles) and South Avenue (2.7 miles).

The Proposed Project's Basis of Design report describes the general features of the proposed BRT:

The proposed alignment is comprised of varying types of right-of-way (ROW) segments including at-grade, elevated viaduct and below-grade open-cut sections, with street running portions along South Avenue and an exclusive two-lane median busway on Richmond Terrace between Nicholas Street and the St. George Terminal. On the portion of the proposed alignment that uses the former North Shore Railroad right-of-way (NSRR ROW), the proposed BRT service would operate within a two-lane, dedicated busway with the potential passing lanes at certain stations. Access to the proposed busway would be provided at four locations: in Arlington, at Bard Avenue, at an extended Alaska Street, and at Nicholas Street in St. George.

As the BRT service travels west from the existing bus terminal at St. George, the BRT would operate on Richmond Terrace in a new, approximately 0.5-mile exclusive dedicated median busway. The exclusive BRT alignment would transition from Richmond Terrace to the former NSRR ROW at Nicholas Street via a new ramp. The at-grade segment of the former NSRR ROW generally abuts the waterfront as it travels west. The North Shore's shoreline has been notably altered because of both continuous natural erosion and severe weather events. Additionally, larger vessels passing through the Kill van Kull because of the Bayonne Bridge modification are anticipated to further exacerbate erosion. At present, the former NSRR ROW and bulkhead near Sailors' Snug Harbor has sustained substantial storm damage and has largely been submerged by the Kill van Kull. The conceptual design option under consideration for this area include shifting the proposed busway away from the shoreline, closer to Richmond Terrace.

At Heritage Park, the at-grade segment of the exclusive BRT alignment would transition to the former North Shore Railroad viaduct structure (for approximately 1.2 miles) that extends past the NYCDEP Port Richmond Wastewater Treatment Plant (WWTP) and Bodine Creek, shifting slightly inland as it crosses through Port Richmond and over Richmond Terrace. East of the Bayonne Bridge, near John Street, the viaduct transitions to the ROW's open-cut section that extends west toward the existing Arlington Yard freight terminal. The open-cut section is approximately 0.9 miles long with varying widths and is situated between 20 feet to 30 feet below grade. In the western section of the open cut near Van Name and Union Avenues, the BRT would be situated to safely coexist with the existing Arlington Yard rail freight service. Near Roxbury Street, the proposed alignment would leave the open-cut and rise to grade as it transitions to Arlington Station. It would then transition through Arlington where it would join South Avenue from a proposed driveway north of Brabant Street where it would operate without exclusive lanes in mixed traffic along South Avenue to West Shore Plaza.

The proposed BRT service would re-purpose and utilize the existing taxi stand on the bus deck of the St. George Terminal as its eastern terminus and the existing West Shore Plaza shopping center as the western terminus. In between these termini, six new BRT stations, with amenities such as platforms and shelters, and three existing, on-street stops along South Avenue, would be served. The specific locations and layouts of the proposed stations has been determined based on their

ability to maximize the transportation goals of the project while minimizing environmental impacts, where practicable (VHB and STV 2020:1-2).

The proposed project also includes the widening of Richmond Terrace by 6 feet on the east side of the street between Schuyler Street and Wall Street, by 12 feet on the west side of the street between Wall Street and Hamilton Avenue, and by 4 feet between Hamilton Avenue and Stuyvesant Place (Appendix A). The 12-foot widening section will affect the properties occupied by the 120th Police Precinct building and the Staten Island Family Courthouse. The steps of both buildings will need to be reconfigured in order to accommodate the road widening. Both buildings are eligible for the State/National Register of Historic Places (S/NRHP) and are New York City Landmarks (NYCLs).

In addition to the proposed alignment and stations, there are also 18 potential construction staging locations for the project, as depicted in the project's *Basis of Design* report (Figure 3). Many of these construction staging areas are within the "constructive way" for the project, or within areas that will be used for constructing the proposed project. Other construction staging areas outside of the "constructive way" are privately held parcels that would be leased only for the duration of the project construction.

B. Regulatory Oversight and Project Initiation

The MTA-NYCT is preparing a Draft Environmental Impact Statement (DEIS) for the Proposed Project in accordance with New York's State Environmental Quality Review Act (SEQRA) and New York City's Environmental Quality Review (CEQR). The Proposed Project may also seek federal funding from the Federal Transit Administration (FTA); thus, the DEIS is being prepared to be consistent with the requirements of the National Environmental Policy Act (NEPA) of 1969, (42 U.S.C. 4321 et seq.), as amended. As part of any future NEPA process, the Proposed Project would be subject to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR Part 800), which mandates that federal agencies consider the effects of their actions on any properties listed on or determined eligible for listing on the S/NRHP and afford the federal Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings. This analysis of archaeological resources is therefore also consistent with Section 106 requirements.

In August 2019 the project team began consultations with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP or SHPO) under SEQRA. On October 4, 2019, SHPO representatives joined MTA-NYCT, VHB, and Historical Perspectives, Inc. (HPI) on a field visit to view the Proposed Project. Based on the results of the field visit and supporting documentation about the Proposed Project, on October 20, 2019 issued a response indicating that a Phase IA archaeology survey was necessary (Brazee 2019a). The Proposed Project or Archaeological APE is defined as the area that could be affected by ground disturbance associated with project development, including construction staging areas. Additionally, SHPO concurred with the project team that the portion of the proposed project along South Avenue to West Shore Plaza (Section 7, below), where there would be no construction impacts, could be eliminated from the APE (Brazee 2019b). On January 24, 2020, the FTA formally initiated consultation with SHPO under Section 106 of the NHPA (Burns 2020).

HPI has been contracted by MTA-NYCT to complete the requested Phase IA Archaeological Documentary Study for the proposed BRT project. An architectural survey for the Proposed Project is being prepared by HPI as a separate report. This archaeological study was prepared to comply with the standards of the OPRHP and the New York City Landmarks Preservation Commission (LPC) (New York Archaeological Council 1994; OPRHP 2005; LPC 2018).

C. Project Section Descriptions

To facilitate the analysis for the North Shore BRT project area, the proposed alignment has been divided into seven Sections (Figure 4). Each Section and associated study area contains generally similar land uses, and/or reflects a section of the alignment that is distinct from an engineering standpoint.

Section 1: St. George

This Section comprises the area along Richmond Terrace from the St. George Terminal west to Jersey Street. Land uses in this Section include the commercial and retail area near the terminal, a variety of civic and community uses, the North Shore Esplanade Park, and residential development south of Richmond Terrace. The Section is approximately 0.9 mile long.

Section 2: New Brighton Waterfront

This Section, which runs primarily along the Kill Van Kull shoreline in the New Brighton neighborhood, extends from Jersey Street west to Davis Avenue. It encompasses the northern portions of the New Brighton neighborhood and the Snug Harbor Cultural Center and Botanical Garden. Land uses in this area are primarily residential and park; however, the eastern part of the shoreline area is occupied by Atlantic Salt, a large industrial facility, and a Con Edison facility is located south of the shoreline and east of Davis Avenue. This Section is approximately 1.2 miles long.

Section 3: West Brighton Waterfront

Section 3 generally parallels the shoreline from Davis Avenue to the foot of Alaska Street, where the former rightof-way transitions from at-grade to a viaduct structure south of Heritage Park. Land uses in this area include singleand multi-family residential south of Richmond Terrace in the West Brighton neighborhood, marine industrial uses (Caddell Dry Dock and TP Marine Electric) along the waterfront, and industrial and commercial uses between the waterfront and Richmond Terrace. This Section is approximately 0.7 mile long.

Section 4: Viaduct

This Section follows the existing viaduct section of the right-of-way from Alaska Street west to John Street. The eastern portion encompasses open space west of Heritage Park and industrial uses, including the Port Richmond Water Pollution Control Plant. The portion of Section 4 west of where the viaduct crosses Richmond Terrace contains a mixture of residential, commercial, and light industrial uses, becoming mostly residential further to the west. Richmond High School and associated sports fields are located at the westernmost end of this Section, which is approximately 1.2 miles long.

Section 5: Open Cut Section

Section 5 follows a section of the former right of way that lies within an open cut approximately 30 feet deep, running from John Street west to Union Street. This Section encompasses mainly residential land uses in the Mariners Harbor neighborhood, interspersed with commercial development. This Section is approximately 0.8 mile long.

Section 6: Arlington Station

This Section follows the former right-of-way along an at-grade section from Harbor Road to South Avenue, where the BRT route would turn south to Cable Way/Netherland Avenue. Land uses along the right-of-way and on the east side of South Avenue are primarily residential, including the New York City Housing Authority Mariner's Harbor complex, with some industrial uses north of the right-of-way and east of South Avenue. The area west of South Avenue has large undeveloped swaths, interspersed with large-scale retail and commercial uses. This Section is approximately 0.54 miles long.

Section 7: South Avenue

South of Cable Way/Netherland Street the BRT would be located within South Avenue to West Shore Plaza. In the area south of the Staten Island Expressway, both sides of South Avenue are characterized by undeveloped land (including some wetland areas) and large-scale office park, hotel, and retail development. This Section is approximately 2.58 miles long.

D. Archaeological Area of Potential Effect (APE)

The Archaeological Area of Potential Effect (APE) is defined as the area that could be affected by ground disturbance associated with project development. For this project, the Archaeological APE includes Sections 1, 2, 3, 4, 5, and the portion of Section 6 to the intersection of South Avenue and the proposed Arlington Station area. Because the BRT will operate in mixed traffic along South Avenue to the West Shore Plaza, there will be no new ground disturbance within the portions of Sections 6 and 7 along South Avenue and these locations have been eliminated from the Archaeological APE. The Archaeological APE measures approximately 5.2 miles in length; the width ranges from approximately 30 feet at its narrowest point to approximately 58 feet at its widest point. As noted in the Introduction, there are also 18 potential construction staging locations for the project (Figure 3).

Ground disturbance as part of the Proposed Project will vary across the alignment, depending on location and need. Types of ground disturbance will include construction of the proposed raised busway and its foundations along the Kill Van Kull shoreline; construction of retaining walls at various points along the entire alignment; removal of soil in conjunction with the retaining walls, especially south of the active railroad tracks and behind the present retaining wall in Section 6; construction of drainage features spaced along the alignment consisting of either drainage infiltration or drainage detention chambers; and construction of six new bus stations along the alignment. If not already paved, construction staging areas would be stripped of existing topsoil and covered with gravel or pavement. Overall depths of proposed ground disturbance could range from a few inches to 15 feet below grade. Pilings for the raised busway could extend below that depth.

II. Methodology

The archaeological survey methodology consisted of background data collection and field inspections. The initial task for the project was to collect information on previously documented archaeological resources within the APE. These materials included archaeological site forms and surveys, and context material on file at the SHPO and LPC. Additional data were collected at the Staten Island Museum archives and the archives of the Staten Island Historical Society at the Historic Richmond Town. Project plans, drawings, and limited soil borings were provided by the project sponsors. The soil borings, for Section 6, are presented in Appendix B.

To further document the history of the Archaeological APE, research included use of the New York City Department of Buildings (DOB) databases, the New York City Municipal Archives historic tax photographs collection, and various historic maps, additional historic photographs, and historic and modern aerial photographs. A selection of historic maps is included with this report. More detailed Sanborn Insurance Company maps were reviewed from 1898 through 2007, which were included in three Corridor Assessments for the project (VHB and STV 2019a, 2019b, 2019c). Due to the large number of Sanborn maps covering the project area, however, they are not reproduced again in this report. Primary and secondary sources were consulted as warranted. A selection of historic photographs, primarily for the Sailors' Snug Harbor historic district resources and for the overall SIRT alignment, is presented in Appendix C.

The project team conducted intensive field inspections of the APE over the course of several days in October and November 2019 and January 2020. All publicly accessible areas within the Archaeological APE along the majority of the BRT alignment were visually inspected and photographed. Those areas that could not be accessed during the field inspections (generally surrounded by private land, such as within the Caddell Dry Docks property along the waterfront) were photographed from the nearest streets and those photographs were supplemented with views from other field visits, such as the MTA-led inspection of the viaduct and open cut sections undertaken in 2018.

III. Current Conditions

A. Section 1: St. George

The beginning of Section 1 is at the entrance to the Staten Island Ferry Terminal on Richmond Terrace. The alignment then runs northwest along the existing paved roadway of Richmond Terrace as far as Nicholas Street (Photograph 1). As noted above, the proposed project includes the widening of Richmond Terrace by 6 feet on the east side of the street between Schuyler Street and Wall Street, by 12 feet on the west side of the street between Wall Street and Hamilton Avenue, and by 4 feet between Hamilton Avenue and Stuyvesant Place. The 12-foot widening

section will affect the properties occupied by the 120th Police Precinct building and the Staten Island Family Courthouse (Photographs 2 and 3). At Nicholas Street, the alignment descends to the paved North Shore Esplanade, where it then runs along the former SIRT ROW and through the North Shore Waterfront Esplanade Park to Jersey Street (Photographs 4, 5, and 6). The APE within the North Shore Waterfront Esplanade Park consists of a level, paved roadway bordered by parkland. Portions of the parkland are proposed as a potential construction staging area. There are a number of soil and debris piles covered with large tarps between the North Shore Esplanade roadway and Richmond Terrace. This area was once under water and was landfilled in the nineteenth century.

B. Section 2: New Brighton Waterfront

Section 2 continues west along the Kill Van Kull shoreline in the New Brighton neighborhood from Jersey Street to Davis Avenue. It follows the former SIRT ROW, generally on landfilled areas. The alignment passes through the Atlantic Salt industrial facility from Jersey Street to Clinton Avenue along Bank Street (Photograph 7). This facility includes several large warehouse buildings; a tall, brick smokestack ringed with cell panels; and large piles of salt, some of which are covered with large tarps. A portion of the APE at the Atlantic Salt facility runs through the basement level of a recently demolished warehouse building.

There is a potential construction staging area on the southeast corner of Richmond Terrace and Franklin Avenue. At the time of the site visit, there was earthmoving by heavy machinery occurring on this vacant parcel (Photograph 8).

From Clinton Avenue to the western end of Snug Harbor Road, the Archaeological APE passes through New York City owned parkland associated with the Sailors' Snug Harbor Cultural Center. This facility is a historic district listed on the State and National Registers of Historic Places (S/NRHP), is a National Historic Landmark (NHL) and a New York City Landmark (NYCL). One set of the former SIRT tracks (there were once two sets of tracks) is visible within the woodland in places along this portion of the section (Photograph 9). Across from the gate at Sailors Snug Harbor on Richmond Terrace, there is a stone lookout platform with flanking stairways that lead down to the waterfront and a modern dock, constructed in the 1990s (Photographs 10 and 11). An embossed tablet facing the shoreline reads "SAILORS SNUG HARBOR." The shoreline here contains a piled stone bulkhead, as well as wooden pilings within the water west of the modern dock (Photographs 12 and 13). This area also contains a series of dressed ashlar stone retaining walls between Richmond Terrace and the shoreline (Photograph 14). One section of the wall contains a portion that juts out and has an embossed notation that says "S. S. HARBOR" (Photograph 15). Additional paved pathways lead down from Richmond Terrace along the retaining walls to the waterfront, and then along the waterfront (Photographs 16 and 17). Across from the two ends of the horseshoe shaped Snug Harbor Road in the area where a perennial stream discharges into the Kill Van Kull, the former landfilled area supporting the railroad tracks has eroded away

(Photograph 18).

The portion of Section 2 from the west end of Snug Harbor Road to Bard Avenue passes behind a restaurant and a gas station (Photograph 19). The one-block section from Bard Avenue to Davis Avenue contains extant railroad tracks, and a Con Edison facility paved surface parking lot on the north side of Richmond Terrace, which is proposed first to serve as a potential construction staging area and later a commuter parking lot for the BRT (Photographs 20 and 21).

C. Section 3: West Brighton Waterfront

Section 3 continues southwest along the former SIRT ROW alignment between Richmond Terrace and the Kill Van Kull shoreline, generally on landfilled areas. From Davis Avenue to N. Burger Avenue it follows the former SIRT ROW, but west of N. Burger Avenue the alignment shifts closer to Richmond Terrace and south of the ROW, before rejoining the ROW east of Alaska Street. The alignment passes through working industrial waterfront businesses including the large Caddell Dry Dock facility and the TP Marine Electric facility. Within the Caddell Dry Dock plant, a land swap is planned that will shift the alignment to some areas that currently contain standing structures and transfer the ROW lands to the facility, in order to allow continuous access to the dry docks along the waterfront (Photographs 22 and 23). Portions of the Caddell Dry Dock facility also are proposed as potential construction staging areas. At the foot of Tompkins Court, the section passes New York City owned Heritage Park (Photograph 24).
D. Section 4: Viaduct

Section 4 begins at Alaska Street, where a new entrance is planned through an existing surface parking lot, running from Richmond Terrace north to the alignment (Photograph 25). A potential construction staging area is located on the north side of Richmond Terrace across from Taylor Street, on vacant land. Just west of the Alaska Street entrance, the section transitions from the at-grade section to the existing former SIRT viaduct. The viaduct continues southwest along the ROW past the Port Richmond Water Pollution Control Plant and an industrial and commercial area, crossing Bodine Creek west of the plant (Photographs 26 and 27). Southwest of Richmond Terrace, the viaduct and ROW cross through neighborhoods containing a mixture of residential, commercial, and light industrial uses, becoming mostly residential further to the west (Photographs 28, 29 and 30). The S/NRHP-eligible Port Richmond Historic District is located along Port Richmond Avenue, abutting the viaduct to the north. Three potential construction staging areas are located in this neighborhood, all on vacant, paved lots. The viaduct ends just west of Treadwell Avenue, and transitions to an at-grade section, which then crosses Nicholas Avenue on an overpass (Photograph 31). Here the ROW shifts from at-grade to an open cut. The cut, which grades to approximately 20 to 30 feet below the surrounding landscape, continues to the end of the section at John Street.

E. Section 5: Open Cut

Section 5 continues the open cut section of the ROW southwest under the Bayonne Bridge and through mixed-use neighborhoods supporting residential and commercial/light industrial structures. The open cut contains areas of dense vegetation and standing water (Photographs 32-35). Remains of railroad stations are located within the cut near Morningstar Road (the Elm Park station), Lake Avenue, and Van Pelt Avenue (the Mariners Harbor station). The section ends at Union Street, where the ROW transitions from the open cut to an at grade section. One potential construction staging area is located south of the open cut between Granite and Lake Avenues. Today this parcel is a gravel vacant lot, but historically this area was part of a factory pond, which has since been filled in.

F. Section 6: Arlington Station

This section follows the former ROW along an at-grade section from Harbor Road west to South Avenue, where the BRT route would turn south to Cable Way/Netherland Avenue. Although termed "at-grade," the alignment in this section is approximately 5 to 10 feet lower in elevation than the surrounding areas, although not as deep as the open cut section (Photographs 36 and 37). Land uses along the right-of-way and on the east side of South Avenue are primarily residential, including the New York City Housing Authority Mariner's Harbor complex, with some industrial uses north of the right-of-way and east of South Avenue. Portions of this section are still in use as an active railway. Due to the height of the cross street overpasses, there are high retaining walls along either side of the railroad tracks at the cross streets, which are lower between the overpasses. The Proposed Project would be located within the present southern embankment of the section from Harbor Road to South Avenue and would require removal of this earthen balk behind the retaining walls.

The Archaeological APE terminates at South Avenue, where the former Arlington Station was located and where the present project proposes a new station and parking lot on the southwest side of the intersection (Photograph 38). The proposed station area is a gravel-covered lot used for storage and stockpiling of materials. Portions of this parcel are proposed as potential construction staging areas. Another potential construction staging area is proposed near Lockman Loop, south of the ROW in a vacant area.

IV. Topography and Hydrology

The overall project site contains a range of topographical and hydrological conditions. The characteristics of each section are described below. Historical conditions are based on the U.S.G.S. and Bien and Vermeule topographical maps from 1891, which depicted contour lines at 20-foot intervals. Current conditions are based on modern project mapping, with elevations depicted at 2-foot contour intervals (NAVD 88 datum) and allowing for greater accuracy. The following discussion of topography has accounted for these discrepancies.

A. Section 1: St. George

Section 1 contains two distinct landforms. The beginning of the section is along Richmond Terrace, which runs along a natural bluff overlooking the waterfront. Historically this area was mapped in elevation from approximately 40 feet above sea level (ASL) at the southern terminus to closer to 20 or 30 feet ASL at Nicholas Street. Today, the elevation at the Staten Island Ferry terminus on Richmond Terrace is approximately 45 feet. Richmond Terrace descends gradually, with elevations ranging from 35-40 feet along the alignment to Jersey Street.

The portion of the section from Nicholas Street to Jersey Street was historically below the natural bluff along the shoreline, which was landfilled to create the level surface for the railroad tracks. In 1891, the first year in which elevations were noted on historic maps, this area was mapped as 0-20 feet above sea level. Today, this area is mapped as approximately elevation 8 to 15 feet.

The nearest water source in this section is Upper New York Bay and the Kill Van Kull, which historically was either immediately adjacent to the alignment or beneath it in areas where this section has been landfilled.

B. Section 2: New Brighton Waterfront

Section 2 is located along the Kill Van Kull shoreline, and as such, elevations historically were less than 20 feet ASL, and in some cases, within the water at or below sea level. Today elevations are still generally less than 20 feet along most of Section 2, with a few locations at about the 20-foot mark where the section includes portions of the hillside leading down from Richmond Terrace. Some areas are currently under the water of the Kill Van Kull. A perennial stream empties into the Kill Van Kull between the two ends of Snug Harbor Road within Section 2.

C. Section 3: West Brighton Waterfront

Section 3 is also located along the Kill Van Kull shoreline, much of which was once under water and has been landfilled to create the current waterfront areas. Today elevations range from approximately 8-10 feet.

D. Section 4: Viaduct

Section 4 contains the existing viaduct that formerly carried the railroad. There are two distinct portions of the section. The eastern portion continues along the Kill Van Kull shoreline, much of which was once under water or marshland and has been landfilled to create the current waterfront areas. Elevations of the current ground surface generally range from elevation 5-10, with some areas slightly higher. The viaduct ranges from approximately 20-25 feet above the ground surface, depending on location. Bodine Creek crosses the section and empties into the Kill Van Kull west of the Port Richmond Water Pollution Control Plant.

The western portion of this section was on land that was not historically under water. Historically elevations ranged from just below to just above 20 feet ASL. Although there has been considerable earthmoving in these areas as the neighborhoods were developed and the railroad and viaduct were constructed, overall elevations are not markedly different across the section today. This western portion of the section is further inland from the Kill Van Kull than the eastern portion. A perennial stream once crossed the section just west of Treadwell Avenue.

E. Section 5: Open Cut

Section 5 contains the open cut section of the former railroad alignment. The landform has been artificially created by excavating the original ground surface to separate the grade of the railroad from the cross streets. The cut is approximately 20-30 feet below the surrounding terrain, depending on location. The nearest natural water source was the Kill Van Kull.

F. Section 6: Arlington Station

Section 6 continues the alignment through a slightly depressed area that is not as deep as the open cut but is still up to 10 feet lower in elevation than the surrounding landform, at approximately elevation 25-27 feet. The section

terminates at the proposed Arlington Station, which is at approximately elevation 30 feet. Historically, several small tributaries of Bridge Creek were located several hundred feet to the south of this section, depending on location.

V. Soils

According to the soil survey for New York City, there are five different soil units mapped across the overall project site. The following is a description of the soil mapping units by section. Figure 5 illustrates the location of the Archaeological APE on the soil survey map for New York City.

A. Section 1: St. George

There are three soil units mapped for Section 1. The portion of the section containing the streetbed of Richmond Terrace is mapped as unit 324, Pavement & buildings-Greenbelt-Cheshire complex, 0 to 8 percent slopes. It is described as:

Nearly level to gently sloping areas of till plains and moraines that have been partially filled with natural soil materials, mostly for residential use; a mixture of anthropogenic soils and red till soils, with up to 80 percent impervious pavement and buildings covering the surface; located in eastern Staten Island (USDA 2008:17-18).

The landfilled area along the shoreline of Section 1 below Richmond Terrace is mapped as unit 101, Pavement & buildings, wet substratum-Laguardia-Ebbets complex, 0 to 8 percent slopes. It is described as:

Nearly level to gently sloping urbanized areas filled with a mixture of natural soil materials and construction debris over swamp, tidal marsh, or water; a mixture of anthropogenic soils which vary in coarse fragment content, with up to 80 percent impervious pavement and buildings covering the surface (USDA 2008:12).

The remainder of Section 1 is mapped as unit 260, Pavement & buildings-Foresthills-Wethersfield complex, 0 to 8 percent slopes. It is described as:

Nearly level to gently sloping areas of urbanized till plains that have been cut and filled for residential use; a mixture of anthropogenic and red till soils, with up to 80 percent impervious pavement and buildings covering the surface; located in Staten Island (USDA 2008:16).

The *Basis of Design Report* (VHB and STV 2020:121) noted that one set of soil borings had been reviewed by the project team within Section 1. The report indicated:

The Richmond Terrace Retaining Wall Assessment project included 10 borings performed between Westervelt Avenue and Nicholas Street. Subsurface conditions generally consisted of medium dense granular fill overlying medium dense silty sand or very stiff clay or silt. Decomposed bedrock followed by serpentine bedrock underlies the overburden materials.

These soil borings were not available to review for this report.

B. Section 2: New Brighton Waterfront

Much of Section 2 is mapped as unit 260, Pavement & buildings-Foresthills-Wethersfield complex, 0 to 8 percent slopes, described above.

The portion of Section 2 including the Sailors' Snug Harbor waterfront is mapped as unit 250, Unadilla-Riverhead-Pavement & buildings complex, 0 to 8 percent slopes. It is described as:

Nearly level to gently sloping areas of outwash plains that are partially developed for parks, hospitals, and cultural facilities; a mixture of silty and loamy outwash soils, with more than 15 percent impervious pavement and buildings covering the surface (USDA 2008:16).

C. Section 3: West Brighton Waterfront

Section 3 is mapped as unit 101, Pavement & buildings, wet substratum-Laguardia-Ebbets complex, 0 to 8 percent slopes, described above.

D. Section 4: Viaduct

The eastern side of Section 4 is mapped as unit 101, Pavement & buildings, wet substratum-Laguardia-Ebbets complex, 0 to 8 percent slopes, described above. The western side is mapped as unit 260, Pavement & buildings-Foresthills-Wethersfield complex, 0 to 8 percent slopes, described above.

E. Section 5: Open Cut

Section 5 is mapped as unit 260, Pavement & buildings-Foresthills-Wethersfield complex, 0 to 8 percent slopes, described above.

F. Section 6: Arlington Station

The majority of Section 6 is mapped as unit 260, Pavement & buildings-Foresthills-Wethersfield complex, 0 to 8 percent slopes, described above.

The portion of Section 6 west of South Avenue is mapped as unit 100, Inwood-Laguardia-Ebbets complex, 0 to 8 percent slopes. It is described as:

Nearly level to gently sloping areas that have been filled with a mixture of natural soil materials and construction debris; a mixture of anthropogenic soils which vary in coarse fragment content (USDA 2008:12).

Soil borings were provided for portions of this section, from a program undertaken by the NYCEDC in from 2002-2008 for the proposed reactivation of the Staten Island Railroad (HNTB 2008). The soil borings within or immediately adjacent to the Section 6 Archaeological APE, along the south side of the ROW, included Borings B44, B46, B48, B50, B52, B54, B56, B58, B60, B62, and B64. The soil boring locations and logs are included as Appendix B. Generally, those soil borings that were not specifically next to the railroad tracks did not record upper levels of fill, suggesting that natural soils could still exist in these locations.

VI. Precontact Summary

For this report, the word precontact is used to describe the period prior to the use of formal written records. In the western hemisphere, the precontact period also refers to the time before European exploration and settlement of the New World. Archaeologists and historians gain their knowledge and understanding of precontact Native Americans in the lower Hudson Valley area from three sources: ethnographic reports, Native American artifact collections, and archaeological investigations.

Based on data from these sources, a precontact cultural chronology has been devised for the New York City area. Scholars generally divide the precontact era into three main periods, the Paleo-Indian (c. 14,000-9,500 years ago), the Archaic (c. 9,500-3,000 years ago), and the Woodland (c. 3,000-500 years ago). The Archaic and Woodland periods are further divided into Early, Middle, and Late substages. The Woodland was followed by the Contact Period (c. 500-300 years ago). Artifacts, settlement, subsistence, and cultural systems changed through time with each of these stages. Characteristics of these temporal periods have been well documented elsewhere, and in keeping with guidelines issued by the NYSOPRHP (2005), will not be fully reiterated here.

Scholars often characterize precontact sites by their close proximity to a water source, fresh game, and exploitable natural resources (i.e., plants, raw materials for stone tools, clay veins, etc.). These sites are often separated into three categories: primary (campsites or villages), secondary (tool manufacturing, food processing), and isolated

finds (a single or very few artifacts either lost or discarded). Primary sites are often situated in locales that are easily defended against both nature (weather) and enemies. Secondary sites are often found in the location of exploitable resources (e.g., shell fish, lithic raw materials).

VII. Previously Recorded Archaeological Sites

Records on file at the NYSOPRHP, the NYSM, and the *Archaeological Evaluation and Sensitivity Assessment of Staten Island, New York* prepared for the LPC by Eugene Boesch in 1994, indicate that there are numerous precontact and historic period archaeological sites within one mile of the APE. Mapped NYSM archaeological site locations generally include much larger areas than the actual site footprint, often due to vague descriptions of the site location and a former policy of mapping a large buffer zone around each site, whereas NYSOPRHP and LPCdocumented archaeological sites are more tightly pinpointed on the maps and generally are more accurate in terms of locations. The maritime resources within the Kill Van Kull north of the APE were recorded during U.S. Army Corps of Engineers' surveys over the past 25 years (Raber Associates 1996; Panamerican 1996, 2002, 2008). All have been evaluated for S/NRHP eligibility, and those that were determined eligible have been mitigated in advance of channel widening that would have impacted these resources.

All archaeological sites within a one-mile radius of the APE in New York are summarized, below, by section. The listings generally are organized from east to west. While the archaeological sites may be within a one-mile radius of multiple sections, they are listed in the tables using the closest section location. Any sites in New Jersey within a one-mile radius are not included. In some cases, discrete archaeological sites were given multiple numbers by each recording agency; where this is the case all of the site numbers are listed in one heading. Those archaeological sites overlapping or abutting the APE are shown in **bold type**, and discussed further, under each section table.

Table 1: Archaeological sites within a one-mile radius of Section 1 of the APE				
Site number(s) / name(s)	Location / Distance from APE	Type of site / Date	Status	
NYSM 6956	Large area on both sides of Bay	Unknown / unknown	Undetermined	
	Street / ca. 0.5 mile south	precontact		
Boesch 114	Stapleton shoreline area / ca. 0.8	Small camp /	Undetermined	
	mile south	Woodland		
Boesch 37	Louis Street vicinity / ca. 1 mile	Unknown / unknown	Undetermined	
	southwest	precontact		
NYSM 4618	Ward's Hill near Cebra Ave. /	Traces of occupation /	Undetermined	
Boesch 67	ca. 0.5 mile southwest	Woodland		
NYSM 8472	South of Victory Boulevard near	Campsite / Woodland	Undetermined	
Boesch 115	Tompkins Circle / ca. 0.4 mile			
Tompkinsville	southwest			
NYSM 4629	Large, amorphous location	Campsite, traces of	Undetermined	
Boesch 69	encompassing much of the St.	occupation		
Stuyvesant Place	George neighborhood,			
archaeological site	overlaps Section 1 from the			
	Staten Island Ferry to St.			
	Peters Place			
80501.002853	Hyatt Street and Central Avenue	Nineteenth-century	S/NRHP eligible	
U.S Quarantine Grounds	/ ca. 0.1 mile southwest	hospital and cemetery		
Marine Hospital &				
cemetery				
Boesch 112	Fort Hill vicinity / ca. 0.4 mile	Unknown / Woodland	Undetermined	
Fort Hill	west			

A. Section 1: St. George

 Table 1: Archaeological sites within a one-mile radius of Section 1 of the APE

As Table 1, above, indicates, one precontact period archaeological site has been recorded overlapping Section 1. This large, amorphously mapped site includes much of the St. George neighborhood. It's generalized location and scant documentation suggests that the likelihood is low that this site is extant within Section 1.

B. Section 2: New Brighton Waterfront

Site number(s) / name(s)	Location / Distance from APE	Type of site / Date	Status
NYSM 4614	Harbor Hill vicinity / ca. 0.5	Campsite / unknown	Undetermined
Boesch 66	mile south	precontact	
Harbor Hill			
NYSM 4613	Silver Lake vicinity / ca. 1.0	Camps / Woodland	Undetermined
Boesch 68	mile southwest		
NYSM 4612	Harbor Hill vicinity / ca. 0.6	Campsite / Woodland	Undetermined
Boesch 65	mile south	-	
Harbor Hill/Golf Link			
Boesch 120	Sailors' Snug Harbor / ca. 500	Small camp / unknown	Undetermined
	feet south	precontact	
NYSM 4591	Vicinity of Sailors' Snug	Village with burials /	Undetermined
Boesch 63	Harbor, overlaps Section 2	Woodland	
Upper or Pelton's Cove	-		
08501.000010	Sailors' Snug Harbor / ca. 400	19 th century complex	Undetermined
Sailors' Snug Harbor	feet south		
Historic Archaeological			
Site			
08501.002361	Sailors' Snug Harbor / ca. 600	19 th century	Undetermined
Stratified 19 th century	feet south		
deposit			

One precontact site has been mapped as overlapping Section 1, as shown in Table 2, above. Site NYSM 4591 or Upper Pelton's Cove, was described in 1909 by Alanson Skinner, who wrote:

A village site and burial ground at Upper or Pelton's Cove occur between Livingston and West New Brighton. When the Shore Road [now called Richmond Terrace] was cut through this place many years ago, numbers of skeletons, etc. were found. This site is now obliterated. During the last ten or twenty years, there has been absolutely nothing to show aboriginal occupation (Skinner 1909:4).

Although this site is mapped as once overlapping Section 2, it is assumed, based on the description by Skinner and the large amount of subsequent disturbance to the area, that the site has been largely destroyed.

C. Section 3: West Brighton Waterfront

Table 3: Archaeological sites within a one-mile radius of Section	on 3 of the APE

Site number(s) / name(s)	Location / Distance from APE	Type of site / Date	Status
NYSM 734	Pelton's Cove vicinity,	Village with burials /	Undetermined
Boesch 64	overlaps Section 3	unknown precontact	
NYSM 8474	Elizabeth Avenue area / ca. 500	Camp / unknown	Undetermined
	feet south	precontact	
NYSM 8475	Elm Street area / ca. 900 feet	Camp / unknown	Undetermined
	south	precontact	
08501.002362	South side of Richmond Terrace	Historic and possibly	S/NRHP eligible
Staten Island Cemetery	between Tompkins Court and	precontact cemetery	
	Alaska Street / ca. 200 feet		
	southeast		

Site number(s) / name(s)	Location / Distance from APE	Type of site / Date	Status
08501.002616	Kill Van Kull / ca. 400 feet north	Possible wooden	Formally recorded and
Vessel V-10		sailing lighter	mitigated, S/NRHP
			individually eligible
08501.002611	Kill Van Kull / ca. 400 feet north	Possible wooden	S/NRHP not eligible
Vessel V-9		sailing lighter	_
08501.002605	Kill Van Kull / ca. 400 feet north	Small beam engine	Formally recorded and
Vessel V-5		wood	mitigated, S/NRHP
			individually eligible
08501.002701	Kill Van Kull / ca. 400 feet north	Wooden steam bucket	S/NRHP not eligible
Vessel V-3		or suction dredge	

One precontact site has been mapped overlapping Section 3, as shown in Table 3, above. This site, although given a different NYSM number than Upper Pelton's Cove from Section 2, appears to be another locus of the same site described by Skinner (1909:4) above. It, too, has likely been destroyed considering the large amount of subsequent disturbance to the area.

D. Section 4: Viaduct

Site number(s) / name(s)	Location / Distance from APE	Type of site / Date	Status
Boesch 107	Castleton and Palmer Avenues /	Camp / unknown	Undetermined
	ca. 0.6 mile south	precontact	
08501.002612	Kill Van Kull / ca. 300 feet north	Possible wooden	S/NRHP not eligible
Vessel V-15		sailing lighter	
08501.002617	Kill Van Kull / ca. 500 feet north	Steel steam lighter	Formally recorded and
Vessel V-28			mitigated, S/NRHP individually eligible
NYSM 7813	Large, amorphous location	Traces of occupation	Undetermined
	along Kill Van Kull shoreline	/ unknown	
	and both sides of Clove Road,	precontact	
	overlaps Section 4		
NYSM 4592	Between Cedar and Dongan	Village and burials /	Undetermined,
08501.000004	Streets / ca. 800 feet south	unknown precontact	destroyed
Boesch Site 62			
Ascension Church			
NYSM 7812	Large, amorphous location along	Camp / unknown	Undetermined
	Clove Road / ca. 0.2 mile south	precontact	
Boesch Site 106	Vague location near Herberton	Camps / unknown	Undetermined
Port Richmond	and Albion Avenues / ca. 0.4	precontact	
	mile south		
Boesch Site G	Vague location overlapping the	Unknown precontact	Undetermined
Erastina	boundary edges of Section 4/5		

Table 4: Archaeological	sites within a or	ne-mile radius of	f Section 4 of the APE

Two precontact period archaeological sites have been mapped as overlapping Section 4, as shown in Table 4, above. NYSM 7813 was recorded by Parker in 1922 and is noted merely as "traces of occupation" over a large area. Another site, known as "Erastina," was recorded by the Staten Island Institute of Arts and Sciences (SIIAS; now the Staten Island Museum) as Site STD-E, but never formally listed with the NYSOPRHP or the NYSM. Its general location, bounded roughly by Hooker Street on the south, Richmond Terrace on the north, and several blocks to the east and west of the APE, was mapped by Boesch in his 1994 sensitivity report. It was noted by Boesch as a precontact site but was not recorded as having firm boundaries or any other data.

E. Section 5: Open Cut

 Table 5: Archaeological sites within a one-mile radius of Section 5 of the APE

Site number(s) / name(s)	ites within a one-mile radius of Sec Location / Distance from APE	Type of site / Date	Status
Boesch Site G	Vague location overlapping the	Unknown precontact	Undetermined
Erastina	boundary edges of Section 4/5	F	
08501.002828	Kill Van Kull / ca. 0.4 mile north	Vessel Paul E.	Formally recorded and
Vessel Paul E. Thurlow		Thurlow	mitigated, S/NRHP
(KVK 37)			individually eligible
08501.002827	Kill Van Kull / ca 0.3 mile north	Vessel Fish Hawk	Formally recorded and
Vessel Fish Hawk (KVK			mitigated, S/NRHP
33)			individually eligible
08501.002826	Kill Van Kull / ca 0.3 mile north	Unnamed suction	Formally recorded and
Unnamed suction dredge		dredge	mitigated, S/NRHP
(KVK 36)			individually eligible
08501.002825	Kill Van Kull / ca 0.3 mile north	Balanced floating dry	Formally recorded and
Balanced floating dry		dock	mitigated, S/NRHP
dock (KVK 38)			individually eligible
08501.002653	Kill Van Kull / ca 0.3 mile north	Wooden hopper barge	S/NRHP not eligible
Vessel V-64			
08501.002703	Kill Van Kull / ca 0.3 mile north	Wooden steam bucket	S/NRHP not eligible
Vessel V-45		or suction dredge	
08501.002702	Kill Van Kull / ca 0.2 mile north	Wooden steam bucket	S/NRHP not eligible
Vessel V-36		or suction dredge	_
08501.002700	Kill Van Kull / ca 0.3 mile north	Possible menhaden	S/NRHP not eligible
Vessel V-33		boat	
08501.002655	Kill Van Kull / ca 0.3 mile north	Wooden hopper barge	S/NRHP not eligible
Vessel V-65			
08501.002687	Kill Van Kull / ca 0.3 mile north	Wooden steam pile	S/NRHP not eligible
Vessel V-44		drivers	
08501.002683	Kill Van Kull / ca 0.3 mile north	Wooden floating	S/NRHP not eligible
Vessel V-89		drydock	
08501.002681	Kill Van Kull / ca 0.3 mile north	Wooden floating	S/NRHP not eligible
Vessel V-79		drydock	
08501.002684	Kill Van Kull / ca 0.3 mile north	Wooden floating	S/NRHP not eligible
Vessel V-90		drydock	
08501.002682	Kill Van Kull / ca 0.3 mile north	Wooden floating	S/NRHP not eligible
Vessel V-88		drydock	
08501.002630	Kill Van Kull / ca 0.3 mile north	Wooden car float	S/NRHP not eligible
Vessel V-78			
08501.002614	Kill Van Kull / ca 0.3 mile north	Tug	S/NRHP not eligible
Vessel V-84			
08501.002656	Kill Van Kull / ca 0.3 mile north	Wooden hopper barge	S/NRHP not eligible
Vessel V-75			
08501.002613	Kill Van Kull / ca 0.3 mile north	Possible wooden	S/NRHP not eligible
Vessel V-83		sailing lighter	
08501.002680	Kill Van Kull / ca 0.3 mile north	Wooden floating	S/NRHP not eligible
Vessel V-68		drydock	
08501.002686	Kill Van Kull / ca 0.3 mile north	Small canal boat	S/NRHP not eligible
Vessel V-100			
08501.002685	Kill Van Kull / ca 0.3 mile north	Small canal boat	S/NRHP not eligible
Vessel V-99			

Site number(s) / name(s)	Location / Distance from APE	Type of site / Date	Status
NYSM 4594	Large area along shore of Kill	Traces of occupation	Undetermined
(mistakenly identified as	Van Kull, running inland to	/ unknown	
Bowman's Brook on	south of APE, overlaps	precontact	
CRIS)	Sections 5 and 6		
Boesch Site I	Richmond Terrace near Lake	Unknown precontact	Undetermined
North Shore	Ave. / ca. 0.2 mile north		
Boesch Site 105	South of Richmond Terrace near	Camps / unknown	Undetermined
Mariners Harbor	Simonson Ave. / ca. 0.1 mile north	precontact	
NYSM 8506	Large, vague location, overlaps	Camp / unknown	Undetermined
	Section 5	precontact	
NYSM 4593	Large area east of South Ave. opposite Arlington Station, overlaps Sections 5 and 6	Traces of occupation / unknown precontact	Undetermined

Several precontact period archaeological sites have been amorphously mapped by the NYSM as overlapping Section 5, as shown in Table 5, above. It is likely that these discretely mapped sites are actually the same "traces of occupation" noted by Skinner (1909:5) who indicated:

At Mariners' Harbor, beginning about half a mile south of the station and running north to Bowman's Point, in every field are traces of prolonged occupation, fire-cracked stones, flint chips, potsherds, and the like.

Given the widespread development in this area since the turn of the twentieth century, which has almost entirely obliterated the fields Skinner refers to, it is expected that most of the remains from these precontact period archaeological resources have been destroyed.

F. Section 6: Arlington Station

0	tes within a one-mile radius of Sec		1
Site number(s) / name(s)	Location / Distance from APE	Type of site / Date	Status
NYSM 4594	Large area along shore of Kill	Traces of occupation	Undetermined
(mistakenly identified as	Van Kull, running inland to	/ unknown	
Bowman's Brook on	south of APE, overlaps	precontact	
CRIS)	Sections 5 and 6	-	
NYSM 4593	Large area east of South Ave.	Traces of occupation	Undetermined
	opposite Arlington Station,	/ unknown	
	overlaps Sections 5 and 6	precontact	
NYSM 7811	Large, vague location / ca. 200	Camp / unknown	Undetermined
	feet north	precontact	
NYSM 730	Across South Ave. from	Shell middens and	Undetermined
08501.000138	Arlington Station / abuts	camps / Woodland	
Boesch Site 33	Section 6 on north	_	
Arlington Station			
NYSM 728	Area in vicinity of Bailey Place	Camp / unknown	Undetermined
Boesch Site 25	and Arlington Ave. / ca. 0.3 mile	precontact	
Arlington Avenue	north	-	
08501.000137	Vicinity of Arlington Avenue	Unknown precontact	Undetermined
Arlington Avenue	and Richmond Terrace / ca. 0.5	-	
-	mile north		
08501.000139	Area north of Arlington Place		Undetermined
NYSM 729	near Northfield Ave. / ca. 0.2		
Boesch Site 34	mile northwest		
Arlington Place			

Table 6: Archaeological sites within a one-mile radius of Section 6 of the APE

Site number(s) / name(s)	Location / Distance from APE	Type of site / Date	Status
NYSM 731	Bailey Place vicinity / ca. 0.4	Camp	Undetermined
Boesch Site 35	mile northwest	-	
Gerties Knoll			
NYSM 732	West of Cable Way / ca. 0.2 mile	Early-Late Archaic	Undermined
Boesch Site 24	southwest	5	
Goodrich			
08501.002688	Kill Van Kull / ca. 0.7 mile	Wood Pile Driver	S/NRHP not eligible
Vessel V-112	northwest		bittitill not engiote
08501.002623	Kill Van Kull / ca. 0.7 mile	Wood Derrick Lighter	S/NRHP not eligible
Vessel V-113	northwest	Wood Derrick Eighter	Shitten not engine
08501.002638	Kill Van Kull / ca. 0.7 mile	A-Frame Crane Barge	Formally recorded and
Vessel V-105	northwest	Tranie Clane Barge	mitigated, S/NRHP
			individually eligible
08501.002666	Kill Van Kull / ca. 0.7 mile	Covered Barge	S/NRHP not eligible
Vessel V-121	northwest	C C	C
08501.002624	Kill Van Kull / ca. 0.7 mile	Wood Derrick Lighter	S/NRHP not eligible
Vessel V-120	northwest	5	5
08501.002637	Kill Van Kull / ca. 0.7 mile	Floating Concrete	S/NRHP not eligible
Vessel V-119	northwest	Plant	
08501.002661	Kill Van Kull / ca. 0.8 mile	Covered Barge	S/NRHP not eligible
Vessel V-144A	northwest		Difficult not engine
08501.002660	Kill Van Kull / ca. 0.8 mile	Covered Barge	S/NRHP not eligible
Vessel V-144	northwest	Covered Burge	bittitill not engiote
08501.002639	Kill Van Kull / ca. 0.9 mile	A-Frame Crane Barge	S/NRHP not eligible
Vessel V-169	northwest	A France Crane Darge	Shitten not engine
08501.002662	Kill Van Kull / ca. 0.9 mile	Covered Barge	S/NRHP not eligible
Vessel V-162	northwest	Covered Barge	S/INCIT not engible
08501.002631	Kill Van Kull / ca. 0.9 mile	Wood Car Float	Formally recorded and
Vessel V-155	northwest	wood Car Ploat	mitigated, S/NRHP
vesser v-155	northwest		individually eligible
08501.002657	Kill Van Kull / ca. 0.9 mile	Trap Rock Scow	Formally recorded and
Vessel V-173	northwest	Trap Rock Scow	mitigated, S/NRHP
vesser v-175	lloruiwest		
08501.002((2	Kill Van Kull / ca. 0.9 mile	Coursed Down	individually eligible
08501.002663		Covered Barge	S/NRHP not eligible
Vessel V-167	northwest		
08501.002645	Kill Van Kull / ca. 0.9 mile	Wood Coastwise Hold	S/NRHP not eligible
Vessel V-166	northwest	Barge	
08501.002647	Kill Van Kull / ca. 0.9 mile	Wood Harbor Scow	S/NRHP not eligible
Vessel V-157	northwest	W 1H 1 0	
08501.002648	Kill Van Kull / ca. 0.9 mile	Wood Harbor Scow	S/NRHP not eligible
Vessel V-158	northwest	~ / 1	
NYSM 4630	Large area south of Richmond	Camp / unknown	Undetermined
	Terrace in Mariners Marsh Park	precontact	
	/ ca. 0.3 mile northwest		
NYSM 8507	Large area south of Richmond	Camp / unknown	Undetermined
	Terrace in Mariners Marsh Park	precontact	
	/ ca. 0.3 mile northwest	x 7'11 / x · · · · · ·	
NYSM 7321	Large area south of Richmond	Village / Late Archaic-	Undetermined
Bowman's Brook	Terrace in Mariners Marsh Park	Late Woodland	
Boesch Site 26	/ ca. 0.3 mile northwest		
Bowman's Brook,			
Newton's Creek, Deharts			
NYSM 8505	Large area near Howland Hook	Traces of occupation /	Undetermined
	Terminal / ca. 0.6 mile northwest	unknown precontact	

Site number(s) / name(s)	Location / Distance from APE	Type of site / Date	Status
08501.002364	North of Richmond Terrace / ca.	Village / Late Archaic-	Undetermined
NYSM 7321	0.7 mile northwest	Late Woodland	
Locus 1			
Bowman's Brook North			
08501.002365	North of Richmond Terrace / ca.	Domestic site with	Undetermined
Locus 2	0.8 mile northwest	well / mid-19 th century	
Richmond Terrace			
Historic Archaeological			
Site			
NYSM 4595	Large area north of I-278 near	Village, burying	Undetermined
	Western Ave. / ca. 0.7 mile west	ground /	
		Contact/Revolutionary	
		War	
08501.002971	North of I-278 near Western	Camp /	S/NRHP eligible
Old Place Neck Site	Ave. / ca. 0.9 mile southwest	Multicomponent,	-
		possible Paleo Indian,	
		Archaic, Woodland,	
		Contact period	
08501.002375	North of I-278 near Western	Revolutionary War era	Undetermined
Locus 19 Revolutionary	Ave. / ca. 0.9 mile southwest		
Skirmish and Burials			
08501.002366	North of I-278 near Western	Camp / Archaic-Late	Undetermined
Locus 9	Ave. / ca. 1 mile southwest	Woodland	
Old Place Prehistoric Site			
08501.002367	North of I-278 near Western	Domestic / c. 1790	Undetermined
Locus 10	Ave. / ca. 1 mile southwest		
Site of Haughwout House			
(c. 1790)			
NYSM 7215	North of I-278 near Western		Undetermined
Old Place Loci 1-8	Ave. / ca. 1 mile southwest		
08501.002371	North of I-278 near Western	Outbuilding / 20 th	Undetermined
Whalen Trucking Co.	Ave. / ca. 0.9 mile southwest	century	
Locus 15			
Outbuilding Site			
08501.002373	North of I-278 near Western	Unknown structure	Undetermined
Whalen Trucking Co.	Ave. / ca. 0.9 mile southwest		
Locus 17			
Unidentified Structure		D (1700	TT 1 / 1
08501.002370	North of I-278 near Western	Domestic / 1790	Undetermined
Whalen Trucking Co.	Ave. / ca. 0.9 mile southwest		
Locus 14			
1790 Domestic Site	North of I-278 near Western	Damastia / 1700	Undetermined
08501.002372 Whalen Trushing Ca		Domestic / 1790	Undetermined
Whalen Trucking Co.	Ave. / ca. 0.9 mile southwest		
Locus 16			
1790 Domestic Site	North of I-278 near Western	Domestic / 1680	Undetermined
08501.002374	Ave. / ca. 0.9 mile southwest	Domestic / 1680	Undetermined
Locus 18 Tuniagan'a 1680 Domostia	Ave. / ca. 0.9 mile southwest		
Tunissen's 1680 Domestic			
Structure NYSM 7216	Large area surrounding L 279 /	Traces of accuration /	Undetermined
IN I SIVI /210	Large area surrounding I-278 / ca. 0.6 mile southwest	Traces of occupation /	Undetermined
	ca. 0.0 mile southwest	unknown precontact	

There are two precontact period "traces of occupation" sites noted in Table 6, above, and described under Section 5. One additional precontact period archaeological site, the Arlington Station site, was once located immediately adjacent to the Section 6 APE, on the west side of South Avenue just north of the SIRT tracks. Skinner (1909:5) wrote:

On South Avenue, just opposite the Arlington Station of the Staten Island Rapid Transit Railroad, is what remains of a once much larger sandy knoll, most of which has been dug away. In May 1902, half-a-dozen shell pits were opened, all of which averaged from four to six feet deep, with about an equal breadth. They were all bowl-shaped and contained animal bones, oyster shells, etc. Several bone and antler implements, a quantity of typical Algonkin pottery, fragments of quite a number of clay pipes, stone arrow points, scrapers, hammerstones, and a flat, thin, double-sided mortar or metate were found. A portion of a pestle, a grooved axe, and a grooved adze were picked up nearby. Several small shell-heaps averaging ten by six feet, and from four to six inches deep, containing the usual camp refuse, were also opened. In the nearby fields, portions of a couple of bannerstones, grooved axes, a couple of celts, and a number of celt (?) blades were picked up. Celts are very rare on the north shore of Staten Island; the writer in ten years of collecting has never obtained a single specimen, and has not seen more than two or three. A stone gouge, the only one reported from Staten Island, was found nearby.

Today the area once containing the Arlington Station site contains warehouses and a building supply storage lot on an artificially leveled landform. It is assumed that the archaeological site on the sandy knoll has been destroyed.

VIII. Previously Recorded Archaeological Surveys

Records on file at the NYSOPRHP, LPC, and the library of HPI indicate that there have been a number of archaeological surveys completed within a one-mile radius of the APE. Some of the surveys are wholly within or overlap portions of the APE. All archaeological surveys within a one-mile radius of the APE in New York are summarized, below, by section. As with the archaeological sites in the previous section, the listings for the surveys generally are organized from east to west. In some cases where localized archaeological surveys may be within a one-mile radius of multiple sections, they are listed in the tables using the closest section location. Long, linear surveys stretching across multiple sections are listed in each section table. Those archaeological surveys overlapping or abutting the APE are shown in **bold type**, and discussed further, under each section table.

A. Section 1: St. George

Project Name	Location / Distance from APE	Study type and findings	Reference
Cross Harbor Freight	Alignment running from New	Phase IA Literature	Hartgen 2002
Movement Project: Port	York Bay to Kill Van Kull	Review and Archeological	
Ivory Yard, Arlington	shoreline and former SIRT	Sensitivity Assessment;	
Yard, Eleven Railroad	ROW, then west to Port Ivory /	further archaeological	
Crossings and Proposed	ca. 0.2 mile south	investigations	
Tunnel		recommended in limited	
		locations	
Removal of Drift	Kill Van Kull Reach, from the	Maritime archaeological	Panamerican 1996
	Staten Island Ferry to Port	survey; S/NRHP	
	Ivory / abutting Section 1	resources identified for	
	within the Kill Van Kull	mitigation	
New York and New	100 feet on either side of Kill	Remote Sensing Survey;	Panamerican 2002
Jersey Harbor	Van Kull channel / abutting	numerous resources	
Navigation Study, Upper	Section 1 within the Kill Van	identified and	
and Lower Bay	Kull	recommended for further	
		investigation	

 Table 7: Archaeological surveys within a one-mile radius of Section 1 of the APE

Project Name	Location / Distance from APE	Study type and findings	Reference
New Stapleton Waterfront Plan	Stapleton waterfront south of Hannah Street / ca. 0.4 mile south	Phase IA Cultural Resources Assessment; selected waterfront resources recommended for further work if impacted	Louis Berger Group 2006
National Lighthouse Museum	Bay Street at the St. George terminal / abutting Section 1 on the south	Stage IA Archaeological Survey; monitoring recommended but never undertaken	Cragsmoor Consultants 2004
National Lighthouse Redevelopment Project, Block 1, Portion of Lot 60	Bay Street at the St. George terminal / abutting Section 1 on the south	Phase IA Archaeological Survey; Phase IB recommended	Cragsmoor Consultants 2007
National Lighthouse Redevelopment Project, Block 1, Portion of Lot 60	Bay Street at the St. George terminal / abutting Section 1 on the south	Phase 1B Archaeological Survey; no significant archaeological resources found	Cragsmoor Consultants 2008
Staten Island Criminal Court and Family Court Complex	Hyatt Street and St. Marks Place / ca. 0.1 mile southwest	Phase IA Cultural Resources Investigation, Topic-Intensive Research; field investigations recommended	HPI 2000
Staten Island Criminal Court and Family Court Complex	Hyatt Street and St. Marks Place / ca. 0.1 mile southwest	Phase IB, II, and III Field Investigation, no further studies after Phase III mitigation	HPI 2017
Staten Island Courthouse, Interim Construction Parking Lot, Block 8, Lots 1, 11 and 14	Hyatt Street and St. Marks Place / ca. 0.1 mile southwest	Phase IA Archaeological Documentary Study; limited Phase IB testing recommended	HPI 2008
St. George Railyard	East of Richmond Terrace / includes Section 1 northwest of Nicholas Street	Phase IA Historical/Archaeological Sensitivity Evaluation; limited Phase IB testing recommended	Greenhouse 1989a
Proposed Minor League Baseball Stadium	East of Richmond Terrace / includes Section 1 northwest of Nicholas Street	Phase IA Memorandum; soil boring review indicated disturbance, no further work	Greenhouse 1999a
Staten Island Condominiums	Richmond Terrace and Stuyvesant Street / abutting Section 1	Phase IA Archaeological Assessment; Phase IB testing recommended	Bergoffen 2007
Staten Island Condominiums	Richmond Terrace and Stuyvesant Street / abutting Section 1	Phase IB Archaeological Field Testing; site heavily disturbed, no intact resources found	Bergoffen 2008

As Table 7, above shows, there have been a number of archaeological studies conducted within, abutting, and within a one-mile radius of Section 1. Two studies were completed that overlapped Section 1: the St. George Railyards project (Greenhouse 1989a) and the subsequent Minor League Baseball Stadium project (Greenhouse 1999a), now known as the Staten Island Yankees Stadium, which included much of the same area. The initial project recommended limited Phase IB testing. During, the 1999 field study, archaeologists monitored soil borings near Richmond Terrace between Nicholas Street and Wall Street, to search for possible precontact or Native American

resources along the former natural shoreline. The soil borings revealed an entirely disturbed soil profile, with no evidence of the former beach remaining. No further work was recommended.

Maritime projects abutting Section 1 included several studies along the Kill Van Kull and its shoreline (Panamerican 1996, 2002) which identified archaeological resources at various locations along the waterfront and beneath the Kill Van Kull. All of the resources identified as part of these studies have been evaluated and where necessary, mitigated.

Archaeological projects inland of Richmond Terrace included the National Lighthouse Redevelopment Project (Cragsmoor Consultants 2004, 2007, 2008), now under development, and the Staten Island Condominiums project (Bergoffen 2007, 2008), which has since been constructed.

B. Section 2: New Brighton Waterfront

Location / Distance from APE		Reference
Alignment running from New	Phase IA Literature	Hartgen 2002
York Bay to Kill Van Kull	Review and	0
shoreline and former SIRT	Archeological Sensitivity	
ROW beginning at Clinton	Assessment; further	
Avenue, then west to Port	archaeological	
Ivory / overlaps Section 2	investigations	
along shoreline		
		Panamerican 1996
		Panamerican 2002
	.	Panamerican 2002
Kun		
Sailors' Snug Harbor		LPC (Baugher and
	shoreline recommended	Lenik) 1990
Ĩ	not archaeologically	,
	significant	
	-	
	Cultural Resources Study;	Cotz 1984
Section 2		
	archaeological sensitivity	
	identified	
	D 11	LDG 1005
Sailors' Snug Harbor / south of	Predictive Model; locations	LPC 1985a
Sailors' Snug Harbor / south of Section 2	of precontact and historic	LPC 1985a
	of precontact and historic period archaeological	LPC 1985a
Section 2	of precontact and historic period archaeological sensitivity identified	
Section 2 Sailors' Snug Harbor / various	of precontact and historic period archaeological sensitivity identified Field testing, limited	LPC 1985a LPC 1985b
Section 2	of precontact and historic period archaeological sensitivity identified Field testing, limited archaeological resources	
Section 2 Sailors' Snug Harbor / various	of precontact and historic period archaeological sensitivity identified Field testing, limited archaeological resources recorded near the Matron's	
Section 2 Sailors' Snug Harbor / various locations south of Section 2	of precontact and historic period archaeological sensitivity identified Field testing, limited archaeological resources recorded near the Matron's Cottage	LPC 1985b
Section 2 Sailors' Snug Harbor / various	of precontact and historic period archaeological sensitivity identified Field testing, limited archaeological resources recorded near the Matron's	
	Location / Distance from APE Alignment running from New York Bay to Kill Van Kull shoreline and former SIRT ROW beginning at Clinton Avenue, then west to Port	Alignment running from New York Bay to Kill Van Kull shoreline and former SIRT ROW beginning at Clinton Avenue, then west to Port Ivory / overlaps Section 2 along shorelinePhase IA Literature Review and Archeological Sensitivity Assessment; further archaeological investigations recommended in limited locationsKill Van Kull Reach, from the Staten Island Ferry to Port Ivory / abutting Section 2 within the Kill Van KullMaritime archaeological survey; S/NRHP resources identified for mitigation100 feet on either side of Kill Van Kull channel / abutting Section 2 within the Kill Van KullRemote Sensing Survey; numerous resources identified and recommended for further investigationSailors' Snug Harbor Sailors' Snug Harbor / south ofPredictive Model; shoreline / south of

 Table 8: Archaeological surveys within a one-mile radius of Section 2 of the APE

Project Name	Location / Distance from APE	Study type and findings	Reference
Proposed Rose, Pond, and	Sailors' Snug Harbor / ca. 1000	Phase IA	Greenhouse 1988
Lions Gardens, Staten	feet south of Section 2	Historical/Archaeological	
Island Botanical Gardens		Sensitivity Evaluation;	
		Phase IB testing	
		recommended	
Proposed Rose, Pond, and	Sailors' Snug Harbor / ca. 1000	Phase IB testing; no	Greenhouse 1989b
Lions Gardens, Staten	feet south of Section 2	significant cultural	
Island Botanical Gardens		resources found, no further	
		work	
Proposed Tuscan Garden	Sailors' Snug Harbor / ca. 1200	Phase 1B Archaeological	JMA 2004
and Vineyards (Vicinity of	feet south of Section 2	Survey; one fieldstone wall	
Building P)		found, no further work	
		recommended	

Table 8 shows that the majority of Section 2 has been studied twice in the past. In 1990, LPC completed a Predictive Model of the Sailors' Snug Harbor shoreline, which included the portion of Section 2 from Tysen Street to the western end of Snug Harbor Road. The results of the study indicated that the strip of land between Richmond Terrace and the Kill Van Kull was not considered archaeologically sensitive. In 2002, Hartgen's Cross Harbor Freight Movement Project, which intended to reuse the SIRT ROW along the waterfront by creating a tunnel along the former alignment, included this same shoreline (beginning at Clinton Avenue and continuing to the end of the section at Davis Avenue). That report concluded that limited remains from the Sailors' Snug Harbor former boathouse and dock may be present within the area. The study also concluded that the shoreline areas could contain precontact deposits in areas that are now submerged but which would have been above sea level in precontact periods.

As with Section 1, several maritime projects along the Kill Van Kull also abut Section 2 (Panamerican 1996, 2002). All of the resources identified as part of these studies have been evaluated and, where necessary, mitigated. Of note, the maritime archaeological studies along the shoreline did not identify any waterfront resources associated with the Sailors' Snug Harbor former boathouse or the dock as part of those surveys.

C. Section 3: West Brighton Waterfront

8	i veys within a one-inne radius of		
Project Name	Location / Distance from APE	Study type and findings	Reference
Cross Harbor Freight	Alignment running from New	Phase IA Literature	Hartgen 2002
Movement Project: Port	York Bay to Kill Van Kull	Review and	
Ivory Yard, Arlington	shoreline and former SIRT	Archeological Sensitivity	
Yard, Eleven Railroad	ROW beginning at Clinton	Assessment; further	
Crossings and Proposed	Avenue, then west to Port	archaeological	
Tunnel	Ivory / includes most of	investigations	
	Section 3	recommended in limited	
		locations	
Removal of Drift	Kill Van Kull Reach, from the	Maritime archaeological	Panamerican 1996
	Staten Island Ferry to Port	survey; S/NRHP	
	Ivory / abutting Section 3	resources identified for	
	within the Kill Van Kull	mitigation	
New York and New	100 feet on either side of Kill	Remote Sensing Survey;	Panamerican 2002
Jersey Harbor	Van Kull channel / abutting	numerous resources	
Navigation Study, Upper	Section 3 within the Kill Van	identified and	
and Lower Bay	Kull	recommended for further	
		investigation	
Markham Gardens	Block 169, Richmond Terrace	Phase IA Archaeological	HPI 2006a
Proposed Residential	and Broadway / ca. 100 feet	Assessment; no further	
Development	south of Section 3	work recommended	

Table 9. Archaeological surveys with	in a one-mile radius of Section 3 of the APE
Table 7. Archaeological surveys with	in a one-nine radius of Section 5 of the Ar E

The majority of Section 3, from Davis Avenue to Broadway, was also included as part of the 2002 Hartgen archaeological survey for the Cross Harbor Freight Movement Project, where a tunnel was proposed. That study concluded that the area could be archeologically sensitive for deposits and structures associated with the early 20th century shipbuilding industry, as well as limited archeological deposits associated with a power station and railroad station. Further, the study concluded that the shoreline areas could contain precontact deposits in areas that are now submerged but which would have been above sea level in precontact periods.

As with Sections 1 and 2, several maritime projects along the Kill Van Kull also abut Section 3 (Panamerican 1996, 2002). All of the resources identified as part of these studies have been evaluated and where necessary, mitigated.

D. Section 4: Viaduct

0	urveys within a one-mile radius o		
Project Name	Location / Distance from APE	Study type and findings	Reference
Removal of Drift	Kill Van Kull Reach, from the	Maritime archaeological	Panamerican 1996
	Staten Island Ferry to Port Ivory	survey; S/NRHP resources	
	/ north of Section 4 within the	identified for mitigation	
	Kill Van Kull		
New York and New Jersey	100 feet on either side of Kill	Remote Sensing Survey;	Panamerican 2002
Harbor Navigation Study,	Van Kull channel / north of	numerous resources	
Upper and Lower Bay	Section 4 within the Kill Van	identified and	
	Kull	recommended for further	
		investigation	
Port Richmond High	East of Port Richmond WPCP	Phase IA Archaeological	HPI 2006b
Rate Treatment Facility	north of Richmond Terrace /	Assessment; no further	
Project	ca. 300 feet south of Section 4	work due to widespread	
		disturbance	
Nicholas Avenue Project	West side of Nicholas Avenue	Stage 1A Archaeological/	Greenhouse 1999b
	north of SIRT / abuts Section	Historical Sensitivity	
	4 on north	Evaluation; backhoe	
		trenching recommended	
Nicholas Avenue Project	West side of Nicholas Avenue	Archaeological Testing;	Greenhouse 2000a
	north of SIRT / abuts Section	no significant resources	
	4 on north	found, no further work	
John Street Project	East side of John Street near	Stage 1A Archaeological/	Greenhouse 2000b
-	Richmond Terrace / ca. 500 feet	Historical Sensitivity	
	north of Section 4	Evaluation; backhoe	
		trenching recommended	

Table 10: Archaeological surveys within a one-mile radius of Section 4 of the APE

Archaeologists have completed two studies within or abutting Section 4. Historical Perspectives, Inc. completed a Phase IA Archaeological Assessment for the proposed Port Richmond High Rate Treatment Facility project in 2006, located on the north side of Richmond Terrace between Bodine and Alaska Streets, on Block 185, Lots 187 and 201 (HPI 2006b). This project was not constructed and the parcels remain vacant. The parcels are proposed as a construction staging location for the present project. The 2006 archaeological study concluded that the parcels were not archaeologically sensitive for either precontact or historic period resources and that they were disturbed from later construction and demolition episodes.

The Nicholas Avenue project was located on the west side of Nicholas Avenue immediately north of the SIRT ROW (Greenhouse 1999b, 2000a). Despite being designated as sensitive for both precontact and historic period resources in the Stage 1A study, archaeologists found no significant archaeological resources during subsequent field testing. Today this parcel is covered with recently constructed townhouses along Riverside Lane.

E. Section 5: Open Cut

Project Name	Location / Distance from APE	Study type and findings	Reference
Removal of Drift	Kill Van Kull Reach, from the Staten Island Ferry to Port Ivory / ca. 0.3 mile north of Section 5 within the Kill Van Kull	Maritime archaeological survey; S/NRHP resources identified for mitigation	Panamerican 1996
New York and New Jersey Harbor Navigation Study, Upper and Lower Bay	100 feet on either side of Kill Van Kull channel / ca. 0.3 mile north of Section 5 within the Kill Van Kull	Remote Sensing Survey; numerous resources identified and recommended for further investigation	Panamerican 2002
Recordation of Six Vessels in Connection with the New York and New Jersey Harbor Navigation Study	Kill Van Kull / ca. 0.3 mile north of Section 5 within the Kill Van Kull	Recordation/Mitigation	Panamerican 2008
Arthur Kill-Howland Hook Marine Terminal Channel Project	Northeast of Shooters Island within the Kill Van Kull / ca. 0.8 mile north of Section 5	Geomorphological and Archaeological Study	Geoarcheology Research Associates 2000
Cross Harbor Freight Movement Project: Port Ivory Yard, Arlington Yard, Eleven Railroad Crossings and Proposed Tunnel	Alignment running from New York Bay to Kill Van Kull shoreline and former SIRT ROW beginning at Clinton Avenue, then west to Port Ivory / includes all of Section 5	Phase IA Literature Review and Archeological Sensitivity Assessment; further archaeological investigations recommended in limited locations	Hartgen 2002
Bayonne Bridge Navigational Clearance Program	Bayonne Bridge and Route 440 approach / crosses Section 5 along both sides of Route 440	Phase IA Archaeological Assessment	HPI 2012
Proposed 3K Center	2040 Forest Avenue / ca. 0.6 mile south of Section 5	Preliminary Assessment/Disturbance Memo; no further work due to prior disturbance	AECOM 2019

 Table 11: Archaeological surveys within a one-mile radius of Section 5 of the APE

All of Section 5 was also included as part of the 2002 Hartgen archaeological survey for the Cross Harbor Freight Movement Project. In this section, the open cut was proposed to be deepened to provide higher clearances for trains. That study concluded that because the open cut had been created by excavating the original landform, there was no longer any archaeological sensitivity along this area.

Section 5 was also crossed by the Bayonne Bridge Navigational Clearance Program project, which included both sides of the Route 440 approach to the bridge (HPI 2012). That study concluded that due to prior disturbance there was no archaeological sensitivity in this area.

F. Section 6: Arlington Station

Table 12: Archaeological surveys within a one-mile radius of Section 6 of the	APE
---	-----

Project Name	Location / Distance from APE	Study type and findings	Reference
Removal of Drift	Kill Van Kull Reach, from the	Maritime archaeological	Panamerican 1996
	Staten Island Ferry to Port Ivory	survey; S/NRHP resources	
	/ ca. 0.3 mile north of Section 6	identified for mitigation	
	within the Kill Van Kull		

Project Name	Location / Distance from APE	Study type and findings	Reference
New York and New Jersey	100 feet on either side of Kill	Remote Sensing Survey;	Panamerican 2002
Harbor Navigation Study,	Van Kull channel / ca. 0.3 mile	numerous resources	
Upper and Lower Bay	north of Section 6 within the	identified and	
	Kill Van Kull	recommended for further	
		investigation	
Cross Harbor Freight	Alignment running from New	Phase IA Literature	Hartgen 2002
Movement Project: Port	York Bay to Kill Van Kull	Review and	
Ivory Yard, Arlington	shoreline and former SIRT	Archeological Sensitivity	
Yard, Eleven Railroad	ROW beginning at Clinton	Assessment; further	
Crossings and Proposed	Avenue, then west to Port	archaeological	
Tunnel	Ivory / includes all of Section 6	investigations	
		recommended in limited	
		locations	
Mariners Harbor	South of Mariners Harbor	Phase IA Literature	McLean 2004
Community Center	Houses, west of Grandview	Review and Archeological	
	Avenue / ca. 0.1 mile south of	Sensitivity Assessment;	
	Section 6	borings recommended	
PS/IS Facility	280 Regiss Drive / ca. 0.9 mile	Phase IA Archaeological	HPI 2005a
-	south of Section 6	Assessment; no further	
		work recommended	
PIN X096.26, Eastbound	I-275 from South Avenue to	Cultural Resources	NYSM 2015
I-278 Staten Island,	Victory Boulevard Overpass /	Reconnaissance Survey;	
	ca. 1 mile south of Section 6	testing revealed no sites	
		and no further work was	
		recommended	
2345 Forest Avenue	2345 Forest Avenue / ca. 0.2	Phase IA Archaeological	HPI 2005b
	mile south of Section 6	Assessment; Phase IB	
		testing recommended	
2345 Forest Avenue	2345 Forest Avenue / ca. 0.2	Phase IB Archaeological	HPI 2005c
	mile south of Section 6	Field Investigation; no	
		intact resources found, no	
		further work recommended	
Harbor Road Project	349 Harbor Road / ca. 0.4 mile	Phase IA Documentary	Key Perspectives
5	south of Section 6	Study of Archaeological	1988
		Potential; monitoring	
		recommended	
Forest and South Avenues	Forest and South Avenues / ca.	Stage 1A	Greenhouse 1986
Project	0.3 mile southwest of Section 6	Archaeological/Historical	
5		Sensitivity Evaluation;	
		additional study	
		recommended	
South Avenue Retail	534 South Avenue / ca. 0.3 mile	Phase IA Addendum;	AKRF 2016
Project	southwest of Section 6	Phase IB testing	
5		recommended	
Goethals Bridge	Area surrounding I-278 and	Phase I Archaeological	Louis Berger
Replacement	Goethals Bridge / ca. 0.7 mile	Report; artifacts found	Associates 2007
1	southwest of Section 6	associated with Old Place	
		Creek site	
DiFazio Industries Project	2828 Gulf Avenue / ca. 0.8 mile	Phase IA Archaeological	HPI 2018
	southwest of Section 6	Documentary Study; no	
		further work recommended	1

Project Name	Location / Distance from APE	Study type and findings	Reference
Port Ivory Department of	Large parcel near Howland	Archaeological and	Greenhouse 1999c
Sanitation, Solid Waste	Hook Marine Terminal / ca. 0.8	Historical Sensitivity	
Management Plan	mile northwest	Evaluation; no further	
Modification		archaeological work	
		recommended	
Texas Eastern	North of Goethals Road North /	Phase IB Archaeological	PAL 2011
Transmission pipeline,	ca. 0.8 mile southwest of	Identification Survey and	
M&R 058 Additional	Section 6	Phase II Archaeological	
Temporary Workspace,		Site Evaluation	
Old Place Neck Site			
(OPRHP			
#A08501.002971)			
Goethals Bridge HDD			
Workspace			
Texas Eastern	North of Goethals Road North /	Phase III Archaeological	PAL 2014
Transmission pipeline, Old	ca. 0.8 mile southwest of	Data Recovery	
Place Neck Site (OPRHP	Section 6		
No. A08501.002971),			
Goethals Bridge HDD			
Workspace			

Much of Section 6 was also included as part of the 2002 Hartgen archaeological survey for the Cross Harbor Freight Movement Project. The section from Harbor Road to South Avenue was part of the area proposed to be deepened to provide higher clearances for trains and, as described above under Section 5, concluded that there was no longer any archaeological sensitivity along this area. The area west of South Avenue along the existing SIRT railroad tracks was part of the Arlington Yard section of that project. The study concluded that the area had likely been graded to create the tracks, but there still could be buried precontact period resources beneath the tracks.

IX. Historic Period Summary

A. General Overview of the Project Area and the North Shore Staten Island Railroad

Staten Island was the most sparsely settled portion of New York City during early Euro-American settlement. In 1630, while under Dutch rule, Michael Pauw purchased land from the Native Americans. Five years later, he sold it to the Dutch West India Company, which sold land rights to Pietersz De Vries in 1639. Native hostilities and Governor Kieft's War forced the abandonment of these settlements in 1643. In 1657, the Dutch repurchased the island. However, when the British gained control of the island in 1664, only a small group of settlers were present at South Beach on the northeastern shore.

In a 1690 treaty English Governor Lovelace extinguished all Native American rights to Staten Island. Labadist missionaries traveling through Staten Island in 1679 observed that "there are now about a hundred families on the island, of which the English constitute the least portion, and the Dutch and French divide between them about equally the greatest portion. They have neither church nor minister and live rather far from each other" (Dankers and Sluyter 1867:142). From 1668-1712, Staten Island was divided into numerous small land patents, which were granted to individuals. Along the north shore of Staten Island, a map showing these patents indicates that the project area was attributed to more than a dozen different people (Skene 1907).

Development on the north shore of Staten Island focused on the waterfront. What is now Richmond Terrace was originally a Native American trail, which skirted the natural shoreline prior to landfilling. Known simply as the Shore Road, the earliest settlements were along this road, often in proximity to the natural creeks that crossed it and emptied into the Kill Van Kull. One of the early grantees was John Palmer, who obtained a tract in 1676 that encompassed most of what is now known as West Brighton. By 1672, Palmer had constructed one of Staten Island's first tide mills, later known as Dongan's lower mill, at the mouth of what was later known as the Clove Valley Creek or Bodine's Creek (Leng and Davis 1930, Vol. II:610). Other mills along the project corridor included A. Crocheron's Mill near the New Brighton shoreline, and the Mill on the Dock in between the Crocheron and

Palmer mills (McMillen 1933). By the late eighteenth century, maps and reconstructions show that there were a number of structures located along the landward side of Richmond Terrace, as well as two ferries operating on the Kill Van Kull (Anglo-Hessian 1780-1783; Taylor and Skinner 1781 [Figure 6]; McMillen 1949). During the Revolutionary War and the British occupation of Staten Island, many of the houses were occupied by troops. Much of what would become the BRT alignment was still under water at this time, however.

The north shore of Staten Island began to develop further around 1819, when Factoryville (the original name for West Brighton) came into existence with the purchase of a former mill at the foot of Broadway by Barrett, Tileston and Company, who established the Staten Island Dyeing and Printing Establishment and diverted water from the Clove Valley Creek northeast towards the Kill Van Kull to form the factory's pond. The factory lured many settlers to the north shore of Staten Island (Leng and Delavan 1924:22; Leng and Davis 1930, Vol. II:616-617). The other industry that affected the north shore during this period was the harvesting of oysters along the Kill Van Kull, which began in earnest in the late 1820s, developed into a significant trade by the 1840s, and continued as a major source of livelihoods through the nineteenth century (Leng and Delevan 1924:22).

The combination of the factories, the oyster harvesting, and the associated maritime industrial and commercial ventures on the north shore drew both working class families and upper class proprietors. Many of the wealthy owners of the businesses constructed large houses along Richmond Terraces, known for a time as "Captains' Row." Real estate speculators began constructing housing stock along the shoreline as well. These developments at New Brighton dated to the 1830s and 1840s (LPC 1994). The community of Port Richmond, which began as a stagecoach stop and ferry landing location during the colonial era, continued to expand during the nineteenth century, becoming a commercial hub on the north shore.

Sailors' Snug Harbor, a retirement community for aging sailors, was established in 1831 within the project area at New Brighton and expanded to its present size over the course of the nineteenth century. The facility, which is now listed on the S/NRHP, is an NHL and a NYCL, has been studied and documented extensively over many decades. Appendix C includes a selection of historic images and photographs of Sailors' Snug Harbor depicting the overall facility as well as the waterfront area, which is the area of focus for this study.

Historic maps from the nineteenth century showed the pace of construction along the project alignment (U.S.C.S. 1835-1836a, 1835-1836b; Blood 1845). The 1850 Dripps map and the updated 1853 Butler map (Figure 7) illustrated development along Richmond Terrace across most of the north shore, with additional concentrations of buildings at New Brighton, Factoryville, and Port Richmond. The western portion of the study area, southwest of Port Richmond, was largely undeveloped during this period, except along a few north-south streets crossing the alignment. Similar conditions were shown on the historic maps from the late 1850s through the 1870s (U.S.C.S. 1856, 1857; Walling 1859, 1860 [Figure 8]; Dripps 1872 [Figure 9], Beers 1874).

The project area character changed considerably with the construction of the North Shore Branch of the Staten Island Rapid Transit Railroad Company (SIRT) incorporated in 1880. In conjunction with the Baltimore and Ohio Railroad (B&O), the company constructed the North Shore Branch in 1886 as an entirely at-grade, double-tracked railroad from St. George Station on the east to Elm Park Station on the west. The line subsequently opened further west to Arlington Station in 1889 and to Port Ivory, beyond the project limits, in 1906 (Leigh and Matus 2002). Original passenger stations, consisting of stand-alone buildings adjacent to the tracks, were located at St. George, New Brighton, Sailors' Snug Harbor, Livingston, West New Brighton, Port Richmond, Tower Hill, Elm Park, Mariner's Harbor, and Arlington. Passenger platforms generally were located on both sides of the railroad tracks at each station. A 500-foot long railroad swing bridge over the Arthur Kill was constructed in 1888, connecting the North Shore Branch with New Jersey. This bridge, which is outside of the APE, was replaced in 1959 with a vertical lift truss bridge, which has been determined individually eligible for the S/NRHP by both the New Jersey Historic Preservation Office (HPO) and the New York SHPO (Howe 2008). Appendix C includes a selection of historic photographs of the North Shore Branch of the SIRT in the APE.

The 1887 Beers map (Figure 10a-d) illustrated both the increased development along the project area corridor, as well as the new route of the SIRT along the north shore (the route was not always accurately depicted on these maps, however). The railroad was constructed on filled areas along the natural Kill Van Kull shoreline from St. George to the Sailors' Snug Harbor boat dock, and then primarily on man-made raised earthen causeways through the water to Bodine Creek. Southwest of Richmond Terrace near Port Richmond, the alignment moved inland, onto

firm ground. The railroad tracks cut through the relatively dense Port Richmond neighborhood, but then emerged to mostly undeveloped land to the west.

The introduction of piped water and electricity to Staten Island in the 1880s and sewers in the 1890s ushered in another building boom, with new construction replacing older housing and commercial stock during these decades (Leng and Delevan 1924:26-29). After consolidation of Staten Island with the rest of New York City in 1898, additional resources and infrastructure contributed to more development. The St. George area surrounding the ferry to Manhattan became the new civic center for Staten Island, with the present municipal buildings, including Staten Island Borough Hall, the Staten Island Courthouse, the 120th Police Precinct building, and the Staten Island Family Courthouse, constructed during the first decades of the twentieth century. The SIRT yards at St. George were also constructed outboard of Richmond Terrace during this period. As new streets with city water and sewer availability under them were added to the project area, particularly west of Port Richmond, new housing, commercial establishments, and industrial facilities were constructed along them. Much of the building stock in this area dates from the turn of the twentieth century through the first half of the twentieth century.

The 1907 Robinson map (Figure 11a-g), the series of topographic maps made by the Borough of Richmond, and the subsequent 1917 Bromley map, among others, showed the pace of construction across the project area after consolidation. In addition, after 1881, portions of the Kill Van Kull bulkhead line had been extended north of the line of the existing railroad tracks, and water grants were made to owners of the shorefront property in the mid-1880s after the railroad had opened. The 1907 Robinson map illustrated the various water grants, and confirms that these areas, particularly the marshlands around Bodine Creek, were beginning to be filled in by their owners. In 1916, however, water pollution became so bad that the Department of Health condemned the oyster beds, effectively ending an era (Smith 1970:152). After this time, shipbuilding and repair became the primary industry of Staten Island (WPA 1982: 601). The Caddell Dry Dock and Repair Facility on the north side of Richmond Terrace near Broadway moved to its current location in 1916, taking over a defunct shipyard location (Urban 2009:7). The company improved and expanded its operations to its present two yards over the course of the twentieth century, and has been in continual operation for over a hundred years.

During the 1920s and 1930s, the project area experienced more changes. Staten Island became tied to Manhattan through regular ferry service, and to New Jersey by a series of bridges – the Goethals Bridge in 1928, the Outerbridge Crossing in 1928, and the Bayonne Bridge in 1931. In 1925, with hopes of connecting to the BMT subway line in Brooklyn via a tunnel at St. George under the Narrows, the SIRT completed electrification of its railroad lines. This entailed track rehabilitation, a new signal system, new railroad cars, and higher platforms at the stations to accommodate elevated railroad car doors (Leigh and Matus 2002). The following year, in 1926, New York State passed the "State Grade Crossings Act," which called for the elimination of at-grade crossings in populated areas (Roess and Sansone 2012:238). In response to this act, construction began in 1934 on the viaduct in Section 4 and the open cut in Section 5. The viaduct carried the railroad over cross streets, while the open cut routed the railroad under them, where new street overpasses were built. New stations and platforms were constructed along the top of the viaduct and within the open cut.

Historic maps and photographs (Appendix C) showed that the new viaduct and open cut were located immediately adjacent to the existing at-grade tracks, so that construction of the new components could proceed without disruption to the active trains. When the viaduct formally opened in February 1937, newspaper accounts claimed that at one mile in length, it was the longest grade crossing elimination unit in the United States (*New York Times* 2/26/1937). Once the viaduct and open cut were completed, the old tracks were removed or covered over. With time, the original railroad stations from the pre-grade separation era were demolished.

Passenger service on the North Shore SIRT was discontinued in 1953, a result of decreased ridership led by the shift to use of buses rather than trains. The opening of the Verrazano Narrows Bridge in 1964, which connected Staten Island to Brooklyn, further changed the character of the area as the island became increasingly suburbanized, with a greater reliance on automobiles. A new wave of building occurred during the last quarter of the twentieth century as older building stock was replaced and additional neighborhoods opened up for development. Freight service on the North Shore SIRT continued until 1989, but after that, too, was eliminated, the industrial waterfront continued to decline. In 2007, freight service resumed on an approximately one-mile stretch of the North Shore SIRT from the Arthur Kill lift bridge to the Union Avenue overpass, servicing the Howland Hook Marine Terminal.

B. Section 1: St. George

Section 1 contains two distinct landforms. The portion from the Staten Island Ferry along Richmond Terrace to Nicholas Street was historically located at the base of a natural bluff, on firm ground. The portion from Nicholas Street to Jersey Street was formerly under the water of the Kill Van Kull. Historic maps indicate that the present route of Richmond Terrace first was called Jay Street as far south as Wall Street (Blood 1845, Walling 1859), where it terminated. The block on the west side of Jay Street between Wall Street and Hamilton Avenue, now the location of the 120th Police Precinct building, contained several structures attributed to A.J. Hamilton in the 1850s through the 1870s (Walling 1859, Beers 1874). The part of the block now containing the Staten Island Family Courthouse had structures situated at the top of the slope, fronting Stuyvesant Place, during the nineteenth century, with the area along Jay Street undeveloped. By issuance of the 1898 Sanborn map, the area containing the 120th Police Precinct contained the St. George Hotel, a large, multi-winged frame building fronting Jay Street. The rest of the buildings along Jay Street were a mixture of dwellings and commercial structures, outside of the Archaeological APE.

After consolidation, the St. George area became the hub for the borough's municipal buildings. As noted above, Staten Island Borough Hall, the Staten Island Courthouse, the 120th Police Precinct building, and the Staten Island Family Courthouse were all constructed during the first decades of the twentieth century, replacing the earlier housing and commercial stock along this street. As well, Jay Street was widened to the east, to its present width of 100 feet, and renamed Richmond Terrace. The municipal buildings have remained as the anchor along the west side of Richmond Terrace, with infill of additional commercial buildings. The east side of Richmond Terrace has undergone a number of changes related to the SIRT and the Staten Island ferry terminals.

The portion of Section 1 from Nicholas Street to Jersey Street remained largely under water or at the shoreline through the mid-1880s. The exceptions were a bathing pavilion across from what is now St. Peter's Place and the New Brighton Landing area at the foot of Jersey Street, bisected by Bank Street, with a number of structures on it in during the mid-nineteenth century (Blood 1845; Beers 1850; Butler 1853 [Figure 7]; Dripps 1872 [Figure 8]; Beers 1874). When the SIRT was constructed along the shoreline of Section 1 in the late 1880s, landfill was added to the area to create the level base for the tracks. After that period waterfront construction expanded on both the north and south sides of the tracks at New Brighton, as shown on the 1907 Robinson map (Figure 11a) and subsequent Sanborn maps. There was a row of commercial buildings between Richmond Terrace and the railroad tracks, which endured until the 1960s, according to Sanborn maps (Sanborn 1962, 1977). Outboard of the railroad tracks were coal yards and other industrial concerns. By the 1970s, these outboard facilities had also been removed. Today the portion of Section from Nicholas Street to Jersey Street contains the North Shore Waterfront Esplanade Park.

C. Section 2: New Brighton Waterfront

Section 2 was also once under the water of the Kill Van Kull, or just at the natural shoreline. Prior to construction of the SIRT in the 1880s, only the area surrounding the New Brighton Landing, as described above, had been further landfilled. The landing area had extended to a point between York and Franklin Avenues by the 1870s, and contained businesses including a mill and several lumber yards (Beers 1874). In 1876, the J.B. King plaster mill was established at the foot of York Avenue on the New Brighton Landing. This company later expanded west to include buildings and structures on landfilled areas as far west as Lafayette Avenue. When the SIRT was constructed in the 1880s, the tracks ran through the plaster mill complex. In 1924, the United States Gypsum Company acquired the plaster mill, and operated in this location until the 1970s, when the factory closed. Atlantic Salt acquired the property after that period, and has operated along the Section 2 waterfront since that time. The massive piles of salt extend as far west as Clinton Avenue. Many of the plaster mill/gypsum plant buildings have been demolished, but at the height of operation, the waterfront north of Richmond Terrace was nearly covered by industrial buildings and structures. Figures 11a and 11b show the extent of the facility in 1907. Sanborn maps show the expansion of the facility footprint during the twentieth century.

The remainder of Section 2 passes through the Sailors' Snug Harbor waterfront area. Historic maps and images (Appendix C) illustrate that there were several landfilled areas along this stretch of the shoreline associated with Sailors' Snug Harbor, including a bath house, a harbor dock house, and a boat house. The SIRT was constructed inboard of these structures, which jutted out into the water. Eventually all of these facilities were demolished, and as they were situated above the water line, no visible evidence remains of them. The dock present along the Sailors' Snug Harbor waterfront today was constructed in the 1990s. Today, the shoreline here is both overgrown with

vegetation and has been scoured by repeated storm and tidal action. Only one set of railroad tracks is still visible in places along the alignment, and the former landfilled area between the two ends of Snug Harbor Road has been severely eroded away.

The short length of the Section 2 Archaeological APE between the western end of Snug Harbor Road and Davis Avenue has a similar history to the other waterfront areas. Until the SIRT was constructed in the 1880s, this area was largely under water, except for docks. The Livingston family owned a large house at the foot of Bard Avenue (Beers 1874, 1887 [Figure 10b]) that later became the SIRT Livingston station house, but which has long since been removed and now is the site of a modern gas station.

The potential construction staging area at the southeast corner of Richmond Terrace and Franklin Avenue is on land that was never underwater. The parcel has had multiple episodes of building and demolition during the nineteenth and twentieth centuries. At the time of the site visit, heavy machinery was moving large quantities of soil on the property (see Photograph 8). The potential construction staging area between Bard Avenue and Davis Avenue is now a parking lot for Con Edison, but previously was largely under water and later contained a large brick power plant that covered the majority of the parcel (Robinson 1907 [Figure 11c]; Bromley 1917, Sanborn 1898-1962).

D. Section 3: West Brighton Waterfront

The majority of Section 3 was once under the water of the Kill Van Kull or just at the natural shoreline. The foot of Broadway was the location of the Castleton or West Brighton landing, where a mill and a ferry operated during the nineteenth century (Walling 1859, 1860 [Figure 8]; Beers 1874). The Archaeological APE crosses through this area where it runs closer to Richmond Terrace than the SIRT ROW. As described above, this area was also known as Factoryville, after the cluster of factories that were located in this neighborhood. The area north of Richmond Terrace in Section 3 contained a combination of commercial and industrial concerns related to the factories, the maritime industry, and the workers who lived in the neighborhood. When the SIRT was constructed in the 1880s, the alignment was built on earthen causeways through Section 3, excepting the portion that ran through the West Brighton landing on previously landfilled areas. During the twentieth century, the area between Richmond Terrace and the SIRT tracks eventually was landfilled. The 1907 Robinson map (Figures 11c and 11d) show the pace of landfilling just after the turn of the century.

The primary commercial concern in Section 3 today is the Caddell Dry Dock and Repair facility, which as described above located to its present location in 1916, taking over an old shipyard (Urban 2009:7). Over the course of the twentieth century, the company has acquired additional land within Section 3. Several paved locations within the Caddell facility are proposed as potential construction staging areas.

E. Section 4: Viaduct

The viaduct in Section 4 crosses two distinct landforms. From the eastern end of the section near the line of Alaska Street to its approximate crossing at Richmond Terrace, the viaduct is within areas originally under water of the Kill Van Kull or its surrounding marshland. When the SIRT was constructed in this area in the 1880s, the tracks were built on earthen causeways through the water and marshland, with a small bridge carrying the tracks over Bodine Creek. From the 1880s through the 1930s, when the at-grade tracks were replaced with the overhead viaduct, the area between Richmond Terrace and the railroad alignment was landfilled, so that today the railroad ROW is surrounded by filled land.

Several contiguous proposed potential staging areas are located within this portion of Section 4, located between the viaduct and Richmond Terrace, and on the north side of the viaduct. Those adjacent to Richmond Terrace were at least partially on firm ground historically, whereas the rest were also under the water of the Kill Van Kull. The potential construction staging area parcel across from Taylor Street was studied by HPI in 2006 and a full site history was given in that report. The parcel was found to be disturbed and no further work was recommended. The proposed entry drive near Alaska Street, which is also a proposed construction staging area, is presently used as a paved parking lot (see Photograph 25). It contained one or more small structures fronting Richmond Terrace through the early twentieth century, according to historic maps (Walling 1859; Beers 1874, 1887 [Figure 10c]; Robinson 1907 [Figure 11d]).

From Richmond Terrace southwest to the terminus of the viaduct at Nicholas Avenue, the Section 4 Archaeological APE is on firm ground that was inland of the Kill Van Kull. This portion traverses the historic Port Richmond community, which was in place during the colonial period and grew to prominence due to the location of a ferry at the foot of Port Richmond Avenue. The streets and buildings of Port Richmond predated the SIRT construction, and the original at-grade railroad was constructed through blocks and lots that previously contained structures. However, when the at-grade railroad tracks were replaced by the viaduct, these former lots were substantially disturbed from the deep excavations for the viaduct piers. Appendix C includes photographs that illustrate the degree to which the viaduct impacted the original ground surface in this area. The short length of Section 4 from Nicholas Avenue to John Street was largely undeveloped prior to construction of the railroad in the 1880s.

There are three potential construction staging areas within the Port Richmond neighborhood. Two, at the southeast intersection of Park Avenue and Richmond Terrace and the northeast corner of Maple Avenue and Grove Avenue, are vacant, paved lots. The third, just north of the viaduct on the east side of Port Richmond Avenue and Ann Street, is a small paved parking area of the Thomas Iron Works property, which was previously completely covered by a building. The property at Park Avenue has had a large number of earlier building and demolition episodes, with various structures covering nearly the entire footprint of the triangular-shaped lot at various times, and it is assumed to be heavily disturbed. The property at Maple Avenue and Grove Avenue also had a series of buildings and structures on it historically. The portion of the lot fronting Port Richmond Avenue contained the parsonage house for the Reformed Church on Staten Island, which is located north of the viaduct, several blocks away from the parsonage house (Walling 1859, Beers 1874, 1887 [Figure 10d]). The parsonage house was constructed prior to 1844 for the Reverend James Brownlee, and remained standing into the first decades of the twentieth century (LPC 2010). It is depicted on the 1907 Robinson map (Figure 11e). The remainder of the parcel fronting Maple Avenue contained a number of smaller frame houses. The portion of the lot that overlapped the parsonage house property later contained an airdome, which was associated with the adjacent Palace Theater, and then commercial stores, which are still extant. The portion of the parcel fronting Maple Avenue later contained a gasoline filling station with underground tanks (Sanborn 1937, 1950).

F. Section 5: Open Cut

Section 5 contains the open cut, so named because in the 1930s it was excavated 20-30 feet below the natural landform to create a depressed channel for the SIRT, eliminating earlier grade crossings. Prior to construction of the at-grade SIRT in the 1880s, this area contained vacant land that was bisected by a number of north-south oriented streets, containing houses along them (see Figures 7, 8, and 9). When the railroad was constructed, those houses that were in the path of the new tracks were removed. In the 1930s, during construction of the open cut, any previous remains associated with the pre-railroad structures and the subsequent railroad structures were destroyed.

There is one potential construction staging area within Section 5, south of the open cut and west of Granite Avenue. As noted above, this parcel is a vacant lot but historically this area was part of a factory pond, which has since been filled in (Beers 1874, 1887 [Figure 10d]).

G. Section 6: Arlington Station

The Archaeological APE for Section 6 contains the active SIRT tracks from Harbor Road to South Avenue, the materials storage yard at the southwest corner of South Avenue and the SIRT tracks where the new Arlington station is proposed, and land immediately south of the tracks to Roxbury Street where the new BRT lanes will be constructed by excavating behind the existing retaining wall. The future Arlington Station parcel is proposed as a potential construction staging area, as is an irregularly shaped parcel between Lockman Loop and the existing SIRT tracks.

Prior to the SIRT at-grade construction in the 1880s, this area was largely undeveloped, except for buildings along Harbor Road and South Avenue, which were the only two north-south streets crossing this area (Figures 7, 8, and 9). Those buildings along the two streets that fell within the new railroad alignment were removed during the 1880s. The grade separation during the 1930s caused Harbor Road and South Avenue to be raised above the railroad tracks. The approach to South Avenue on both sides of the tracks has resulted in the properties bordering the road, including the proposed Arlington Station parcel, to be lower in elevation than the adjacent road. None of the proposed construction staging areas in this section have been developed with any significant structures during the twentieth century, and it is possible that some original landforms may survive.

V. Conclusions and Recommendations

A. Section 1: St. George

The archaeological sensitivity for Section 1 is mixed. There has been significant disturbance throughout the area from multiple construction and demolition episodes over time, which likely has destroyed many potential archaeological resources within the Archaeological APE. However, the complete subsurface conditions cannot be known without further study. Given that the Proposed Project includes the construction of retaining walls and drainage features to various depths below the at-grade portion of the bus route in this section between Nicholas Street and Jersey Street, it is possible that both precontact period and historic period archaeological resources could exist within discrete locations. Soil or geotechnical borings to be taken in these locations for design purposes should be reviewed by a qualified archaeologist to determine whether there is any potential for archaeological resources to be impacted as a result of the Proposed Project. The construction staging areas in Section 1 are within landfilled areas that were previously disturbed.

Within Block 9, where the Richmond Terrace roadway would be widened by 12 feet, necessitating the acquisition of a narrow swath of sloped land in front of the Staten Island Family Courthouse, Phase IB archaeological testing may be warranted if disturbance to the original landform cannot be confirmed to the depth of the planned impacts.

B. Section 2: New Brighton Waterfront

The archaeological sensitivity for Section 2 is mixed. Archaeologists have studied the span along the Sailors' Snug Harbor waterfront twice in the past. In 1990, archaeologists concluded that the area was too disturbed to contain any historic period archaeological resources, and that potential buried precontact period resources beneath the Kill Van Kull were possible but not probable (LPC 1990). They recommended review of any future soil borings to assess the precontact period archaeological potential along the waterfront, should future development be proposed. In 2002, archaeologists reiterated the potential for precontact archaeological resources beneath the Kill Van Kull, and also indicated the possibility for historic period remains from the Sailors' Snug Harbor boathouse and dock (Hartgen 2002).

Section 2 conditions have deteriorated since 2002. The coastline along this stretch has eroded considerably, scouring the area and lowering the landform by several feet in places. While it is still possible that precontact period archaeological resources could be present under the Kill Van Kull, any potential historic period archaeological resources here appear to have been further disturbed or destroyed.

The Proposed Project calls for the construction of a new elevated busway in this section, which would be supported on pilings. The alternative would construct the busway on the existing land between Richmond Terrace and the Kill Van Kull. Soil or geotechnical borings to be taken in these locations for design purposes should be reviewed by a qualified archaeologist to determine whether there is any potential for precontact period archaeological resources to be impacted as a result of the Proposed Project. Last, all of the construction staging areas in Section 2 have been previously disturbed by multiple building and demolition episodes and are not sensitive for archaeological resources.

C. Section 3: West Brighton Waterfront

The archaeological sensitivity for Section 3 is mixed. There has been significant disturbance throughout the area from multiple construction and demolition episodes over time, which likely has destroyed many potential archaeological resources within the Archaeological APE. However, the complete subsurface conditions cannot be known without further study. Given that the Proposed Project includes construction of retaining walls and drainage features to various depths below the at-grade portion of the bus route along the length of this section, it is possible that both precontact period and historic period archaeological resources could exist within discrete locations. Soil or geotechnical borings to be taken in these locations for design purposes should be reviewed by a qualified archaeologist to determine whether there is any potential for archaeological resources to be impacted as a result of

the Proposed Project. Last, the construction staging areas in Section 3 are within lands previously disturbed from prior construction and demolition episodes. The construction staging area across from Taylor Street was studied by HPI in 2006, confirming disturbance.

D. Section 4: Viaduct

The archaeological sensitivity for Section 4 is low. Construction of the original railroad alignment and the existing viaduct have caused significant disturbance to the original landform within this section. The Proposed Project plans indicate that there will be new subsurface drainage features installed beneath the viaduct at approximately 333-foot intervals to depths of approximately 3.52 feet below grade, spaced between the existing viaduct concrete supports. The exact locations of the new drainage features have not been confirmed. As the project progresses, if soil or geotechnical borings are taken prior to installation of these drainage features, the soil borings should be reviewed by a qualified archaeologist to determine whether there is any potential for archaeological resources to be impacted as a result of the Proposed Project. All of the proposed construction staging areas within Section 4 are paved lots that have been previously disturbed by multiple building and demolition episodes.

E. Section 5: Open Cut

The archaeological sensitivity for Section 5 is low. Further, the Proposed Project plans indicate that there will be no new excavation below areas that have already been excavated or disturbed by past construction and demolition episodes, including at the site of construction staging areas.

F. Section 6: Arlington Station

The archaeological sensitivity for Section 6 is high. The portion of Section 6 south of the active railroad tracks and behind the present retaining wall may contain landforms that were not substantially graded when the railroad tracks were lowered in the 1930s. Given the proximity to former wetlands and a perennial stream in the area now covered by the NYCHA Mariners Harbor complex, which are markers for precontact period archaeological sensitivity, this area south of the railroad tracks may warrant future archaeological testing. If the construction staging area near Lockman Loop will be impacted below the current ground surface, this parcel may warrant future archaeological testing as well. Additionally, the proposed Arlington Station parcel on the west side of South Avenue may be sensitive for precontact period archaeological resources beneath the gravel parking area that covers the lot, given its proximity to wetlands and the former Arlington Station archaeological site. If project impacts extend beneath this gravel surface, archaeological testing may be necessary here as well.

VI. References

AECOM

2019 *Proposed 3K Center at 2040 Forest Avenue, Staten Island, New York.* Prepared for the New York City School Construction Authority.

AKRF, Inc.

2016 South Avenue Retail Development Project 534 South Avenue, Staten Island, Richmond County, New York.

Anglo-Hessian Map

1780-83 Plan (No. 31) du Camp Anglo-Hessois dans Staten Island, Baie de New York de 1780 à 1783.

Baugher, Sherene and Judith Baragli

1987 *The Archaeological Investigation at the Matron's Cottage Snug Harbor Cultural Center Staten Island, New York.* Prepared by the New York City Landmarks Preservation Commission.

Baugher, Sherene, Judith Baragli, Louise De Cesare, and Robert Venables

- 1985a An Archaeological Report of the Field Testing at Snug Harbor Cultural Center, Staten Island. Prepared by the New York City Landmarks Preservation Commission.
- 1985b *An Archaeological Predictive Model of Snug Harbor Cultural Center*. Prepared by the New York City Landmarks Preservation Commission.

Baugher, Sherene and Edward J. Lenik

1990 An Archaeological Predictive Model of the Shoreline Property of Snug Harbor Cultural Center, Staten Island, New York. Prepared by the New York City Landmarks Preservation Commission.

Beers, F.W.

1874 Map of the City Of New-York and Its Environs from Actual Surveys, from official records and surveys; compiled and drawn by F. W. Beers. J.B. Beers and Co., New York.

Beers, J.B.

1887 Atlas of Staten Island, Richmond County, New York, from official records and surveys; compiled and drawn by J.B. Beers and Company. J.B. Beers and Co., New York.

Bergoffen, Celia

- 2007 Staten Island Condominiums, Block 13, Lots 82, 92, 100, 103, 104, Borough of Staten Island, New York, Phase IA Archaeological Assessment. Prepared for Philip Habib & Associates.
- 2008 Staten Island Condominiums, Block 13, Lots 82, 92, 100, 103, 104, Borough of Staten Island, New York, Phase IB Archaeological Field Testing. Prepared for Liberty Towers.

Bien, Joseph Rudolph and C.C. Vermeule

1891 Atlas of the Metropolitan District and adjacent country comprising the counties of New York, Kings, Richmond, Westchester and part of Queens in the state of New York, the county of Hudson and parts of the counties of Bergen, Passaic, Essex and Union in the state of New Jersey ... From original surveys by J.R. Bien and C.C. Vermeule, the U.S. Coast and Geodetic Survey and the Geological Survey of New Jersey. Published by Julius Bien & Co., New York.

Blood, C.H.

1845 Staten Island: Map of New Brighton, Tompkinsville, Stapleton and Clifton; shewing the surrounding neighbourhood.

Boesch, Eugene J.

1994 Archaeological Evaluation and Sensitivity Assessment of Staten Island, New York. Prepared for the New York City Landmarks Preservation Commission.

Borough of Richmond, Topographical Survey

1907-12 Borough of Richmond, Topographical Survey. Various sheets.

Brasser, T. J.

1978 "Early Indian-European Contacts," in *Handbook of North American Indians: Northeast*, vol. 15, B. G. Trigger (ed.), Smithsonian Institution, Washington, D.C..

Brazee, Olivia

- 2019a Olivia Brazee, SHPO to Linda Tonn, MTA/NYCT Capital Program, October 20, 2019.
- 2019b Olivia Brazee, SHPO to Linda Tonn, MTA/NYCT Capital Program, December 11, 2019.

Bromley, G.W.

1917 Atlas of the City of New York, Borough of Richmond, Staten Island. From actual surveys and original plans, by George W. and Walter S. Bromley. G.W. Bromley and Co., Philadelphia.

Burns, Donald

2020 Donald Burns, FTA to Olivia Brazee, SHPO. January 24, 2020.

Butler, James

1853 Map of Staten Island or Richmond County. J. Butler.

City of New York, Department of Buildings

1898- Indexed records. < <u>http://a810-bisweb.nyc.gov/bisweb/bsqpm01.jsp</u>>. present

Cotz, Jo Ann E.

1984 Cultural Resource Study at Sailors' Snug Harbor.

Cragsmoor Consultants

- 2004 Stage IA Archaeological Survey, National Lighthouse Museum, Staten Island, Borough and County of Richmond, New York City.
- 2007 Phase IA Archaeological Survey, National Lighthouse Redevelopment Project, Block 1, Portion of Lot 60, Staten Island Borough and County of Richmond, New York City.
- 2008 Phase 1B Archaeological Survey, National Lighthouse Redevelopment Project, Block 1, Portion of Lot 60, Staten Island, Borough and County of Richmond, New York City.

Dankers, Jasper and Peter Sluyter

1867 Journal of Voyage to New York and a Tour in Several of the American Colonies in 1670-80. Translated from the original manuscript in Dutch for the Long Island Historical Society. Edited by H. C. Murphy. Long Island Historical Society, NY.

Dripps, M.

- 1850 Map of Staten Island or Richmond County. M. Dripps, New York.
- 1872 Map of Staten Island, Richmond County, New York. M. Dripps, New York.

Geoarchaeology Research Associates

2000 Geomorphological And Archaeological Study Northeast Of Shooters Island, Hudson And Union Counties, New Jersey, In Connection With The Arthur Kill-Howland Hook Marine Terminal Channel Project. Final Report. Contract No. DACW51-97-D-0009. Work Order No. 003. Greenhouse Consultants, Inc.

- 1986 Phase 1a Archaeological and Historical Sensitivity Survey for the Proposed Richmond Avenue and Forest Avenue Shopping Plaza, Staten Island, New York. For Keypac Collaborative. CEQR 86-096R.
- 1988 Phase IA Historical/Archaeological Sensitivity Evaluation of the Proposed Rose, Pond, and Lions Gardens, Staten Island Botanical Gardens, Richmond County, New York.
- 1989a Phase IA Historical/Archaeological Sensitivity Evaluation of the St. George Railyard Project, Staten Island, New York (CEQR #86-163R).
- 1989b Phase IB Archaeological Survey of the Proposed Rose and Lions Gardens, Staten Island Botanical Gardens, Richmond County, New York.
- 1990 Stage I/II-Richmond Terrace.
- 1999a Phase IA Memorandum, Proposed Minor League Baseball Stadium, St. George, Staten Island, Richmond County, New York.
- 1999b Stage 1A Archaeological/Historical Sensitivity Evaluation of the Nicholas Avenue and Richmond Terrace Project, Richmond, New York. 99DCP012R.
- 1999c Archaeological and Historical Sensitivity Evaluation, Port Ivory, Staten Island, New York, City of New York, Department of Sanitation, Solid Waste Management Plan Modification.
- 2000a Archaeological Testing Report, Nicholas Avenue and Richmond Terrace Project, Richmond, New York. 99DCP012R.
- 2000b Stage 1A Archaeological/Historical Sensitivity Evaluation of the John Street Project.
- Hartgen Archaeological Associates
- 2002 Phase IA Literature Review and Archeological Sensitivity Assessment, Cross Harbor Freight Movement Project: Port Ivory Yard, Arlington Yard, Eleven Railroad Crossings and Proposed Tunnel, Staten Island, Richmond County, New York.
- Historical Perspectives, Inc. (HPI)
- 2000 Phase IA Cultural Resources Investigation for the Staten Island Criminal Court and Family Court Complex, Staten Island, New York [Block 6 Lot 21] DASNY SEQRA-R.
- 2005a Phase IA Archaeological Assessment, New York City School Construction Authority, PS/IS Facility at 280 Regis Drive, Staten Island, Richmond County, New York, Block 1653, Lot 1.
- 2005b Phase IA Archaeological Survey, 2345 Forest Avenue, Block1270, Lots 12, 13, 17, 20, 21, 25, 29, 54, 142, 143, 144, and 151, Staten Island, Richmond County, New York.
- 2005c Phase IB Archaeological Field Investigation 2345 Forest Avenue Block 1270, Lots 12, 13, 17, 20, 21, 25, 29, 54, 142, 143, 144, and 151, Staten Island, Richmond County, New York.
- 2006a Phase IA Archaeological Assessment, Markham Gardens Proposed Residential Development, Block 169, Lot 1, Bounded by Richmond Terrace, Broadway, North Burgher Avenue and Wayne Street, Staten Island, Richmond County, New York, NYSOPRHP 06PR00935, LPC NYCHA/ER.R.
- 2006b Phase IA Archaeological Assessment, Port Richmond High Rate Treatment Facility, North side of Richmond Terrace between Bodine and Alaska Streets, Block 185, Lots 187 and 201, Staten Island, New York. Prepared for Hazen and Sawyer, New York, NY.

- 2008 Phase IA Archaeological Documentary Study, SI Courthouse, Interim Construction Parking Lot, Block 8, Lots 1, 11 and 14, Staten Island, Richmond County, New York.
- 2012 Phase IA Archaeological Assessment, Bayonne Bridge Navigational Clearance Program, The Port Authority of New York and New Jersey, Staten Island, Richmond County, New York.
- 2017 Phase IB, II, and III Field Investigations for the Staten Island Criminal Court and Family Court Complex, Staten Island, New York.
- 2018 Phase IA Archaeological Documentary Study, 2828 Gulf Avenue, Block 1855 / Lot 9, Staten Island, Richmond County, New York. Prepared for DiFazio Industries, Staten Island, New York.

HNTB Corporation

2008 Boring Logs and Boring Plans, Reactivation of the Staten Island Railroad. Prepared for the New York City Economic Development Corporation.

Howe, Kathy

2008 Kathy Howe, SHPO. Resource Evaluation, Staten Island Railway Lift Truss Bridge over the Arthur Kill between Staten Island and New Jersey.

John Milner Associates (JMA)

- 2004 Phase IB Archeological Survey, Proposed Tuscan Garden and Vineyards (Vicinity of Building P) Snug Harbor Cultural Center, SI, NY.
- Key Perspectives (Karen S. Rubinson)
- 1988 Phase 1A Documentary Study Of Archaeological Potential Harbor Road Site, 349 Harbor Road, Staten Island. For: Lauria Associates. CEQR 88-121R (Karen S. Rubinson).
- Leigh, Irvin and Paul Matus
- 2002 Staten Island Rapid Transit, The Essential History. The Third Rail Online. http://thethirdrail.net/0201/sirt1.html. Accessed February 21, 2020.

Leng, Charles W. and William T. Davis

1930 Staten Island and Its People, A History, 1609-1929. Lewis Historical Publishing Company, Inc., New York.

Leng, Charles W. and Edward C. Delavan, Jr.

1924 *A Condensed History of Staten Island (Borough of Richmond, New York City).* The Staten Island Edison Corporation, Staten Island, New York.

Louis Berger Group

2006 *New Stapleton Waterfront Plan, Phase IA Cultural Resources Assessment*. Prepared for the New York City Economic Development Corporation.

Louis Berger Associates

2007 Phase I Archaeological Report, Goethals Bridge Replacement, Richmond County, New York and the City of Elizabeth, Union County, New Jersey.

McLean, Joanne, Inc.

2004 Phase IA Literature Review and Archeological Sensitivity Assessment of the Mariners Harbor Community Center Project Area, (Tax block 1248, Part of Tax Lot 200), Mariner's Harbor, Richmond County, New York. Prepared for STV, Inc.

McMillen, Loring

1933 *A Map of Staten Island During the Revolution 1775-1783*. Compiled from The Taylor & Skinner Map 1781, Plan No. 31 du Camp Anglo-Hessois dans Staten Island de 1780 a 1782 and The Hessian Map 1777.

"Old Mills of Staten Island." The Staten Island Historian. July-September, 1949. Vol. X, No. 3.

New York Archaeological Council (NYAC)

1994 Standards for Cultural Resource Investigations and the Curation of Archaeological Collections. New York Archaeological Council.

New York City Landmarks Preservation Commission (LPC)

- 1994 St. George Historic District Designation Report.
- 2010 *Reformed Church on Staten Island, Sunday School Building, and Cemetery, 54 Port Richmond Avenue, Staten Island.* Designation Report.
- 2018 Guidelines for Archaeological Work in New York City.

New York State Museum

- 2015 Cultural Resources Reconnaissance Survey Report for PIN X096.26, Eastbound I-278 Staten Island, South Avenue to Victory Boulevard Overpass, Town of Northfield, Richmond County, New York.
- New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP)

2005 Phase I Archaeological Report Format Requirements.

New York Times

1937 Staten Island Opens Mile-Long Viaduct; Thirty-Four Grade Crossings Are Eliminated. February 26, 1937.

Panamerican Consultants, Inc./USACE

- 1996 *Cultural Resources Survey, New York Harbor Collection and Removal of Drift Project, Arthur Kill, New York Reach; Arthur Kill, New Jersey Reach; and Kill Van Kull, New York Reach.* Volume 1, Draft Report. Contract No. DACW51-95- D-0024. For: U.S. Army Corps.
- 2002 Remote Sensing Survey in Connection with the New York and New Jersey Harbor Navigation Study, Upper and Lower Bay. Port of New York and New Jersey, Kings, Queens, New York and Richmond Counties, New York, Essex, Hudson, Monmouth and Union Counties, New Jersey.
- 2008 Recordation of Six (6) Vessels in Connection with the New York and New Jersey Harbor Navigation Study, Upper and Lower Bay, Port of New York and New Jersey, Staten Island, Richmond County, New York, Elizabeth, Union County, and Bayonne, Hudson County, New Jersey. Two Volumes.

Parker, Arthur C.

1922 "The Archaeological History of New York." *New York State Museum Bulletin.* The University of the State of New York, New York State Museum, Albany, New York.

Public Archaeology Laboratory (PAL)

- 2011 Phase IB Archaeological Identification Survey M&R 058 Additional Temporary Workspace and Phase II Archaeological Site Evaluation Old Place Neck Site (OPRHP #A08501.002971) Goethals Bridge HDD Workspace, Staten Island, Richmond County, New York.
- 2014 Phase III Archaeological Data Recovery, Old Place Neck Site (OPRHP No. A08501.002971), Goethals Bridge HDD Workspace, Staten Island, Richmond County, New York.

Raber Associates

1996 Reconnaissance Cultural Resource Investigations, Kill Van Kull, New York Reach, Richmond County, New York. New York Harbor Collection and Removal of Drift Project, U.S. Army Corps of Engineers, New York District.

Robinson, E.

1907 Atlas of the Borough of Richmond, City of New York. E. Robinson, New York.

Roess, Roger P. and Gene Sansone

2012 The Wheels That Drove New York: A History of the New York City Transit System. Springer, Heidelberg, Germany.

Sanborn Map Company

1885- Insurance Maps of Staten Island, New York. Sanborn Map Company, New York. Various years. 2007

Skene, Frederick

1907 *Map of Staten Island, Richmond Co., N.Y. showing the Colonial Land Patents from 1668-1712.* On file at the Staten Island Historical Society.

Skinner, Alanson

1909 The Lenape Indians of Staten Island. Reprinted from the *Anthropological Papers of the American Museum of Natural History*, Volume III. New York.

Smith, Dorothy Valentine

- 1970 Staten Island, Gateway to New York. Chilton Book Company, Philadelphia.
- Taylor, George and A. Skinner
- 1781 A Map of New York & Staten Island and Part of Long Island.

United States Coast Survey (U.S.C.S.)

1835-6a Staten Island (from Kill van Kull to the Narrows). Washington, D.C.

- 1835-6b Staten Island (area north of Prall's Island).
- 1856 Staten Island, New York Harbor, From New Brighton to Fresh Kills. Washington, D.C.
- 1857 Northwest Part of Staten Island and Bergen Point.
- United States Department of Agriculture (U.S.D.A.)
- 2008 *New York City Reconnaissance Soil Survey*. United States Department of Agriculture, Natural Resources Conservation Service, Staten Island, NY. Map updated 2006.

United States Geological Survey (U.S.G.S.)

- 1891 Staten Island, N.Y. 15 Minute Topographic Quadrangle.
- 2016 Elizabeth, N.J.-N.Y. 7.5 Minute Topographic Quadrangle.
- 2016 Jersey City, N.J-N.Y. 7.5 Minute Topographic Quadrangle.

Urban, Erin

2009 Caddell Dry Dock: 100 Years Harborside. The Noble Maritime Collection, Staten Island, New York.

VHB and STV

- 2019a Corridor Assessment of Staten Island North Shore Bus Rapid Transit (BRT) Project Section 1 North Shore of Staten Island, New York Between St. George Terminal and the Intersection of Richmond Terrace and Jersey Street. Prepared for MTA New York City Transit.
- 2019b Corridor Assessment of Staten Island North Shore Bus Rapid Transit (BRT) Project Section 2 North Shore of Staten Island, New York Between Jersey Street and Alaska Street. Prepared for MTA New York City Transit.

- 2019c Corridor Assessment of Staten Island North Shore Bus Rapid Transit (BRT) Project Section 3 North Shore of Staten Island, New York Between Alaska Street and South Avenue. Prepared for MTA New York City Transit.
- 2020 Basis of Design Report, Contract Number B-62040/B-80143, CM-0143 Environmental and Engineering Services for the Staten Island North Shore Bus Rapid Transit System in the Borough of Staten Island, New York. Prepared for MTA New York City Transit.

Walling, H.F.

- 1859 *Map of Staten Island, Richmond County, New York, from surveys under the direction of H.F. Walling.* D.A. Fox, New York.
- 1860 Map of the City of New-York and Environs.

Works Progress Administration (WPA).

1982 *The WPA Guide to New York City.* Originally published: Revised edition. Random House, New York, 1939. Reprint, with an introduction by William H. Whyte. Random House, New York.

Figures



Phase IA Archaeological Documentary Study Staten Island North Shore Bus Rapid Transit (BRT) Project Staten Island, Richmond County, New York

Figure 1: Archaeological APE on *Elizabeth and Jersey City N.J.-N.Y.* 7.5 Minute Topographical Quadrangles (U.S.G.S. 2016).

0 1200 2400 4800 Feet








ARCHAEOLOGICAL APE

Figure 2b: Archaeological APE and photograph locations for Section 2 (HPI 2020 and VHB 2020).





Figure 2d: Archaeological APE and photograph locations for the west part of Section 4 and the east part of Section 5 (HPI 2020 and VHB 2020).



Potential Staging Locations Overview



Figure 3: Potential Staging Locations Overview (VHB and STV 2020).



Figure 4: Section Overview Map (VHB 2020).



Figure 5: Archaeological APE on New York City Soil Reconnaissance Survey (U.S.D.A. 2006).









Figure 6: Archaeological APE on A Map of New York & Staten Island and Part of Long Island (Taylor and Skinner 1781).









Figure 7: Archaeological APE on Map of Staten Island or Richmond County (Butler 1853).









Figure 8: Archaeological APE on Map of the City of New-York and Environs (Walling 1860).









Figure 9: Archaeological APE on Map of Staten Island (Richmond Co.) N.Y... (Dripps 1872).









Staten Island, Richmond County, New York

Figure 10a: Archaeological APE on Atlas of Staten Island, Richmond County, New York (Beers 1887).

400 600 800 1000 FEET 200



Staten Island, Richmond County, New York

Figure 10b: Archaeological APE on Atlas of Staten Island, Richmond County, New York (Beers 1887).

300 600 900 1200 1500 FEET



Figure 10c: Archaeological APE on Atlas of Staten Island, Richmond County, New York (Beers 1887).





Figure 10d: Archaeological APE on Atlas of Staten Island, Richmond County, New York (Beers 1887).

0 250 500 750 1000 1250 FEET





Phase IA Archaeological Documentary Study Staten Island North Shore Bus Rapid Transit (BRT) Project Staten Island, Richmond County, New York

Figure 11a: Archaeological APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).

Р	LATE_1	ι.
- 1886 C - 1886 C	(Byo OSmith Ely	77 1853
	1801 (P)	- 498 1887
	1851 @	111 1147
	1811 R Hamilton Park	668 (90)
	1897 (S) Stephins Eal.	-Soft illiga
990 A	IQC7 D J. Crabber	
	U S. N. Hayens	
		- 658 1803
D	W Sarah H. Green	701 1807
	W Sarah H. Green	222 1860
4	6	
Present I	O manual room	. 419 1885
In series		1887
2/// the 200	(Z) These E. Davia	
In?		
3/1/ 10	N.	
2/1/ //	1	
11 : 11	í	
1/10	1	
10711	nn	
SA.		
TO NICE GO	L	
O ATANHAL FE	REE	
ATTA .	AN I	
Att	22	
Mrattes M	Man)	
the affan all		
Alean AMAN		
111 78 8 84	il K	
	1 KZ	2
A B B B B B	1 1	
THE AND		Ż I
111111 1	IF	5
A A A L	1-	21
1/51	//	1
100 -		1
100 000	1	X
110		X
i r	- 11	2
	U	i.
_	D	
-	1 1	
GOVERNME	11 1	
BATE TAT	HT	
OUPE DEPAR		
	T	
		1
TITI	2. PIKA Hal	
0		
1 x	and a state	-
iomw.e. y	PIER No. 2	
	PIER	
Key		75
·		1
_		
Archao	ological APE	
Archae	ological AI E	a l
-		
		5 1 10
Section	divisions	
Section	u1 1 1 51 0115	
310		
Copyright.see	cared in 1907 by E. Robinse	un l
		+
N		
Λ		H_{\sim}
	▶ #4	⊥µ #
4		1//
	V V	



Figure 11b: Archaeological APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).



Figure 11c: Archaeological APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).





Phase IA Archaeological Documentary Study Staten Island North Shore Bus Rapid Transit (BRT) Project Staten Island, Richmond County, New York

Figure 11d: Archaeological APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).





Phase IA Archaeological Documentary Study Staten Island North Shore Bus Rapid Transit (BRT) Project Staten Island, Richmond County, New York

Figure 11e: Archaeological APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).





Phase IA Archaeological Documentary Study Staten Island North Shore Bus Rapid Transit (BRT) Project Staten Island, Richmond County, New York

Figure 11f: Archaeological APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).





Figure 11g: Archaeological APE on Atlas of the Borough of Richmond, City of New York (Robinson 1907).



Photographs



Photograph 1. Section 1, Richmond Terrace near the Staten Island Ferry Terminal. View looking northwest.



Photograph 2. Section 1, 120th Police Precinct building, 78 Richmond Terrace. The roadway is proposed to be widened by 12 feet in front of this building, within the sidewalk and berm. View looking northwest.



Photograph 3. Staten Island Family Courthouse, 100 Richmond Terrace. The roadway is proposed to be widened by 12 feet in front of this building, within the existing sidewalk and grassy berm. View looking northwest.



Photograph 4. Section 1, former railroad alignment under pavement in North Shore Waterfront Esplanade Park, with Richmond Terrace on left. View looking northwest.



Photograph 5. Section 1, North Shore Waterfront Esplanade Park and Bank Street. The former railroad tracks are no longer visible. View looking northwest.



Photograph 6. Section 1, North Shore Waterfront Esplanade Park and Bank Street. View looking northeast.



Photograph 7. Section 2, Bank Street, at foot of Jersey Street. Railroad tracks are no longer visible. View looking west.



Photograph 8. Section 2, proposed staging area on the south side of Richmond Terrace near Franklin Avenue. View looking south.



Photograph 9. Section 2, former railroad tracks on the north side of Richmond Terrace at Sailors' Snug Harbor. View looking north.



Photograph 10. Section 2, Sailors' Snug Harbor historic viewing platform on the north side of Richmond Terrace. View looking south.



Photograph 11. Section 2, modern dock at Sailors' Snug Harbor on the north side of Richmond Terrace. The former railroad tracks are under the vegetation. View looking north.



Photograph 12. Section 2, the shoreline at Sailors' Snug Harbor. View looking east with the Atlantic Salt facility in the upper left background.



Photograph 13. Section 2, the shoreline at Sailors' Snug Harbor. View looking west.



Photograph 14. Section 2, former railroad tracks and stone retaining wall at Sailors' Snug Harbor, with Richmond Terrace in the background. View looking southeast.



Photograph 15. Section 2, the stone retaining wall at Sailors' Snug Harbor, at the base of the paved paths. View looking south.



Photograph 16. Section 2, paved paths leading to the Sailors' Snug Harbor shoreline, with Richmond Terrace on the right. View looking east.



Photograph 17. Section 2, pedestrian path along the shoreline at Sailors' Snug Harbor. Remains of the railroad tracks are within the woods on the right. View looking east.



Photograph 18. Section 2, former railroad tracks along the Sailors' Snug Harbor scoured shoreline. Note the erosion of the beach. View looking west.



Photograph 19. Section 2, rear of Blue Restaurant at 1115 Richmond Terrace showing the reconstructed railroad tracks. View looking east.



Photograph 20. Section 2, remains of the railroad tracks to the north of the Con Edison parking lot. View looking west.



Photograph 21. Section 2, the Con Edison parking lot on the north side of Richmond Terrace that is proposed to serve first as a construction staging area and later a commuter parking lot. View looking northwest.



Photograph 22. Section 3, the former railroad tracks are embedded in the pavement in front of the gray building of the Caddell Dry Dock and Repair Company yard in the background. The Archaeological APE runs through the foreground of the image. View looking north.



Photograph 23. Section 3, Caddell Dry Dock and Repair Company buildings. The former railroad tracks were located next to these buildings. View looking east from the access road and parking lot for Heritage Park.



Photograph 24. Section 3, Heritage Park, view looking northwest.



Photograph 25. Section 4, the proposed access drive across from Alaska Street, now used as a paved parking lot. View looking northwest.



Photograph 26. Section 4, the Port Richmond Water Pollution Control Plant at 1789 Richmond Terrace with the viaduct in the far background. View looking north.


Photograph 27. Section 4, the viaduct near its crossing of Richmond Terrace. View looking northeast.



Photograph 28. Section 4, the viaduct crossing at Richmond Terrace. View looking northwest.



Photograph 29. Section 4, detail of the viaduct underside crossing Port Richmond Avenue. View looking west.



Photograph 30. Section 4, the viaduct crossing at Faber Street. View looking northeast.



Photograph 31. Section 4, the end of the viaduct at Nicholas Avenue and Slaight Street. View looking northwest.



Photograph 32. Section 5, remains of the open cut filled with water under the Bayonne Bridge approach. View looking southwest.



Photograph 33. Section 5, the open cut near Morningstar Road, with station remnants. View looking west.



Photograph 34. Section 5, the open cut between Van Pelt Avenue and Van Name Avenue. View looking east.



Photograph 35. Section 5, station remnants within the open cut between De Hart Avenue and Van Pelt Avenue. View looking southeast.



Photograph 36. Section 6, active tracks under the Harbor Road overpass. View looking west.



Photograph 37. Section 6, active tracks west of the South Avenue overpass. View looking west.



Photograph 38. Section 6, the proposed Arlington Station parcel west of South Avenue. View looking north.

Appendix A: Project plans (VHB and STV, April 2020)

Appendix B: Soil Borings for Section 6 (HNTB 2008)

BORING LOGS AND BORING PLANS

REACTIVATION OF THE STATEN ISLAND RAILROAD

HNTB CORPORATION

APRIL 2008

.





Consulting Engineers

BORINGS FOR

STATEN ISLAND RAILROAD REACTIVATION

(Project)

SITE BLAUVELT

(Contractor)

ontract No	Purpose _	RDWY.	· · · · ·	Structur	OFF	·
Rig No. 55 DATE TIME STARTED TIME FINISHED WEATHER DEPTH REACHED	Type CME 9/10/02 10:50 3:35 SUNNY 75'9" 75'9"	Driller			Helper <u>DAV</u>	<u> </u>
		<u> </u>	•			

GROUND ELEVATION ZERO OF BORING LOG 31.30 ft

M.L.W. ELEVATION ELEVATION GROUND WATER

BORING NO.

SHEET NO.

B44 1 OF

3

				PAY QU	ANTITIE	S				
LI	NEAL FER	et of Bori	NG			SAMPLES		LIN.	FT. OF R	XCK CORE
)-12 in	3 in	4 in			ORD . DRY	UNDIST. DRY		1-3/8	1-5/8"	2-1/8"
ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM

	Unit Weight	Size	We	ight of Hammer	Average	Fall
Drilling Mud Ordinary Dry S Undisturbed Sa	Samples O.D. <u>2-1/2 in</u> amples Type _	I.D	1-% in Length	140 lbs	<u>30 in</u>	I.D
GROUND WATER	READINGS					

GROOND	WALEK VENDINGS					
DATE	9/10/02					
TIME	11:00	 				
DEPTH	5 ft	 	· · · · · · · · · · · · · · · · · · ·	<u> </u>	··	

GENERAL REMARKS:

The subsurface information shown hereon was obtained for State design and estimate purposes. It is made available to authorized users only that may have access to the same information available to the State. It is presented in good faith, but is not intended as a substitute for investigations, interpretation or judgement of such authorized users.

INSPECTOR

Helen Huang, Robert Kumapley, Dick Riordan, & George Townsend

RESIDENT ENGINEER Kwabena O. Wadeer, P.E.

Boring No.		- B4	4
Sheet No	2	of	3

						1	
Elev.	Blows		s on Don	Sau	mple		
(ft)	on Casing	For	6-in ration	No.	Depth ft	Log	Material & Remarks
1		27	34	S1	0' - 2'		Dark Brown Sand, some C-F Gravel.
		27	16			1	Rec: 15
		11	12	S2	2' - 4'	1	Brown M-F Sand, some Silt. (moist)
		11	9			1	Rec: 18
		5	6	S3-A	4' - 6'		Dark Brown M-F Sand, some Silt. (wet) (10'
		5	7	S3-B		-	Grey M-F Sand, some Silt. (10") Rec: 20
		5	6	S4	6' - 8'	1	Grey M-F Sand, some Silt.
		4	5			1	Rec: 14
		7	4	\$5	8' - 10'	1	Light Brown M-F Sand, some Silt.
		4	5	+		1	Rec: 14
		6	5	S6-A	10' - 12'		Light Brown M-F Sand, some Silt. (18")
_		6	5	S6-B		1	Grey C-F Sand, some Silt. (6") Rec: 24
				+		1	
				8 8	~		<i>p</i>
		10				-	
		16	8	S7-A	15' - 17'	-	Greu C-F Sand, some Silt. (20")
		8	10	\$7-B		1	Redish Brown Clayey Silt. (4") Rec: 24
						1	
						$\frac{1}{2}$	
		7	7	S8-A	20' - 22'	4	Brown C-F Sand, some Silt. (16")
		10	13	S8-B	20 22	-	Redish Brown Clayey Silt. (8") Rec: 24
						-	
/						-	
			4.00	+		1	
		7	7	S9-A	25' - 27'	-	Brown C-F Sand, some Silt. (14")
		7	9	S9-B	20 27	1	Redish Brown Clayey Silt. (10") Rec: 24
						-	······································
-		3	4	\$10	30' - 32'		Redish Brown Clayey Silt.
		6	7]	Rec: 15
						1	
		4	4	S11-A S11-B	35' - 37'	4	Silty Clay, trace of C-F Gravel. (10") Redish Brown Clay. (14") Rec: 24
				311-8		1	Redish Brown Clay. (14") Rec: 24
]	
		3	5	S12-A	40' - 42'	-	Silty Clay, little C-F Gravel. (14")
		5	5	S12-B	12	1	Clay, some Fine Sand. (8") Rec: 20
						-	
		3	5	S13-A	45' - 47'	1	Silty Clay. (12")
)		6	7	\$13-B		4	Clay, some Fine Sand. (12") Rec: 24
1				1			
			r	1		-	

Boring No. <u>B44</u> Sheet No <u>3</u> of

Elev.			and the second sec										
(ft)	On Casing	For	6-in tration	No.	De	pth ft	Log	Material & Remarks					
		1	2	S14	50'	- 52'		Clay, some Fine Sand.					
		3	3					Rec: 2					
		2	4	\$15-A	55'	- 57'		Fine Sand with Silt. (12")					
		6	8	S15-B				Clay with some Gravel. (10") Rec: 2					
		9	23	S 16	60'	- 62'		Fine Sand with Silt and some M-F Gravel.					
_		26	28		-			Rec: 2					
		30	100/2"	\$17	65'	- 67'		Fine Sand with Silt and some C-F Gravel. Rec: 6					
		34	100/3"	S18	70'	- 72'		Rock Ships with Fine Sand and Silt. Rec: (
		_						Coring ended @ 75'9".					
		_					END						
_						-							
-													

Consulting Engineers

BORINGS FOR

STATEN ISLAND RAILROAD REACTIVATION

(Project)

SITE BLAUVELT

(Contractor)

	RDWY.		STAOFF
Type CME	Driller	TOM	Helper DAVE
9/9/02	9/10/02		
11:20	7:35		
2:30	9:35	÷	
SUNNY	SUNNY		
65 ft	75 ft		0.600 AD
	9/9/02 11:20 2:30 SUNNY	RDWY. Type CME Driller 9/9/02 9/10/02 11:20 7:35 2:30 9:35 SUNNY SUNNY	Type CME Driller TOM 9/9/02 9/10/02 11:20 7:35 11:20 11:2

M.L.W. ELEVATION

ELEVATION GROUND WATER

GROUND ELEVATION ZERO OF BORING LOG

PAY QUANTITIES

31.71 ft

LI	NEAL FEE	T OF BORI	NG			SAMPLES		LIN. FT. OF ROCK CORE			
J. in	3 in	4 in			ORD. DRY	UNDIST. DRY		1-3/8	1-5/8"	2-1/8"	
ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	

	Unit We	aight	Siz		Weight of Hammer	Average	Fall	
Drilling Mud								
Ordinary Dry	Samples	0.D. 2-1/2 in	I.D.	1- % in	140 lbs	30 in		
Undisturbed	Samples	Туре		Lengt	:h	0.D.	I.D.	

GROUND	WATER READINGS				
DATE	9/9/02				
TIME	12:00	 			
DEPTH	6 ft	 · - · · · · · · · · · · · · · · · · · ·		·	
		 	· · · · · · · · · · · · · · · · · · ·		

GENERAL REMARKS:

WATER LOSS DURING CORING. (NO WATER RETURN)

The subsurface information shown hereon was obtained for State design and estimate purposes. It is made available to authorized users only that may have access to the same information available to the State. It is presented in good faith, but is not intended as a substitute for investigations, interpretation or judgement of such authorized users.

INSPECTOR

Helen Huang, Robert Kumapley, Dick Riordan, & George Townsend

RESIDENT ENGINEER Kwabena O. Wadeer, P.E.

BORING NO. B46 SHEET NO. 1 OF 3

Boring No. Sheet No 2

No. <u>B46</u> o <u>2</u> of <u>3</u>

TRACT	NO.			WY.			STA. OFF.	
Elev.	Blows		oon	Sa	mple			
(ft)	on Casing		6-in ration	No.	Depth ft	Log	Material & Remarks	
-		3	3	S1	0' - 2'	1	Brown M-F Sand, some Silt.	
		4	4			1	Rec:	20
		5	2	S2	2' - 4'		Same as above.	_
1		4	6				Rec:	20
		7	6	\$3	4' - 6'		Light Brown M-F Sand, some Silt, little	
		5	4]	Clay. Rec:	21
		10	10	\$4	6' - 8'		Same as above. (wet)	
		9	5				Rec:	18
	1	2	6	\$5	8' - 10'		Brown M-F Sand, some Silt. (wet)	
		8	10				Rec:	18
		4	6	\$6	10' - 12'		Same as above.	
		6	5	E. C. La			Rec:	18
						-		-
								_
-		5	5	\$7	15' - 17'	1	Same as above. (19")	
		5	6				Redish Brown Clayey Silt. (5") Rec:	24
				1		-		
		5	3	\$8	20' - 22'	-	Redish Brown Clayey Silt.	-
		5	8			-	Rec:	24
		3 9	6 12	59	25' - 27'		Same as above. Rec: :	24
-	_	3	5	\$10	30' - 32'		Same as above.	-
		8	10			1	Rec:	18
		2	3	\$11	35' - 37'		Same as above.	_
_		5	8				Rec:	24
		3	9	812	40' - 42'		Same as above. (19")	
		12	19	011	40 - 42		Redish Brown Fine Sand, some Rec:	24
							Silt. (5")	
			7	S13-A	AE/ 47/		Dedich Duese Dine Coul	-
		5	12	S13-A S13-B	45' - 47'	-	Redish Brown Fine Sand, some Silt. (12") Redish Brown Clayey Silt. (12") Rec: 3	
		-					Net Alexandre Starter (12) Net	-
			-	1				

ONTRACT	NO.		RD	WY.				STA. OFF.				
Elev.	Blows	Spe	oon		ample							
(ft)	On Casing		6-in ration	No.		pth ft	Log	Material & Remarks				
1		3	3	S14	50'	- 52'		Redish Brown Clayey Silt.				
		5	5					Rec: 24				
					-							
		9 15	12 24	\$15	55'	- 57'		Same as above. Rec: 1				
				-								
	-	9	20	\$16	601	- 62'		Same an abane with little Onemal				
		25	28	516	60.	- 62		Same as above with little Gravel. Rec: 1:				
			_									
		100/2"		S 17	65′	- 67'		Rock chips.				
			-		-			Rec: 2'				
-								1. Martine and 1. Mar				
		1			-			· · · · · · · · · · · · · · · · · · ·				
)			-			-						
-							END	10 ft coring ended @ 75 ft.				
		-										
1	1											
							-					
	1.1.1											
			1									
					-							
					-							
						-						
					-							
_						-	1					

Consulting Engineers

BORINGS FOR

STATEN ISLAND RAILROAD REACTIVATION

(Project)

SITE BLAUVELT

(Contractor)

Contract No	Purpose		Stru	cture No		
Location	R	DWY	STA.		_OFF	
Rig No B57	Type MOBILE MANUAL	Driller	RICK	Helper	TRACEY	
DATE	9/12/02	· · · · · · · · · · · · · · · · · · ·				<u></u>
TIME STARTED	7:00					
TIME FINISHED	10:00					
WEATHER	SUNNY					
DEPTH REACHED	52 ft					
GROUND ELEVATIO	N	34.34 ft	M.L.W. EL	EVATION		

ZERO OF BORING LOG

ELEVATION GROUND WATER

LINEAL FEET OF BORING						SAMPLES		LIN. FT. OF ROCK CORE		
).1 _{2 in}	Ag in 3 in 4 in				ORD. DRY	UNDIST. DRY		1-3/8	2-1/8"	
ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM

	Unit We	eight			Size	W	leight of	f Hammer	Average Fall			
Drilling Mud												
Ordinary Dry	Samples	0.D.	2-12	in I.1	D. <u>1</u> -	% in	140	lbs		30 in		
Undisturbed #	Samples	Т	ype			Length			0.D.	•	I.D.	
						-						
											_	

GROUND	WATER READINGS				
DATE	9/12/02				
TIME	7:30	·	 		
DEPTH	6 ft		 		
		 		····	

GENERAL REMARKS:

The subsurface information shown hereon was obtained for State design and estimate purposes. It is made available to authorized users only that may have access to the same information available to the State. It is presented in good faith, but is not intended as a substitute for investigations, interpretation or judgement of such authorized users.

INSPECTOR

George Townsend

RESIDENT ENGINEER Kwabena O. Wadeer, P.E.

BORING NO.

SHEET NO. 1 OF

B48

3

Boring No. B48 Sheat No 2 of 3

		NO. RDWY. Blows on			STA. OFF.		
Elev.	Blows		poon	Sa	mple		
(ft)	on Casing		: 6-in tration	No.	Depth ft	Log	Material & Remarks
		1	1	81	0' - 2'	1.7	Brown Fine Sand and Silt. (wet)
		3	4				Rec: 1
	15	6	7	S2	2' - 4'		Black and Brown Fine Sand and Silt. (wet)
		11	13				Rec: 1
	(10	7	\$3	4' - 6'	1	Black and Brown Fine Sand and Silt, litt
		6	8				C-F Gravel. Rec: 2
	F	9	9	S4	6' - 8'		Brown M-F Sand and Silt.
-		7	6				Rec: 2
1.1.2		14	14	S5	8' - 10'		Same as above.
_		11	10				Rec: 2
		3	4	\$6	10' - 12'		Same as above. (wet)
		5	7				Rec: 7
						-	
		4	7	57	15' - 17'	1	Red Silty Clay. (wet)
		12	12			-	Rec: 1
						-	
		11	4	58	20' - 22'		Red Silty Clay, little M-F Gravel.
1		6	12	1			Rec: 1.
		5	7	59	25' - 27'		Same as above. Rec: 1
							Aug. 1
	7	5		\$10	30' - 32'		Same as above.
		5 7	6 11	\$10	30' - 32'		Same as above. Rec: 2
			6	<u>\$10</u>	30' - 32'		
			6	\$10 \$11	30' - 32' 35' - 37'		
		7	6 11				Rec: 2 Same as above.
		7	6 11 9 11	\$11	35' - 37'		Same as above. Rec: 2 Rec: 2
		7 6 8 12	6 11 9 11	\$11 \$12-A			Rec: 2 Same as above. Rec: 2 Red Silty Clay, little C-F Gravel. (16")
		7 6 8	6 11 9 11	\$11	35' - 37'		Same as above. Rec: 2 Rec: 2 Rec: 2
		7 6 8 12 25	6 11 9 11 17 50	S11 S12-A S12-B	35' - 37' 40' - 42'		Rec: 2 Same as above. Rec: 2 Red Silty Clay, little C-F Gravel. (16") Redish Brown M-F Sand. (wet) (8") Rec: 8
		7 6 8 12	6 11 9 11	\$11 \$12-A	35' - 37'		Rec: 2 Same as above. Rec: 2 Red Silty Clay, little C-F Gravel. (16") Redish Brown M-F Sand. (wet) (8") Rec: 8 Red Silty Clay, some M-F Gravel. (wet)
		7 6 8 12 25	6 11 9 11 17 50	S11 S12-A S12-B	35' - 37' 40' - 42'		Rec: 2 Same as above. Rec: 2 Red Silty Clay, little C-F Gravel. (16") Redish Brown M-F Sand. (wet) (8") Rec: 8
		7 6 8 12 25	6 11 9 11 17 50	S11 S12-A S12-B	35' - 37' 40' - 42'		Rec: 2 Same as above. Rec: 2 Red Silty Clay, little C-F Gravel. (16") Redish Brown M-F Sand. (wet) (8") Rec: 8 Red Silty Clay, some M-F Gravel. (wet)

NO. Blows On Casing	Spe For	oon	WY.		-	STA. OFF.
On	For					
			Sa	mple		
		6-in ration	No.	Depth ft	Log	Material & Remarks
	17	39	S14	50' - 52'		Redish Brown Silty Clay, some Sand and C-F
	38	15				Gravel. (wet) Rec: 14"
			-		END	End of boring 0 52 ft.
					-	
					-	A second s
					-	and a second
					-	
					1	
					1	
					1	No. of the second se
					4	
					-	
				· · · ·	1	
]	
		-			4	
1.000						
	-			· · · ·	-	
			-		-	
	-				4	
		- 100 m - 1000 m - 1000 m			1	
		1.4.1			1	
			-		1	
			1]	
-	-				4	· · · · · · · · · · · · · · · · · · ·
		-			{	· · · · · · · · · · · · · · · · · · ·
	-				-	
		1.1.1			1	
					1	
-]	
			-		ļ	
					4	
			-		1	

Consulting Engineers

BORINGS FOR

STATEN ISLAND RAILROAD REACTIVATION

(Project)

SITE BLAUVELT

					(Contra	actor)				
ontract ocation	No	Pur	pose	RDWY.		Str	ucture		F	
Rig No.	B57	Trano M	BILE MANUA	L Dril	ler RIG			lper T	ACEY	
DATE		9/12/				~~		iper <u> </u>		<u> </u>
TIME ST	RTED	10:4	15							
TIME FIN	ished	1:4								
WEATHER DEPTH RE	ACHED	SUN1 52 1		•		<u></u>				
	ELEVATIO	-		34.59 f	it	M.L.W. E		_		
ZERO OF	BORING	LOG				ELEVATIO	N GROUN	D WATER		
	• •			PAY QU	ANTITIE	S				
LI	NEAL FEE	T OF BOR	ING			SAMPLES		LIN.	FT. OF RO	CK COR
Ja in	3 in	4 in			ord. Dry	UNDIST. DRY		1-3/8	1-5/8"	2-1/8
ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITE
			L			1	1		1	La
				Size		Weight of	Hanner	Av	erage Fal	1
rilling		it Weight	•							
	Mud	it Weight		I.D	1- % in	140 1	bs	30	in	
rdinary	Mud	ples O.D.		I.D	1-% in Lengt		bs	<u>30</u> 0.p.	in I.D.	
rdinary	Mud Dry Sam	ples O.D.	2-12 in	I.D			bs			 /
rdinary ndistur	Mud Dry Sam	ples O.D. les 1	2-12 in	I.D			bs			·
rdinary ndistur	Mud Dry Samp oed Samp WATER REAL 9/12	ples O.D. les 1 DINGS /02	2-12 in	I.D			bs			
GROUND V DATE TIME	Mud Dry Samp oed Samp WATER REAL 9/12, 11:	ples O.D. les 1 DINGS /02 15	2-12 in	I.D			bs			
GROUND V DATE	Mud Dry Samp oed Samp WATER REAL 9/12	ples O.D. les 1 DINGS /02 15	2-12 in	I.D			bs			
rdinary ndisturk GROUND V DATE TIME	Mud Dry Samp oed Samp WATER REAL 9/12, 11:	ples O.D. les 1 DINGS /02 15	2-12 in	I.D			bs			
GROUND V DATE TIME DEPTH	Mud Dry Samp oed Samp WATER REAL 9/12, 11:	ples O.D. les 1 DINGS /02 15	2-12 in	I.D			bs			
GROUND V DATE TIME DEPTH	Mud Dry Samp oed Samp VATER REAL 9/12, 11:: 6 f	ples O.D. les 1 DINGS /02 15	2-12 in	I.D			bs			
GROUND V DATE TIME DEPTH	Mud Dry Samp oed Samp VATER REAL 9/12, 11:: 6 f	ples O.D. les 1 DINGS /02 15	2-12 in	I.D			bs			
GROUND & DATE TIME DEPTH ENERAL I	Mud Dry Samp oed Samp VATER REAL 9/12, 11:: 6 f	ples O.D. les T DINGS /02 15 t	<u>2-12 in</u>		Lengt	:h		о.р	I.D.	
GROUND & DATE TIME DEPTH ENERAL I	Mud Dry Samp oed Samp VATER REAL 9/12, 11:: 6 ff REMARKS:	ples O.D. les DINGS /02 15 tt	2-12 in ype	reon was	Lengt	for State d	esign ar	O.D.	I.D.	
GROUND W DATE TIME DEPTH ENERAL H Che substance ava: State.	Mud Dry Samp oed Samp VATER REAL 9/12, 11:: 6 f REMARKS: urface in ilable to It is p	ples O.D. les 7 DINGS /02 15 tt	2-12 in ype	reon was nly that	obtained may have it is not	:h	esign ar	O.D.	I.D.	es. It

INSPECTOR

George Townsend

RESIDENT ENGINEER Kwabena O. Wadeer, P.E.

BORING NO. <u>B50</u> SHEET NO. <u>1</u> OF

3

Boring No. Sheet No **B50** 2 of 3

			s on				
Elev.	Blows	Spo	noc	Sa	mple		
(ft)	on Casing		6-in ration	No.	Depth ft	Log	Material & Remarks
		1	1	S1	0' - 2'		Black and Brown M-F Sand and Silt. (wet)
	def. and it	2	4		1		Rec: 2
		7	9	S2	2' - 4'		Black and Brown M-F Sand and Silt, some
	1	20	17				C-F Gravel. (wet) Rec: 1
	113-54	21	28	S3	4' - 6'		Redish Brown M-F Sand and Silty Clay. (we
		37	15				Rec: 7
1.00	1.000000	17	19	S4	6' - 8'		Redish Brown M-F sand and Silt, trace of
-	130-14	21	15	1			Clay. (wet) Rec: 1
	12	15	17	\$5	8' - 10'		Brown M-F Sand and Silt. (wet)
		19	21				Rec: 2
		3	2	S6	10' - 12'		Same as above.
		3	10				Rec: 2
						-	
		7	5	\$7	15' - 17'		Red Silty Clay, little C-F Gravel. (wet)
_		9	10			1	Rec: 1
-		9	9	58	20' - 22'	-	
_		9	10	20	20 22.	•	Same as above. Rec: 1.
-		-		-		•	NeG, 1.
				-		1	
		6 10	8	89	25' - 27'		Same as above.
_		10	10				Rec: 2
		6	8 15	\$10	30' - 32'	4	Same as above.
		,	15				Rec: 1
				1		1	
		6	9	811	35' - 37'		Same as above.
		1	13				Rec: 2
						-	
		8	10	S12-A	40' - 42'	1	Same as above. (8")
		39	60	S12-B			Redish Brown M-F Sand. (16") Rec: 8
				1.77			
-		18	16	\$13	45' - 47'	-	Red Silty Clay. (wet)
)		21	17	-		-	Rec: 2
-			-			1	

TRACT	NO.		RD	WY.			STA. OFF.
Elev.	Blows		rs on oon	San	ple		
(ft)	On Casing		6-in ration	No.	Depth ft	Log	Material & Remarks
_		28 31	33 29	S14-A	50' - 52'		Red Silty Clay, little M-F Gravel. (wet) (5") Rec: 1
-			1	S14-B		END	Red Silty Clay tightly compacted with C-H
							Gravel. (wet) (7")
_							
							End of boring 0 52 ft.
_						-	
_	-		1		- <u></u> ,		
_							
			-				
			-				
			-			1	
					<u></u>	-	
		-					
-						-	
			-				
					and the state of the		
						-	
						1	
						1	
		-	-				

_							
			nice nices.				
		- 1				1	and a second of the second of

Consulting Engineers

BORINGS FOR

SHEET NO. 1 OF

BORING NO.

B52

3

STATEN ISLAND RAILROAD REACTIVATION

(Project)

SITE BLAUVELT

(Contractor)

MOBILE MANUAL	WY	RICK	STA.	OFF.	
	Driller	DICE		_	
		VTAV	Hel	per TRACEY	
13/02 9	0/16/02				
2:00	8:20	00			·
:20	9:00				
UNNY	SUNNY				
2 ft !	52 ft				
	2:00 3:20 UNNY 5	8:20 8:20 9:00 9:00 SUNNY	8:20 8:20 9:00 UNNY SUNNY	8:20 8:20 9:00 UNNY SUNNY	8:20 8:20 9:00 UNNY SUNNY

GROUND ELEVATION ZERO OF BORING LOG 34.97 ft

M.L.W. ELEVATION ELEVATION GROUND WATER

				PAY QU	ANTITIE	S				
LINEAL FEET OF BORING						SAMPLES		LIN. FT. OF ROCK CORE		
J.12 in	J _{2 in} 3 in 4 in				ORD. DRY	UNDIST. DRY		1-3/8 1-5/8" 2-1/		
ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM

Unit Weight	Size	Weight of Hamme:	r Average Fall
Drilling Mud			1.00
Ordinary Dry Samples O.D.	2-1/2 in I.D. 1-7/8	in 140 lbs	30 in
Undisturbed Samples Ty	pe	Length	0.D I.D

GROUND	WATER READINGS				
DATE	9/13/02				
TIME	2:20	 	 		
DEPTH	6 ft	 	 		
		 	 	······	

GENERAL REMARKS:

The subsurface information shown hereon was obtained for State design and estimate purposes. It is made available to authorized users only that may have access to the same information available to the State. It is presented in good faith, but is not intended as a substitute for investigations, interpretation or judgement of such authorized users.

INSPECTOR

George Townsend

RESIDENT ENGINEER Kwabena O. Wadeer, P.E.

Boring No.		B52	2
Sheet No	2	of	3

ONTRACT	NO.			WY.			STA. OFF.
Slev.	Blows		s on Don	Sa	mple		
(ft)	on Casing	For	6-in ration	No.	Depth	Log	Material & Remarks
_		2	2	S1	0' - 2'	+	Brown M-F Sand and Silt. (damp)
		3	4			1	Rec: 1
		4	20	\$2	2' - 4'	1	Black and Brown M-F Sand, some Asphalt an
		10	21			1	C-F Gravel. Rec: 1
		23	25	S 3	4' - 6'		Brown M-F Sand and Silt.
		26	28]	Rec: 2
		12	15	S4	6' - 8'		Brown M-F Sand and Silt. (wet)
		18	13				Rec: 1
		13	19	S 5	8' - 10'		Same as above.
		21	23				Rec: 1
		19	21	S6	10' - 12']	Same as above.
		23	24			-	Rec: 2
						4	
		14	4	S7	15' - 17'	-	Red Silty Clay, some C-F Gravel. (wet)
		7	17 '			1	Rec: 1
							·····
		7	4	S8	20' - 22'	.	Same as above.
N		7	9			-	Rec: 1
		9	10	89	25' - 27'		No recovery.
		9	13			-	Rec: 0
						-	
		9	10	S10	30' - 32'		No recovery.
		11	14			-	Rec: (
						1	
		16 20	19 21	\$11	35' - 37'	4	No recovery.
		20	<u> </u>			-	
			3	<u>812</u>	40' - 42'		
		7 10	7 14	312	40' - 42'		Red Silty Clay, some C-F Gravel. (wet) Rec: 2
_		10	12	S13	45' - 47'	-	Same as above.
)		13	19			-	Rec: 2
						1	

Blows Blows on Por 6-in Casing Sample Log Material & Remarks 41 41 41 50' 52' Same as above with some M-F Sand. 32 50 14 50' 52' Same as above with some M-F Sand. 32 10 10 10 10 Re 33 10 10 10 10 Re 33 10 10 10 10 10 33 10 10 10 10 10 33 10 10 10 10 10 10 33 10 10 10 10 10 10 10 34 10 10 10 10 10 10 10 10 10 10<	ONTRACT	NO.		RD	WY.			STA. OFF.
Casing Penetration No. ft 41 41 514 50' - 52' Same as above vith some M-F Sand. 32 50 - - Ref Ref - - - - - Ref Ref - - - - - Ref Ref Ref - - - - - - Ref	Elev.	Blows			Sa	mple		
32 50 Re Image: Solution of the solutio	(ft)				No.	Depth ft	Log	Material & Remarks
BRD Rnd of boring @ 52 ft. Image: State in the	_				S14	50' - 52'	-	Same as above with some M-F Sand. Rec:
		7					END	
				-				
			_					
				100.0 - 10 - 10		-		
							100	
						(1	
		-	-	1 2 1 2				
	-						1	
		-		_			-	
							-	
Image: Section of the section of t)				-		1	
Image: Section of the section of t	C		(and the second
Image: Section of the section of th	-						1	
Image: Section of the section of th		,						
Image: Section of the section of t							1	
Image: Section of the sec			-				-	
Image: Section of the section of th								
Image: Section of the section of th				<u> </u>			-	
Image: Section of the sec							1	
							-	
Image: Section of the sec								
							-	
	· · · ·		•					
)							

Consulting Engineers

BORINGS FOR

STATEN ISLAND RAILROAD REACTIVATION

(Project)

SITE BLAUVELT

(Contractor)

Contract No.	Purpose			Structure No	
location		RDWY.	8	STA	
Rig No.	Type MOBILE MANUAL	Driller	LARRY	Helper	JOSE
DATE	9/16/02				
TIME STARTED	10:00				
TIME FINISHED	12:10				
WEATHER	DRIZZLE				
DEPTH REACHED	52 ft				
			32 30		

GROUND ELEVATION ZERO OF BORING LOG 34.62 ft

M.L.W. ELEVATION ELEVATION GROUND WATER

				PAY QU	ANTITIE	S		v.		
LI	NEAL FER	T OF BOR	ING			SAMPLES	84	LIN. FT. OF ROCK CORE		
J ¹ 2 in	3 in	4 in			ORD. DRY	UNDIST. DRY		1-3/8	1-5/8"	2-1/8"
ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM

	Unit Weight	Size	Weight of Hammer	Average	Fall
Drilling Mud Ordinary Dry Undisturbed S	Samples O.D. 2-12 in	-	in 140 lbs	30 in O.D.	
GROUND WATER	READINGS			<u> </u>	

DATE	9/16/02				
TIME	10:15	 ·····	······································		
DEPTH	6 ft	 		 	
		 	······································	 	· · · · · · · · · · · · · · · · · · ·

GENERAL REMARKS:

The subsurface information shown hereon was obtained for State design and estimate purposes. It is made available to authorized users only that may have access to the same information available to the State. It is presented in good faith, but is not intended as a substitute for investigations, interpretation or judgement of such authorized users.

INSPECTOR

Helen Huang

RESIDENT ENGINEER Kwabena O. Wadeer, P.E.

BORING NO. <u>B54</u> SHEET NO. <u>1</u> OF <u>3</u>

Boring No. Sheat No 2

B54 2 of 3

					1	S OD	Blows		
				amp	Sa		ws Spoon		Elev.
	Material & Remarks	Log	Depth ft	T	No.		For (Penetr	on Casing	(ft)
-	n C-M Sand with little Gravel.)' - 2'	+	S1	2	2		-
o: 2		1				5	4	100.000	
	n M-F Sand with little Silt.	1	2' - 4'		\$2	4	4		
c: 6	E		-			9	8		
	as above.		1' - 6'		\$3	9	6		1
a: 8	İ			T	I	15	10		
	as above.		5' - 8'	T	S4	10	9	0	
c: 1						15	10		
-	t Brown M-F Sand with some Silt		' - 10'		85	13	12		
a: 2						15	13		
	as above.)' - 12'	T	S6	12	12		
c: 2	P	÷		-	2	14	17	1.2-1	-
				+				-	
_								Han	
c: 2	as above.		5' - 17'	-	\$7	12 16	8	-	
3: 4	F								_
_				1					
	sh Brown Clayey Silt.)' - 22'		58	11	8		
c: 8	P					23	18		
_)
-									1
		1.1.1		_					
	as above.		5' - 27'		89	6	6		
c: 1	P			+		14	9		
-				+					-
	as above.	1.1)' - 32'	+	\$10	8	8		
c: 8	P	6 F		+		15	7		
	· · · · · · · · · · · · · · · · · · ·			T					
_	as above.		i' - 37'		S11	8	7		
c: 1				1		17	15		
				+		-			
_	sh Brown Clay with little Silt.		· - 42'	+	S12	9	8		
c: 2	R			-		17	16		_
				+				_	
_	ecovery.		· - 47'	+	\$13		50/2"		-
o: 0	Ŕ	2.5)
-				-					1.1
				1					

					BORING		Boring No. <u>B54</u> Sheet No <u>3</u> of <u>3</u>
ONTRACT	NO.		a second s	WY.			STA. OFF.
Elev.	Blows		ws on Xoon	Sau	mple		
(ft)	On Casing		6-in ration	No.	Depth ft	Log	Material & Remarks
		50/3"		S14	50' - 52'		Brown Clay with little Silt and Gravel and
-					-	-	a 1" piece of Rock. Rec: 13'
		-	-		-	END	End of boring @ 52 ft.
-							
						1	1999
						1	
A	1				1	1	
1.00	2 × 2 × 4 ×			1	3	1	
-					1		
				-		-	
			-				
		-	-		ōī		
	1.00				A	1	
					1	1	
				I	Entra a de terra a como		
5	1				-		
1	1			-	1		
-				-			
		_	_	-	A		
					-		
		1.000	1.2.2.			1	
-	-			-			
-				-			
				1		1	
	1 S.	Sec.			2		
			1250				
		-		-			
-					-		
-	-		-	-			
	<u>.</u>	-	-	-		10.00	
	-			-			
				1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	
		1.2.2.1					
	1.5.2.3	1					
	1					1	
				-			
		_	-	-	2		

Consulting Engineers

BORINGS FOR

STATEN ISLAND RAILROAD REACTIVATION

(Project)

SITE BLAUVELT

(Contractor)

Contract No Location	Purpose _	RDWY.	Struc STA.	Structure No STAOFF		
Rig No.	Туре	Driller	LARRY	Helper JOSE	······································	
DATE	9/16/02					
TIME STARTED	12:45					
TIME FINISHED	2:50					
WEATHER	SUNNY					
DEPTH REACHED	52 ft				<u> </u>	
	· · · · · · · · · · · · · · · · · · ·					
GROUND ELEVATI	ÓN	34.17 ft	M.L.W. ELE	EVATION		

GROUND ELEVATION ZERO OF BORING LOG

M.L.W. ELEVATION ELEVATION GROUND WATER

BORING NO.

SHEET NO. 1 OF

_____B56

3

AL FEE	T OF BORI	NG.			SAMPLES		LIN.	FT. OF RO	CK CORE
3 in	4 in			ORD. DRY	UNDIST. DRY		1-3/8	1-5/8"	2-1/8"
ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM
	3 in	3 in 4 in	3 in 4 in	3 in 4 in	3 in 4 in ORD. DRY	3 in 4 in ORD. UNDIST. DRY DRY	3 in 4 in ORD. UNDIST. DRY DRY	3 in 4 in ORD. UNDIST. DRY DRY 1-3/8	3 in 4 in ORD. UNDIST. DRY DRY 1-3/8 1-5/8"

	Unit W	eight	Siz	e W	eight of Hammer	Average Fall	
Drilling Mud	L						
Ordinary Dry	Samples	0.D. 2-1/2 in	I.D.	1- % in	140 lbs	30 in	
Undisturbed	Samples	Туре		Length		0.D I.D	

GROUND	WATER READINGS				
DATE	9/16/02				
TIME	12:50	 	····		
DEPTH	5 ft	 		 	

GENERAL REMARKS:

The subsurface information shown hereon was obtained for State design and estimate purposes. It is made available to authorized users only that may have access to the same information available to the State. It is presented in good faith, but is not intended as a substitute for investigations, interpretation or judgement of such authorized users.

INSPECTOR Helen Huang

RESIDENT ENGINEER Kwabena O. Wadeer, P.E.

Boring No.		B5	6
Sheet No	2	of	3

	NO.			WY.	· · · · · · · · · · · · · · · · · · ·	1	STA. OFF.
Elev.	Blows		on on	Sau	mple	_	
(ft)	On Casing		6-in ration	No.	Depth ft	Log	Material & Remarks
		1	3	S1	0' - 2'		Brown M-F Sand with Organic material.
		4	5			1	Rec: 2
		4	4	S2	2' - 4'	4	Brown to Light Brown M-F Sand with some
		4	4			4	Silt. Rec: 10 Light Brown M-F Sand with some Silt.
		5	6	83	4' - 6'	•	
		6	8	S4	6' - 8'	4	Rec: 1 Brown M-F Sand with some Silt.
	┝───┼	*	7	34	0 - 0	-	Rec: 1
	├─── ─┤	12	12	\$5	8' - 10'		Same as above.
		14	16			4	Rec: 2
		7	10	S6	10' - 12'	•	Same as above.
		10	7			1	Rec: 2
						4	
		4	4	S7	15' - 17'	-	Redish Brown Clayey Silt.
	1 1	4	4			1	Rec: 1
						$\frac{1}{2}$	
		9	9	Se	20' - 22'		Same as above.
		9	7			-	Rec: 2
)							
		7.	7	<u>89</u>	25' - 27'		Redish Brown Clay with little Silt. Rec: 2
		6	7		30' - 32'		Redish Brown Clayey Silt with Gravel.
		9	13		- Sec]	Rec: 2
		8	12		35' - 37'		Redish Brown Clay with Silt and Gravel.
		13	17				Rec: 2
		_					
		5	7	\$12	40' - 42'	-	Redish Brown Clayey Silt. (wet) Rec: 1
		7	/			-	
s		7	7	S13	45' - 47'	-	Same as above.
)		12	13		ļ	-	Rec: 7
100				1			
£.							

TRACT	NO		80	WY.				STA. OFF.		
TRACT		Blo	ws on	-	-		1	OLA. VEF.		
Elev.	Blows	-	oon	Sa	mple	mple				
(ft)	On		6-in ration	No.	D	epth ft	Log	Material & Remarks		
-	Casing		ration					and the second		
-		50/4"		S14	50'	- 52'	1	Same as above. Rec:		
-				-	-		END	End of boring 0 52 ft.		
							1			
				_	-					
-				-	-		-			
			-		-	_				
-	-				-					
1000							1			
-					-	_	-			
-				-	-	-	1			
							- C - C			
-	1000				-					
				-			1			
					1					
1.7.1	2012									
				Ì	1					
		1.1.1.1.1.1								
		1		1						
1				1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	-	-				
-		-	-		-					
							61.1			
					_					
					-			and the second		
_		-	-		-	_				
-					-	-				
		-			-					
-				-						
					-		1			
-		-		-	-		1	the second se		
-				-	-					
							1			
					1					
							1			
		1	1				1			
					L		1.1.1			
		1								
1		1-24		-				A 20, 1 4 10		
	1									
-			1							
						-				
1.1.1.1.1.1	and the second se				1					

Consulting Engineers

BORING NO. **B58** SHEET NO. 1 OF 3

BORINGS FOR

STATEN ISLAND RAILROAD REACTIVATION

(Project)

SITE BLAUVELT

(Contractor)

ontract No	Purpose	RDWY.		_ Structure No STA	DFF
Rig No.	Туре	Driller	LARRY	Helper	
DATE	9/17/02				
TIME STARTED	7:30				
TIME FINISHED	9:20				
Weather	SUNNY				
DEPTH REACHED	52 ft				
					· · · · · _ · · · ·
				•	

GROUND ELEVATION ZERO OF BORING LOG 32.57 ft

M.L.W. ELEVATION ELEVATION GROUND WATER

SAMPLES	LIN.	FT. OF RO	OCK CORE
UNDIST.			
DRY	1-3/8	1-5/8"	2-1/8"
ITEM ITEN	1 ITEM	ITEM	ITEM
	ITEM ITER	ITEM ITEM ITEM	ITEM ITEM ITEM ITEM

	Unit We	ight	Siz	e, W	eight of Hammer	Average	Fall
Drilling Mud Ordinary Dry	Samples (D.D. <u>2-1/2</u> i	in I.D.	1- % in	140 lbs	<u>30 in</u>	
Undisturbed \$	Samples	Туре		Length		0.D :	I.D

GROUND	WATER READINGS			
DATE	9/17/02			
TIME	7:40		 	
DEPTH	6 ft	<u></u>		
		 	 ·	

GENERAL REMARKS:

The subsurface information shown hereon was obtained for State design and estimate purposes. It is made available to authorized users only that may have access to the same information available to the State. It is presented in good faith, but is not intended as a substitute for investigations, interpretation or judgement of such authorized users.

INSPECTOR Alvin Chen & Helen Huang RESIDENT ENGINEER Kwabena O. Wadeer, P.E.

Boring No. 2 of 3 Sheet No

OFF.

B58

STA.					RDV s on		NO.	
		and a second	mple	Sar	non	Spo	BLOWS	Elev.
	Log	Depth ft	F	No .	6-in ration		On Casing	(ft)
Light Brown		' - 2'	0'	S1	2	2		
					5	4		
Same as abov		' - 4'	2'	\$2	8	8		
					7	6	-	
Brown M-F Sa		' - 6'	4'	83	10	10		
Same as abov		' - 8'	61	S4	15 14	13 10		
Same as abov			-	34	23	16		
	1	- 10'	81	85	12	10		
			l –	00	19	13		
Same as abov	1.11	' - 12'	10/	86	8	8		
Dame us abov	1.1			- 30	8	8		
				_				
Dedich Deser			1.54					
Redish Brown		' - 17'	15'	\$7	5	5		
				-		5		
							ł	
-			<u> </u>					
Same as abov		' - 22'	20'	S 8	5	5		-
					5			100
	1			1000				-
2	1			Par 1997				
1 - management		200						
No recovery.		' - 27'	25'	89	12	8		
11			1-1-1		19	17		
1								
				-				
			1	-		-		
No recovery.	1	' - 32'	30'	\$10	5	5		
			-	100.000	11	1		
	-		-	12	-			
Redish Brown		' - 37'	25/	\$11	10	10		
Neuran Brown		- 31	33	511	16	10		-
			-					
			+		-			
	1		-					
Same as abov		' - 42'	40'	S12	8	12		-
	1				9	8		
	1		-			-		
	1		1					
	1			1				
Same as abov	1	' - 47'	45'	\$13	50/3"	13		-
	1		1					1
	1		1					-
	1			1		1997		
	1		_					

Material & Remarks M-F Sand with little Silt. Rec: 12" 8. Rec: 12" nd with little Silt. Rec: 18" 8. Rec: 18" Rec: 18" в. Rec: 24" Clayey Silt. Rec: 24" 8. Rec: 12" Rec: 0" Rec: 0" Clayey Silt with Gravel. Rec: 20" 8. Rec: 16" e with Rock pieces. Rec: 9"

NTRACT	NO.		RDI	WY.				STA.	<u>B58</u> 3 of <u>3</u> OFF.
Elev.	Blows		rs on oon		mple				
(ft)	On Casing	For	6-in ration	No.	-	epth Ft	Log	Material & F	lemarks
		50/1"		S14	50'	- 52'		Rock chips.	
					-	_			Rec:
				-	-	_	END	End of boring @ 52 ft.	- 10-04
			-	-	-		1	-	
					1		1		
	C	[a-4]					1		
								1	
_		-	-		-		1		
		_			-				
	n				-				
					1	_			
							1		
	1.20-01								
							-		
-					-				
						_	1		
-									
)		-			-				
				-	-	_	-		
-			-				1		
	-						-		
				-					
		1.32.71			-		1		
N	Sec. 14			20.000			1		
				S			1		
					-				
-			-	-	-	_			
	-								
	1.7.1				-				
				1					
					-				
-				-	-				
-			1 1	-	1				
	1				1				
	i				1				
-									
				1			1		

Consulting Engineers

BORING NO. B60 SHEET NO. 1 OF 2

BORINGS FOR

STATEN ISLAND RAILROAD REACTIVATION

(Project)

SITE BLAUVELT

(Contractor)

ontract No	Purpose			Structure	No	
ocation	R	DWY.		STA	OFF	
Rig No.	Type MOBILE MANUAL	Driller	LARRY	н	elper	
DATE	9/17/02					
TIME STARTED	10:30					
TIME FINISHED	2:00					····
WEATHER	SUNNY					
DEPTH REACHED	48 ft					
		······································	•••••••••••••••••••••••••••••••••••••••			

GROUND ELEVATION ZERO OF BORING LOG 33.52 ft

M.L.W. ELEVATION ELEVATION GROUND WATER

PAY QUANTITIES

LINEAL FEET OF BORING				SAMPLES			LIN. FT. OF ROCK CORE			
J _{2 in}	3 in	4 in			ORD. DRY	UNDIST. DRY		1-3/8	1-5/8"	2-1/8"
ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM

	Unit We	ight	Size	We	eight of Hammer	Average	Fall
Drilling Mud							
Ordinary Dry	Samples	O.D. <u>2-12 in</u>	I.D	1-% in	140 lbs	30 in	
Undisturbed S	Samples	Туре		Length		0.D.	I.D.

GROUND	WATER READINGS				
DATE	9/17/02				
TIME	10:40		 	 	
DEPTH	6 ft	·	 	 	

GENERAL REMARKS:

The subsurface information shown hereon was obtained for State design and estimate purposes. It is made available to authorized users only that may have access to the same information available to the State. It is presented in good faith, but is not intended as a substitute for investigations, interpretation or judgement of such authorized users.

INSPECTOR

Helen Huang
BORING LOG

Boring No	•
Sheet No	2

NO.		B60		
No	2	of	3	

Slev.	BLows		rs on oon	Si	ample		
(ft)	on Casing		6-in ration	No.	Depth ft	Log	Material & Remarks
					0' - 2'		0' - 2' Railroad foundation ballast stone
		8	13	<u>\$1</u>	2' - 4'	100	Brown M-F Sand with some Silt.
	<u> </u>	37	50/3"	- 31	2 - 4	-	Rec: 12
	┝━━━━╋	20	15	S2	4' - 6'	-	Same as above.
		12	12				Rec: 10
		8	8	S 3	6' - 8'		Same as above.
		11	8				Rec: 10
		10	10	S4	8' - 10'	1	Same as above.
		10	10			1	Rec: 6"
		11	7	S 5	10' - 12'		Same as above.
		6	5	_		-	Rec: 24
						1	
		4	4	S6	15' - 17'	•	No recovery.
		5	6]	Rec: 0"
		9	5	S 7	20' - 22'		Redish Brown Clayey Silt.
	[5	4			-	Rec: 14
		2 6	2 12	S8	25' - 27'		Same as above. Rec: 22
-		2	6	89	30' - 32'		Same as above with little Gravel.
		9	10	-			Rec: 12
19. Y		-		-			
		7	7	810	35' - 37'		Redish Brown Clay with little Silt.
			7 10	\$10	35' - 37'		
		7 7	10				Rec: 14
		7 7 7	10	\$10 \$11	35' - 37' 40' - 42'		Rec: 14 Redish Brown Silt with Gravel and Rock
		7 7	10				Rec: 14 Redish Brown Silt with Gravel and Rock
		7 7 7	10				Rec: 14 Redish Brown Silt with Gravel and Rock
5		7 7 7	10				Rec: 14 Redish Brown Silt with Gravel and Rock pieces. Rec: 12
		7 7 7	10			END	Rec: 14 Redish Brown Silt with Gravel and Rock

HNTB CORPORATION

Consulting Engineers

BORINGS FOR

STATEN ISLAND RAILROAD REACTIVATION

(Project)

SITE BLAUVELT

(Contractor)

Contract No Location	Purpose I	RDWY.	 Structo	ire No	OFF.	
Rig No. <u>B57</u> DATE TIME STARTED TIME FINISHED WEATHER DEPTH REACHED	Type MOBIL MANUAL 9/16/02	Driller		Helper	TRACEY	······
	······	22 08 54	 		3	•·

ZERO OF BORING LOG

M.L.W. ELEVATION GROUND WATER

BORING NO.

SHEET NO. 1

B62

OF

2

				PAY QU	ANTITIE	S				
LI	NEAL FEE	T OF BORI	NG		SAMPLES			LIN. FT. OF ROCK CORE		
	3 in	4 in			ORD. DRY	UNDIST. DRY		1-3/8	1-5/8"	2-1/8"
ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	item	ITEM	ITEM

	Unit Weight	Size	Weight of Hammer	Average Fall
Drilling Mud	Samples O.D. 2-12 in	I.D. 1-% in	140 lbs	30 in
Undisturbed S		Len		0.D I.D

G	ROUND	WATER	R READINGS			
D	ATE	23	9/16/02			
T:	IME		10:54	 	 	
וס	2 PTH		7 ft		 	

GENERAL REMARKS:

FLOW FROM AUGERED HOLE WAS ALMOST WATER AT 35 FT, 40 FT.

The subsurface information shown hereon was obtained for State design and estimate purposes. It is made available to authorized users only that may have access to the same information available to the State. It is presented in good faith, but is not intended as a substitute for investigations, interpretation or judgement of such authorized users.

INSPECTOR

George Townsend

RESIDENT ENGINEER Kwabena O. Wadeer, P.E.

BORING LOG

Boring NO.	
Sheet No	2

B62 of 2

TRACT	NO.		RD	WY.		STA. OFF.			
Elev.	Blows		Blows on Spoon Sample		Sample		Sample Depth No. ft		
(ft)	on Casing	For (Penetr		No.	Material & Remarks				
-					0' - 4'	-	0' - 4' Railroad foundation ballast stone		
						-			
	-	-		-		-			
-		41	34	S1	4' - 6'	1	Black Organic material (roots) and Silt.		
		42	43	-		1	Rec: 2		
		10	12	\$2	6' - 8'	1	Brown M-F Sand and Silt, trace of Clay,		
		14	19			1	Little C-F Gravel. (wet) Rec: 1		
		12	13	\$3	8' - 10'	1	Same as above.		
		21	25				Rec: 2		
		9	10	34-A	10' - 12'		Brown M-F Sand. (wet) (19")		
-	1000	13	16	S4-B			Red Silty Clay. (wet) (5") Rec: 2		
			The second						
		8	11	85	15' - 17'		Red Silt and Clay and M-F Sand. (wet)		
		16	19				Rec: 1		
				1					
-		9	11	56	20' - 22'		Red Clay, some Fine Sand and Silt. (damp)		
_		10	14		1		Rec: 2		
1.11			1						
					-				
-		9	8	\$7	051 071	100			
		7	12	5/	25' - 27'	-	Red Silty Clay, some M-F Gravel. (damp) Rec: 1		
- 1									
					201 201				
_		6 9	7	98	30' - 32'	1	Same as above. Rec: 2		
		-	**						
_		8	13		35' - 37'				
		13	26	S 9	35' = 37'	-	Red Clayey Silt, C-F Gravel. (wet) Rec: 2		
_									
		10	18	S10	40' - 42'		Brown Silt and Clay, C-F Gravel. (wet)		
		22	24	510	40 - 42	1	Rec: 1		
			-						
		100/4"		S11	45' - 47'		Same as above.		
					F	END			
						-	Rec: 3 Auger refusal (46 ft.		

HNTB CORPORATION

Consulting Engineers

BORINGS FOR

STATEN ISLAND RAILROAD REACTIVATION

(Project)

SITE BLAUVELT

(Contractor)

ontract No	RD	WY	STA.	ure No	OFF.
Rig No. <u>B57</u> DATE	Type MOBILE MANUAL 9/17/02	Driller	RICK	Helper	TRACEY
TIME STARTED	8:30				
TIME FINISHED	2:05	·····			
Weather	SUNNY				
DEPTH REACHED	46' 4"	· ·	······		
DEPTH REACHED	46' 4"	·	·····		

ROUND ELEVATION ZERO OF BORING LOG 30.73 ft

M.L.W. ELEVATION ELEVATION GROUND WATER

BORING NO.

B64

SHEET NO. 1 OF 2

				PAY QU	ANTITIE	S				
LI	NEAL FEE	T OF BOR		-	SAMPLES			LIN. FT. OF ROCK CORE		
() in	3 in	4 in			ORD . DRY	UNDIST. DRY		1-3/8	1-5/8"	2-1/8"
ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM	ITEM

	Unit We	aight	Siz	e	Weight of Hammer	Average Fall	
Drilling Mud	L				-		
Ordinary Dry	Samples	0.D. 2-12 in	_ I.D	1- % in	140 lbs	30 in	
Undisturbed	Samples	Туре		Length	n	0.D. <u>I.D.</u>	<u> </u>

GROUND	WATER READINGS			 · · · · ·
DATE	9/17/02			1
TIME	<u> </u>	 		
DEPTH	20 ft	 	 	
1		 	 	

GENERAL REMARKS:

The subsurface information shown hereon was obtained for State design and estimate purposes. It is made available to authorized users only that may have access to the same information available to the State. It is presented in good faith, but is not intended as a substitute for investigations, interpretation or judgement of such authorized users.

INSPECTOR Dick Riordan

RESIDENT ENGINEER Kwabena O. Wadeer, P.E.

BORING LOG

Boring No. <u>B64</u> Sheet No <u>2</u> of <u>2</u>

	-			WY.			STA. OFF.		
Elev. (ft)	Blows on Casing	Blows on Spoon		Sample		1			
			6-in ration	No.	No. ft		Material & Remarks		
				S1	0' - 2'		0' - 4' Railroad foundation ballast sto	one	
		-							
2.0		-	-	\$2	2' - 4'	-		_	
	-	8	7	\$3	4' - 6'		Red Clay with trace of Silt and Gravel.		
		6	8	1		-	Rec:		
12		8	11	S4	6' - 8'		Red Clay and Gravel.		
		12	13	1			Rec:	1	
		18	18	S5	8' - 10		Red Clay and C-F Gravel.		
		17	14			_	Rec:	1	
	-	10	22	S6	10' - 12	<u></u>	Same as above.		
	-	18	17			-	Rec:	1	
				-					
		100/2"		\$7	15' - 17	,	Same as above.	_	
	-	1 di				-	Rec:	6	
						_			
-	-	3	4	\$8	20' - 22	_	Redish Brown Clay, some Fine Sand and S		
							Bec:	3	
							Rec:	3	
		12 13	6 14	59	25' - 27		Rec: Red Clay and Fine Sand, some Silt. Rec:		
		12 13	6 14				Red Clay and Fine Sand, some Silt. Rec:		
		12 13 17	6 14 11	S10-A	25' - 27 30' - 32		Red Clay and Fine Sand, some Silt. Rec: Red Clay, some Gravel. (6")	2	
		12 13	6 14				Red Clay and Fine Sand, some Silt. Rec:	2	
		12 13 17	6 14 11	S10-A			Red Clay and Fine Sand, some Silt. Rec: Red Clay, some Gravel. (6") Red Sand, some Silt. (18") Rec:	2	
		12 13 17 6	6 14 11 33	S10-A S10-B	30' - 32		Red Clay and Fine Sand, some Silt. Rec: Red Clay, some Gravel. (6")	2	
		12 13 17 6 21 18	6 14 11 33 23 17	S10-A S10-B S11	30' - 32 35' - 37		Red Clay and Fine Sand, some Silt. Rec: Red Clay, some Gravel. (6") Red Sand, some Silt. (18") Rec: Red Clay and C-F Gravel. Rec:	2	
		12 13 17 6 21	6 14 11 33 23	S10-A S10-B	30' - 32		Red Clay and Fine Sand, some Silt. Rec: Red Clay, some Gravel. (6") Red Sand, some Silt. (18") Rec: Red Clay and C-F Gravel.	2	
		12 13 17 6 21 18	6 14 11 33 23 17	S10-A S10-B S11	30' - 32 35' - 37		Red Clay and Fine Sand, some Silt. Rec: Red Clay, some Gravel. (6") Red Sand, some Silt. (18") Rec: Red Clay and C-F Gravel. Rec: Red Clay and Rock fragments.	2	
		12 13 17 6 21 18	6 14 11 33 23 17	S10-A S10-B S11	30' - 32 35' - 37		Red Clay and Fine Sand, some Silt. Rec: Red Clay, some Gravel. (6") Red Sand, some Silt. (18") Rec: Red Clay and C-F Gravel. Rec: Red Clay and Rock fragments.	2	
		12 13 17 6 21 18	6 14 11 33 23 17	S10-A S10-B S11	30' - 32 35' - 37		Red Clay and Fine Sand, some Silt. Rec: Red Clay, some Gravel. (6") Red Sand, some Silt. (18") Rec: Red Clay and C-F Gravel. Rec: Rec: Red Clay and Rock fragments. Rec:	2	

Appendix C: Selected Sailors' Snug Harbor and North Shore Staten Island Railroad Historic Photographs

Sailors' Snug Harbor Historic Images



Bird's Eye View Sailors' Snug Harbor, S.I.

Bird's Eye View Sailors' Snug Harbor, S.I. Undated image. Multiple sources.



Undated photograph of the Sailors' Snug Harbor waterfront as seen from the Kill Van Kull. Courtesy Staten Island Museum.



Aerial photograph of the north shore of Staten Island including Sailors' Snug Harbor, ca. 1900. Courtesy Staten Island Museum.



Waterfront, Sailors' Snug Harbor, ca. 1915. Multiple sources.





Undated image of Sailors' Snug Harbor boat house. Courtesy Staten Island Museum.



Richmond Terrace at Sailors' Snug Harbor, 1877. Courtesy Brooklyn Public Library.



Stone overlook at Sailors' Snug Harbor, ca. 1878-1885. Courtesy Staten Island Historical Society.

North Shore Staten Island Rapid Transit Railway Historic Images



Livingston, looking toward Sailors' Snug Harbor, showing railroad on earthen causeway on left, undated image. Courtesy Staten Island Museum.



Earthen railroad causeway near Sailors' Snug Harbor, undated photograph. Courtesy Staten Island Museum.



Railroad crossing at Richmond Terrace, 1912. Courtesy Staten Island Museum.



Morningstar Road and the Elm Park station prior to grade elimination, 1935. Courtesy New York Public Library



Mariners' Harbor station prior to grade elimination, undated photograph. Courtesy Staten Island Museum.



Constructing the open cut and the Lake Avenue station in 1936. Courtesy Gary Owens, http://www.gretschviking.net/GOSIRTNorthShore2.htm.



Richmond Terrace, excavating for the viaduct on left in 1935. Courtesy Gary Owens, http://www.gretschviking.net/GOSIRTNorthShore.htm.



Building the viaduct at Maple Avenue in 1935. Courtesy Gary Owens, http://www.gretschviking.net/GOSIRTNorthShore.htm.



The newly constructed viaduct on the left with the older at-grade tracks on the right in 1937. Courtesy Gary Owens, http://www.gretschviking.net/GOSIRTNorthShore.htm.



The newly constructed viaduct in the background and the older trestle in the foreground, crossing Bodine Creek, ca. 1930s. Courtesy Gary Owens, http://www.gretschviking.net/GOSIRTNorthShore.htm.



Park Avenue showing a train on the newly constructed viaduct with the at-grade tracks in front in 1936. Courtesy New York Public Library.



The railroad tracks at St. George after construction of the retaining wall along Richmond Terrace, undated image. Courtesy Brooklyn Public Library.