United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. **Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).**

1. Name of Property

historic name Bush Terminal Historic District

other names/site number Industry City

name of related multiple property listing N/A

Location

street & number Roughly bounded by the Bay Ridge Channel, 50th Street, 2nd Avenue, 39th Street, 3rd Avenue, and 32nd Street. ☐ not for publication ☐ vicinity

city or town Brooklyn

state New York code NY county Kings code 04701 zip code 11232

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this _X_ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property _X_ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___ national ___ statewide _X_ local

Signature of certifying official/Title Date

State or Federal agency/bureau or Tribal Government

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official Date

Title State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

___ entered in the National Register

___ determined eligible for the National Register

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain:) _____

Signature of the Keeper Date of Action

Bush Terminal Historic District Kings County, New York
Name of Property County and State

5. Classification

Ownership of Property
(Check as many boxes as apply.)

- [X] private
- [X] public - Local
- [ ] public - State
- [ ] public - Federal

Category of Property
(Check only **one** box.)

- [ ] building(s)
- [X] district
- [ ] site
- [ ] structure
- [ ] object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
58	15	buildings
	1	sites
8		structures
		objects
66	16	**Total**

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing)

N/A

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions.)

TRANSPORTATION: Rail-related
TRANSPORTATION: Water-related
INDUSTRY: Industrial Storage
INDUSTRY: Manufacturing facility

Current Functions
(Enter categories from instructions.)

Vacant
INDUSTRY: Industrial Storage
COMMERCE/TRADE: Warehouse

7. Description

Architectural Classification
(Enter categories from instructions.)

LATE 19TH AND EARLY 20TH CENTURY AMERICAN MOVEMENTS: Commercial Style/Chicago

Materials
(Enter categories from instructions.)

foundation: reinforced concrete
walls: brick, reinforced concrete
roof: Concrete, metal, rubber
other:

Narrative Description

(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

Summary Paragraph

The Bush Terminal Historic District in Brooklyn, Kings County, New York, is an irregularly shaped industrial district encompassing approximately 162 acres along the waterfront. The district is about 2.5 miles east of Bayonne, New Jersey, and 3.3 miles southeast of Manhattan's Battery Park, separated by the upper bay. The district is part of a neighborhood referred to as Sunset Park, which is roughly bounded by the Bay Ridge Channel to the west, 65th Street to the south, 9th Avenue and Green-Wood Cemetery to the east and the Prospect Expressway to the north. Known for its prosperous industrial waterfront, the neighborhood experienced extensive redevelopment during the late twentieth century into the twenty-first century following the decline in industry. The Bush Terminal Historic District is surrounded by urban industrial and commercial buildings, with the Brooklyn Army Terminal (U.S. Army Military Ocean Terminal, NRHP 1983) to the south and Red Hook to the north. The Brooklyn-Queens Expressway runs parallel to 3rd Avenue between 19th Street and 63rd Street, surrounding the district and separating it from the residential area. Development is dense and divided into rectangular blocks with limited green space. Sunset Park, equipped with a community pool and recreational spaces, is east of the district. The surrounding landscape is relatively flat with the exception of the landscaped Green-Wood Cemetery (NRHP 1997; NHL 2006). Established in 1838, the 478-acre sprawling cemetery is northeast of the district.

The district boundary encompasses the extant buildings within the original Bush Terminal complex. The district boundary previously laid out in the 1986 federal determination of eligibility was altered slightly to include 104 50th Street. Historic maps identify the building at 104 50th Street as part of Bush Terminal. The general outline of the district is roughly bounded by the Bay Ridge Channel to the west, 32nd Street to the north, 2nd and 3rd Avenues to the east, and 50th Street to the south. The district boundary is an irregular shape, excluding buildings not associated with the Bush Terminal development, such as the South Brooklyn Marine Terminal. Also not included are two former track yards which were bounded by 2nd and 3rd Avenues between 28th and 29th Streets and 31st and 32nd Streets and have been converted into parking lots.

The Bush Terminal complex was designed in a grid layout that is intersected by railroad tracks. The function of the building types determined their location. Large warehouses such as Units E, F, and G and Buildings 57 and 58 were constructed along the waterfront for quick distribution of goods to and from the adjacent piers. The one-story warehouses, situated between 50th and 44th Streets, were originally designed as cotton warehouses constructed a distance from the surrounding buildings to prevent the spread of fire. Following the initial construction phase between 1895 and 1906, the development continued north with the construction of the model loft buildings. The historically flat topography was altered during the second half of the twentieth century when the area between Piers 1 through 3 was infilled. Today, the Bush Terminal Park occupies the infilled area and features a sloping terrain. The development utilized the entirety of the property and did not include open space. However, the demolition of buildings, such as Units E and F, and the introduction of Bush Terminal Park have created open space within the district. Pier 8 was removed during the construction of the South Brooklyn Terminal ca. 1958 and is not included. The boundary was drawn to include the largest intact area of the original plan and the greatest number of contiguous of resources that were associated with the terminal during the period of significance.

The waterfront's character changed from residential and undeveloped land to industrial use in the early twentieth century. The majority of the district was developed between 1895 and 1906; however, Bush Terminal continued to expand until the mid-twentieth century. Bush Terminal was purchased by Harry B. Helmsley in

1965 but remained active. Today, many of the buildings are utilized for commercial purposes, although some resources have been left vacant, resulting in structural damage. The district represents the innovative manufacturing complex created by Irving T. Bush (1869-1948). The complex includes piers, warehouses, and multi-tenant factory buildings that were all accessible by the railroad. Consisting of building using predominately reinforced concrete construction, ranging from brick-faced one-story warehouses to six-story loft buildings, the design principle of 'form follows function' is evident, as every element of Bush Terminal served a purpose. Although most of the buildings are utilitarian in design, several small-scale buildings along the waterfront on 43rd Street are unusual within the context of the district. Unlike the surrounding buildings, the Administration Building was designed with Renaissance Revival elements such as buff brick quoining (Figures 1 & 2). Nearby, the Longshoremen's Restaurant and Office features Italianate style details in the form of a wide overhanging eave with dentils and triple-arched windows. Other small-scale buildings extant within the complex include the railroad's roundhouse, powerhouse, and pumphouse.

Integrity Analysis

The Bush Terminal Historic District retains integrity of location, design, setting, materials, feeling, and association. The character of the district is defined by its industrial use. Brooklyn's waterfront transitioned into an international port with the introduction of Bush Terminal in 1895. By 1906, Bush Terminal was a self-sufficient, multi-tenant industrial district with an integrated railroad system. Although some of the original warehouses, piers, and sections of the railroad have been demolished or removed, the most essential components of the original complex design remain intact, namely the overall scale of the development, and the functional relationship between the piers, warehouses, and railroad. Contributing resources within the complex include fifty-eight buildings and eight structures; non-contributing resources include fifteen buildings and one site.

Methodology

Contributing resources were built during the period of significance (1895-1971) and have retained their historic integrity. Non-contributing resources were determined by a construction date following 1971 or major alterations that have diminished the integrity of the resource. Common alterations include window and door replacements and demolition. Throughout the twentieth century, the buildings were altered to accommodate tenants. Alterations such as the removal of historic material and non-historic additions have diminished the resource's integrity, and therefore have been found non-contributing to the district. Resources that have undergone minimal alterations, such as non-historic loading docks and windows that have not diminished the building's integrity have been found contributing to the district. Despite non-historic alterations, overall, the Bush Terminal warehouses have retained their historic massing and exteriors. The complex experienced significant change during the second half of the twentieth century, which included the demolition of ancillary buildings, Units E and F, and the pumphouse. The one-story warehouses underwent the most significant alterations, most commonly demolition and changes to historic openings. Between 1974 and 1980 the area between Piers 1 through 3 was infilled to accommodate the expansion of the South Brooklyn Terminal, which has since been converted into a public park. Starting in 2010, the Loft Buildings between 32nd and 37th Street underwent a 450-million-dollar rehabilitation for the purpose of creating a multi-tenant commercial space.[1] The rehabilitation retained the historic fenestration and preserved the concrete and façades.

The following criteria were considered when determining whether a resource contributes to the district:

- The building was built during the period of significance and designed as part of Bush Terminal.

[1] "About," Industry City, accessed November 8, 2022, https://industrycity.com/about/.

- The resource has retained integrity of location, setting, design, workmanship, materials, feeling, and association.
- *Buildings:* The building has retained its historic scale and form and character as an industrial building. Non-historic alterations such as replacement windows and loading dock bays are acceptable if they do not interfere with the building meeting other integrity standards.
- *Piers*: Considering the importance of the piers to the overall complex, the principal factor in determining their integrity is the location. The condition of the piers ranges from submerged to repaved. Piers 1 through 3 have been partially infilled and are now part of Bush Terminal Park; however, aerial imagery shows that the historic cribbing remains, and location is discernible.
- *Railroad*: The Bush Terminal Railroad Yard situated between 50th Street and 1st Avenue is fully intact. The integration of the railroad tracks throughout the entire complex is a major component in the district and although there has been building infill within the one-story warehouses, the tracks remain visible.

Resource List

The resources are organized by type and geographical location starting in the southernmost portion of the district boundary and moving north. The first group of resources are one-story warehouses bounded by 50th Street to the southwest, 2nd Avenue to the southeast, 44th Street to the northeast and 1st Avenue to the northwest. A one-story curved building (104 50th Street) on the corner of 1st Avenue and 50th Street associated with Bush Terminal is included within the one-story warehouses. This group is followed by a section of the district that includes the railroad and the associated roundhouse to the northwest, followed by the waterfront warehouses, administration buildings, and piers. The boundary terminates at the loft buildings, which are bounded by 32nd Street to the north, 3rd Avenue to the east, 37th Street to the south, and 2nd Avenue to the west.

One-Story Warehouses

104 50th Street (aka 102-136 50th Street and 5001 1st Avenue)
Property Name: Warehouses 118-121
Date of Construction: 1906
Status: 1 contributing building

The building at 104 50th Street was constructed as part of the one-story reinforced concrete warehouses in 1906. The south elevation of the building curves to adapt to the abutting railroad tracks. The building has a flat roof and exterior walls are a combination of painted brick and concrete and feature regularly spaced pilasters. Five entrances with a combination of non-historic flush metal and roll-up doors are between eight non-historic loading dock bays on the north elevation.

4907 1st Avenue (aka 101-135 50th Street)
Property Name: Warehouses 104-105 and 111-112
Date of Construction: 1906
Status: 1 contributing building

The building at 4907 1st Avenue was constructed as part of the one-story reinforced concrete warehouses in 1906. The building spans the width of 50th and 49th Streets along 1st Avenue. Historically, the railroad penetrated the west elevation; however, the center was infilled with warehouse spaces in the first quarter of the twenty-first century. The 1906 sections facing 50th and 49th Streets have a flat roof, while the central infill has a low-pitched gable roof. Exterior walls are painted brick with regularly spaced pilasters. A series of non-

historic loading dock bays and entryways are along the north elevation. Extant window openings have non-historic windows.

143 50th Street (aka 137-143 50th Street)
Property Name: Warehouse 113
Date of Construction: 1906
Status: 1 contributing building

The building at 143 50th Street was constructed as part of the one-story reinforced concrete warehouses in 1906. The building faces south on to 50th Street and has a flat roof. Exterior walls are painted brick with regularly spaced pilasters. A combination of historic and non-historic loading dock bays are located along the south elevation.

145 50th Street (aka 145-151 50th Street)
Property Name: Warehouse 114
Date of Construction: 1906
Status: 1 contributing building

The building at 145 50th Street was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building faces south on to 50th Street and has a flat roof. Exterior walls are brick with regularly spaced pilasters. A combination of historic and non-historic loading dock bays are on the south elevation. Two segmental arched openings and a garage bay have been infilled with concrete block.

157 50th Street (aka 153-157 50th Street)
Property Name: Warehouse 115
Date of Construction: 1906
Status: 1 contributing building

The building at 157 50th Street was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building faces south on to 50th Street and has a flat roof. Exterior walls are painted concrete with regularly spaced pilasters. A combination of historic and non-historic loading dock bays are located along the south elevation.

4902 2nd Avenue (aka 4902-4912 2nd Avenue, 159-183 50th Street, and 164-184 49th Street)
Property Name: Warehouses 109-110 and 116-117
Date of Construction: 1906
Status: 1 contributing building

The building at 4902 2nd Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building spans the width of 50th and 49th Streets along 2nd Avenue. Historically the railroad penetrated the west elevation; however, the center was infilled with warehouse spaces in the first quarter of the twenty-first century. The 1906 sections have a flat roof with a parapet, while the central infill has a low-pitched gable roof. Exterior walls are brick with regularly spaced decorative pilasters. A combination of historic and non-historic loading dock bays and infilled bays are on the exterior.

150 49th Street (aka 150-162 49th Street)
Property Name: Warehouse 108
Date of Construction: 1906
Status: 1 contributing building

The building at 150 49th Street was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building faces south on to 49th Street and is has a flat roof. Exterior walls are painted concrete with regularly spaced pilasters. A combination of loading dock bays and entryways are along the north elevation.

102 49th Street (aka 102-148 49th Street)
Property Name: Warehouses 106-107
Date of Construction: 1906
Status: 1 contributing building

The building at 102 49th Street was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. Historically the railroad penetrated the west elevation; however, the center was infilled with warehouse spaces in the first quarter of the twenty-first century. The 1906 section has a flat roof, while the central infill has a low-pitched gable roof. Exterior walls are painted brick with regularly spaced pilasters. A series of non-historic and historic loading dock bays and entryways are along the north elevation.

4821 1st Avenue (aka 4813-4823 1st Avenue and 101-135 49th Street)
Property Name: Warehouses 95-98
Date of Construction: 1906
Status: 1 contributing building

The building at 4821 1st Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. Exterior walls are painted brick with regularly spaced pilasters and the building features a flat roof. A series of non-historic and historic loading dock bays, as well as modern windows and ventilation, are along the north elevation. Segmental arched and rectangular window openings have been infilled with concrete block.

4820 2nd Avenue (aka 137-183 49th Street)
Property Name: Warehouses 99-103
Date of Construction: 1906
Status: 1 contributing building

The building at 4820 2nd Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building has a flat roof and exterior walls are a combination of painted brick, concrete, and exposed brick with regularly spaced pilasters. The easternmost portion of the building that continues onto 2nd Avenue features ornamentation on the pilasters and parapet. A combination of non-historic, historic, and infilled loading dock bays are on the exterior walls.

4802 2nd Avenue (aka 4802-4812 2nd Avenue and 136-184 48th Street)
Property Name: Bush Terminal Company Freight House
Date of Construction: 1947 and 1950
Status: 1 contributing building

The building at 4802 2nd Avenue was constructed as the Bush Terminal Company Freight House in 1947 and in 1950 the section on 2nd Avenue was constructed as storage. Historically constructed as an L-shape, the interior mass was infilled ca. 2000, replacing the railroad tracks. The 1947 and 1950 buildings rise one-story to a flat roof and the interior building rises one-story to a low-pitched gable roof. Exterior walls are painted brick with a combination of infilled and non-historic loading dock bays.

4801 1st Avenue (aka 4801-4805 1st Avenue and 102-132 48th Street)
Date of Construction: ca. 1960
Status: 1 contributing building

The building at 4801 1st Avenue was constructed ca. 1960 as a brick warehouse. Historically constructed as a narrow rectangular building, the interior mass was infilled ca. 2000, replacing the railroad tracks. The ca. 1960 building rises one-story to a low-pitched gabled roof with a stepped parapet on the west elevation and the infill features a flat roof. A series of loading dock bays, one of which has been infilled with brick, and glass block windows are on the exterior walls. The west elevation features an entryway and double-hung windows.

4720 2nd Avenue (aka 4720-4724 2nd Avenue and 169-183 48th Street)
Property Name: New York Daily News building
Date of Construction: 1997
Status: 1 non-contributing building (postdates period of significance)

The building at 4720 2nd Avenue was constructed in 1997 as the New York Daily News building, replacing the 48th Street railroad tracks. Constructed of concrete block, the one-story building rises to a flat roof. The south elevation is clad in a decorative striped multi-colored brick pattern and features a loading bay, double-hung windows, and a non-historic entrance. The east elevation is painted concrete block with regularly spaced pilasters.

157 48th Street (aka 157-167 48th Street)
Date of Construction: 1996
Status: 1 non-contributing building (postdates period of significance)

The building at 157 48th Street was constructed in 1996 replacing the 48th Street railroad tracks. Constructed of concrete block, the one-story buildings rise to a one-story to a flat roof. The façade appears to be two separate buildings. The façade of the easternmost building is clad in brick with decorative concrete elements. Two arched window openings have been partially infilled to adapt to non-historic windows. The building features a loading dock, flanked by buttresses, and an entryway.

Unlike other buildings in the district, the westernmost building at 157 48th Street features decorative tilework. A pair of pilasters flank a loading dock and non-historic entryways are in the outer bays.

145 48th Street (aka 145-155 48th Street)
Date of Construction: 1997
Status: 1 non-contributing building (postdates period of significance)

The building at 145 48th Street was constructed in 1997 as three one- story concrete block warehouses with a flat roof, which replaced the 48th Street railroad tracks. Exterior walls are brick, and the central warehouse features decorative horizontal brickwork. Each warehouse features a loading dock bay and a non-historic entryway.

133 48th Street (aka 133-137 48th Street)
Date of Construction: ca. 2001
Status: 1 non-contributing building (postdates period of significance)

The building at 133 48th Street was constructed ca. 2001 as a one-story warehouse with a flat roof, which replaced the 48th Street railroad tracks. Exterior walls are brick with a horizontal pattern. The façade features two loading dock bays, window opening, and an entryway.

129 48th Street
Date of Construction: ca. 2010
Status: 1 non-contributing building (postdates period of significance)

The building at 129 48th Street was constructed ca. 2001 as three warehouses, replacing the 48th Street railroad tracks. The buildings rise one-story to a flat roof and exterior walls are clad in a combination of exposed and painted brick. The easternmost warehouse features a slight bump-out with quoining. Each warehouse features a loading dock and a non-historic entryway.

4717 1st Avenue (aka 4717-4723 1st Avenue and 101-111 48th Street)
Date of Construction: ca. 2008
Status: 1 non-contributing building (postdates period of significance)

The building at 4717 1st Avenue is a one-story metal building with a low-pitched gabled roof.

4711 1st Avenue (aka 4709-4711 1st Avenue)
Date of Construction: post 2007
Status: 1 non-contributing building (postdates period of significance)

The property at 4711 1st Avenue is a vacant lot with several metal structures.

4701 1st Avenue (aka 102-120 47th Street)
Date of Construction: post 2007
Status: 1 non-contributing building (postdates period of significance)

The property at 4701 1st Avenue is an irregular shaped building not visible from the public right-of-way due to fencing.

124 47th Street
Status: Vacant lot; not counted

4702 2nd Avenue (aka 4702-4712 2nd Avenue and 184 47th Street)
Date of Construction: ca. 1964
Status: 1 non-contributing building (due to loss of integrity)

The building at the corner of 2nd Avenue and 47th Street is a one-story, concrete block building that replaced railroad tracks. The building features a flat roof and exterior walls are concrete block. Most openings have been infilled with concrete block, although six bays of steel framed windows remain. The facade on 2nd Avenue was significantly altered ca. 2021 and is non-historic.

4620 2nd Avenue (aka 4616-4624 2nd Avenue and 173-183 47th Street)
Property Name: Warehouse 87
Date of Construction: 1905
Status: 1 contributing building

The building at 4620 2nd Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. Exterior walls are brick with regularly spaced decorative pilasters. The building has a flat roof. A combination of loading dock bays, infilled bays and infilled bays and entryways are on the exterior.

4564 2nd Avenue (aka 4524-4604 2nd Avenue and 155-171 47th Street)
Property Name: Warehouses 77-78, 85-86, and 89
Date of Construction: 1905
Status: 1 contributing building

The building at 4564 2nd Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The property encompasses the building at 4564 2nd Avenue and has facades on both 2nd Avenue and 47th Street. Historically constructed as a section in a larger building with multiple wings and an integrated railroad between 47th and 44th Streets, the center was infilled with warehouse spaces during the first quarter of the twenty-first century. The 1906 section has a flat roof, while the central infill has a low-pitched gable roof. Exterior walls are a combination of exposed and painted brick, with regularly spaced decorative pilasters. A combination of loading dock bays, infilled bays and infilled bays and entryways are on the exterior.

4614 2nd Avenue (aka 4606-4614 2nd Avenue)
Property Name: Warehouse 88
Date of Construction: 1905
Status: 1 contributing building

The building at 4614 2nd Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. Exterior walls are brick with regularly spaced decorative pilasters. The building has a flat roof. A combination of loading dock bays, infilled bays and infilled bays and entryways are on the exterior.

149 47th Street (aka 147-149 47th Street)
Property Name: Warehouses 75-76 and 84
Date of Construction: 1905
Status: 1 contributing building

The building at 149 47th Street was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. Historically constructed as a section in a larger building with multiple wings and an integrated railroad between 47th and 44th Streets, the center was infilled with warehouse spaces during the first quarter of the twenty-first century. The 1906 section has a flat roof, while the central infill has a low-pitched gable roof. Exterior walls are painted brick with regularly spaced decorative pilasters. A combination of loading dock bays, infilled bays and double-hung windows and entryways are on the exterior.

135 47th Street135 47th Street (aka 135-145 47th Street)
Property Name: Warehouse 83
Date of Construction: 1905
Status: 1 contributing building

The building at 135 47th Street was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. Exterior walls are clad in painted stucco with regularly spaced decorative pilasters. The building has a flat roof. Two loading dock bays are on the façade.

131 47th Street131 47th Street (aka 129-131 47th Street)
Property Name: Warehouse 82
Date of Construction: 1905
Status: 1 contributing building

The building at 131 47th Street was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. Exterior walls are clad in painted stucco with a brick base and regularly spaced decorative pilasters. The building has a flat roof. The façade features a loading dock bay, and non-historic windows and entryways.

123 47th Street (aka 111-127 47th Street)
Property Name: Warehouses 80-81
Date of Construction: 1905
Status: 1 contributing building

The building at 123 47th Street was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. Exterior walls are clad in painted stucco with regularly spaced decorative pilasters. The building has a flat roof. The façade features two loading dock bays, and an entryway.

4613 1st Avenue (aka 4613-4623 1st Avenue and 101-109 47th Street)
Property Name: Warehouse 79
Date of Construction: 1905
Status: 1 contributing building

The building at 4613 1st Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. Exterior walls painted brick with regularly spaced decorative pilasters. The building has a flat roof. Segmental arched windows have been infilled with brick. Loading dock bays and a non-historic entrance is on the exterior.

4609 1st Avenue (aka 4609-4611 1st Avenue)
Date of Construction: 1988
Status: 1 non-contributing building (postdates period of significance)

The building at 4609 1st Avenue is the 1988 infill replacing the railroad tracks, although some tracks are still visible. The building rises one-story to a low-pitched gable roof. Exterior walls are a combination of exposed and painted brick. The façade features three loading dock bays and an entryway.

4603 1st Avenue (aka 4601-4605 1st Avenue)
Property Name: Warehouses 71-74
Date of Construction: 1905
Status: 1 contributing building

The building at 4603 1st Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building has a flat roof. Exterior walls are stucco with regularly spaced decorative pilasters. A combination of loading dock bays, non-historic windows, and entryways are on the exterior.

4473 1st Avenue (aka 4431-4519 1st Avenue)
Property Name: Warehouses 63-67
Date of Construction: 1905; infill 1988; warehouse 63 altered ca. 2012
Status: 1 contributing building (warehouses 64-67); 1 non-contributing building (warehouse 63 heavily altered; 1988 infill postdating the period of significance)

The building at 4473 1st Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building has a flat roof. Exterior walls are brick with regularly spaced decorative pilasters. The façade features loading dock bays and an entryway. Segmental arched window openings have been infilled with concrete block. A 1988 concrete block warehouse that replaced railroad tracks is to the rear of the building. The 1988 infill rises one-story to a low-pitched gable roof. The west façade is clad in brick and features three loading dock bays and an entryway.

4502 2nd Avenue (aka 4502-4508 2nd Avenue)
Property Name: Warehouses 68-69 and 91
Date of Construction: 1905
Status: 1 contributing building

The building at 4502 2nd Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building has a flat roof and exterior walls are brick with regularly spaced decorative pilasters. The façade features loading dock bays and an entryway. In 1988 a concrete block warehouse with a gabled roof replaced the railroad tracks behind the building. The property

encompasses 4512 2nd Avenue and continues to 2nd Street. The east elevation is clad in brick with decorative pilasters and loading dock bays.

4512 2nd Avenue (aka 4510-4522 2nd Avenue)
Property Name: Warehouses 70 and 90
Date of Construction: 1905
Status: 1 contributing building

The building at 4512 2nd Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building has a flat roof and exterior walls are brick with regularly spaced decorative pilasters. A combination of loading dock bays, infilled bays, and non-historic entryways are on the exterior.

4422 2nd Avenue (aka 4414-4430 2nd Avenue)
Property Name: Warehouses 37-38 and 92-93
Date of Construction: 1902 (warehouses 37-38) and 1905 (warehouses 92-93)
Status: 1 contributing building

The building at 4422 2nd Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building has a flat roof and exterior walls are painted brick with regularly spaced decorative pilasters. The east façade features a concrete block infilled bay and two boarded entrances. In 1988 a concrete block warehouse with a gabled roof replaced the railroad tracks behind the building.

4400 2nd Avenue (aka 4400-4412 2nd Avenue and 174-184 44th Street)
Property Name: Warehouse 94
Date of Construction: 1905
Status: 1 contributing building

The building at 4400 2nd Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building is located on the corner of 44th Street and 2nd Avenue and has a flat roof. Exterior walls are brick with infilled garage bays and regularly spaced decorative pilasters. The exterior features a loading dock bay, non-historic windows, and entryway.

156 44th Street (aka 154-162 44th Street)
Property Name: Warehouses 29-30
Date of Construction: 1902, later modifications
Status: 1 non-contributing building (due to loss of integrity)

The building at 156 44th Street was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building was significantly modified when a second story was added ca. 2000. The building has a flat roof with a beveled cornice. Exterior walls are stucco with regularly spaced pilasters and three stringcourses. The north façade features a combination of loading dock bays, non-historic windows, and entryways.

152 44th Street (aka 146-152 44th Street)
Property Name: Warehouses 28 and 36
Date of Construction: 1902
Status: 1 contributing building

The building at 152 44th Street was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building has a flat roof and exterior walls are clad in stucco. The north façade features a central loading dock bay flanked by two pilasters and a concrete block infilled entrance. A loading dock bay in the westernmost bay. A non-historic entryway is in the easternmost bay.

142 44th Street (aka 130-144 44th Street)
Property Name: Warehouses 26-27 and 34-35
Date of Construction: 1902
Status: 1 contributing building

The building at 142 44th Street was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building has a flat roof and exterior walls are painted brick and regularly spaced pilasters. Three bays of segmental arched window openings have been infilled with brick and a recessed entryway. Three loading dock bays are on the north façade.

128 44th Street (aka 120-128 44th Street)
Property Name: Warehouses 25 and 33
Date of Construction: ca. 2004
Status: 1 non-contributing building (postdates period of significance)

The building at 128 44th Street was constructed ca. 2004, replacing a 1902 one-story warehouse. The concrete block building rises three-stories to a flat roof. The north façade is clad in brick and features four bays of windows and two loading dock bays.

112 44th Street (aka 112-118 44th Street)
Property Name: Warehouse 24
Date of Construction: 1902
Status: 1 contributing building

The building at 112 44th Street was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building has a flat roof and exterior walls are painted brick with regularly spaced pilasters. The north façade features a loading dock bays and entryways.

4401 1st Avenue (4401-4413 1st Avenue and 102-110 44th Street)
Property Name: Warehouse 23
Date of Construction: 1902
Status: 1 contributing building

The building at 4401 1st Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building has a flat roof and exterior walls are painted brick

with regularly spaced pilasters. The north façade features a loading dock bays, non-historic windows, and entryways.

4415 1st Avenue (aka 4415-4417 1st Avenue)
Date of Construction: 1988
Status: 1 non-contributing building (postdates period of significance)

The building at 4415 1st Avenue was constructed ca. 1988, replacing the railroad. The building rises one-story to a gabled roof. Exterior walls are clad in brick. The west façade features three loading dock bays, ventilation, and non-historic windows.

4429 1st Avenue (aka 4419-4429 1st Avenue)
Property Name: Warehouses 31-32
Date of Construction: 1902
Status: 1 contributing building

The building at 4429 1st Avenue was constructed in the south boundary of Bush Terminal as part of the one-story reinforced concrete warehouses in 1906. The building has a flat roof and exterior walls are brick with regularly spaced pilasters. The west façade features a non-historic window, loading dock bays, and four entryways.

Rail Yard

Bush Terminal Railroad
Date of Construction: ca. 1896-1915
Status: 1 contributing structure

The first tracks were laid ca. 1896 and continued to expand until 1915. By 1906 the six-block long Railroad Yard was located between 1st Avenue and the waterfront warehouses, with track connecting to all parts of the complex. The railroad was an integral part of Bush Terminal, allowing steam and electric locomotives to transport freight. Although they are no longer in operation, the railroad tracks remain throughout the district.

38 43rd Street
Property Name: Roundhouse
Date of Construction: ca. 1906, ca. 1922
Status: 1 contributing building

The Roundhouse was constructed in multiple phases at the north end of the Railroad Yard for the purpose of servicing locomotives. Constructed by 1906 as a one-story building, it was significantly expanded by 1922 to wrap the corner of 43rd Street and 1st Avenue. The 1926 Sanborn map identifies the building as a garage, machine shop, a blacksmith shop, sand storage, and a locomotive house.[2] By 1951 the building was expanded again, including a second story on the locomotive house. The former garage portion facing 1st Avenue was converted into a salt warehouse by 1978. A large portion of the later addition was removed during the twenty-first century, including the removal of the garage along 43rd Street which now functions as a parking lot.

[2] Sanborn Map Company, Brooklyn, Kings County, New York 1926.

The Roundhouse is an irregular L-shape with an angled west wall along the railroad track and a multi-eave flat roof. The former locomotive house rises two-stories, while the remainder of the building is a single story. The exterior walls of the reinforced concrete building are clad in brick. The utilitarian building lacks ornamentation, apart from the of the two-story portion Roundhouse. Details on the north and west elevations include concrete lintels and sills, as well as full-height pilasters that terminate at corbelled brick. Pilasters on the east elevation terminate at the second story. Fenestration throughout the two-story portion are narrow openings regularly spaced between the pilasters, most of which have been infilled with brick. The outer west bay features a garage bay at ground level. The east elevation features a loading dock door and is without fenestration on the second story. Visibility of the one-story portion of the building is obscured by overgrown vegetation.

Waterfront Warehouses

58 50th Street
Property Name: Building 58
Date of Construction: 1909-10 (NB 7516-1909)
Status: 1 contributing building

In 1910, a pair of nearly identical buildings, known as Buildings 57 and 58, were completed along the waterfront. Building 58 is constructed of reinforced concrete and rises six-stories to a flat roof. A parapet frames the flat roof and a window with an arched header is in the stair tower along the eastern elevation. Changes occurred over time to better serve the function of the spaces. Pilasters embellished with decorative quoining separate the regularly spaced fenestration. A combination of modified, infilled, or historic windows are throughout the exterior. Historic hoist-ways have been removed and windows were replaced with fixed industrial sashes.

57 48th Street
Property Name: Building 57
Date of Construction: 1909-10 (NB 7517-1909)
Status: 1 contributing building

In 1910, a pair of nearly identical buildings, known as Buildings 57 and 58, were completed along the waterfront. Building 57 is constructed of reinforced concrete and rises six-stories to a flat roof. A parapet frames the flat roof and a window with an arched header is in the stair tower along the eastern elevation. Changes occurred over time to better serve the function of the spaces. Pilasters embellished with decorative quoining separate the regularly spaced fenestration. A combination of modified, infilled, or historic windows are throughout the exterior. Historic hoist-ways have been removed and windows were replaced with fixed industrial sashes.

51-56 48th Street
Property Name: Warehouses 51-56, later Unit G
Date of Construction: 1905 (NB 611-1905)
Status: 1 contributing building

Three nearly identical warehouse buildings, known as Unit E, F, and G, were constructed along the waterfront in 1903-05. Units E and F were demolished between 1961 and 1962, leaving Unit G the last standing of the

three warehouses (a fourth building, Unit H, was proposed in the original 1903 New Building permit but ultimately wasn't built in favor of Buildings 57 and 58). Historic maps show that a one-story, curved refrigerator building was constructed onto the south elevation by 1926.[3]

Unit G is a rectangular shaped brick building that rises eight stories to a flat roof. The building has lost many of the character defining architectural features it had in the early twentieth century. While its overall massing and form are intact, many of the openings were altered or infilled with brick during the mid-twentieth century. Some historic hoist-ways have been removed and windows were replaced by modern fixed industrial sash with brick infill below with a concrete sill or a combination of brick infill and aluminum framed windows. The historic open stairs on the west elevation have been infilled with brick, as well as the north and center open stairs on the east elevation. The exterior brick has significant cracking throughout the building and is in overall poor condition.

Piers

5102 1st Avenue

Property Name: Bush Terminal Park
Date of Construction: 1974-1980
Status: 1 non-contributing site (postdates period of significance)

Between 1974 and 1980 the area between Piers 1 through 3 were infilled to accommodate the expansion of the South Brooklyn Terminal, which was converted into a public park in 2014. Today the infilled area features sports fields, bike paths, and public restrooms.

Pier 1

Date of Construction: ca. 1909
Status: 1 contributing structure

Pier 1 was constructed ca. 1909 as a 150-feet wide and approximately 1,330 to 1,351 feet long pier. The central concrete portion of the construction was built on earth infill with timber and pile construction along the sides. The infill was constrained by a combination of cribbing, piling, and rip-rap stone retained by timber framing.[4] A one-story, steel framed, shed superstructure with metal and wood exterior walls was constructed onto the pier. The pier shed was removed by 1978 and today the pier is part of Bush Terminal Park.

Pier 2

Date of Construction: ca. 1907
Status: 1 contributing structure

Pier 2 was constructed ca. 1907 as a 150-feet wide and approximately 1,330 to 1,351 feet long pier. The central concrete portion of the construction was built on earth infill with timber and pile construction along the sides. The infill was constrained by a combination of cribbing, piling, and rip-rap stone retained by timber framing.[5] A

[3] Sanborn Map Company, Brooklyn, Kings County, New York 1926.
[4] Thomas R. Flagg and Michael S. Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York. U.S. Army Corps of Engineers," (May 1986).
[5] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York."

one-story, steel framed, shed superstructure with metal and wood exterior walls was constructed onto the pier. The pier shed was removed by 1978 and today the pier is part of Bush Terminal Park.

Pier 3
Date of Construction: ca. 1904
Status: 1 contributing structure

Pier 3 was constructed ca. 1904 as a 150-feet wide and approximately 1,330 to 1,351 feet long pier. The central concrete portion of the construction was built on earth infill with timber and pile construction along the sides. The infill was constrained by a combination of cribbing, piling, and rip-rap stone retained by timber framing.[6] A one-story, steel framed, shed superstructure with metal and wood exterior walls was constructed onto the pier. The pier shed was removed by 1978 and today the pier is part of Bush Terminal Park.

Pier 4
Date of Construction: ca. 1903
Status: 1 contributing structure

Pier 4 was constructed ca. 1903 as a 150-feet wide and approximately 1,330 to 1,351 feet long pier. The central concrete portion of the construction was built on earth infill with timber and pile construction along the sides. The infill was constrained by a combination of cribbing, piling, and rip-rap stone retained by timber framing.[7] A one-story, steel framed, shed superstructure with metal and wood exterior walls was constructed onto the pier. The pier shed was removed by 1978 but the infill has been retained which was recently paved.

Pier 5
Date of Construction: ca. 1903
Status: 1 contributing structure

Pier 5 was constructed ca. 1903 as a 150-feet wide and approximately 1,330 to 1,351 feet long pier. The central concrete portion of the construction was built on earth infill with timber and pile construction along the sides. The infill was constrained by a combination of cribbing, piling, and rip-rap stone retained by timber framing.[8] A one-story, steel framed, shed superstructure with metal and wood exterior walls was constructed onto the pier. Today the pier has been removed and most of the existing infill is underwater.

Pier 6
Date of Construction: ca. 1880-1895, rebuilt in 1913, extensive modification made before 1965
Status: 1 contributing structure

Pier 6 was constructed ca. 1880 and later modified by Bush in 1895. In 1913 the pier was rebuilt as a 1,261-ft by 276-feet structure with a wider concrete portion than the surrounding piers.[9] Two wood frame decks were constructed onto the pier. A large fire occurred in 1981 and in 1994 the pier was significantly shortened. Today only the concrete base remains which has significant vegetation growth.

[6] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York."
[7] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York."
[8] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York."
[9] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York."

Pier 7
Date of Construction: ca. 1886
Status: 1 contributing structure

Pier 7 was constructed ca. 1886 as a solid fill pier which was expanded by Bush in 1905. When completed the pier was 1,213-feet by 157-feet and was constructed using a method similar to Piers 1-5.[10] The pier was active in 1978, but soon after a series of small fires occurred, and sheds removed. Today only the concrete form remains, most of which is submerged underwater.

Terminal Core

8 43rd Street
Property Name: Administration Building
Date of Construction: 1903 (NB 192-1903)
Status: 1 contributing building

The Administration Building at 8 43rd Street was constructed in 1903 with Renaissance Revival elements such as buff brick quoining framing the fenestration and the corners of the building. The brick building rises three-stories to a low-pitched hip roof with an overhanging eave. The roof features a gabled dormer on the north, east, and south slopes and the west slope features an intersecting gable framing a circular fixed window. Historically square in form, a two-story addition with a tower and a one-story entryway was constructed onto the east façade in 1950. Unlike the 1903 building, the addition is without ornamentation. A statue of Irving Bush stands on the one-story entryway addition. A combination of single, paired, and triptych segmental arched openings with concrete sills are throughout the building. The west elevation features a historic entryway no longer in operation and two arched windows. A non-historic double-leaf door is located on the addition on the east façade.

43rd Street Pumphouse
Date of Construction: ca. 1906
Status: 1 contributing building

The former pumphouse, and later maintenance shop by 1950, rises one story to a flat roof with a small, lightly castellated, parapet. The exterior walls of the rectangular building are clad in brick. Historic fenestration has been infilled and a series of non-historic entryways and loading doors are along the south elevation. Although the building has undergone modern alterations, the historic massing remains the same.

36 43rd Street
Property Name: Longshoremen's Restaurant & Office
Date of Construction: ca. 1906
Status: 1 contributing building

Historic maps identify the building as an electrician supply building and office in 1906 and by 1926 the building functioned as the Longshoremen's Restaurant & Office. The building is a rectangular plan that rises one-and-

[10] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York."

one-half stories to a side gabled roof with regularly spaced wood dormers on the north and south slopes. Unlike other buildings in the district, the building features restrained Italianate detailing such as triple arched windows in the west gable end, a wide overhanging eave with dentils and cornice return. An interior brick chimney is on the ridgeline of the east elevation. Exterior walls are clad in brick with splayed brickwork above window openings. A recessed entryway on the north façade is flanked by three 9/9 windows. Two half-arched windows are within the east gable end. Alterations have been made to the secondary entryways on the east elevation.

4290 1st Avenue
Property Name: Warehouses 20-22, later Unit D
Date of Construction: ca. 1902
Status: 1 contributing building

Unit D is an irregularly shaped square brick warehouse that rises one-story to an extremely low-pitched gabled roof with a parapet. Exterior walls are clad in brick with regularly spaced pilasters on the north and south elevations. A combination of historic and non-historic loading dock doors are throughout the exterior. The south elevation features a historic arched entryway with a double-leaf wood door. Fenestration includes boarded historic window openings and non-historic 1/1 windows.

1 43rd Street
Property Name: Warehouses 4-6, later Unit C
Date of Construction: 1896
Status: 1 contributing building

Unit C is a rectangular, brick warehouse that rises four-stories to an extremely low-pitched gabled roof. The building is currently under construction and scaffolding obscures visibility of the exterior. Exterior walls are clad in brick with window openings are predominately arched.

4100-4112 1st Avenue
Property Name: Warehouses 7-10, later Unit B
Date of Construction: 1897, 1950's alterations
Status: 1 contributing building

Unit B is a rectangular, brick, mill construction warehouse that rises six-stories to an extremely low-pitched gabled roof. By 1928 a one-story addition was constructed on the north elevation, connecting Unit B to the adjacent loft building; however, the addition was recently removed. Exterior walls are clad in painted brick and without ornamentation. Regularly spaced steel framed industrial windows are throughout the exterior. Entrances include full-height loading dock doors and recessed entryways.

4200 1st Avenue
Property Name: Warehouses 1-3, later Unit A
Date of Construction: 1895-1896
Status: 1 contributing building

Unit A is a rectangular, brick warehouse that rises five-stories to an extremely low-pitched gabled roof. A three-story addition was constructed on the north elevation by 1951. A series of full-height loading docks span the width of the west elevation. The building is currently under construction which has included removing windows

and paint from the brick exterior walls. The historic massing and regularly spaced window openings have not been altered.

Powerhouse
Date of Construction: ca. 1928
Status: 1 contributing building

Currently the powerhouse is not visible from the public right-of-way. Historic maps identify the building as a reinforced concrete building with exterior brick walls that curve with the railroad track. The building ranges from one to six-stories with a large smokestack. The building is currently vacant and in poor condition. It is evident that the building has extensive vegetation growth and a broken smokestack.

4000 1st Avenue (aka 3928-4014 1st Avenue)
Property Name: Building 26
Date of Construction: 1926-27
Status: 1 contributing building

The building at 4000 1st Avenue was constructed between 1926 and 1927. A one-story structure was constructed on the south elevation to connect to Unit B, which was recently removed. The buildings have a flat roof framed by a decorative parapet and a denticulated cornice. A beveled stringcourse is above the second floor and seventh floor with pilasters separating the fenestration on the second through seventh floors. The historic fenestration pattern remains, and window openings are a combination of steel framed factory windows and infill. Non-historic loading dock doors around throughout the ground-level.

In 2001 the building was redeveloped for residential and office use while retaining the buildings historic integrity.

82-94 39th Street and 76-80 39th Street3915 1st Avenue
Property Name: Buildings 22 & 23
Date of Construction: 1917 (Building 22), 1926-27 (Building 23)
Status: 2 contributing buildings

The construction of these loft buildings began in 1917 as two separate reinforced concrete eight-story structures along 1st Avenue. The buildings have a flat roof framed by a decorative parapet and a denticulated cornice. A beveled stringcourse is above the second floor and seventh floor with pilasters separating the fenestration on the second through seventh floors. The historic fenestration pattern remains, and window openings are a combination of steel framed factory windows and infill. Non-historic loading dock doors around throughout the ground-level.

In 2001 the buildings were redeveloped for residential and office use while retaining the buildings historic integrity.

52-74 39th Street
Property Name: Building 24
Date of Construction: 1917
Status: 1 contributing building

Building 24 was constructed in 1917 as the Bush Terminal Service Station and historic building permits indicate the two-story extension was built during the construction of Building 24. The reinforced concrete building rises eight stories to a flat roof framed by a decorative parapet and a denticulated cornice. A beveled stringcourse is above the second floor and seventh floor with pilasters separating the fenestration on the second through seventh floors. The historic fenestration pattern remains, and window openings are a combination of steel framed factory windows and infill. Non-historic loading dock doors around throughout the ground-level.

116 39th Street
Property Name: Dannemiller Coffee Co./Marcus Ward Co. Building
Date of Construction: ca. 1906
Status: 1 non-contributing building (building was not constructed as part of Bush Terminal)

The building at 116 39th Street was constructed as a three-story brick building ca.1906 not associated with Bush Terminal. Today the building ranges from one to four stories. Exterior walls are a combination of exposed and painted brick. Fenestration is predominately segmental arched openings with non-historic windows. Many of the windows on the west elevation have been infilled with brick. A combination of loading dock doors and non-historic entryways are on the ground level.

4023 1st Avenue (aka 4009-4025 1st Avenue and 101-127 41st Street)
Status: vacant lot; not counted

4002 2nd Avenue
Property Name: Buildings 19 and 20
Date of Construction: 1910-11 (NB 6523-1910 for Building 19)
Status: 2 contributing buildings

The U-shaped loft building bounded by 41st Street, 2nd Avenue, and 39th Street was constructed in 1910-11 as an eight-story reinforced concrete building. The building has a flat roof with decorative parapets. Pilasters embellished with decorative quoining separate the regularly spaced fenestration. A few of the railroad tracks that historically ran between the north and south wings of the building are still visible. The building was recently rehabilitated for commercial use while keeping its historic character. Alterations to the exterior include an additional floor constructed along 39th Street and non-historic storefronts.

Model Lofts/Industry City

639 2nd Avenue (aka 629-639 2nd Avenue and 201-271 37th Street)
Property Name: Loft Building 1
Date of Construction: 1905 (NB 2428-1905)
Status: 1 contributing building

The Loft Building 1 at 639 2nd Avenue was the first of ten nearly identical Loft Buildings with an integrated railroad built between 32nd and 37th Streets. Constructed in 1905, the reinforced concrete building spans the length of a city block and rises six-stories to a flat roof framed by a castellated parapet. Exterior walls are painted brick. Unlike the other Loft Buildings between 37th and 32nd Streets, Loft Building 1 has architectural elements such as a recessed portion centrally located on the south elevation which rises to a pedimented parapet with arched openings. Loft Building 1 also features a seven-story mass on the east and west elevations. Fenestration is regularly spaced with a combination of rectangular, segmental arched, and pointed arched window openings.

Starting in 2010 the Loft Buildings between 32nd and 37th Streets underwent a 450-million-dollar redevelopment for the purpose of creating a multi-tenant commercial space.[11] The redevelopment retained the historic fenestration pattern and preserved the brick façade. Alterations include non-historic storefronts and historically appropriate windows.

627 2nd Avenue (aka 621-627 2nd Avenue and 202-272 36th Street)
Property Name: Loft Building 2
Date of Construction: 1906
Status: 1 contributing building

The Loft Building 2 at 627 2nd Avenue was one of ten nearly identical Loft Buildings with an integrated railroad between 32nd and 37th Streets. Constructed in ca. 1915, the reinforced concrete building spans the length of a city block rises and six-stories to a flat roof framed by a decorative parapet. A denticulated cornice is on the east and west elevations. Pilasters embellished with decorative quoining separate the regularly spaced fenestration.

Starting in 2010 the Loft Buildings between 32nd and 37th Streets underwent a 450-million-dollar redevelopment for the purpose of creating a multi-tenant commercial space.[12] The redevelopment retained the historic fenestration pattern and preserved the concrete façade. Alterations include non-historic storefronts and historically appropriate windows.

627 2nd Avenue
Property Name: Loft Building 3-4
Date of Construction: 1907 (Loft 3, NB 532-1907) and 1909 (Loft 4, NB 3236-1909 and NB 3855-1909)
Status: 2 contributing buildings

The Loft Buildings 3-4 at 627 2nd Avenue was one of ten nearly identical Loft Buildings with an integrated railroad to be constructed between 32nd and 37th Streets. Constructed in ca. 1915, the reinforced concrete building spans the length of a city block and wraps onto 3rd Avenue. The building rises six-stories to a flat roof framed by a decorative parapet. A denticulated cornice is on the east and west elevations. Pilasters embellished with decorative quoining separate the regularly spaced fenestration.

[11] Industry City, “About.”
[12] Industry City, “About.”

Starting in 2010 the Loft Buildings between 32nd and 37th Streets underwent a 450-million-dollar redevelopment for the purpose of creating a multi-tenant commercial space.[13] The redevelopment retained the historic fenestration pattern and preserved the concrete façade. Alterations include non-historic storefronts and historically appropriate windows.

581 2nd Avenue (aka 581-599 2nd Avenue, 912-930 3rd Avenue, 34-118 34th Street, and 23-87 35th Street)
Property Name: Loft Building 5-6
Date of Construction: 1909-10
Status: 1 contributing building

The Loft Buildings 5-6 at 581 2nd Avenue was one of ten nearly identical Loft Buildings with an integrated railroad to be constructed between 32nd and 37th Streets. Constructed in ca. 1915, the reinforced concrete building is a U-shape spanning the entire block of 34th and 35th Streets and onto 3rd Avenue. The building rises six-stories to a flat roof framed by a decorative parapet. A denticulated cornice is on the east and west elevations. Pilasters embellished with decorative quoining separate the regularly spaced fenestration.

Starting in 2010 the Loft Buildings between 32nd and 37th Streets underwent a 450-million-dollar redevelopment for the purpose of creating a multi-tenant commercial space.[14] The redevelopment retained the historic fenestration pattern and preserved the concrete façade. Alterations include non-historic storefronts and historically appropriate windows.

892 3rd Avenue (892-910 3rd Avenue, 561-579 2nd Avenue, 18-94 33rd Street, and 33-117 34th Street)
Property Name: Loft Building 7-8
Date of Construction: 1911 (NB 2971-1911 for Building 7)
Status: 1 contributing building

The Loft Buildings 7-8 at 892 3rd Avenue was one of ten nearly identical Loft Buildings with an integrated railroad to be constructed between 32nd and 37th Streets. Constructed in ca. 1915, the reinforced concrete building is a U-shape spanning the entire block of 33rd and 34th Streets and onto 3rd Avenue. The building rises six-stories to a flat roof framed by a decorative parapet. A denticulated cornice is on the east and west elevations. Pilasters embellished with decorative quoining separate the regularly spaced fenestration.

Starting in 2010 the Loft Buildings between 32nd and 37th Streets underwent a 450-million-dollar redevelopment for the purpose of creating a multi-tenant commercial space.[15] The redevelopment retained the historic fenestration pattern and preserved the concrete façade. Alterations include non-historic storefronts and historically appropriate windows.

882 3rd Avenue (aka 872-890 3rd Avenue, 88-100 32nd Street, and 25-99 33rd Street)
Property Name: Loft Building 9
Date of Construction: ca. 1916-18
Status: 1 contributing building

[13] Industry City, “About.”
[14] Industry City, “About.”
[15] Industry City, “About.”

The Loft Building 9 at 882 3rd Avenue was one of ten nearly identical Loft Buildings with an integrated railroad to be constructed between 32nd and 37th Streets. Constructed in ca. 1916-18, the reinforced concrete building is an L-shape spanning the entire block of 33rd Street and onto 3rd Avenue. The building rises six-stories to a flat roof framed by a decorative parapet and a denticulated cornice. Pilasters embellished with decorative quoining separate the regularly spaced fenestration. A one-story mass on 2nd Avenue was constructed with a curved to adapt to the railroad track. Historically the curved mass operated as a garage and shipping shed.

Starting in 2010 the Loft Buildings between 32nd and 37th Streets underwent a 450-million-dollar redevelopment for the purpose of creating a multi-tenant commercial space.[16] The redevelopment retained the historic fenestration pattern and preserved the concrete façade. Alterations include non-historic storefronts and historically appropriate windows.

882 3rd Avenue (aka 872-890 3rd Avenue, 88-100 32nd Street, and 25-99 33rd Street)
Property Name: Loft Building 10
Date of Construction: 1916
Status: 1 contributing building

The twelve-story Loft Building, known as Loft Building 10, faces east onto 3rd Avenue and features three beveled stringcourses and protruding parapet.

Starting in 2010 the Loft Buildings between 32nd and 37th Streets underwent a 450-million-dollar redevelopment for the purpose of creating a multi-tenant commercial space.[17] The redevelopment retained the historic fenestration pattern and preserved the concrete façade. Alterations include non-historic storefronts and historically appropriate windows.

551 2nd Avenue
Property Name: Steam plant
Date of Construction: 1913
Status: 1 contributing building

Constructed on the corner of 32nd Street and 2nd Avenue in 1913, the Steam plant is a one and two-story building equipped with two large buff brick smokestacks. The multi-eave building has flat roofs with a low-pitched gable roof on the central clerestory. Exterior brick walls and fenestration have been painted. Non-historic loading dock entryways are throughout the ground-level. Architectural ornamentation includes pilasters and a corbelled brick cornice. Pilasters on the mass facing west onto 2nd Avenue rise above the parapet.

[16] Industry City, “About.”
[17] Industry City, “About.”

Bush Terminal Historic District Kings County, New York
Name of Property County and State

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [X] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B Property is associated with the lives of persons significant in our past.
- [X] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

- [ ] A Owned by a religious institution or used for religious purposes.
- [ ] B removed from its original location.
- [ ] C a birthplace or grave.
- [ ] D a cemetery.
- [ ] E a reconstructed building, object, or structure.
- [ ] F a commemorative property.
- [ ] G less than 50 years old or achieving significance within the past 50 years.

Areas of Significance
(Enter categories from instructions.)

Commerce
Architecture
Engineering

Period of Significance
1895-1971

Significant Dates
1895, 1902, 1905

Significant Person
(Complete only if Criterion B is marked above.)

Cultural Affiliation

Architect/Builder
Planner of property – Irving T. Bush
Terminal Design Consultant – E. P. Goodrich
Factory Loft Architect – William Higginson
Factory Loft Construction Contractor – Turner Construction Co.
Architect - Kirby, Petit & Green

Period of Significance (justification)

Bush Terminal's period of significance begins in 1895, when the earliest buildings in the district were constructed, and ends in 1971, the year in which the Interstate Commerce Commission approved the termination of operations of the pier and railroad. However, it should be noted that the complex remains in use today as a multi-tenant industrial and commercial complex.

Criteria Considerations (explanation, if necessary)

Statement of Significance Summary Paragraph
(Provide a summary paragraph that includes level of significance and applicable criteria.)

The Bush Terminal Historic District on Brooklyn's waterfront is significant at the local level under National Register **Criterion A** in the area of **Commerce** as a groundbreaking and influential industrial complex which integrated railroad and water transportation with industrial warehousing and manufacturing.[18] Bush Terminal was the first integrated industrial complex to combine all of these elements under one owner, and it became the largest multi-tenant industrial property in the United States.[19] Its success greatly impacted how future industrial complexes were designed. Following the creation of Bush Terminal, similar complexes were constructed, such as the Degnon Terminal (1913), New York Docking Company (1913), Brooklyn Army Terminal (constructed between 1918 and 1919), Starrett-Leigh Building (1931), and the Bayonne Naval Base in New Jersey (constructed between 1939 and 1942). Although the relationship between the piers, railroad, and warehouses at Bush Terminal was repeated in many other locations, none would match the monumental scale of Bush Terminal. The terminal provided the utmost efficiency, which in turn decreased the cost for manufacturers and expedited distribution. In addition, the terminal provided copious job opportunities and had an immense impact on New York's economy.

The district is also significant at the local level under National Register **Criterion C** in the area of **Architecture** and **Engineering** for its association with the Turner Construction Company of Brooklyn and its reinforced concrete construction. Bush Terminal was one of the Turner Construction Company's first major commissions. The company, national leaders in reinforced concrete design, is still active today. The Turner Construction Company collaborated with design consultant E.P. Goodrich and factory loft architect William Higginson in the design of the complex. Buildings within Bush Terminal are a symbol of the height of New York's waterfront industry. The architecture in Bush Terminal reflects the change in architectural style and construction methods of industrial buildings at the turn of the twentieth century. As reinforced concrete buildings replaced early brick and timber structures., the new construction methods allowed for rapid construction, durability, greater functionalism, and had minimal maintenance costs, valuable assets in large-scale industrial design.

Narrative Statement of Significance

Criterion A: Commerce

Industrial Development of Brooklyn

During the nineteenth century, present day Sunset Park, an area east of 4th Avenue and south of Green-Wood Cemetery, transitioned from an agricultural village into an urban environment. Unlike the neighborhoods surrounding the Brooklyn Bridge, Sunset Park remained largely undeveloped until the end of the nineteenth century. In 1834 Brooklyn became an incorporated city and five years later a city plan was developed. Parks were introduced within a gridded street pattern, including Green-Wood Cemetery. In 1840 the 478-acre Green-Wood Cemetery opened to the public which included hills, ponds, pathways, and gardens. The picturesque landscape became a popular destination and by 1860 more than 500,000 visitors entered through the cemetery's

[18] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York."
[19] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York."

large Gothic-arched entrance.[20] City parks continued to be developed including Prospect Park (opened to the public in 1867) and Sunset Park (land acquired in 1891).

The population of Brooklyn increased from 48,000 to 280,000 in the years between 1840 and 1859.[21] Row houses were constructed, providing housing to predominately Scandinavian, Irish, and Italian immigrants. In 1849, construction of the Gowanus Canal began in the Park Slope, Cobble Hill, Carroll Gardens, and Red Hook neighborhoods. The area surrounding the canal quickly became an industrial center. The Brooklyn Bridge (1883) and the 39th Street Ferry (1889) provided accessibility between Brooklyn and Manhattan and allowed for Brooklyn residents to commute to the city. Urban development increased in the last quarter of the nineteenth century, when the Brooklyn Union Elevated Railway expanded its 5th Avenue line to 3rd Avenue in 1893.[22] The railway line connected the 36th Street Union Depot to stations between 40th and 65th Streets along 3rd Avenue.[23]

As the nineteenth century progressed, Manhattan's ports could no longer support the demand for sea-transported goods, and often ships were unable to dock at a pier but were instead moored to adjacent ships, making transporting goods difficult. The inconvenient and inefficient shipping method, in combination with the lack of storage facilities, led to the development of Brooklyn's waterfront. Industry rapidly increased during the late nineteenth century and new neighborhoods developed to support the rise in population. By 1890, there were 10,623 factories in Brooklyn and the waterfront became known as the Walled City because of the brick warehouses that lined it.[24]

The Founding of Bush Terminal

The development of Bush Terminal marked a turning point in the industrial manufacturing and warehousing process. The City of New York was desperate to improve manufacturing facilities during the late nineteenth and first quarter of the twentieth century. New York City became an industrial mega center during the mid-nineteenth century in large part because of its many ports and the creation of the Erie Canal in 1825. The construction of the New York State Barge Canal between 1905 and 1918 and the completion of the Panama Canal in 1914 increased both land and sea commerce in the region. Construction within the city increased to accommodate the growth in business. The combination of mass construction and the rise in personal vehicle ownership resulted in congested traffic. This, in turn, caused slow freight deliveries and increased the cost of transportation for manufacturers and wholesalers. Bush Terminal focused on improving efficiency in all aspects of the design, from the handling and transportation of freight to the reinforced concrete construction of its warehouses and lofts. This attention to detail made the terminal highly convenient and economical. In 1913 Bush Terminal was recognized as the 'most useful development' by the Merchants' Association of New York.[25] Bush Terminal's success influenced competitors to mimic the design. Companies such as the Degnon Company planned two similar developments in Queens in 1913. Bush Terminal, however, remained the largest-scale

[20] Barbara Maranzani, "Green-Wood Cemetery: A Victorian Era Icon," History Channel, https://www.history.com/news/green-wood-cemetery-a-victorian-era-icon-turns-175.
[21] "The Earliest New York City Parks," *NYC Parks*, Accessed March 24, 2023, https://www.nycgovparks.org/about/history/earliest-parks.
[22] Amanda B. Davis, "Sunset Play Center Exterior," *New York City Landmarks Preservation Commission*, July 24, 2007, http://s-media.nyc.gov/agencies/lpc/lp/2242.pdf.
[23] Davis, "Sunset Play Center Exterior."
[24] Andrew S. Dolkart, "DUMBO Historic District Designation Report," *New York City Landmarks Preservation Commission*, December 18, 2007, http://s-media.nyc.gov/agencies/lpc/lp/2279.pdf.
[25] "Tremendous Improvement Now Under Way," *Greater New York, Bulletin of the Merchants' Association of New York; Volume 2* (Harvard University, 1913).

industrial property under a single owner and the first complex in the United States to include storage facilities as well as distribution of goods via water, rail, and land.[26]

Named for its founder, Bush Terminal was the brainchild of Irving T. Bush. Son of industrialist Rufus T. Bush and Sarah Melinda Hall Bush, Irving T. Bush was born in Michigan on July 12, 1869.[27] Rufus T. Bush ended his career as a teacher when he discovered his passion for business as a sewing machine salesman.[28] A native New Yorker, Rufus relocated his family to the city to broaden his career in sales. He thrived as a salesman and eventually became involved in the petroleum oil business. Rufus became a partner in the Bush & Denslow Manufacturing Company in 1870, a small oil refinery on the northern portion of the present-day Bush Terminal. Meanwhile, Irving attended the Hill Boarding School in Pottstown, Pennsylvania, and upon graduation he became the company's secretary.[29] By 1879 Bush & Denslow were producing approximately 1,000 barrels of crude oil a day.[30] Due to the small-scale of the business, the company found it difficult to retain a contract with a railroad and could not compete with major companies such as Standard Oil. Rufus was vocally against large oil corporations' monopolistic methods. In 1879 Rufus testified against Standard Oil's use of railroad rebates in an anti-trust case; soon after Standard Oil purchased the Bush & Denslow lots near 25th Street. Rufus Bush passed away in 1890, leaving an inheritance of approximately thirty million dollars to the family.[31] In January 1895, Irving Bush, along with his mother and brother, established the Independent Storage Company.[32] Soon after its establishment, the Independent Storage Company became the Bush Docks Terminal Railway, which was eventually simplified to the Bush Terminal Company by 1902. Irving T. Bush's answer to Manhattan's congested city streets was to create a new freight city. Bush described the concept as:

> The smaller brother of mercantile Manhattan. A new freight city, built by science and peopled by captains of industry. Solving the traffic problem of New York City – the vast economies earned by manufacturers and wholesalers through the scientific handling of shipments and the reduction of insurance rates.[33]

Bush was familiar with Brooklyn's waterfront and the benefits of the borough after working for his father at Bush & Denslow. In combination with undeveloped land and proximity to Manhattan, Brooklyn provided the perfect location for a large-scale industrial complex, offering 200.64 miles of waterfront compared to Manhattan's 40.11 miles of waterfront.[34]

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[26] Martin Schein, *Storehouse #2 U.S. Navy Fleet Supply Base National Register of Historic Places Registration Form* (Washington, D.C.: U.S. Department of the Interior, National Park Service, National Register of Historic Places, 2012).
[27] DBpedia, "Irving T. Bush," Accessed October 19, 2022, https://dbpedia.org/page/Irving_T._Bush.
[28] *The National Cyclopaedia of American Biography: Being the History of the United States as Illustrated in the Lives of the Founders, Builders, and Defenders of the Republic, and of the Men and Women who are Doing the Work and Moulding the Thought of the Present Time* (J.T. White Company, 1910), 102.
[29] "Irving T. Bush Dies; Terminal Founder," *New York Times*, October 22, 1948, https://timesmachine.nytimes.com/timesmachine/1948/10/22/98428780.html?pageNumber=25; Contradicting sources state that Irving was a clerk at the offices of the Standard Oil Company.
[30] Ida Minerva Tarbell, *History of the Standard Oil Company, Vol. 1* (McClure, Phillips & Company, 1904), 199.
[31] "Bush Family Is Spending Millions in South Brooklyn," *Brooklyn Daily Eagle*, September 30, 1895, https://www.newspapers.com/image/50414295/?terms=Bush%20%26%20Denslow&match=1.
[32] "Local Stock & Bonds," *Brooklyn Daily Eagle*, December 1895, https://www.newspapers.com/image/50404062/?terms=independent%20company&match=1.
[33] *Economy: Making Dividends by Saving Them* (New York: The Company, 1910), https://archive.org/details/economymakingdiv00bush/page/n5/mode/2up.
[34] "Brooklyn: A National Center of Commerce and Industry," *Brooklyn, NY: Committee on industrial advancement of the Brooklyn league* (1914).

The area along the waterfront was largely undeveloped until the last quarter of the nineteenth century (Figure 3). In 1888, the largest concentration of development within the present-day Bush Terminal was between 36th and 42nd Streets. Rows of two-story dwellings and several stores were located between 41st and 42nd Street, as well as the southeast portion of 42nd and 43rd Street to the north of 1st Avenue.[35]At this time, local rail companies constructed several freight piers; however, they were temporary. Prior to Bush Terminal, the handling of cargo along Brooklyn's waterfront was problematic. The wharfs could not serve the amount of cargo entering the port; they were ill-equipped to handle a large range of cargo, and there was limited access to the railroad. A vital component of Bush Terminal was the design of the piers constructed along the deep-water channel. Bush Terminal's piers featured steel construction and continuous cargo doors to allow for efficient transport. The 1888 Sanborn map illustrates the early formation of the Short Pier, Pier 6, and Pier 7, which would later be expanded and modified under Bush's ownership.

The development of the complex away from the density of Manhattan proved to be a turning point for the industrial process in New York City. Brooklyn's waterfront drastically changed in the beginning of the twentieth century as piers and warehouses were constructed. Although industry was present in Brooklyn at this time, Bush Terminal would be the first project of its scale in the United States. In 1895, permits were issued to construct six buildings described as, "a block of buildings 400 square feet, six stories in height, very solidly built of brick and iron. They will be situated on the waterfront between 41st and 43rd Street, facing a pier 260 feet wide and 1,000 feet long."[36] In addition to the pier, the nearby Union Railway Depot on 39th Street provided freight transportation. M. Gibson & Son were hired as the contractors for the first group of buildings in what later would become known as Bush Terminal. The buildings were constructed as four- and five-story buildings and exist today as Units A and C.

Irving Bush aspired to compete with the Warehouse Trust, which at the time monopolized the warehouse market in Brooklyn. When interviewed in 1895, the assistant secretary of the warehouse trust was quoted as saying,

> I have heard that the Independent Company was going to build. I don't think, though, that it will interfere with us. I understand that it is going into the business of storing cotton. I hear that they will spend a very large amount of money but have no knowledge of the matter. I think there's room for all of us, though I do not see any particular necessity for the Independent Company's enterprise. There is plenty of competition with our company now.[37]

A pessimistic public nicknamed Irving's plan "Bush's Folly," but the headstrong industrialist was not deterred.

Early Development of Bush Terminal (1895-1905)

Construction of Bush Terminal began in September 1895, when "Ground was broken…for an extensive series of warehouses, to be known as the 'Independent Stores,' on the property of The Bush Company, Limited."[38] M. Gibson & Son were hired as the contractors for the first group of buildings, which were described as "a block of

[35] Sanborn Map Company, Brooklyn, Kings County, New York 1888.
[36] "Bush Family Is Spending Millions in South Brooklyn," *Brooklyn Daily Eagle*, September 30, 1895, https://www.newspapers.com/image/50414295/?terms=Bush%20%26%20Denslow&match=1.
[37] "Bush Family Is Spending Millions in South Brooklyn."
[38] "Big Enterprise: Extensive Warehouses, Known as the 'Independent Stores," *The Standard Union*, September 30, 1895.

buildings 400 square feet, six stories in height, very solidly built of brick and iron. They will be situated on the waterfront between 41st and 43rd Street, facing a pier 260 feet wide and 1,000 feet long."[39]

These warehouses were numbered consecutively as they were completed. Warehouses 1-3 (now known as Unit A) stood five stories tall and were completed in 1895-1896 on the waterfront block between 41st and 42nd Streets. Warehouses 4-6 (now Unit C) stood four stories tall and were completed in 1896 just to the south, between 42nd and 43rd Streets. Warehouses 7-10 (now Unit B) stood six stories tall and were completed in 1897 on the block just inland from nos. 1-3. Warehouses 11-13, 14-16, and 17-19 (all since demolished) were planned as early as 1900 and completed ca. 1902.[40] The one-story warehouses 20-22 (now Unit D) were also completed ca. 1902, replacing several rows of houses that had previously stood on the site. By the early twentieth century, a compact core of warehouse buildings had been established between 40th and 43rd Streets at First Avenue.

In 1902, Bush Terminal underwent a major expansion when Irving T. Bush purchased the land Bush & Denslow had once occupied back from Standard Oil.[41] *Industrial Digest* states that Standard Oil had such little faith in Irving that they accepted interest payments instead of a mortgage, believing that his development would fail.[42] In order to prove that his concept of Bush Terminal could be a success, Irving offered two fruit steamship companies free docking privileges, but the companies refused to relocate from the Manhattan fruit markets. Irving's persistence resulted in his hosting a dinner party for every fruit dealer in Manhattan, at which he proposed his plans to offer lower prices for both docking and warehousing.

This extension encompassed the property between 1st and 2nd Avenues from 44th to 52nd Street and between 1st Avenue and the water from 43rd to 51st Street.[43] Along the shoreline, the company planned another series of tall waterfront warehouses (Figure 4). Warehouses 39-44 and 45-50 (later Units E and F, now demolished) were completed in 1903 and stood six stories tall. Warehouses 51-56 (now Unit G) were completed in 1905 and stood seven stories tall. (A fourth building, which would have comprised warehouses 57-62, was not built as originally planned; instead, the reinforced concrete Buildings 57 and 58 were constructed on the site a few years later in 1909-1910.) Like the earlier warehouse buildings, firewalls divided the interior into three to six separate spaces to accommodate multiple tenants. The brick-faced buildings functioned as general merchandise warehouses and were strictly utilitarian in design with hoist-ways and metal shutters (Figure 5). The roofs of the warehouses featured whip hoists and electric winches at street level to transport goods. During the construction of the waterfront warehouses, the already established Piers 6 and 7 were modified to include sheds. An approximately 950-foot timber pile pier south of Pier 6, known as the Short Pier, was also erected prior to Bush Terminal's ownership.[44]

On the inland blocks between 1st and 2nd Avenues, the Bush Terminal company erected a series of one-story warehouses between 1903 and 1906. These buildings, comprising warehouses 23-38 and 63-121, were initially designed to store cotton but would be utilized to store a broad range of goods. Furniture manufacturers, iron

[39] "Bush Family Is Spending Millions in South Brooklyn." In addition to the pier, the nearby Union Railway Depot on 39th Street provided freight transportation.
[40] Warehouses 11-13 and 14-16 stood where Building 26 was later built, while warehouses 17-19 occupied what is now a vacant lot at 4023 1st Avenue.
[41] "Bush Terminal," *Historic American Engineering Record, HAER No. NY-201*.
[42] "A Builder of Ports," *Industrial Digest and Commodities and Finance, Vol. 4* (Russell's News Publications, Inc., 1925).
[43] "Transfers," *The Brooklyn Times,* April 7, 1902, 10. The new property excluded the three blocks between 1st and 2nd Avenues, 41st to 44th Street.
[44] "Bush Terminal," *Historic American Engineering Record, HAER No. NY-201*.

work, wine storage, and paper storage were among the tenants within the one-story warehouses. The design allowed for future growth as the company expanded and included brick exterior walls with pilasters and flat roofs with skylights to provide natural light. The interiors of the warehouses were divided into separate spaces by fireproof walls accessible through steel doors. Railroad tracks directly outside each warehouse provided quick and efficient transportation of goods.

Located between the waterfront warehouses and the one-story warehouses was a vast railyard. A vital aspect of Bush's concept was the relationship of the railroad tracks to the surrounding complex. The system of transporting merchandise between the piers, warehouses, and lofts by way of the railroad reduced the cost of distributing freight for the manufacturer. The first railroad tracks were laid in 1896 and by 1915 the expansive tracks were completed (Figure 6). The railroad yard, located between 1st Avenue and the waterfront warehouses, was six blocks wide with the ability to hold approximately 1,000 railcars. Tracks penetrated the warehouse and lofts buildings, down the piers, and to the 39th Street passenger ferry. The railroad expanded farther than the property and featured public freight stations, which provided service to the local industry.[45] At the time major rail lines through New Jersey, Manhattan, and the Bronx were not easily accessible. Bush created public freight stations throughout the terminal that would accommodate local businesses not associated with the terminal, in turn boosting the economy of south Brooklyn.[46]

By 1902 a transfer bridge was located at Pier 6 which allowed rail cars to be transferred onto barges or car floats. Following the improvements on Piers 6 and 7, Bush constructed Pier 5 (ca. 1903), Pier 4 (ca. 1903), Pier 3 (ca. 1904), Pier 2 (ca. 1904) which extended from a timber bulkhead (Figure 7). The piers were 150 feet wide and approximately 1,330 to 1,351 feet long with a central concrete portion of the construction built on earth infill with timber and pile construction along the sides (Figure 8). The infill was constrained by a combination of cribbing, piling, and rip-rap stone retained by timber framing.[47] The first occupants of Piers 3 through 7 were the Funche, Edye & Co, Prince Line, Austro-American Steamship Company, American Ice Company, F.D. Creamers & Company, and the American Hawaiian Steamship Company. There was minimal turnover and many tenants stayed for decades, such as the Prince Line (later known as the Furness-Prince Line and Prince Line Ltd.), which occupied Pier 4 from ca. 1906 until ca. 1965.

Model Loft Buildings (1905-1927)

Bush Terminal underwent a second major expansion starting in 1905, when a series of massive reinforced concrete buildings were completed between 2nd and 3rd Avenues from 37th Street northward to 32nd Street.[48] This portion of the terminal was often referred to as the Model Loft Buildings, or Industry City, and would become a focal point of the Bush Terminal complex.

Like the earlier warehouses, the model lofts were numbered consecutively as they were built.[49] Loft Building 1 was completed in 1905 along 37th Street (Figure 9). Lofts 2 and 3, completed in 1906 and 1907, faced each other across 36th Street. Loft 4, completed in 1909, was the first to include frontage on 3rd Avenue. Lofts 5 and 6, also completed in 1909, and Lofts 7 and 8, completed in 1911, were built as matched pairs. Lofts 9 and 10 were built together in 1916, the later unusual in its twelve-story height and smaller footprint facing 3rd Avenue.

[45] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York," 6.
[46] "Bush Terminal," *Historic American Engineering Record, HAER No. NY-201*.
[47] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York," 6.
[48] The company initially planned on building as far north as 28th Street but ultimately stopped at 32nd Street.
[49] Lofts 11-18, which would have occupied the land between 32nd and 28th Streets, were never built.

The lofts included modern technologies such as large freight elevators, automatic sprinkler systems, heat-controlled systems, and exterior walls that were approximately 80 percent glass. The 70,000 sprinkler heads within the buildings improved safety, in turn allowing insurance companies to offer low rates to tenants.[50] Each loft featured loading docks that provided direct access to the railroad freight car. Between eight to ten elevators, approximately eleven feet by eight feet, were in each building with the capacity of transporting three tons (Figure 10).[51] Publications by the Bush Terminal Company describe the model loft buildings,

> From the manufacturer's standpoint the Bush Terminal model loft buildings are ideal. The light and air on all sides is a revelation to the man who has been used to the cramped quarters obtainable in New York. The buildings are so huge that manufacturing concerns whose business was spread over five or six floors in New York City find that one floor, at the Bush Terminal gives them all the space they need. The light pouring in the big windows on every side increase the efficiency and enables their operatives to do better work in the same time, and to do quicker work, too – it increases the amount of work they can do and improves the quality of the work they do.[52]

The Bush Terminal company provided full service to their tenants, including transferring tenants' cargo to the railroad from the freight elevators; the tenant's duty was merely loading their merchandise onto the elevators. Shipments to the tenant were delivered directly to their floor in turn maximizing convenience and eliminating expenses.[53] In addition to providing transportation services, the company also provided tenants with utilities, social services, and commercial services.[54] Bush Terminal functioned as its own city, equipped with its own private police service, bank, medical center, restaurant, and trolley cart system.

The terminal's impressive circulatory transportation system was described by engineer B. F. Cresson as "probably the finest example of terminal development on the Atlantic Coast, if not anywhere in the world."[55] Bush's concept of integrating all the features of the manufacturing process under one private management firm was groundbreaking.[56] Never before had a large-scale complex been created that simplified the process of shipping, manufacturing, and transportation in the United States.[57] An article published in 1902 states,

> The plant will be one of the most complete and modern along the seaboard. The plant will vary in many essential details from the other large shipping plants in the city. The docks will be connected by a system of car tracks, which will also connect with all of the buildings, so that cargoes may be carried directly from one ship to another or from a ship to any building in the entire plant without unloading.[58]

The waterfront continued to be developed and improvements were made to the piers. Originally constructed in 1886, Pier 7 was reconstructed in 1905 as a solid fill with a wood-on-iron frame pier which was approximately 1,213 feet by 157 feet. Unlike other piers on the waterfront that used pile construction, the Bush Terminal piers were larger and built on solid fill. The wide slips allowed for ship barges to transport goods to the piers

[50] R.A.P Walker, "Industry City: Ships to Four Corners of the World," *Brooklyn Daily Eagle*, January 5, 1951, https://bklyn.newspapers.com/image/56107858/.
[51] *Economy: Making Dividends by Saving Them.*
[52] *Economy: Making Dividends by Saving Them.*
[53] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York."
[54] "Bush Terminal," *Historic American Engineering Record, HAER No. NY-201.*
[55] "Bush Terminal," *Historic American Engineering Record, HAER No. NY-201.*
[56] "Bush Terminal," *Historic American Engineering Record, HAER No. NY-201.*
[57] Martin Schein, *Storehouse #2 U.S. Navy Fleet Supply Base National Register of Historic Places Registration Form.*
[58] "Goodrich Quits the Navy to Build Bush Terminal," *Brooklyn Daily Eagle*, April 23, 1902, https://www.newspapers.com/clip/16772309/bush-terminal-construction-bny-1902/.

effortlessly. A one-story, steel-framed, shed superstructure with metal and wood exterior walls and a series of loading doors was constructed onto Pier 7, which would be the first pier shed in the terminal (Figure 11).

Between 1909 and 1911, several additional reinforced concrete buildings were constructed throughout the complex. Buildings 57 and 58, built along the waterfront at the head of Piers 1 and 2, were described as an "absolutely novel design" by the *New York Times*.[59] A pair of eight-story lofts, known as Buildings 19 and 20, were constructed between 40th and 41st Streets near Pier 7. These buildings were designed in response to complaints from merchants who found that obtaining metropolitan representation was too expensive. Bush's concept was to create several floors of union shipping rooms within the buildings where merchants could have goods shipped and stored under a semi-cooperative agreement. The union shipping rooms would provide merchants with shared storage with access to Bush Terminal's transportation services. Bush released the following statement in regard to the union shipping rooms:

> Many manufacturers and shippers who require a distributing headquarters in New York both for local business and for shipments to territory tributary to that centre are put to the expense of hiring stock rooms and maintaining a force of shipping clerks and bookkeepers whose services are actually required only a small portion of each day. The duties of a shipping clerk are not materially different in handling one class of product or another. This is shown by the fact that the moment a package passes from the shipping room to the railroad the same intelligence handles an infinite variety of articles. The idea with which these union stock rooms could be established has the same underlying principle of co-operative economy which has been instrumental in reducing operating costs in other lines. Manufacturers and wholesale dealers who require a central shipping point in New York City will find that through the economy; first, of a freight station acting for all the railroads; second, union shipping buildings on terminal tracks of all railroads; third, proximity of the Bush piers; fourth, union stock rooms conducted upon the principle of co-operation, they can enjoy each, for a few hundred dollars, better facilities than they are now paying thousands to maintain.[60]

By 1910 seven piers had been erected which had the ability to accommodate more than twenty-seven steamships (Figure 12).[61] Piersheds were constructed with a combination of battered sides, wood, narrow aprons, steel framing and rows of cargo doors. At the time of construction, it was unusual for piersheds to feature steel framing and cargo doors.[62] Other cargo handling facilities recognized the benefits of the quick steel construction and continuous cargo doors which allowed for quick and efficient movement of cargo and would duplicate the construction method. Hand trucks, low flat horse trucks, and storage battery crane trucks transported cargo from the interior of the pier shed to the warehouse.

The monthly tonnage exceeded 95,000 tons by rail and over 200,000 tons of cargo by steamship in 1910.[63] Eventually thirty-five miles of railroad track would connect to every terminal in the eastern part of Bush Terminal. [64] Approximately fifty Bush Terminal trucks were available to transport goods within the immediate

[59] "Bush Terminal Co.'s New Warehouses," *New York Times*, April 24, 1910, https://timesmachine.nytimes.com/timesmachine/1910/04/24/issue.html. These buildings adopted the numbering scheme from the earlier waterfront warehouses, rather than the model loft buildings.
[60] "Bush Terminal Co.'s New Warehouses," *New York Times*.
[61] *Economy: Making Dividends by Saving Them*.
[62] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York."
[63] *Economy: Making Dividends by Saving Them*.
[64] "A Builder of Ports."

vicinity.[65] A variety of businesses occupied the Bush Terminal lofts and warehouses, which guaranteed constant shipments. Every aspect of the terminal design was intentional, in Bush's words, "Everything is four square, everything is geometrical and exact. There are no crooked streets, there is not an inch of waste space. Every line has its mission, every stone in each cubic foot its reason for being there, as expressed in economy and efficiency."[66]

Bush's concept of integrating all the features of the manufacturing process under one private management firm was groundbreaking.[67] Never before had a large-scale complex been created that simplified the process of shipping, manufacturing, and transportation in the United States.[68] Local newspaper *The Brooklyn Eagle* reported,

> The plant will be one of the most complete and modern along the seaboard. The plant will vary in many essential details from the other large shipping plants in the city. The docks will be connected by a system of car tracks, which will also connect with all of the buildings, so that cargoes may be carried directly from one ship to another or from a ship to any building in the entire plant without unloading.[69]

By 1912, New York's port surpassed cities such as Philadelphia and Boston, as well as international competitors London and Hamburg, in large part due to the success of Bush Terminal.[70] According to an article in an issue of *Engineering News*, since 1901 "the average increase in tonnage during the past ten years has been a million tons per annum" in New York.[71] It is not a coincidence that the years observed correlate to the establishment of Bush Terminal.

The nineteenth-century construction of Pier 6 was rebuilt in 1913 as a 1,261-foot by 276-foot structure with a wider concrete portion and two wood-framed decks.[72] Pier 6 had fourteen acres of deck room and was the only double decked freight pier in New York.[73] Unlike the other piers, the water end of Pier 6 was designed with a recessed area to provide additional docking. When Pier 6 was rebuilt, the transfer bridge was replaced by two transfer bridges between Pier 1 and 51st Street. Remnants of the two transfer bridges remain between Pier 1 and 51st Street. Construction of Pier 8 began in 1914 as a timber pile pier. In addition, Bush Terminal was equipped with six steel three-track carfloats, which had the ability to transport approximately eighteen cars, two floats, and two steam tugs.[74]

Bush Terminal prospered throughout the first quarter of the twentieth century. In 1914 the Committee on Industrial Advancement of the Brooklyn League commented on the design of Bush Terminal, "The merchant who is able to load and unload at the door of his factory, delegating the trouble of shipping, transfers, etc., to the one railroad at his disposal, is no doubt in the best position to send his product throughout the country with the

[65] "A Builder of Ports."
[66] *Economy: Making Dividends by Saving Them.*
[67] "Bush Terminal," *Historic American Engineering Record, HAER No. NY-201*.
[68] Martin Schein, *Storehouse #2 U.S. Navy Fleet Supply Base National Register of Historic Places Registration Form*.
[69] "Goodrich Quits the Navy to Build Bush Terminal," *Brooklyn Daily Eagle*, April 23, 1902, https://www.newspapers.com/clip/16772309/bush-terminal-construction-bny-1902/.
[70] Charles W. Staniford and Philip Guise, "The New South Brooklyn Freight Terminal, New York Harbor," *The Engineering Record, Vol. 67* (1912): 421-423.
[71] Staniford and Guise, "The New South Brooklyn Freight Terminal, New York Harbor."
[72] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York."
[73] "Bush Terminal Plant Largest of its Kind," *New York Times*, January 1918, https://timesmachine.nytimes.com/timesmachine/1918/01/01/102650912.pdf?pdf_redirect=true&ip=0.
[74] "Bush Terminal," *Historic American Engineering Record, HAER No. NY-201*.

minimum of cost, delay, and bother."[75] This process was not only more efficient, but cheaper for the merchant; one tenant is quoted as saying,

> In two years I have saved more than $20,000 in actual trucking and shipping expenses; I have been enabled to enlarge my plant by merely renting part of another loft in the same building; whenever I have surplus raw material on hand I need not burden my valuable loft space with it but it is held for me, at a moderate cost, in one of the Bush warehouses; and, last but not least, I figure that I am $5,000 more in pocket as a result of the low insurance rates prevailing at the Terminal.[76]

The thirty-story tall Bush Tower, otherwise known as the Bush Terminal International Exhibit Building, was constructed at 130-132 West 42nd Street in Manhattan and designed by the prominent architectural firm Helmle & Corbett in 1916. Bush Tower is extant and was listed as a New York City Landmark in 1988. Samples of a tenant's merchandise would be transported from Bush Terminal to the showrooms at the Bush Tower, which brought the manufacturer in direct contact with the buyer. [77] The location in proximity to Times Square was ideal for both the manufacturer and buyer. In Irving T. Bush's own words, "This building will succeed, because of its location was selected and structure equipped for its purpose, and it has underlying it the Bush Terminal plant with all its service."[78] The relationship of Bush Tower to the Bush Terminal was a proven success and soon after the counterpart, Bush House, was constructed in London to expand international trade.

Two additional reinforced concrete warehouses, known as Buildings 22 and 24, were completed in 1917. These were located at the southwest corner of 39th Street and 1st Avenue, just north of the terminal's historic core on land that had previously been occupied by a separate manufacturing business.

In 1918 the War Department requisitioned Bush Terminal's facilities for the purpose of storing and shipping supplies and ammunition to France during World War I and tenants were forced to temporarily relocate. Despite the size of the terminal, it became evident that more space was needed.[79] Bush's expertise in both railroad and water transportation led to him becoming a consultant, in conjunction with architect Cass Gilbert and the Turner Construction Company, to construction of the U.S. Army Military Ocean Terminal just south of Bush Terminal. Eventually his skillset led to Irving being appointed Chief of Embarkation for the Port of New York, Director of the Harbor and Terminal Facilities and Chief Executive of the War Board of the Port of New York.[80] Constructed between 1918 and 1919 the U.S. Army Military Ocean Terminal included two eight-story buildings, three two-story piers, ancillary buildings, and a railroad within ninety-seven acres. Unlike Bush Terminal, the buildings used wooden forms and poured concrete to ration the use of steel during the war.

In 1920 Pier 8 was completed and the Short Pier was shortened, and two railroad tracks added.[81] Pier 8 extended from the eight-story Bush Service Station on 39th Street, which would become part of the Loft Building on the corner of 1st Avenue and 39th Street in 1926.

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[75] "Brooklyn: A National Center of Commerce and Industry," *Brooklyn, NY: Committee on industrial advancement of the Brooklyn league* (1914).
[76] "Brooklyn: A National Center of Commerce and Industry."
[77] *Bush Terminal International Exhibit Building & Buyers Club*, Bush Terminal (New York, 1917).
[78] *Bush Terminal International Exhibit Building & Buyers Club*.
[79] Suzanne Spellen, "Industry City's Rise, Fall and Rebirth, from Wartime Manufacturing to Artisanal Mecca," *Brownstoner*, November 30, 2015, https://www.brownstoner.com/history/industry-city-brooklyn-bush-terminal-sunset-park-history/.
[80] "Irving T. Bush Dies; Terminal Founder," *New York Times*, October 22, 1948, https://timesmachine.nytimes.com/timesmachine/1948/10/22/98428780.html?pageNumber=25.
[81] "Bush Terminal," *Historic American Engineering Record, HAER No. NY-201*.

By 1925 there were sixteen model factories with approximately three hundred tenants.[82] Two additional lofts—the last major buildings completed in the complex—were completed in 1926-27 and were known as Buildings 23 and 26. In contrast to the congested city streets, the well-planned Bush Terminal complex offered spacious, sun-filled buildings that could transport goods directly from the building to the railroad without interference. In addition to the utilitarian spaces, the lofts offered other amenities. Clement's Club was an exclusive club for executives located between Loft Buildings 5 and 6 (Figure 13). A newspaper advertisement states, "Enjoy the luxurious comfort of fine club service from kitchen and bar in Clement's Club's attractive dining rooms and cocktail lounge. Television provided."[83]

Bush Terminal 1928-1971

The Great Depression significantly affected production and transportation at Bush Terminal. During this time Bush filed for bankruptcy and temporarily lost control of the Bush Terminal Company. Once Bush obtained control of his company, he maintained the position until his death in 1948. In addition to his success as a business mogul, Bush wrote several books on his knowledge of the industry, including *Working with the World*, published in 1929. The impact Bush Terminal had on the industrial economy was significant as it expanded the shipping industry in the United States. Other developers observed the success of the terminal and constructed along south Brooklyn's waterfront. Bush Terminal also had a significant impact on the surrounding community, as it was a source of employment and at its height employed approximately 30,000 people.[84] Employees were primarily Italian and Scandinavian immigrants who built communities in proximity to the terminal.

Bush Terminal was converted to military-based manufacturing again during World War II. At this time the army paved the cobblestone on 1st Avenue to accommodate tanks traveling between the U.S. Army Military Ocean Terminal to Bush Terminal.[85]

Bush Terminal continued to thrive into the second half of the twentieth century, despite changes to south Brooklyn. The surrounding landscape was altered during the mid-twentieth century when Robert Moses commissioned the Brooklyn-Queens Expressway (BQE). Built between 1944 and 1948 the BQE was constructed to minimize congestion on local streets; however, in doing so many historic neighborhoods were removed and residents relocated. The southernmost portion, known as the Gowanus Expressway, physically separates Bush Terminal from the east side of 3rd Avenue. In addition to the BQE, the Brooklyn-Battery Tunnel was completed in 1950, connecting Brooklyn to Manhattan.

Additional changes to the area occurred on December 3, 1956, when one of the largest explosions in New York City history occurred. The site of the explosion was the 1,740-foot pier at the end of 35th Street occupied by the Luckenback Steamship Lines.[86] Although not part of Bush Terminal, the terminal's pier shed's metal and glass roofs took to the air, and the windows of the surrounding buildings shattered. It was discovered that the cause of the disaster was 37,000 pounds of Primacord, a material used for detonating fuses, that was being stored on the

[82] "A Builder of Ports."
[83] "Clement's Club Advertisement," *Brooklyn Daily Eagle*, March 20, 1953, https://www.newspapers.com/image/53866951/?terms=clement%27s%20club&match=1.
[84] "Bush Terminal," *Historic American Engineering Record, HAER No. NY-201*.
[85] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York."
[86] Keith Williams, "Carnage and Heroism: Memories of 1956 Bush Terminal Explosion," *New York Times*, December 1, 2016, https://www.nytimes.com/2016/12/01/nyregion/bush-terminal-brooklyn-explosion-1956.html.

pier.[87] In addition to the extensive damage to the surrounding buildings, the explosion resulted in the deaths of ten people and 247 injuries.

Container ports that used truck transportation became increasingly popular in the second half of the twentieth century, making the rail and shipping system used at Bush Terminal outdated which in turn negatively impacted the local economy. Unlike the New Jersey piers, the Brooklyn and Manhattan piers were slow to adapt to the new technology.[88] In 1956, entrepreneur Malcom McLean and engineer Keith Tantlinger created the first shipping container which could be stacked and transported. The dimensions of the rectangular metal container boxes were standardized, which allowed for quick and inexpensive production. McLean retrofitted the decking on two World War II tankers to support the weight of the cargo, and cranes or sidelifters were used to lift the containers from trailers onto the tankers. The following year McLean purchased the Pan-Atlantic Shipping Company, which would later become Sea-Land Service, Inc., to begin shipments between the United States and Puerto Rico.[89] Facilities continued to expand and improvements to efficiency were made to lesson costs and make container ports in the standard in large-scale shipping industry.

In 1958 the City of New York purchased Pier 8 for the purpose of integrating it into the 39th Street Terminal. Like the Bush Terminal piers, the 39th Street Terminal was constructed on solid fill. Two years later the Short Pier was shortened for the second time. By 1988 the Short Pier had been completely removed.

Harry Helmsley purchased the terminal in 1963, at which point it became primarily garment manufacturing, although some original tenants, such as Journal Paper and Topps Chewing Gum, remained.[90] Helmsley made updates to the terminal to adapt to the changes in transportation. Alterations to the buildings include the installation of rooftop transformers, updated heating systems, and upgrades to bathroom facilities and stairwells.[91] The 48th Street Freight Station was located on the south side of 48th Street until it was demolished between 1988 and 1991 and later developed in 1997 as one-story warehouses in a design that was architecturally cohesive with the surrounding Bush Terminal buildings. A concrete block storage building was constructed on the former railroad tracks associated with the 48th Street Freight Station, along 47th Street, in 1964.

Bush Terminal Post-1971

Although the complex was designed in the late nineteenth century and early twentieth century, the buildings remained relevant and active into the twenty-first century. An article published in 1976 describes the continued use of the buildings, despite the failure of other manufacturing buildings in the area, “The success of Bush Terminal stems from its scale- its main buildings contain about six million square feet of manufacturing space, or approximately 140 enclosed acres-and its proximity to cheap labor and mass transit.”[92] Despite the continued

[87] Williams, “Carnage and Heroism: Memories of 1956 Bush Terminal Explosion.”
[88] Linda Mackey, *Bush Terminal Historic District Resource Evaluation Form*, March 20, 2019.
[89] Scott Mall, “FreightWaves Classics/Pioneers: Malcom McLean changed the freight world with intermodal containers,” *Freight Waves*, May 27, 2021, https://www.freightwaves.com/news/freightwaves-classicspioneers-malcom-mclean-changed-the-freight-world-with-intermodal-containers.
[90] Carter B. Horsley, “Bush Terminal Shouldn’t Be A Success But It Is,” *New York Times*, September 12, 1976, https://www.nytimes.com/1976/09/12/archives/bush-terminal-shouldnt-be-a-success-but-it-is-by-all-the-rules-bush.html.
[91] Shawn G. Kennedy, “About Real Estate; Industrial Condominiums at the Old Bush Terminal,” *New York Times*, April 30, 1986, https://www.nytimes.com/1986/04/30/business/about-real-estate-industrial-condominiums-at-the-old-bush-terminal.html.
[92] Horsley, “Bush Terminal Shouldn’t Be A Success But It Is.”

use of the buildings, the piers and railroad became obsolete, and in 1971 the Interstate Commerce Commission approved the termination of operations.[93]

Unlike the Bush Terminal buildings, conditions of the environment resulted in constant maintenance and repair of the piers' timber piling and side system. Despite the decay, the piers remained in operation until 1971, at which point the city gained control. Three years later the Northeast Marine Terminal Company leased Piers 1 through 4 and the pier sheds were removed.[94] The piers were infilled, and the area was used for container storage. Soon after the Northeast Marine Terminal filed for bankruptcy, which terminated the project.[95] Piers 5, 6, and 7 ceased operation soon after and a fire occurred in 1981. The fire was the first of several in the second half of the twentieth century, which resulted in Pier 6 being demolished in 1985. Despite numerous fires, Piers 5 and 7 retained portions of their original pier sheds.[96] In 2014 the area between Piers 1 and 3 was infilled to create a waterfront public park, equipped with sports fields and bike paths.

Bush Terminal and its Impact on Industrial Terminals

Bush Terminal influenced the design of other nearby terminals, such as the Degnon Terminal, the New York Docking Company, Brooklyn Army Terminal, Starrett-Lehigh Building, and the Bayonne Naval Base. Today, many of the early twentieth century terminals are no longer intact because of their conversion into container terminals, which do not require early terminal infrastructure, while other historic terminals have been rehabilitated into commercial and residential purposes. Since the stackable shipping containers eliminated the need for warehouses, historic buildings are often demolished to create space for containers awaiting distribution.

The Brooklyn Wharf and Warehouse Company was established in 1895 north of Bush Terminal in the Red Hook neighborhood. The facility included forty piers and 150 brick storage buildings. The company was dependent on the grain trade, which collapsed in 1900 resulting in the company declaring bankruptcy.[97] In 1901, the Brooklyn Wharf and Warehouse Company was reincorporated as the New York Dock Company. Reinforced concrete buildings were constructed with adjacent railroad service to provide efficient transportation of goods in 1911; however, because Bush Terminal already offered this service, it negatively affected the New York Dock Company's business.[98] The New York Dock Company merged with the Brooklyn Eastern District Terminal in 1978 but would eventually cease operations in 1983. Today, portions of the former New York Dock Company complex have either been significantly altered or removed. Two large reinforced concrete buildings constructed in 1913 on Imlay Street remain which operate as a climate-controlled art storage facility and condominiums.

In 1913, the Degnon Company established Degnon Terminal in Long Island City, New York. The terminal imitated Bush Terminal in many aspects, such as having its own railway, water transportation, and large fireproof industrial buildings. Advertisements offer building sites, equal freight rates, shipping facilities, a variety of water routes, terminal railroad, local deliveries, subway and elevated connections. By 1915 the terminal covered 125 acres along the Dutch Kills Canal with the Degnon Terminal railroad tracks having direct access to the docks on the Dutch Kills Canal terminal. An article in the *Brooklyn Daily Eagle* printed in 1915

[93] "Bush Terminal," *Historic American Engineering Record, HAER No. NY-201*.
[94] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York," 7.
[95] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York," 7.
[96] Flagg and Raber, "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York," 7.
[97] Malka Simon, "The Walled City: Industrial Flux in Red Hook, Brooklyn, 1840-1920."
[98] Simon, "The Walled City: Industrial Flux in Red Hook, Brooklyn, 1840-1920."

states, "We are following the same plan as the Bush people in cutting the cost of doing business."[99] Although Degnon Terminal followed the same general concept that Bush Terminal created, it predominately catered to major companies, such as Loose-Wiles Sunshine Biscuit Company and Packard Motors. Manufacturers had the option to purchase the land and construct their own factory, or lease a building constructed by Degnon Terminal. Large reinforced concrete industrial buildings, similar to the Bush Terminal lofts, with integrated railroad tracks, were constructed within the complex. Unlike Bush Terminal, Degnon Terminal was located within a residential and commercial area, which made it possible for the factories to have showrooms. Following the death of the owner, Michael J. Degnon, in 1925, the Long Island Railroad obtained the former Degnon Railroad.[100] Soon after the terminal became vacant, and in 1989 it was deactivated. Today, many of the former industrial buildings have been rehabilitated as educational, government, and commercial buildings.

The Starrett-Lehigh Building at 601 West 26th Street in Manhattan was constructed as a joint-venture between the Starrett Corporation and the Lehigh Valley Railroad in 1930; however, the Lehigh Valley Railroad gained full control of the facility in 1932. Architects Cory & Cory and Yasuo Matsui with engineers Purdy & Henderson designed the building covering an entire city block above a freight railroad on the ground floor. In addition to the railroad, trucks could enter from the street, passing beneath the railroad tracks to a freight elevator that would take the truck to the upper floors. The Modernist building is nineteen stories at its highest point with setbacks as low as nine stories with horizontal ribbon windows on the exterior. The manufacturing and distributing center followed Bush Terminal's simple concept of integrating all aspects of production. When constructed, the building included offices, cafeterias, a hospital, barbershop, newsstand, gas station, and an auto repair shop.[101] The Great Depression had a major impact on the early years of the Starrett-Lehigh Building and the building didn't reach full capacity until 1943.[102] A year later the spur line tracks were removed from the ground floor and the Lehigh Valley Railroad sold the property to Jacob Friedus. In 1974 Harry B. Helmsley purchased the property and the building continued to operate as a warehouse facility. The Helmsley family maintained ownership until 1998, when investors purchased the building to convert into offices. The building was renovated again in 2011 when RXR Realty bought the building. The Starrett-Lehigh Building remains a multi-use office building and is listed as a New York City Landmark (1986, Ref. No. 1295).

Although constructed for the purpose of an industrial terminal in 1939, the Bayonne Naval Base was quickly converted to a naval base with the emergence of World War II. The terminal is located on the east coast of Bayonne, New Jersey, in New York's Upper Harbor and functioned as a dry-dock and supply center. Also known as the Military Ocean Terminal Bayonne (MOTBY) the facility became an army base in 1967. Like Bush Terminal, MOTBY was a shipping terminal with transportation directly to warehouses and a rail network that provided access to the vessels. The MOTBY was active until 1999 and the site was redeveloped to house retail tenants and residential housing. In 2018 Lincoln Equities Group (LEG) purchased the property for the purpose of converting the site into a United States Parcel Service (UPS) distribution center. A historic smokestack and steel water tower were demolished in 2018 and in 2021 the last two historic structures were demolished.

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[99] "Prospects of Queens, the City's Biggest Borough," *Brooklyn Daily Eagle,* March 28, 1915, https://www.newspapers.com/image/685823336/?terms=degnon%20terminal&match=1.
[100] "Long Island Railroad to Buy Degnon Line," *New York Times*, October 1928, https://timesmachine.nytimes.com/timesmachine/1928/10/07/317401182.html?pageNumber=99.
[101] Jay Shockley, "Starrett-Lehigh Building," *New York City Landmarks Preservation Commission,* October 7, 1986, http://s-media.nyc.gov/agencies/lpc/lp/1295.pdf.
[102] Christopher Gray, "Streetscapes/Starrett-Lehigh Building; Time of Change for a Modern Industrial Landmark," *New York Times,* May 31, 1998, https://www.nytimes.com/1998/05/31/realestate/streetscapes-starrett-lehigh-building-time-change-for-modern-industrial-landmark.html.

Criterion C: Architecture and Engineering

Bush's primary design team consisted of terminal chief engineer Ernest P. Goodrich, factory loft architect William Higginson, and the Turner Construction Company. Together they created "[the] largest unified non-railroad terminal ever built in the Port of New York, and the largest multi-tenant industrial property in the United States."[103]

Goodrich resigned as the assistant engineer in the department of yards and docks at the Brooklyn Navy Yard to become the chief engineer at Bush Terminal in 1902. Several months before accepting the position, Goodrich was the consulting engineer for Bush Terminal. Goodrich's decision to leave the Navy Yard was based on the lack of opportunity to create original work and, according to a newspaper article announcing Goodrich's position change, "the entire system of docks and buildings will incorporate his ideas."[104] Goodrich would go on to have an expansive career including becoming the first president of the Institute of Traffic Engineers, chief of New York's Sanitation Department's engineering division, engineer to the Manhattan Department of Public Works, and engineering adviser to the government of the Republic of China to develop city plans for Huangpu and Nanking.

Higginson emigrated to the United States from England in 1885 and in 1894 established an architectural firm in New York City. Following a brief partnership with architect Edward L. Angell between 1897 and 1899, Higginson was commissioned to design eleven buildings for the Robert Gair Company in 1904. The Gair Company buildings would be Higginson's introduction to the Turner Construction Company and reinforced concrete construction. The Turner Construction Company was founded in 1902 and would become known for its expertise in concrete construction. Higginson and the Turner Construction Company would work together on many other reinforced concrete industrial buildings such as the Loose-Wiles Biscuit Company Building (1908) in Long Island City and the Arbuckle Brothers Warehouse in DUMBO (1910-11, a contributing building in the DUMBO Industrial District). It seems the development was a collaborative process between all team members.

The Architecture of Bush Terminal

The earliest buildings in Bush Terminal—the tall, numbered warehouses built before 1905—were all of traditional industrial architectural design. By one account, half were of mill construction, while the other half were "of open joist construction with 1-in. pine roof boards."[105] Mill construction was distinguished primarily by its interior framing, which employed massive wood beams and posts that were slow to burn in case of fire. Most industrial buildings of mill construction also typically had thick wood floors and roofs with no air pockets or attic spaces that could spread or conceal fire. The massive framing members allowed open plans with widely spaced columns minimally interrupting the work floor, and with large windows to maximize light and ventilation.

The exteriors of these early buildings were designed in what has come to be known as the American round-arch style. Characteristic features include planar brick facades, sometimes interrupted by regularly placed projecting piers, corbelled brick cornices, and most notably the regular rhythm of segmental- or round-arched window openings. The most intact example of this style in the district is the four-story building comprising warehouses 4-6 (now Unit C), completed in 1896 and built by M. Gibbons & Sons. Particularly striking are the waterfront and inland elevations, which both feature expansive fields of large, round-arched windows.

[103] Mackey, *Bush Terminal Historic District Resource Evaluation Form.*
[104] "Goodrich Quits the Navy to Build Bush Terminal," *Brooklyn Daily Eagle*.
[105] "The Reinforced Concrete Factories for the Bush Terminal," *The Engineering Record* 53 (1906): 36.

Around 1905, the architecture of Bush Terminal made a rapid transition towards the use of reinforced concrete framing, which in turn allowed for novel exterior designs, particularly the abstracted Industrial Neoclassicism preferred by the district's primary architect, William Higginson.

Loft Building 1, the first large-scale reinforced concrete structure in Bush Terminal, is particularly illustrative of this transition. It was initially proposed in 1904 and building permits were issued in August 1905.[106] According to a lengthy magazine article on the new building, "Very careful studies were made of the most desirable types of construction and that of reinforced concrete with special details for floors and columns was adopted."[107] It also notes that the building was the result of a large design team: "The general system has been developed by Mr. Irving T. Bush" and construction was overseen by E. P. Goodrich; R. T. Tucker was consulting engineer and "the reinforced concrete details have been worked out and their construction supervised under direction of the chief engineer, by Bertine & Son." Higginson was listed as consulting architect and was also the architect of record on building permits.

Notably, the exterior elevations of Loft Building 1 were produced by another architectural firm, Kirby, Petit & Green, which had just designed the Bush Terminal Office Building at 100 Broad Street in Manhattan in 1904.[108] In many ways, the exterior appearance of the building closely resembles traditional industrial architecture and belies the novel construction techniques contained within. It is clad with brick, not concrete, and is embellished with typical American round-arch details such as the arched window openings, prominent brick piers, arcaded upper story windows, and the scalloped, corbelled brick cornice.

Later buildings in Bush Terminal—starting with Loft Building 2, built in 1906, just a year after Loft Building 1—fully embraced reinforced concrete on both the interior and exterior. Higginson was the architect of record for these buildings and likely was responsible for all aspects of their design. Their exteriors employ the austere Industrial Neoclassical style that became the Higginson's hallmark. Characteristic features include rusticated concrete piers separating the wide window bays, spandrels with simple incised ornament, and parapets ornamented with brackets and stepped pediment typically containing the building number. On these buildings, the exteriors comprise vast expanses of glass, arranged horizontally in large rectangular windows only minimally interrupted by the vertical columns.

Coincidentally, the one-story warehouses spanned these two periods both chronologically—they were completed between 1903 and 1906—and in terms of their construction methods. According to fire insurance maps, the exterior walls are traditional load-bearing brick, while the interior columns and roof are reinforced concrete.

Reinforced Concrete Construction

Concrete construction methods have been employed for centuries; however, it wasn't until the mid-nineteenth century that iron reinforcement was introduced. Numerous patents emerged that integrated the use of reinforced concrete, such as R.B. Stevenson's method of casting concrete pipes using mortar and sheet metal and S.T. Fowler's reinforced concrete wall using iron bars. Technological advancements led to experiments in fire resistance. American inventor Thaddeus Hyatt published *An Account of Some Experiments with Portland Cement Concrete Combined with Iron as a Building Material with Reference to Economy in Construction and*

[106] New Building permit 2428 for 1905.
[107] "The Reinforced Concrete Factories for the Bush Terminal," *The Engineering Record*.
[108] "The Reinforced Concrete Factories for the Bush Terminal," *The Engineering Record*. See also "Erection of a reinforced concrete factory for the Bush Terminal Company," *The Engineering Record* 53 (1906): 284.

for Security against Fire in the Making of Roofs, Floors and Walking Surfaces in 1877 for the purpose of "a possible means of obtaining cheaper and more reliable fireproof construction than those in common use."[109]

Methods of reinforcing concrete continued into the late-nineteenth century when French engineer Francois Hennebique developed the basis of what is commonly used today. [110] Hennebique's 1892 patent was the first monolithic reinforced concrete construction method which integrated the column and the beam. In the United States, P. H. Jackson & Co., working with Ernest L. Ransome, built a pair of notable reinforced concrete buildings on the campus of Stanford University in the early 1890s. Ransome later worked with Pacific Coast Borax Company, including on his first East Coast commission in Bayonne, New Jersey. Between 1900 and 1902 Ransom created a method which allowed for larger windows to be installed in reinforced concrete buildings. This was made possible by a reinforced concrete skeletal grid system on the exterior walls, eliminating the need for thick, load-bearing walls.[111]

While Ransome's name is often closely linked to the development of reinforced concrete, "the development of concrete reflected a long history of technical experimentation and, at the end of the nineteenth century, a remarkable burst of entrepreneurial enthusiasm that brought it into wide use among American buildings."[112] By the turn of the twentieth century, a variety of proprietary "systems" were available on the market, each distinct enough to be awarded its own patent. Most of these systems can be divided into two groups: beam-and-girder construction and flat-slab (mushroom column) construction.

Beam-and-girder construction was the first to be perfected and was championed by Ransome and his protégées at the Turner Construction Company, as well as by the Kahn Brothers (architect Albert Kahn and engineer Julius Kahn). It was characterized primarily by its flooring system, which comprised a series of concrete columns supporting a grid of massive concrete girders and smaller intermediary beams, with a slab floor resting above. Though similar in concept and general appearance to older mill construction techniques, it offered superior fire resistance and allowed for larger windows and thinner walls. Beam-and-girder construction remained predominant in the Northeast through the early 1910s.

Flat-slab construction was first introduced in the United States in the early 1900s when O. W. Norcross and C. A. P. Turner (unrelated to Tuner Construction) filed a series of competing patents.[113] It was characterized by a flooring system in which "the load upon the floor is carried directly to the columns without the agency of other elements, such as beams or girders. As commonly constructed, a reinforced-concrete floor slab of uniform thickness…is supported symmetrically upon columns provided with wide conical-shaped capitals."[114] One of the primary benefits of flat-slab construction was the reduction in thickness of the floor plate, which allowed larger windows and more sunlight to enter the building, while also enabling either taller ceilings or additional

[109] Thaddeus Hyatt, *An Account of Some Experiments with Portland Cement Concrete Combined with Iron as a Building Material with Reference to Economy in Construction and for Security against Fire in the Making of Roofs, Floors and Walking Surfaces* (London: Chiswick Press, 1877).
[110] Before reinforced concrete became widely used in 1900, the technique was referred to as armored concrete, ferro-concrete, hooped concrete, sidero-concrete, steel concrete, and concrete steel. "The Development of Reinforced Concrete," *The Aberdeen Group* (1961).
[111] Martin Schein, *Storehouse #2 U.S. Navy Fleet Supply Base National Register of Historic Places Registration Form*.
[112] Amy E. Slaton, *Reinforced Concrete and the Modernization of American Building*, 1900-1930 (Baltimore: Johns Hopkins University Press, 2001), 15, quoted in Dolkart, "DUMBO Historic District Designation Report," 15.
[113] Orlando W. Norcross held patents 698,542 and 698,543 (filed 1901 and granted 1902), while Claude A. P. Turner held patents 985,119 and 1,003,384 (filed 1907 and granted 1911).
[114] Nathan C. Johnson, *Concrete Engineers Handbook* (New York: McGraw-Hill Book Company, Inc., 1918), 457.

floors in the same height building.[115] The first building in America to employ flat-slab construction techniques was C. A. P Turner's 1905 Johnson-Bovey Building in Minneapolis, Minnesota. Though more common in the Midwest, its widespread adoption may have been delayed by a patent dispute between Norcross and C. A. P. Turner that wasn't resolved until 1916, when rights to the design were consolidated in the Flat Slab Patents Co. of Chicago. Even then, it was acknowledged that "the field for the designer of flat slabs is not a free one and, unless he can invent a method of reinforcement that is entirely new…he must be licensed under one of the 'Systems'" owned by the Flat Slab Patents Co.[116]

Bush Terminal is an example of the transition between nineteenth-century brick and timber industrial buildings and the rise in reinforced concrete construction (Figure 14). As the construction method evolved and improved it became increasingly popular because of its cost, durability, vibration and fire resistance, and ability to push height boundaries. Large open space interiors were designed to accommodate both large and small-scale tenants as they gave the option of adding partition walls. In the early twentieth century four common construction methods were typically used for industrial buildings: frame construction, steel construction, mill or slow burning construction, and reinforced concrete construction. The first reinforced concrete building constructed in the United States was in 1872, although it wasn't until 1895 when the method was used commercially.[117] Due to its risk of fire, frame construction fell out of favor as safer methods were introduced. Although somewhat resistant to fire, the expense of steel construction deterred its use. Mill, or slow burning construction, which used structural brick walls and heavy timber frames, was successful at isolating a fire but required routine maintenance.[118]

Efficiency was paramount in all aspects of Bush Terminal. During construction two mixing plants were in the basement near the elevators, this efficient technique resulted in the building being completed within seventy-four working days.[119] An innovative design feature on the model loft buildings is the flooring, which consisted of ribbed slabs supported by heavy girders, creating a ribbed appearance underneath. Typically beams, girders, and slabs were used to create flooring, but Bush Terminal's approach limited the amount of material needed while still supporting large amounts of weight. Rapid construction was made possible by reusing the same falsework and molds for each floor, which required less labor and materials (Figure 15). This technique was executed by approximately 150 men who were able to complete a floor in eighteen nine-hour days.[120] Wooden piles support column footings, which vary slightly in the factory buildings, for example, Factory No. 1 has cylindrical columns and Factory No. 2 has octagonal columns.

The advantages of reinforced concrete construction were extensive, including the cost of construction which did not require a skilled craftsman like other construction methods. The durability of the material is ideal for industrial buildings, as described by a 1918 publication by the Atlas Portland Cement Company: "The safety of a well-designed reinforced concrete building increases with age, the concrete constantly gaining in strength and the bond becoming stronger."[121] Since reinforced concrete construction does not require large columns for

[115] Johnson, 457-458.
[116] Johnson, 479-480.
[117] "Reinforced Concrete in Factory Construction," *The Atlas Portland Cement Company*, 1918, https://upload.wikimedia.org/wikipedia/commons/0/07/Reinforced_concrete_in_factory_construction._%28IA_reinforcedconcre00atla%29.pdf.
[118] "Reinforced Concrete in Factory Construction."
[119] "A Builder of Ports," 60.
[120] "*Erection of a reinforced concrete factory for the Bush Terminal Company*," 282.
[121] "Reinforced Concrete in Factory Construction," 8.

support, it allows for large sections of glass on the exterior, in turn maximizing natural light.[122]It is evident by the continued use of the buildings that the construction methods were able to withstand high volume usage and the location along the waterfront.

Turner Construction Company

Founded by Henry C. Turner and DeForrest H. Dixon in 1902, the Turner Construction Company became a leader in reinforced concrete construction. Turner and Dixon worked for Ernest L. Ransom prior to establishing the Turner Construction Company.[123] The company's first commission was to construct a reinforced concrete vault for Thrift Bank, but the company would go on to build more than 150 buildings in Brooklyn by 1919.[124] The Turner Construction Company is still active today as an international construction services company.

The company's first major project was for cardboard box manufacturer Robert Gair in 1900.[125] Gair hired British-born architect William Higginson and the Turner Company to construct several buildings in the present-day DUMBO Industrial District (NRHP 2000) in an area that would later be referred to as "Gairville," which became the first large-scale factory buildings in the United States.[126] Gair intended for the first building at 41-49 Washington Street to be constructed of brick and timber; however, after seeing the benefits of reinforced concrete construction was persuaded by his son to hire the Turner Construction Company.[127] The project would be Higginson's introduction to the construction method, and after seeing the advantages he continued to work in collaboration with the Turner Company. During the construction of 41-49 Washington Street, the Turner Construction Company designed and constructed the staircases for the New York subway.

The building at 41-49 Washington Street in Brooklyn was the largest reinforced concrete building when it was completed in 1904. The eight-story industrial building features Neoclassical elements and was used for paper box manufacturing with the Gair Company headquarters on the eighth floor. Following the completion of 41-49 Washington Street, 51-59 Washington Avenue (1908), 70 Washington Street (1910-11), and 40-58 Washington Street (1913-14) were constructed using reinforced concrete construction. In 1914 the Gair Clocktower Building at 1 Main Street was completed in 1914.[128] Standing at sixteen stories, the Gair Clocktower Building became the largest reinforced concrete building and a notable feature along the waterfront. The Turner Construction Company continued the development of Gairville with the construction of 35-41 Main Street (1916), 27 York Street (1916), and 45 Main Street (1919). An article detailing the development of the Gair buildings states, "The buildings are subject to extremely hard wear, high floor loads and the shock of heavy machinery. It seems a tribute both to the type of construction and to the contractor that they have given such good satisfaction, as the call for so many repeat orders indicate."[129]

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[122] "Reinforced Concrete in Factory Construction," 9.
[123] Schein, *Storehouse #2 U.S. Navy Fleet Supply Base National Register of Historic Places Registration Form*.
[124] Suzanne Spellen, "How Reinforced Concrete and Turner Construction Changed Brooklyn and the World," *Brownstoner*, October 22, 2015, Accessed October 12, 2022, https://www.brownstoner.com/history/turner-construction-company-history-brooklyn-reinforced-concrete/.
[125] "William Higginson Dies; Was Famous as Architect," *Brooklyn Daily Eagle*, August 6, 1943, Accessed October 18, 2022, https://www.newspapers.com/image/52647294/?terms=william%20higginson%20bush%20terminal&match=1.
[126] Dolkart, "DUMBO Historic District Designation Report."
[127] Dolkart, "DUMBO Historic District Designation Report."
[128] Suzanne Spellen, "The Concrete Clock Tower if Robert Gair, an Iconic Dumbo Building," *Brownstoner*, July 17, 2018, Accessed October 12, 2022, https://www.brownstoner.com/architecture/brooklyn-architecture-dumbo-1-main-street-robert-gair/.
[129] "Concrete Building Development in Brooklyn," *Brooklyn Life*, April 26, 1919, https://www.newspapers.com/image/83388787/?terms=Turner%20construction%20.

During the development of Gairville, Higginson and the Turner Construction Company began work on Bush Terminal. The Turner Construction Company constructed twenty-two buildings covering 5,839,000 square feet in the complex.[130] Construction was not limited to factory and warehouse buildings; two reinforced concrete powerhouses were included within the complex. Bush Terminal was one of Turner Construction Company's first major large-scale commissions. The company also constructed the American Can Company building at 43rd Street and 2nd Avenue, adjacent to Bush Terminal. In 1917 the company constructed the U.S. Navy Fleet Supply Base directly north of the Bush Terminal complex. The supply base was constructed for the purpose of transporting and storing supplies for the Third Naval District.

Higginson and the Turner Construction Company collaborated on many projects during the beginning of the twentieth century, including the Loose-Wiles Biscuit Company building at 29-10 Thomson Avenue, near the intersection of 47th Avenue and 30th Street in Long Island City, New York (1914) and the Arbuckle Brothers Warehouse (contributing building to the DUMBO Industrial District) at 20 Jay Street in Brooklyn, New York (1909). The Loose-Wiles Biscuit Company building was constructed as a ten-story, industrial reinforced concrete building faced with glazed terra cotta.[131] The Arbuckle Brothers Warehouse was constructed as an eleven-story, industrial reinforced concrete building and has undergone minor alterations, such as infilled loading docks and windows, non-historic storefronts, and replacement windows.

As the successors to Ransome's reinforced concrete patent, the Turner Construction Company initially embraced beam-and-girder construction methods. Most of the reinforced concrete buildings in Bush Terminal are therefore of this type. The model loft buildings were in fact widely cited in articles and advertisements as protypes from beam-and-girder construction. In the 1910s the company began adopting flat-slab techniques. It claimed their factory for the Safety Car Heating and Lighting Co. in Jersey City, New Jersey—for which it received the contract in 1912—was the first such building in the New York City metropolitan area.[132] Several of the later reinforced concrete buildings in Bush Terminal therefore employ the flat-slab construction techniques with their distinctive mushroom columns.

During World War I the Turner Construction Company was commissioned by the United States Government to construct the Navy and War Office Buildings in Washington D.C., the U.S. Navy Fleet Supply Base, and the Brooklyn Army Terminal in South Brooklyn.[133]Experts in the field of reinforced concrete construction, the Turner Construction Company completed the commissions at a rapid pace. The Navy and War Office Buildings were completed in seven months and became the largest building in the United States.[134] Although many construction companies were using reinforced concrete during the twentieth century, the Turner Construction Company was widely recognized as the leader in the field. The company was able to complete large-scale projects in record time, minimizing the amount of labor and materials required. The architectural firm Maynicke & Franke, known for its steel frame structures, designed two six-story reinforced concrete buildings for the New York Docking Company in Red Hook, Brooklyn, which took approximately a year to complete.[135] These buildings were similar to the Bush Terminal's loft buildings, which the Turner Construction Company was able

[130] "Concrete Building Development in Brooklyn," *Brooklyn Life*.
[131] The terra cotta was replaced between 2016 and 2017.
[132] "Factories in Structural Concrete," *Brickbuilder* 23 (1914), xxxiv.
[133] Schein, *Storehouse #2 U.S. Navy Fleet Supply Base National Register of Historic Places Registration Form*.
[134] Schein, *Storehouse #2 U.S. Navy Fleet Supply Base National Register of Historic Places Registration Form*.
[135] "Concrete Solution 2014," *CRC Press Taylor & Francis Group*, 2014, Accessed November 14, 2022, https://www.google.com/books/edition/Concrete_Solutions_2014/hVrLBQAAQBAJ?hl=en&gbpv=1.

to complete within months. By 1919 it was said that the Turner Construction Company had constructed approximately "three-fourths of the reinforced concrete buildings in New York City."[136]

Throughout the twentieth century the Turner Construction Company continued to expand, opening offices in Philadelphia (1907), Buffalo (1908), and Boston (1916). In 1946 Henry Turner stepped down as chairman, passing the role to his brother, Archie. A month after accepting the position, Archie passed away from a heart attack, leaving Henry Turner's son, Henry Turner Jr., control of the company.[137] Under his leadership the company continued to grow, opening offices in Cincinnati, Ohio (1954), Los Angeles, California (1964), Cleveland and Columbus, Ohio (1966), San Francisco (1968), Detroit, Michigan (1973), Denver, Colorado (1973), Pittsburgh, Pennsylvania (1976), Atlanta, Georgia (1976), Seattle, Washington (1977), Miami, Florida (1979), and Portland, Oregon (1979).[138] During the second half of the twentieth-century the company constructed several monumental skyscrapers, such as the twenty-six story John Hancock building in Boston (1968-1976) and they sixty-five story U.S. Steel Headquarters in Pittsburgh (1967-1970). The U.S. Steel Headquarters remains one of fifty of the tallest buildings in the United States and is significant as one of the first buildings to apply "Cor-Ten" steel to the exterior.[139] Today the company provides international services and has a presence in twenty countries.

[136] "Concrete Building Development in Brooklyn," *Brooklyn Life*.
[137] "Turner Construction Company," *Encyclopedia.com,* Accessed April 6, 2023, https://www.encyclopedia.com/books/politics-and-business-magazines/turner-construction-company.
[138] "Turner Construction Company," *Encyclopedia.com.*
[139] "U.S. Steel Headquarters," *Turner,* Accessed April 6, 2023, https://www.turnerconstruction.com/experience/project/8269/us-steel-headquarters.

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

"A Builder of Ports." *Industrial Digest and Commodities and Finance, Vol. 4*. Russell's News Publications, Inc., 1925.

"About." Industry City. Accessed November 8, 2022. https://industrycity.com/about/.

Bradley, Betsy. "Bush Tower." *New York City Landmarks Preservation Commission*, October 18, 1988. https://s-media.nyc.gov/agencies/lpc/lp/1561.pdf.

"Brooklyn: A National Center of Commerce and Industry." Brooklyn, NY: Committee on industrial advancement of the Brooklyn league, 1914.

"Building Bush Terminal at Brooklyn Waterfront 1903 Photo Album on House of Mirth Photos." *House of Mirth Photos*. Accessed November 11, 2022. https://www.houseofmirthphotos.com/pages/books/298/building-bush-terminal-at-brooklyn-waterfront-1903-photo-album.

"Bush Family Is Spending Millions in South Brooklyn." *Brooklyn Daily Eagle*, September 30, 1895, https://www.newspapers.com/image/50414295/?terms=Bush%20%26%20Denslow&match=1.

"Bush Terminal." *Brooklyn Public Library*, https://www.bklynlibrary.org/digitalcollections/item/b5377f63-7245-4654-a3ec-dd9e437beaaf.

"Bush Terminal." Historic American Engineering Record, HAER No. NY-201.

"Bush Terminal Co.'s New Warehouses." *New York Times*, April 24, 1910, https://timesmachine.nytimes.com/timesmachine/1910/04/24/issue.html.

Bush Terminal International Exhibit Building & Buyers Club. New York: Bush Terminal Company, 1917.

"Bush Terminal Plant Largest of its Kind." *New York Times*, January 1918, https://timesmachine.nytimes.com/timesmachine/1918/01/01/102650912.pdf.

"Clement's Club Advertisement." *Brooklyn Daily Eagle*, March 20, 1953, https://www.newspapers.com/image/53866951/?terms=clement%27s%20club&match=1.

"Concrete Solution 2014." *CRC Press Taylor & Francis Group*, 2014, https://www.google.com/books/edition/Concrete_Solutions_2014/hVrLBQAAQBAJ?hl=en&gbpv=1.

"Concrete Building Development in Brooklyn." *Brooklyn Life*, April 26, 1919, https://www.newspapers.com/image/83388787/?terms=Turner%20construction%20.

Davis, Amanda B. "Sunset Play Center Exterior." *New York City Landmarks Preservation Commission*, July 24, 2007, http://s-media.nyc.gov/agencies/lpc/lp/2242.pdf.

"The Development of Reinforced Concrete." *The Aberdeen Group*, 1961.

Dolkart, Andrew S. "DUMBO Historic District Designation Report." *New York City Landmarks Preservation Commission*, December 18, 2007, http://s-media.nyc.gov/agencies/lpc/lp/2279.pdf.

"The Earliest New York City Parks." *NYC Parks*, Accessed March 24, 2023, https://www.nycgovparks.org/about/history/earliest-parks.

Economy: Making Dividends by Saving Them. New York: The Company, 1910, https://archive.org/details/economymakingdiv00bush/page/n5/mode/2up.

"E.P. Goodrich Gets City Engineer Post." *New York Times*, June 9, 1933, https://timesmachine.nytimes.com/timesmachine/1933/06/09/105142025.html?pageNumber=2.

"Erection of a reinforced concrete factory for the Bush Terminal Company." *Engineering Record* 53 (1906): 282-84.

"First Block of Bush Terminal Company's Model Factories." *Brooklyn Daily Eagle*, October 22, 1905.

Flagg, Thomas R. and Michael S. Raber. "Documentation for Determination of Eligibility for Bush Terminal, Kings County, New York." U.S. Army Corps of Engineers, May 1986.

Gray, Christopher. "Streetscapes/Starrett-Lehigh Building; Time of Change for a Modern Industrial Landmark." *New York Times*, May 31, 1998, https://www.nytimes.com/1998/05/31/realestate/streetscapes-starrett-lehigh-building-time-change-for-modern-industrial-landmark.html.

NYC Department of Records & Information Services. "Goodrich, E.P., 1974-1955," https://a860-collectionguides.nyc.gov/agents/people/672.

"Goodrich Quits the Navy to Build Bush Terminal." *Brooklyn Daily Eagle*, April 23, 1902, https://www.newspapers.com/clip/16772309/bush-terminal-construction-bny-1902/.

Horsley, Carter B. "Bush Terminal Shouldn't Be A Success But It Is." *New York Times*, September 12, 1976, https://www.nytimes.com/1976/09/12/archives/bush-terminal-shouldnt-be-a-success-but-it-is-by-all-the-rules-bush.html.

Hyatt, Thaddeus. *An Account of Some Experiments with Portland Cement Concrete Combined with Iron as a Building Material with Reference to Economy in Construction and for Security against Fire in the Making of Roofs, Floors and Walking Surfaces*. London: Chiswick Press, 1877.

King's College London. "The History of Bush House." https://www.kcl.ac.uk/aboutkings/orgstructure/ps/estates/real-estate/completed/bush-house/bush-house-history.

"Irving T. Bush." DBpedia, Accessed October 19, 2022, https://dbpedia.org/page/Irving_T._Bush.

"Irving T. Bush Dies; Terminal Founder." *New York Times*, October 22, 1948, https://timesmachine.nytimes.com/timesmachine/1948/10/22/98428780.html?pageNumber=25.

"Irving T. Bush Plans Tunnel Along 41st Street." *Home Talk the Item*, February 6, 1929, https://www.newspapers.com/image/576123052/?terms=william%20higginson%20bush%20terminal&match=1.

Johnson, Nathan C. *Concrete Engineers Handbook*. New York: McGraw-Hill Book Company, Inc., 1918.

Kennedy, Shawn G. "About Real Estate; Industrial Condominiums at the Old Bush Terminal." *New York Times*, April 30, 1986, https://www.nytimes.com/1986/04/30/business/about-real-estate-industrial-condominiums-at-the-old-bush-terminal.html.

Kirkeby, Mark. "Sunset Park: Irving's Place." NYC Department of Records & Information Services, https://www.archives.nyc/blog/2017/1/5/sunset-park-irvings-place.

"Local Stock & Bonds." *Brooklyn Daily Eagle*, December 1895, https://www.newspapers.com/image/50404062/?terms=independent%20company&match=1.

"Long Island Railroad to Buy Degnon Line." *New York Times*, October 1928, https://timesmachine.nytimes.com/timesmachine/1928/10/07/317401182.html?pageNumber=99.

Mackey, Linda. *Bush Terminal Historic District Resource Evaluation Form*, March 20, 2019.

Mall, Scott. "FreightWaves Classics/Pioneers: Malcom McLean changed the freight world with intermodal containers." *Freight Waves*, May 27, 2021, https://www.freightwaves.com/news/freightwaves-classicspioneers-malcom-mclean-changed-the-freight-world-with-intermodal-containers.

Mall, Scott. "FreightWaves Classics: Port of Long Beach celebrates 110 years of Service." *FreightWaves*, June 24, 2021, https://www.freightwaves.com/news/freightwaves-classics-port-of-long-beach-celebrates-110-years-of-service.

Maranzani, Barbara. "Green-Wood Cemetery: A Victorian Era Icon." *History Channel*, Accessed March 24, 2023, https://www.history.com/news/green-wood-cemetery-a-victorian-era-icon-turns-175.

Moore, A. "Reinforced Concrete Construction and Brick." *Sunset Park History*, https://www.sunsetparkhistory.org/items/show/261.

The National Cyclopaedia of American Biography: Being the History of the United States as Illustrated in the Lives of the Founders, Builders, and Defenders of the Republic, and of the Men and Women who are Doing the Work and Moulding the Thought of the Present Time. n.p.: J.T. White Company, 1910.

Nola, John. *City Planning: A series of papers presenting the essential elements of a city plan*. New York: D. Appleton and Co., 1916.

"Prospects of Queens, the City's Biggest Borough." *Brooklyn Daily Eagle*, March 28, 1915, https://www.newspapers.com/image/685823336/?terms=degnon%20terminal&match=1.

"Reinforced Concrete in Factory Construction." *The Atlas Portland Cement Company*, 1918. https://upload.wikimedia.org/wikipedia/commons/0/07/Reinforced_concrete_in_factory_construction._%28IA_reinforcedconcre00atla%29.pdf.

"The reinforced concrete factories for the Bush Terminal." *Engineering Record* 53 (1906): 36-39.

Sanborn Map Company. Brooklyn, Kings County, New York 1888.

Sanborn Map Company. Brooklyn, Kings County, New York 1926.

Schein, Martin. *Storehouse #2 U.S. Navy Fleet Supply Base National Register of Historic Places Registration Form*. Washington, D.C.: U.S. Department of the Interior, National Park Service, National Register of Historic Places, 2012.

Shockley, Jay. "Starrett-Lehigh Building." *New York City Landmarks Preservation Commission*, October 7, 1986, http://s-media.nyc.gov/agencies/lpc/lp/1295.pdf.

Simon, Malka. "The Walled City': Industrial Flux in Red Hook, Brooklyn, 1840–1920." *Buildings & Landscapes: Journal of the Vernacular Architecture Forum* 17, no. 2 (January 2010), https://go.gale.com/ps/i.do?id=GALE%7CA240017657&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=19360886&p=AONE&sw=w&userGroupName=mlin_oweb&isGeoAuthType=true.

Spellen, Suzanne. "The Concrete Clock Tower if Robert Gair, an Iconic Dumbo Building." *Brownstoner*, July 17, 2018. Accessed October 12, 2022, https://www.brownstoner.com/architecture/brooklyn-architecture-dumbo-1-main-street-robert-gair/.

Spellen, Suzanne. "How Bananas Built Industry City–the Story of Sunset Park's Bush Terminal." *Brownstoner*, November 16, 2015. Accessed October 12, 2022, https://www.brownstoner.com/history/industry-city-brooklyn-bush-terminal-history/.

Spellen, Suzanne. "How Reinforced Concrete and Turner Construction Changed Brooklyn and the World," *Brownstoner*, October 22, 2015, Accessed October 12, 2022, https://www.brownstoner.com/history/turner-construction-company-history-brooklyn-reinforced-concrete/.

Spellen, Suzanne. "Industry City's Rise, Fall and Rebirth, from Wartime Manufacturing to Artisanal Mecca." *Brownstoner*, November 30, 2015, Accessed October 12, 2022, https://www.brownstoner.com/history/industry-city-brooklyn-bush-terminal-sunset-park-history/.

Staniford, Charles W. and Philip Guise. "The New South Brooklyn Freight Terminal, New York Harbor," *Engineering Record* 67 (1912): 421-423.

Tarbell, Ida Minerva. *The History of the Standard Oil Company, Vol. 1*. McClure, Phillips & Company, 1904.

"Tremendous Improvement Now Under Way." *Greater New York, Bulletin of the Merchants' Association of New York. Volume 2*. n.p.: Harvard University, 1913.

Trainweb. "Industrial, Offline Terminal Railroads & Rail-Marine Operations of Brooklyn, Queens, Staten Island, Bronx & Manhattan: Bush Terminal," Accessed October 11, 2022, http://members.trainweb.com/bedt/indloco/bt.html.

"Tunnel Held Boon to Bush Terminal." *New York Times*, May 1950, https://timesmachine.nytimes.com/timesmachine/1950/05/02/94257251.html?pageNumber=38.

"Turner Construction Company." Encyclopedia.com, Accessed April 6, 2023, https://www.encyclopedia.com/books/politics-and-business-magazines/turner-construction-company.

Turner. "U.S. Steel Headquarters," Accessed April 6, 2023, https://www.turnerconstruction.com/experience/project/8269/us-steel-headquarters.

Walker, R.A.P. "Industry City: Ships to Four Corners of the World." *Brooklyn Daily Eagle*, January 5, 1951, https://bklyn.newspapers.com/image/56107858/.

"William Higginson Dies; Was Famous as Architect." *Brooklyn Daily Eagle*, August 6, 1943, https://www.newspapers.com/image/52647294/?terms=william%20higginson%20bush%20terminal&match=1.

Williams, Keith. "Carnage and Heroism: Memories of 1956 Bush Terminal Explosion." *New York Times*, December 1, 2016, https://www.nytimes.com/2016/12/01/nyregion/bush-terminal-brooklyn-explosion-1956.html.

Previous documentation on file (NPS):

__X__ preliminary determination of individual listing (36 CFR 67 has been requested)
____ previously listed in the National Register
____ previously determined eligible by the National Register
____ designated a National Historic Landmark
____ recorded by Historic American Buildings Survey #_____
__X__ recorded by Historic American Engineering Record # __NY-201.__ __
____ recorded by Historic American Landscape Survey # _____

Primary location of additional data:

__X__ State Historic Preservation Office
____ Other State agency
____ Federal agency
____ Local government
____ University
____ Other
Name of repository: _____

Historic Resources Survey Number (if assigned): _____

Bush Terminal Historic District Kings County, New York
Name of Property County and State

10. Geographical Data

Acreage of Property approximately 161 acres
(Do not include previously listed resource acreage.)

UTM References
(Place additional UTM references on a continuation sheet.)

1	Zone	Easting	Northing	3	Zone	Easting	Northing
2	Zone	Easting	Northing	4	Zone	Easting	Northing

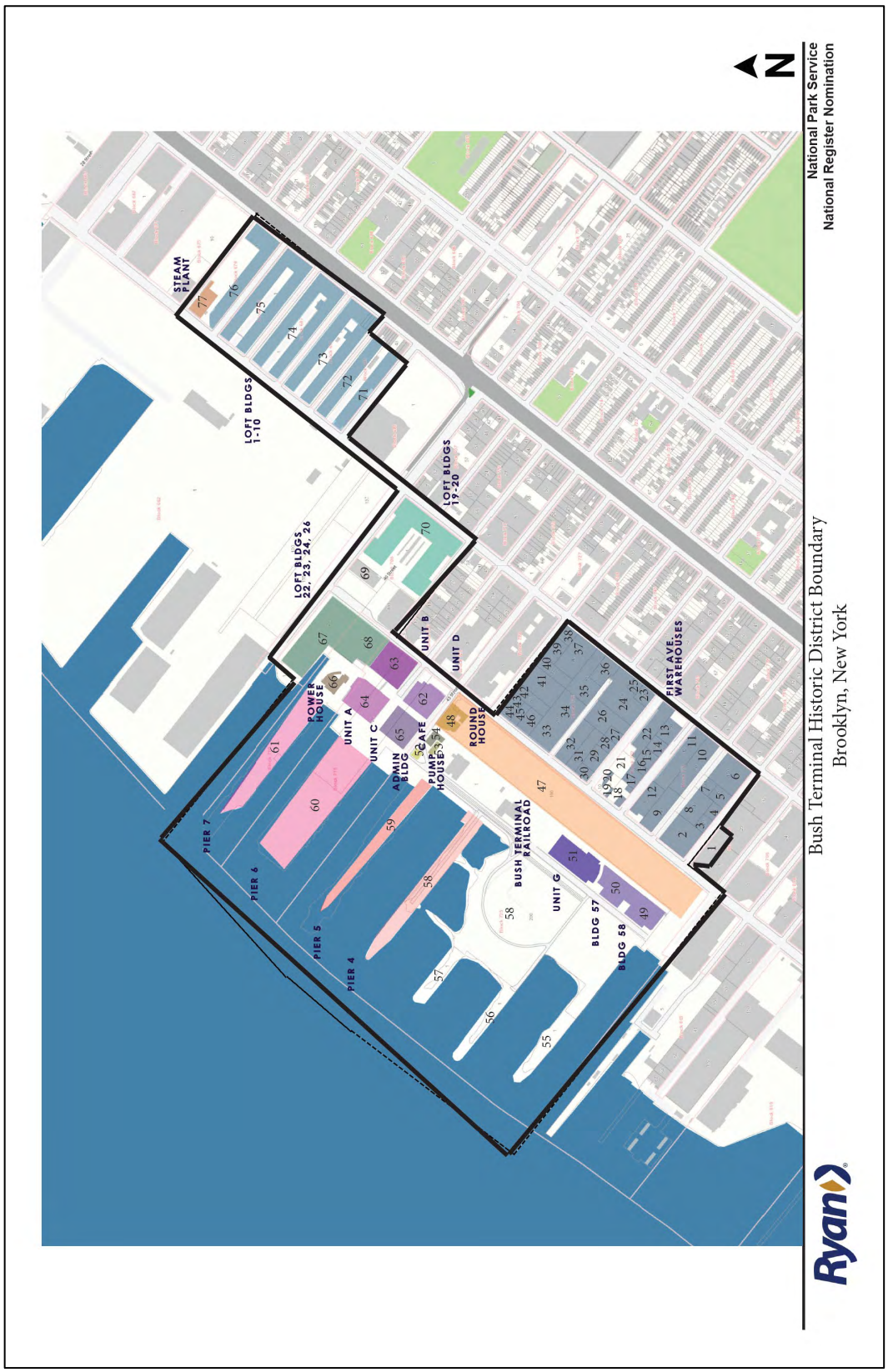
Verbal Boundary Description (Describe the boundaries of the property.)

The boundary is indicated by a heavy line on the enclosed map.

Boundary Justification (Explain why the boundaries were selected.)

The boundary encompasses extant buildings associated with the Bush Terminal complex. Two former track yards which were bounded by 2nd and 3rd Avenues between 28th and 29th Streets and 31st and 32nd Streets and have been converted into parking lots are not included in the district. Pier 8 was removed by 1965 and therefore is not included in the district.

Bush Terminal Historic District Kings County, New York
Name of Property County and State



Bush Terminal Historic District Kings County, New York
Name of Property County and State

11. Form Prepared By

name/title Kendal Anderson; editing and additional research by Christopher D. Brazee, NYSHPO
organization Ryan, LLC date August 2023
street & number One International Place, Suite 1840 telephone (207) 593 3008
city or town Boston state MA zip code 02110
e-mail Kendal.anderson@ryan.com

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** (7.5 or 15 minute series) indicating the property's location.

  A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.

- **Continuation Sheets**

- **Additional items:** (Check with the SHPO or FPO for any additional items.)

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

Figures

Figure 1. July 21, 1903, Administration Building with Steam Engine on the far right. *Courtesy of House of Mirth.*

Figure 2. Unveiling of the Irving T. Bush Statue 1950. *Courtesy of the Brooklyn Public Library.*

Figure 3. Waterfront looking south from 43rd Street April 2, 1903. *Courtesy of House of Mirth.*

Figure 4. Units E, F, and G to the left and Pier 5 to the right. *Courtesy of House of Mirth.*

Figure 5. Warehouses along the waterfront, likely Unit E & F ca. 1915. *Library of Congress.*

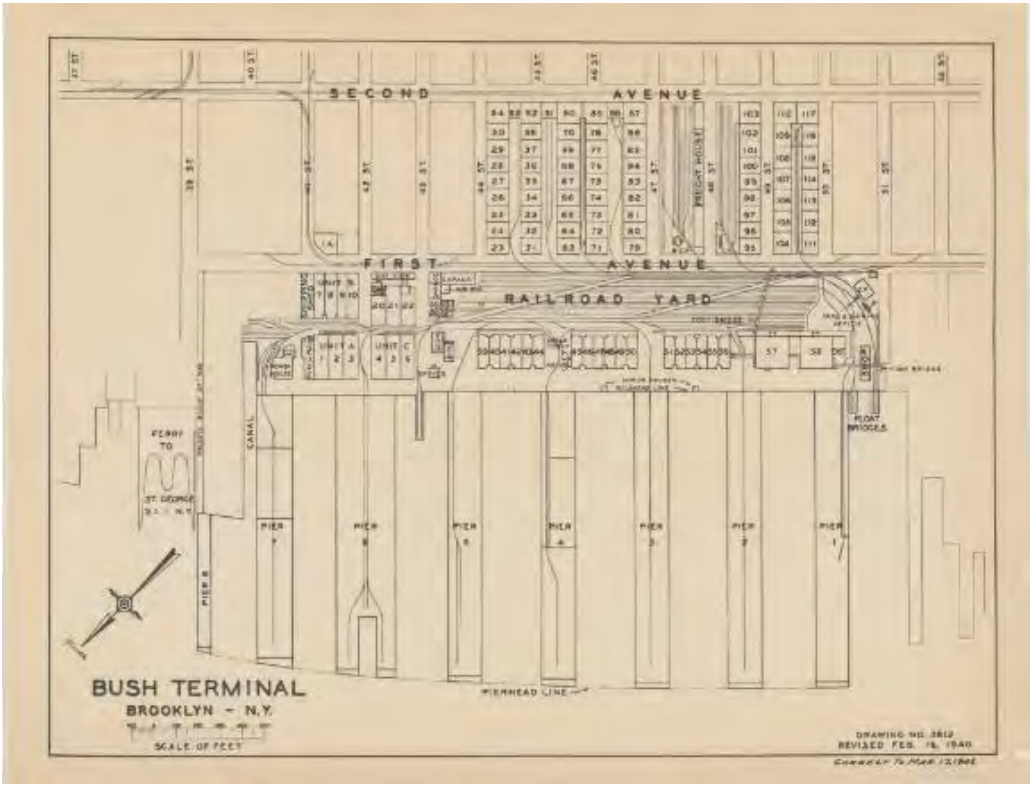
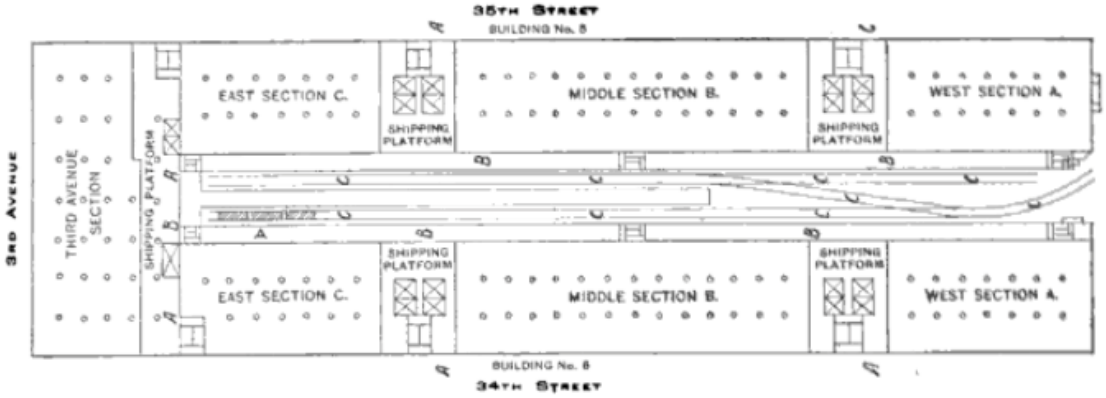


Figure 6. Bush Terminal, Drawing No. 3812, ca. 1940-1942. *South Street Seaport Museum Archives.*

Figure 7. Beginning construction of Pier 3 April 9, 1903. *Courtesy of House of Mirth.*

Figure 8. Short Pier and Pier 5 May 1, 1903. *Courtesy of House of Mirth.*

Figure 9. Illustration of the first Model Lofts from *Bush Terminal from Economy: Making Dividends by Saving Them, 1910*



BUILDINGS NOS. 5 AND 6, BUSH TERMINAL BUILDINGS CO., FIRST FLOOR PLAN
"A" elevators communicate with loading platforms "B." "D" freight trains can enter enclosure and reach all parts of building by means of tracks "C."

Figure 10. Model Loft Buildings 5 & 6, First Floor Plan. *John Nolan.*

Figure 11. View from the Railroad Yard looking at the construction of Pier 5 April 1, 1903. *Courtesy of House of Mirth.*

Figure 12. Illustration of Bush Terminal from *Bush Terminal from Economy: Making Dividends by Saving Them, 1910*

Figure 13. Postcard showing the interior of the Clement's Club

Figure 14. Reinforced Concrete Construction 1906. *Courtesy of Sunset Park History.*

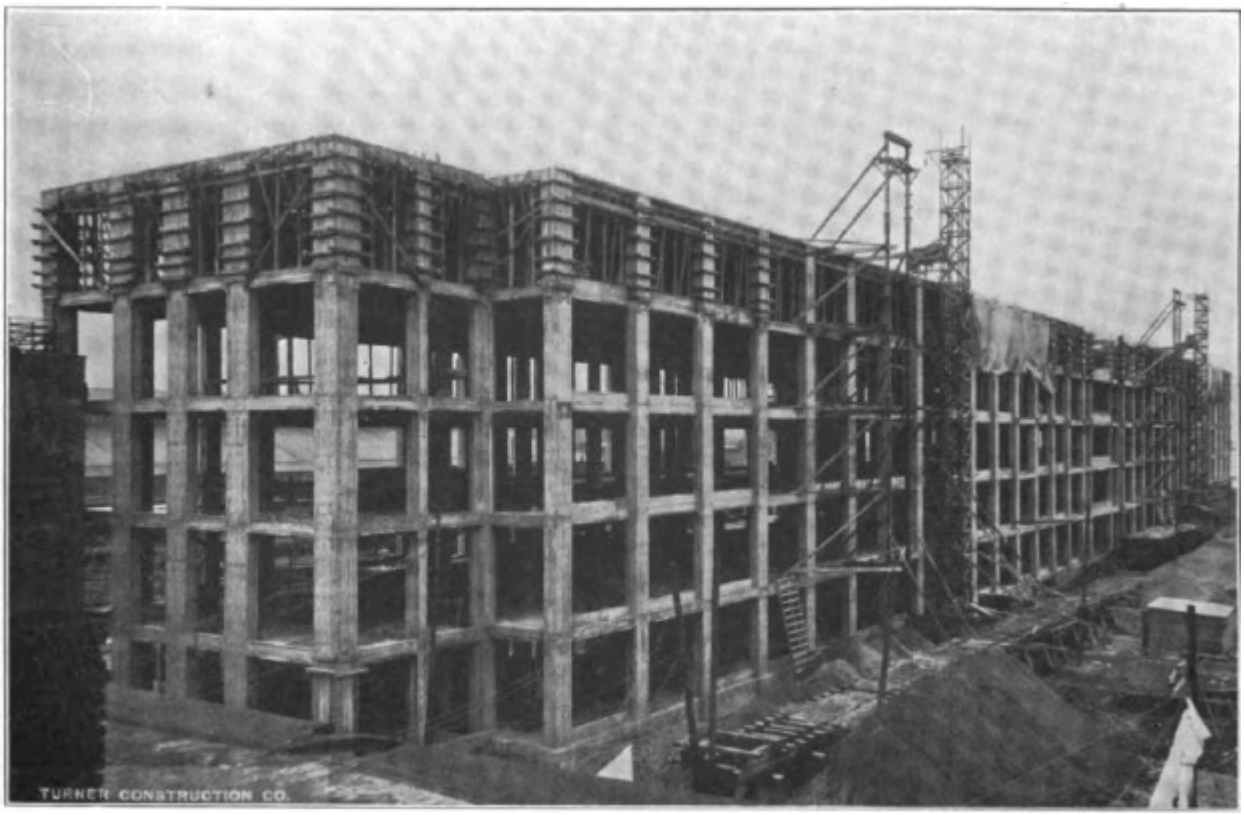


Figure 15. Construction 1906. *The Engineering Record Vol. 53, 1906.*

Bush Terminal Historic District Kings County, New York
Name of Property County and State

Photographs:

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

Name of Property: Bush Terminal

City or Vicinity: Brooklyn

County: Kings State: New York

Photographer: Kendal Anderson & Kelsey Dootson

Date Photographed: October 2022

Description of Photograph(s) and number:

0001 of 0082: 104 50th Street, view south.
0002 of 0082: One-story warehouses on 50th Street, view east.
0003 of 0082: 143 50th Street, view east.
0004 of 0082: 4821 1st Avenue, view east.
0005 of 0082: One-story warehouses on 49th Street, view east.
0006 of 0082: One-story warehouses on 49th Street, view southeast.
0007 of 0082: One-story warehouses on 49th Street, view southeast.
0008 of 0082: One-story warehouses on 49th Street, view east.
0009 of 0082: One-story warehouses on 49th Street, view northwest.
0010 of 0082: One-story warehouses on 49th Street, view northwest.
0011 of 0082: Corner of 48th Street and 2nd Avenue, view north.
0012 of 0082: Corner of 48th Street and 2nd Avenue, view northwest.
0013 of 0082: One-story warehouses on 48th Street, view northwest.
0014 of 0082: One-story warehouses on 48th Street, view northwest.
0015 of 0082: One-story warehouses on 48th Street, view northwest.
0016 of 0082: One-story warehouses on 48th Street, view southwest.
0017 of 0082: Corner of 48th Street and 1st Avenue, view south.
0018 of 0082: One-story warehouses on 48th Street, view west.
0019 of 0082: Corner of 47th Street and 1st Avenue, view south.
0020 of 0082: One-story warehouses on 47th Street, view southeast.
0021 of 0082: One-story warehouses on 47th Street, view east.
0022 of 0082: One-story warehouses on 47th Street, view southeast.
0023 of 0082: One-story warehouses on 47th Street, view northwest.
0024 of 0082: Intersection of 47th Street and 2nd Avenue, view east.
0025 of 0082: 2nd Avenue, view north.
0026 of 0082: 2nd Avenue, view southwest.
0027 of 0082: Corner of 44th Street and 2nd Avenue, view southwest.
0028 of 0082: Warehouses on 44th Street, view west.
0029 of 0082: 1st Avenue, view southwest.
0030 of 0082: 1st Avenue, view southwest.
0031 of 0082: Former railroad tracks between the one-story warehouses, view northwest.
0032 of 0082: Former railroad tracks between the one-story warehouses, view southeast.
0033 of 0082: Former railroad tracks between the one-story warehouses, view northwest.
0034 of 0082: 1st Avenue, view north.
0035 of 0082: Railroad yard, view east, with the one-story warehouses behind.
0036 of 0082: Railroad yard, view southeast, with the one-story warehouses behind.
0037 of 0082: Roundhouse, view east.
0038 of 0082: Buildings 57 & 58, view northwest.

0039 of 0082: Buildings 57 & 58, Unit G, view southeast.
0040 of 0082: Buildings 57 & 58, Unit G, view south.
0041 of 0082: Unit G, view southeast.
0042 of 0082: Administration Building, Pump house, and Unit C, view northeast.
0043 of 0082: Administration Building, view northwest.
0044 of 0082: Pump house, view southeast.
0045 of 0082: Longshoreman's Restaurant, view southeast.
0046 of 0082: Pier 1, view northwest.
0047 of 0082: Bush Terminal Park, view north.
0048 of 0082: Pier 4, view north.
0049 of 0082: Bush Terminal Park, view northeast.
0050 of 0082: Pier 6, view northwest.
0051 of 0082: Pier 7, view north.
0052 of 0082: Unit C, view south.
0053 of 0082: Unit A and Powerhouse, view northeast.
0054 of 0082: Unit D, view northwest.
0055 of 0082: Unit B, view north.
0056 of 0082: 43rd Street, view northwest.
0057 of 0082: Loft Building, view north.
0058 of 0082: Loft Building, view west.
0059 of 0082: Loft Building, view west.
0060 of 0082: Warehouse and Dannemiller Coffee Co./Marcus Ward Co. Building, view southeast.
0061 of 0082: Warehouse, view southeast.
0062 of 0082: Dannemiller Coffee Co./Marcus Ward Co. Building, view west.
0063 of 0082: Industry City, view northeast.
0064 of 0082: Industry City, view northwest.
0065 of 0082: Industry City, view south.
0066 of 0082: Industry City, view northwest.
0067 of 0082: Industry City, view southeast.
0068 of 0082: Industry City, view south.
0069 of 0082: Industry City, view northwest.
0070 of 0082: Industry City, view northwest.
0071 of 0082: Industry City, view southeast.
0072 of 0082: Industry City, view northwest.
0073 of 0082: Industry City, view northwest.
0074 of 0082: Industry City, view northwest.
0075 of 0082: Industry City, view northwest.
0076 of 0082: Industry City, view northwest.
0077 of 0082: Industry City, view southeast.
0078 of 0082: Industry City, view south.
0079 of 0082: Industry City, view southwest.
0080 of 0082: Steam Plant, view northwest.
0081 of 0082: Industry City and Steam Plant, view southwest.
0082 of 0082: Industry City and Steam Plant, view northeast.

NY_Kings County_Bush Terminal_0001

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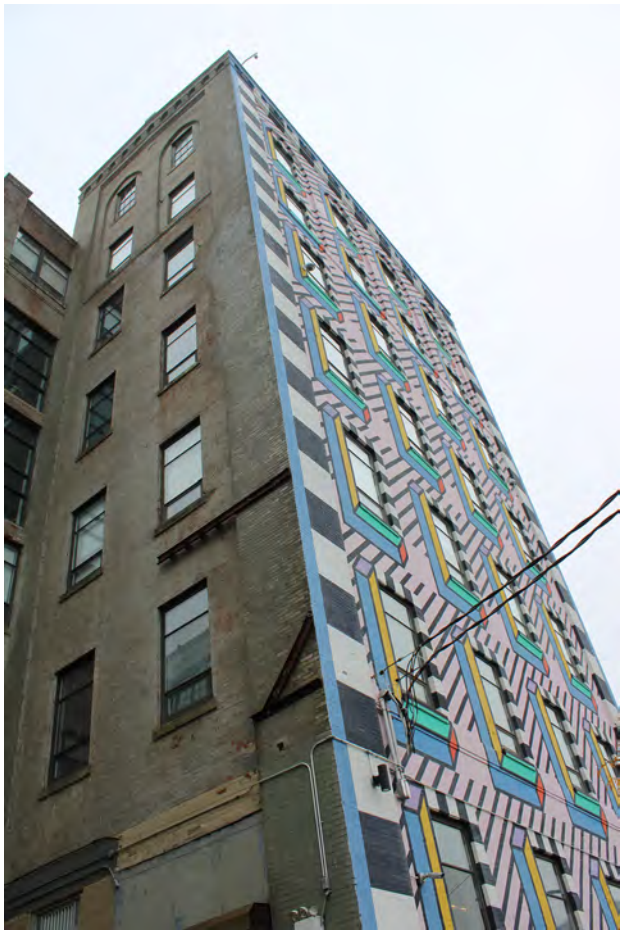

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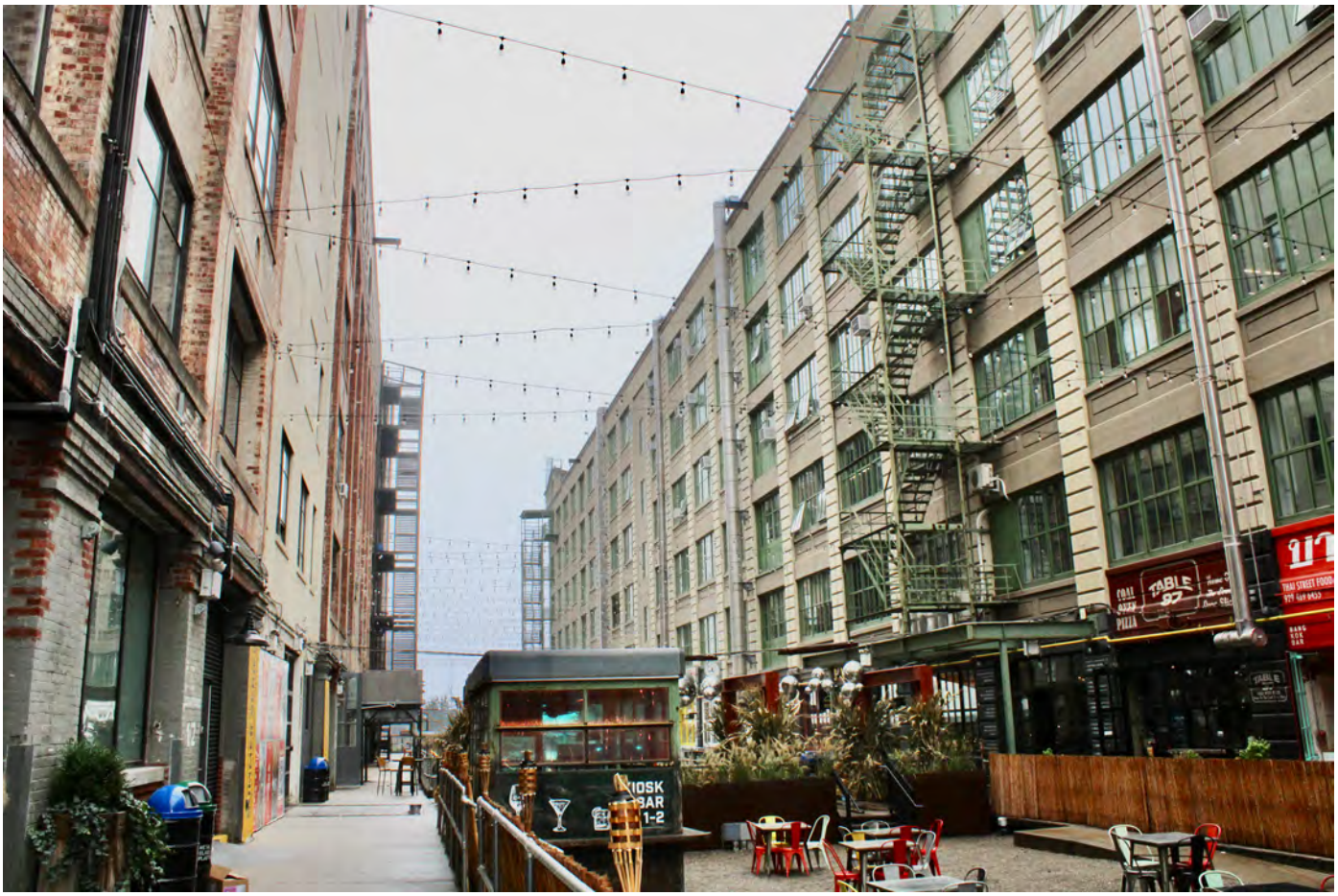

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