

Historical Assessment of Proposed Renovations to Union Pier Terminal

Charleston County, South Carolina

September 2015

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Prepared for:

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Executive Summary

Renovation of northern end of Union Pier Terminal and Building 322 to accommodate cruise ship operations requires the installation of additional pilings beneath the existing structure. The Union Pier Terminal Area of Potential Effect (APE) includes approximately 67 acres on lands owned by the South Carolina State Ports Authority (SCSPA) between Laurens Street on the north and Cumberland Street on the south and between Washington and Concord Streets on the west and Charleston Harbor on the east. The SCSPA requested a permit from the U.S. Army Corps of Engineers (USACE), Charleston District, to install the necessary pilings, as per Section 10 of the Rivers and Harbors Act. To comply with Section 106 of the National Historic Preservation Act for this undertaking, the USACE requested an assessment of effect of the Project on historic properties (sites, buildings, structures, objects, or districts listed on or eligible for the National Register of Historic Places [NRHP]). Two historic properties lie adjacent to the APE: Fleet Landing Building and the Charleston Old and Historic District. The Fleet Landing Building (World War II era U.S. Navy construction that today houses a public restaurant) stands on a pier immediately south of the Union Pier Terminal. The Charleston Old and Historic District (which is also a National Historic Landmark) lies adjacent to portions of the APE. Individual District elements that contribute to its NRHP eligibility and individual historic properties included in the Historic District (HD) lie 150 to 1,150 feet from the APE, 900 to 2,500 feet from the existing cruise terminal (Building 325) on the southern end of Union Pier, and 1,600 to 3,500 feet from the proposed cruise terminal (Building 322) on the northern end of Union Pier.

This assessment reviewed the potential effects of the Project on the nearby historic properties through the consideration of the defined aspects of integrity necessary for NRHP eligibility (location, design, setting, materials, workmanship, feeling, and association). We evaluated how the Project or a No-Action-Alternative (cruise operations continuing on the southern end of Union Pier) might alter these aspects of integrity to such an extent that the NRHP eligibility of the nearby historic properties would be compromised.

Cruise operations at Union Pier Terminal will not alter the location, design, setting, materials, workmanship, feeling, or association of the Fleet Landing Building. The building was originally constructed on a working wharf/pier that served numerous commercial and military vessels at the time of construction. It was designed to absorb or withstand vibrations associated with maritime commerce and traffic. The Project at Building 322 will not affect the Fleet Landing Building. Also, cruise operations on the southern end of Union Pier Terminal have not altered the location, design, setting, materials, workmanship, feeling, or association of the Fleet Landing Building. Therefore, continued cruise operations at the southern end of Union Pier Terminal will not affect the Fleet Landing Building.

There are numerous modern commercial and industrial buildings, some on Union Pier Terminal and others within the intervening blocks between the District and the pier, that separate Union Pier Terminal from the District and some of its most significant elements. Given the distance between the elements and the present and proposed cruise facilities (900 to 2,900 feet and 1,650 to 3,500 feet respectively) and the intervening buildings and facilities, the operation of a cruise facility (at its present location or the proposed location) does not alter individual elements of the District due to noise, vibration, or visual intrusions. The berthing of cruise vessels at Union Pier Terminal (96-104 times per year over the next five years) and the passage of cruise vessels through Charleston Harbor do not intrude upon the District in such a fashion that the associations of individual District elements with historical themes and events cannot be understood or appreciated. Thus, cruise operations at Union Pier Terminal at the present facility (No Action Alternative) or at a renovated Building 322 (Proposed Project) will not affect the Charleston HD.

We evaluated the increased number of visitors to the Charleston HD over the next five years to determine if the feeling of the District could be affected. The increased numbers of visitors and vehicles to the Charleston HD associated with cruise operations do not alter the feeling of the District and do not detract from visitors' ability to understand

and appreciate the associations of District elements with significant historical themes and events. At some point, one would expect a decline in visitors to the District if the increasing number of visitors were adversely affecting the feeling of the District. Cruise operations have not deterred or slowed an overall increase in visitors to the District (with cruise passengers representing only four to six percent of these visitors annually), nor is there any expectation at present that a decline in visitation is expected. The marshalling of cruise passengers and their associated personal vehicles along routes that travel primarily adjacent to the District helps to minimize or prevent effects. Thus, the increased number of visitors who are cruise passengers and their personal vehicles do not affect the Charleston HD.

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1.0 Introduction

The South Carolina State Ports Authority (SCSPA) proposes to renovate the north end of Union Pier Terminal to accommodate the use of Building 322 as the core of cruise operations (the Project). Currently, cruise ships dock at the south end of Union Pier Terminal, and Building 325 supports cruise operations. Passengers, luggage, and all support materials move across the wharves and pier between Washington and Concord Streets and the berthed vessels. The northern end of Union Pier Terminal including Building 322 currently serves break-bulk cargo operations with rail and road connections to the principal streets and rail lines along the east side of the Charleston Peninsula.

Improvements to Building 322 will require the placement of pilings at five locations beneath the building or portions of the adjoining wharf/pier to support heavier loads on the wharf surface (such as elevators for handicapped access to docked ships). Placement of the pilings requires permits from the USACE, Charleston District. Section 106 of the National Historic Preservation Act of 1966 (as amended) requires that the USACE consider the effect of the proposed undertaking on nearby historic properties (sites, buildings, structures, objects, districts, or traditional cultural properties determined eligible for or listed on the National Register of Historic Properties [NRHP]). The following provides a brief overview of the historical development of Union Pier Terminal and an assessment of effect of the Project, to include cumulative and long-term effects, on nearby historic properties.

Union Pier Terminal lies on approximately 67 acres on the east side of the Charleston Peninsula, within TMS Parcels 4580104005, 4580104007, 4580104009, 4580104014, 4580504015, 4580504016, 4580504005, 4580504008, 4580504009, 4580504010, and 4590000009. It extends south from Laurens Street to Cumberland Street/Fleet Landing Pier and east from Washington and Concord Streets into Charleston Harbor. The Cooper River/Charleston Harbor forms the eastern edge of the Project with Washington Street and Concord Street forming the western edges. The SCSPA owns all of this land and the structures that extend over the Cooper River on its eastern edge; a small outparcel owned by South

Carolina Electric and Gas Company (SCE&G) lies in the northwest portion of the Project. This area likely will be the USACE permit area/Area of Potential Effect (APE); however, changes to buildings and structures on the pier will be limited to its northeast corner. Figure 1.1 displays the location of the Project and Buildings 322 and 325 at Union Pier Terminal.

The renovation of Building 322 and the northern end of Union Pier Terminal to accommodate cruise operations in the Port of Charleston is the preferred use of the pier by the SCSPA. Moreover, Union Pier Terminal is the optimal location for cruise operations. There are no other SCSPA terminals that can accommodate cruise operations without extensive alterations of existing cargo operations and supporting infrastructure. Moving cruise operations to the northern end of Union Pier Terminal will eliminate all other uses for this facility. Facilities and infrastructure to serve cargo operations are not compatible with those for handling cruise operations. Cargo vessels will no longer call at this terminal. With the elimination of cargo operations on Union Pier Terminal, the rail lines will no longer be used and Concord Street will be reopened between Laurens and Pritchard Streets. The area between Concord, Washington, Laurens, and Pritchard Streets also will no longer be needed to support cargo and cruise operations on Union Pier Terminal. Building 325 will continue to serve special vessels like tall ships, but these activities will not require all of the support facilities currently used for cruise operations. Thus, many of the warehouses that currently support cruise operations on the southern end of Union Pier Terminal could be converted to other uses. In total, the number of vessels calling at Union Pier Terminal will remain at or near the current number of calls per year (approximately 100 vessels).

Should cruise operations remain at the southern end of Union Pier Terminal, some alterations of the nearby facilities will be necessary to meet security requirements, but all other uses of Union Pier Terminal will continue. The current street lay-outs and rail connections will remain in use. The number of vessels calling at Union Pier Terminal will include both cruise vessels and cargo vessels. The total number of vessels that use the terminal will not be limited.

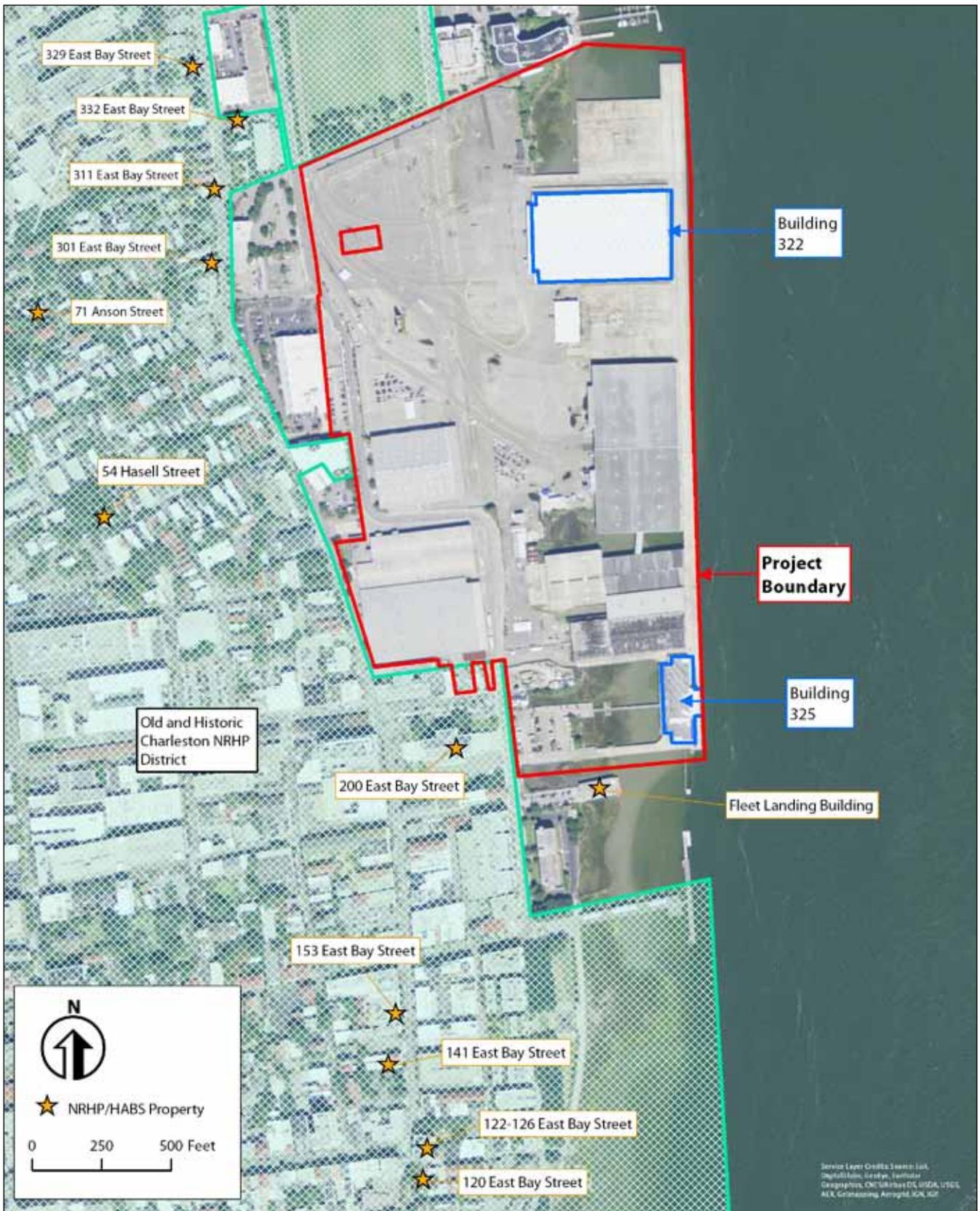


Figure 1.1 The location of the Union Pier Terminal APE.

The Old and Historic Charleston NRHP District and National Historic Landmark (Charleston HD) lies to the south, west, and north of Union Pier Terminal. The Charleston HD contains numerous buildings and structures that reflect the eighteenth through mid-twentieth century development of Charleston and the architectural history of the United States during this period or that reflect events and processes significant in the history of South Carolina and the United States. Originally, over 650 buildings within the District contributed to its NRHP eligibility (46 of these buildings are documented in the Historic American Buildings Survey [HABS] and 31 buildings or districts of buildings are listed on the NRHP as individual historic properties); more contribute today with the extension of the District boundaries (Edmunds 1970; Stockton 1977). However, many, if not most, buildings and structures within the District boundaries do not contribute to its eligibility. The SHPO also determined that the Fleet Landing Building (today housing a restaurant of the same name) at the foot of Cumberland Street adjacent to the APE is eligible for the NRHP.

Review of the relationship of Union Pier Terminal and its proposed renovations to the Charleston HD, individual historic properties within the District, and the District's NRHP-contributing elements indicates that the Project and cruise operations on Union Pier Terminal will not alter any aspect of the integrity of the Charleston HD that will compromise its NRHP eligibility, nor the NRHP eligibility of any of the individual historic properties within the District or the District's contributing elements. Therefore, the Project and cruise operations on Union Pier Terminal will not affect the Charleston HD, individual historic properties within the District, or any of the District's NRHP-contributing elements.

This assessment reviews briefly the historical development of this portion of the Charleston waterfront and its relationship to the historic district. We then review the potential actions and consequences associated with the development and operation of a cruise facility at Union Pier Terminal (including the proposed renovation of Building 322 and the current use of Building 325) and the potential effects of these actions on nearby historic properties.

2.0 A Brief Overview of the Historical Development of Union Pier Terminal

The City of Charleston has relied on its maritime connections since its founding in 1670 and its establishment on the Oyster Point peninsula in 1680. Throughout the colonial period, people and goods moved into and out of the City primarily via ships and boats. Its connections with the various elements of the Atlantic World, particularly other British colonies and Great Britain, made it one of the most important ports in North America and undoubtedly the most active in the Southeast. The development of overland transportation routes did little to reduce the maritime traffic that streamed through the port of Charleston. In fact, major roads and the first commercial steam-powered railroad in the United States were developed to carry people and goods into and out of Charleston due to its ready access to points around the world via ship and boat. One cannot ignore the role that port activities played in the development of the city even though the NRHP nomination form for and subsequent revisions of the Old and Historic Charleston District (Charleston HD) do not include maritime commerce as a specific historically significant theme for the District (Edmunds 1970; Stockton 1977). Charleston exists and developed because of its harbor. As stated in the NRHP nomination for the Charleston HD, “The City was a major Colonial seaport, an active (if later occupied) participant in the American Revolution, a seat of rice and cotton culture and a leader of secession.” It is doubtful that Charleston would have been so wealthy, influential, and integrated with the rest of the world had it not been a port city.

With the establishment of Charles Towne on Oyster Point in 1680, the Cooper River waterfront became the eastern boundary of the new town. By the 1690s, fear of Spanish attacks on Carolina prompted the Lords Proprietors to provide for the construction of fortifications around the young town. The Cooper River waterfront witnessed the construction of three primary bastions connected by a curtain wall that also served as a seawall; the wall ran along the east side of East Bay Street. The southern Granville Bastion stood at the intersection of East Bay and Water Streets today (remnants lie beneath the Misroon House at 40 East Bay Street); the Half-Moon Battery stood at the center of the

town at the foot of Broad Street (today beneath the Old Exchange Building), and the northern Craven Bastion stood at the foot of Market Street (today beneath the U.S. Customs House). After the Yamasee War (1715-1718), the threats of Spanish and Indian attacks diminished, and Charleston quickly expanded beyond the enclosing fortifications. This expansion included the extension of docks and wharves across or beyond the former curtain wall into Charleston Harbor. This allowed vessels to dock and unload directly into the city rather than having to transship cargos and move them in small vessels to the wall. At times, openings were cut through the wall to permit easier ingress and egress. Note that docks and piers are structures that stand in the water; wharves are more substantial constructions and usually consisted of timber bulwarks that were then filled with debris and soil to form causeways or segments of made-land that extend into the harbor.

During these early decades, Carolina grew slowly with colonists experimenting with various agricultural pursuits and resource extractions to generate commerce and wealth within the colony. Foodstuffs (especially cattle and pigs), naval stores and timber, deerskins obtained through trade with the local Indians, and Indian slaves also obtained from the local Indians all were produced or obtained and exported from Charleston via ships arriving from Britain and the Caribbean. Soon, rice and cotton became the principal export commodities of Carolina, moving by ship to other portions of the British colonial empire and the Atlantic World.

Once docks and wharves extended into the harbor, silt accumulated along the curtain wall, and the Cooper River shoreline began moving. This prompted Charleston landowners to fill the newly exposed lands east of the wall, and the city quickly grew to the east beyond East Bay Street, as well as to the west and north beyond the former fortifications. Throughout the first half of the eighteenth century, the center of maritime trade extended several blocks north and south of Broad Street. The original shoreline market, exchange and early customs house stood at the foot of Tradd Street (within a redan of the City’s seaward fortifications and under today’s South Adgers Wharf). By the time of the Revolu-

tion, the new Exchange opened at the foot of Broad Street (atop the old Half-moon Battery, today's Old Exchange and Provost Dungeon). The City Market would also occupy this space (and more land immediately east of the old fortifications) by the 1760s and remain here until the early nineteenth century when the new market opened four blocks to the north.

Just before the Revolution, Christopher Gadsden built his wharf well to the north. This was the largest wharf on the East Coast at the time, extending from modern Calhoun Street to Laurens Street and from Washington Street to near the current edge of the harbor. All of this area was filled (pine timber cribs were constructed and then filled with oyster shell, sand, and other materials), moving the shoreline over 900 feet to the east. Portions of Gadsdens Wharf are today incorporated into the Charleston HD, with archaeological remnants existing beneath the modern surface in many areas. The Union Pier Terminal APE borders the former Gadsden's Wharf along its northern edge.

Most of the Union Pier Terminal APE remained undeveloped during this period. The south-central area was partially filled by 1788 with three wharves and numerous buildings atop them. Figure 2.1 displays the Union Pier Terminal APE at that time. All of the wharves along the southern edge of the APE lay to the west; lands had not been built to the east by this time to permit the use of the Union Pier area. To the north, with the exception of Gadsden's Wharf along the northwest corner, the Union Pier Terminal APE remained tidal flats and open water.

During the last two decades of the 18th century, the City of Charleston began filling the creek beneath today's Market Streets and in the late 1790s built the new City Market atop this newly made land. The new Market opened in 1800, wharves and docks expanding along the Cooper River waterfront all to the east of East Bay Street. Prior to the extension of land into the harbor beyond East Bay Street, merchants were concentrated along that street due to their proximity to the source of goods and stores: the wharves in the harbor. As new land and wharves were built, some merchants moved their shops onto the wharves. Numerous industries also began to establish themselves on the waterfront, particularly those that relied on the movement of raw materials and finished products into and out of

Charleston. The East Point rice mill was constructed atop Gadsden's Wharf by 1819, and Bennett's Rice Mill was built atop the central Union Pier wharves (within the APE) by 1844. The Union Cotton Press and Wharf were also present, eventually giving their name to this portion of the Charleston waterfront. Other types of industries included blacksmiths and iron-mongers and other trades that may have been nuisances in the commercial and residential areas to the west. Today, Building 322 stands immediately north of the site of the Bennett's Rice Mill complex. However, this portion of Union Pier remained tidal flats into the 1850s. Figure 2.2 displays the Union Pier Terminal APE in the 1850s. By this time, the Union Dock was present within the APE between Pritchard and Pinckney Streets.

Also, during mid-nineteenth century, railroads began to carry goods and people into and out of the City of Charleston. The Charleston to Hamburg Railroad was completed in the 1830s, providing ready access from the central Savannah River Valley to the Port of Charleston. Cotton was the primary commodity moved in this fashion, but other goods and many people also began to travel by rail into and out of the city. However, the direct connection of rail service to the wharves would not be realized for several more decades.

Commerce was greatly reduced during the Civil War primarily due to the Federal blockade of all Confederate ports. However, Charleston remained an active port, receiving and dispatching blockade runners, and a hub of Confederate naval activities. In the decades following the Civil War, maritime commerce into and out of Charleston declined as the economy of South Carolina and other southern states began to shift from the plantation-supported agricultural exports to other commodities and agricultural products produced in other manners. By 1872, at least one new wharf had been built within the northern portion of the Union Pier Terminal APE, to the west of the current location of Building 322. Figure 2.3 displays the Union Pier Terminal APE in the 1870s.

In the 1880s, phosphates were discovered near the surface in the lower portions of South Carolina, and mines and processing plants were opened throughout the Charleston Neck and the surrounding areas. This material was essential for fertil-

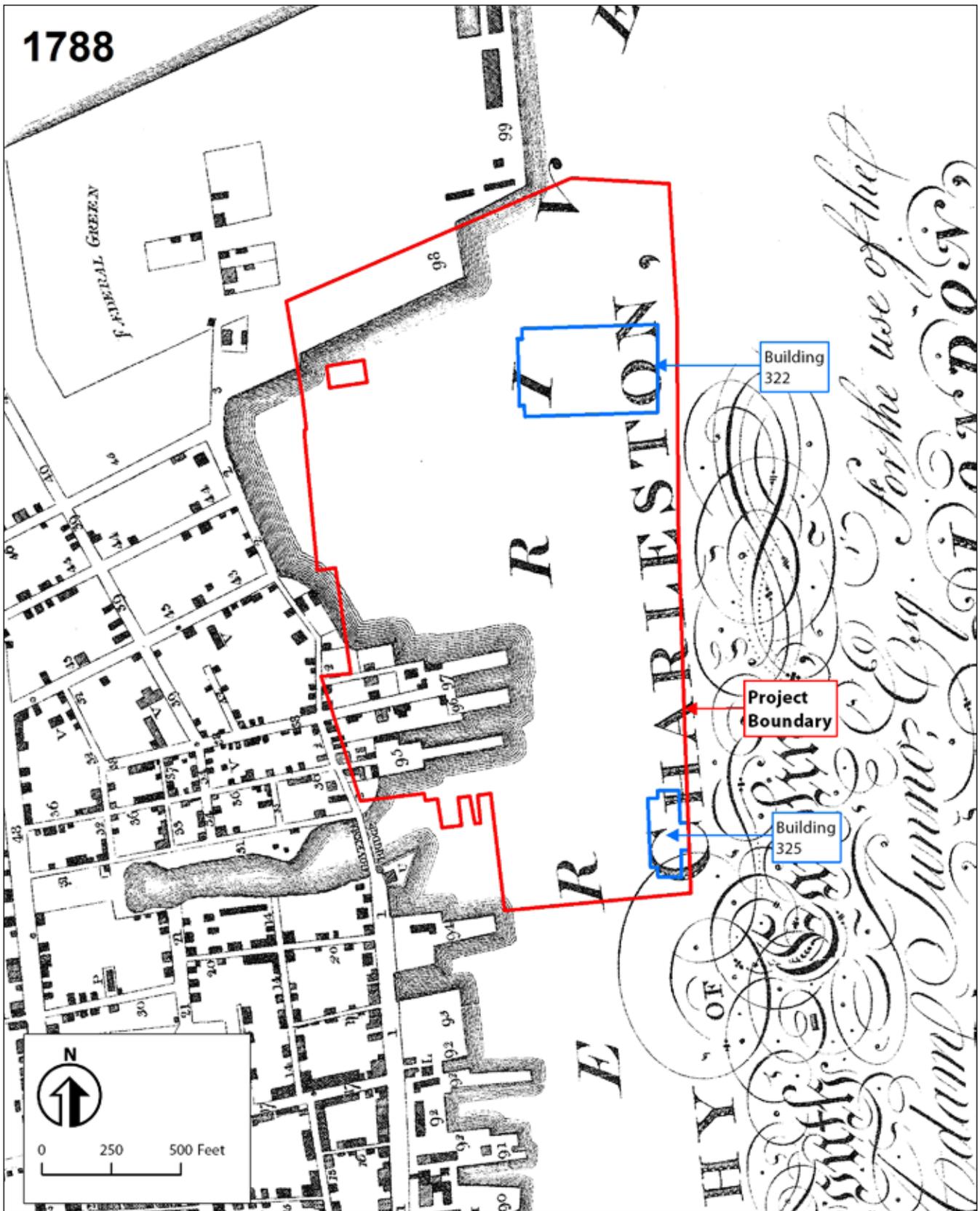


Figure 2.1 The location of the APE on the 1788 Phenix Fire Company Map of Charleston.

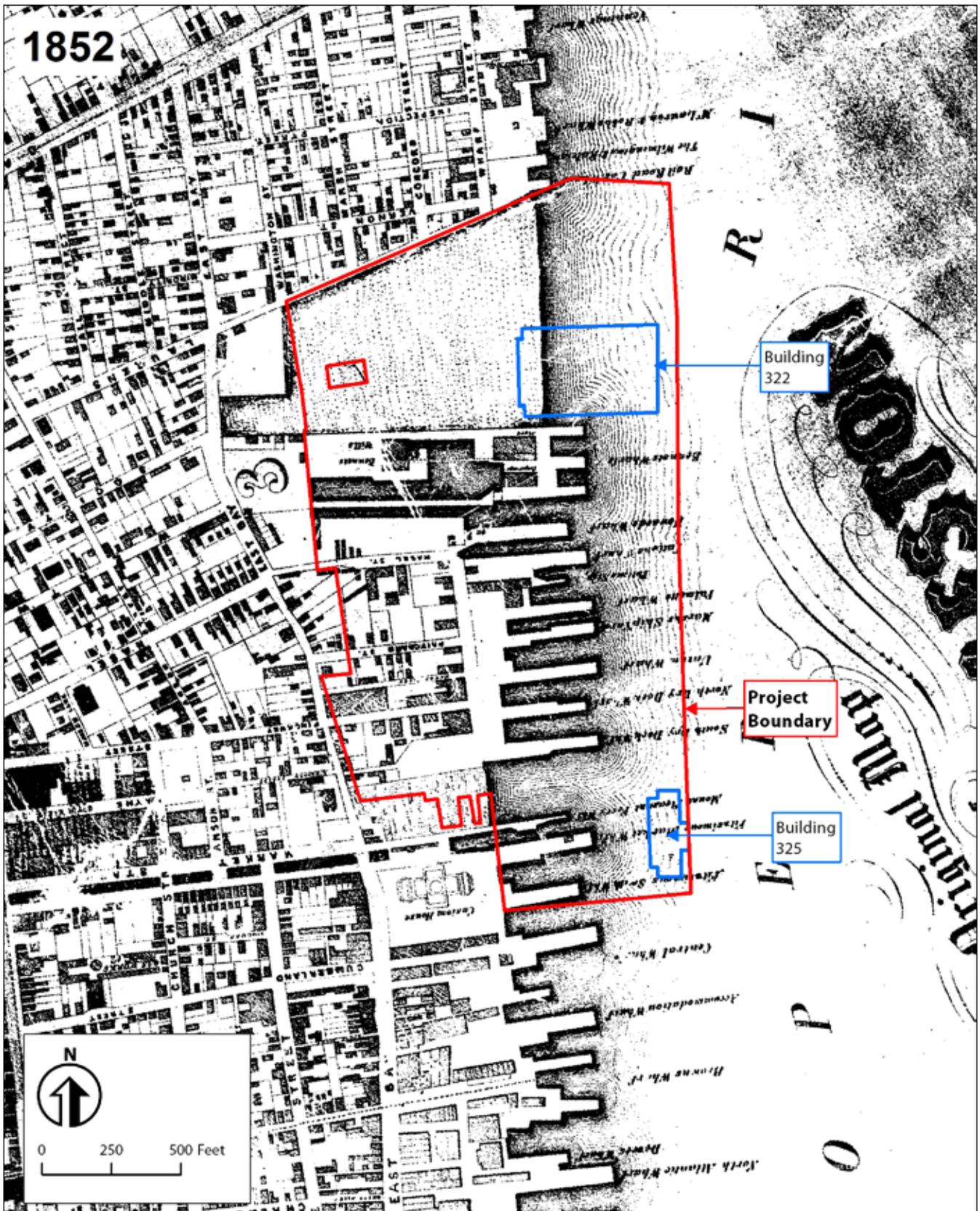


Figure 2.2 The location of the APE on the 1852 Bridges & Allen Map of Charleston.

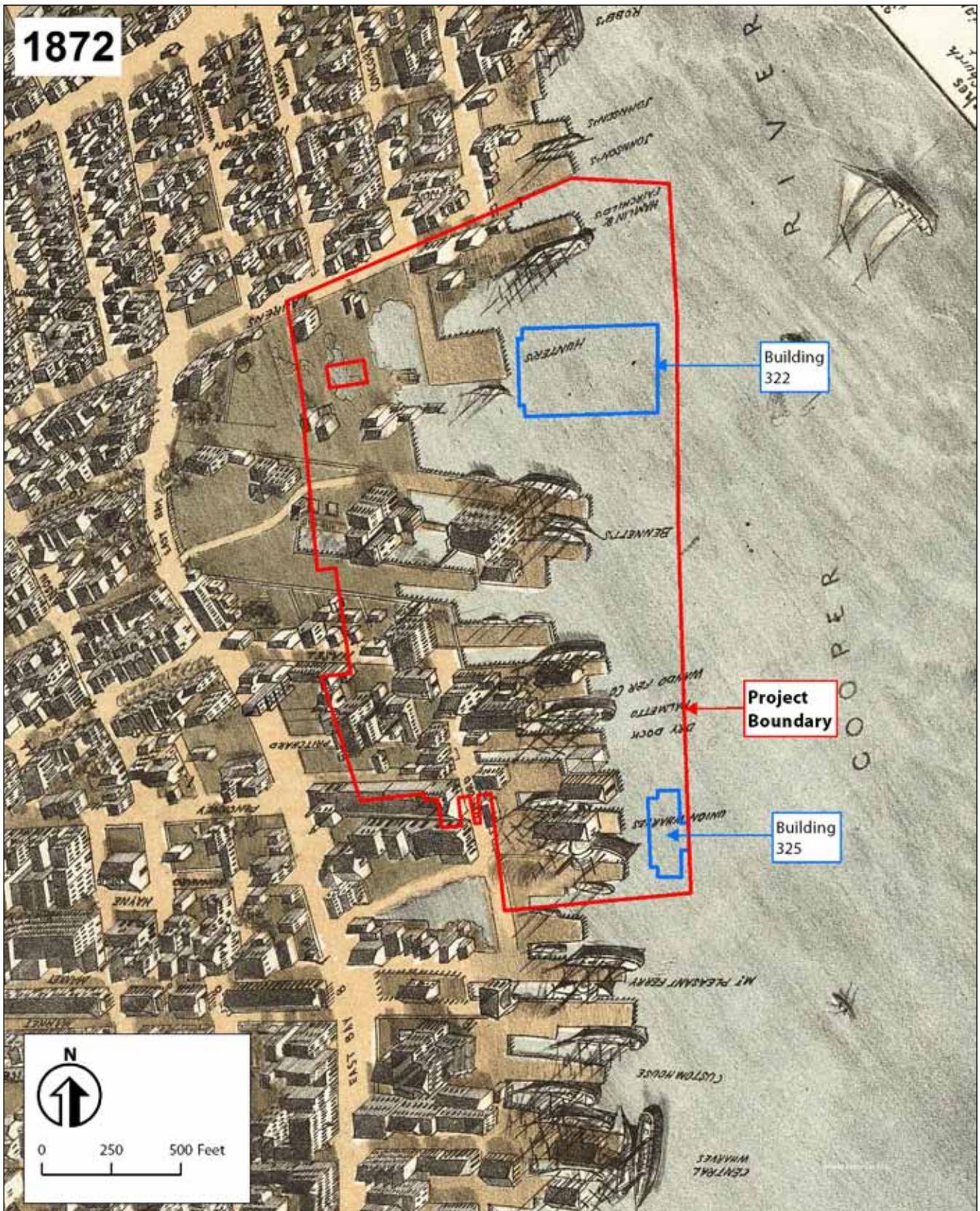


Figure 2.3 The location of the APE on the 1872 Drie's Bird's Eye View of Charleston.

izer and was shipped out from Charleston to areas throughout the United States and beyond. By 1884, a shipyard and naval stores yard were present in the northern portion of the Union Pier Terminal APE. To the south, two rice mills, the Union Cotton Press and associated warehouses, a guano (phosphate) processing plant, a shipyard, wharves and freight sheds used by the Baltimore Steam Ship Company, and the market and customs house wharves all stood within the APE. Figure 2.4 displays the Union Pier Terminal APE in 1884. All of these facilities remained in the APE following the earthquake of 1886 that destroyed or damaged most of the buildings within the City of Charleston. Figure 2.5 displays the Union Pier Terminal APE in 1888.

The City of Charleston witnessed expansions of industrial facilities during the late nineteenth and early twentieth centuries, but the phosphate industry declined rapidly in the new century, and the city began searching for other industries to support its economy. Tourism was one of these efforts. The South Carolina Inter-State and West Indian Exposition of 1901-1902 attempted to promote trade and travel into and out of the state and Charleston. Also, the U.S. Navy established an installation on the Cooper River north of the city of Charleston (actually on land recently acquired by the city where they planned to build a park). The Navy installation soon included a shipyard (for repair and construction) and service facilities for smaller naval ships home-berthed in Charleston. The U.S. Navy remains a part of the greater Charleston community, despite the closing of U.S. Navy Base Charleston and the Shipyard in 1996, with numerous training facilities on U.S. Navy lands in Berkeley County north of the city.

Industrial facilities and the movement of freight and cargo to and from ships continued within the APE into and throughout the early twentieth century. Of greatest interest, by 1902, the Southern Railroad Company acquired the wharves at the northern end of the Union Pier Terminal APE and connected their wharves and freight sheds (beneath the future Building 322) to rail lines that extended down the eastern side of the Charleston peninsula along the route as the same rail lines that serve the Port of Charleston and Union Pier Terminal today. Figure 2.6 displays Union Pier Terminal APE in 1902. During the early twentieth century, most of

the wharves along the east side of Charleston were owned by railway and freight companies. Many fell into disrepair with insufficient capacity to fill the many warehouses. Charleston's Mayor John Grace created the Ports Utility Commission to own and manage the many wharves along the city's east side. This agency began to promote the use of the waterfront facilities and in 1942 became part of the newly created South Carolina State Ports Authority (an agency originally created to support World War II related initiatives in the state).

As the 20th century progressed, so did the maritime traffic into and out of the City of Charleston. The U.S. Navy increased its warship production just prior to and during World War I. Charleston benefited from new Navy assets and the various industries and activities associated with a growing military presence. As World War II approached, the Navy continued to expand, resulting in the explosive growth of residential and service facilities north of Charleston proper for the increasing number of workers at the growing base. Eventually, this led to the formation of North Charleston, a separate municipality around Navy Base Charleston. Maritime activities continued along the Charleston waterfront as well albeit slowly until the SCSPA began to market the Port actively. During the mid-twentieth century, three wharves remained in the northern portion of the APE although many would be abandoned, collapse, or be demolished as the twentieth century progressed. Figure 2.7 displays an aerial photograph of the Union Pier area in 1939; note that the northernmost wharf has been demolished or has collapsed. By the late 1950s, most of the northern wharves were no longer in use and had collapsed or been demolished. Figure 2.8 displays the Union Pier Terminal APE in 1957.

In 1967, recreational cruise vessels began to call at the Port of Charleston with some regularity. In 1973, Building 325 at the south end of the existing pier structure was completed as a passenger facility (see Figures 1.1 and 2.9). This site has remained the center of cruise operations in the Port since that time. The remainder of Union Pier Terminal continued to be used (and continues to be used) for cargo operations, with various kinds of vessels using the berths to discharge and load cargos. The proposed relocation of cruise operations to Building

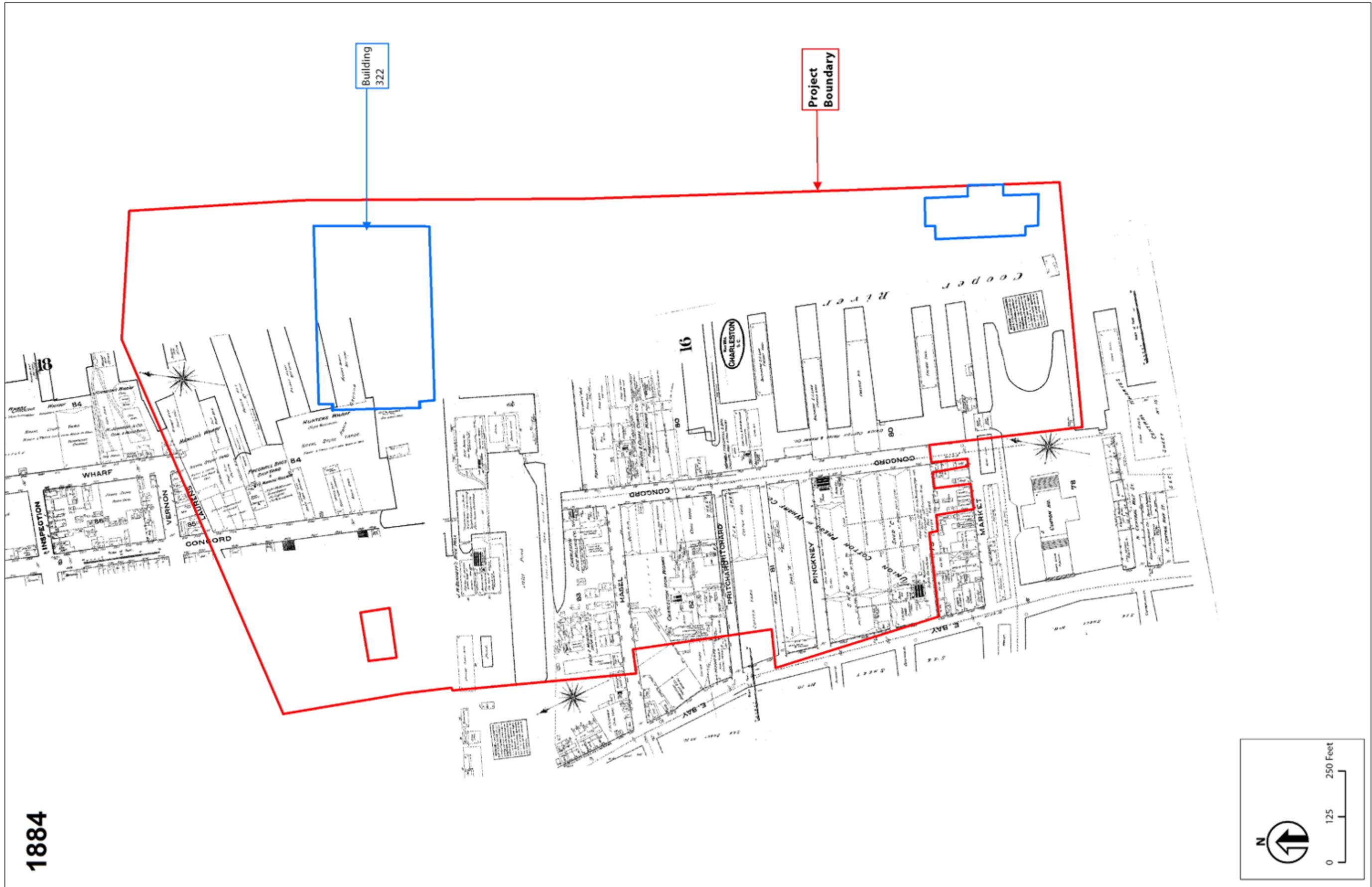


Figure 2.4 The location of the APE on the 1884 Sanborn Fire Insurance Company maps of Charleston.

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Figure 2.5 The location of the APE on the 1888 Sanborn Fire Insurance Company maps of Charleston.

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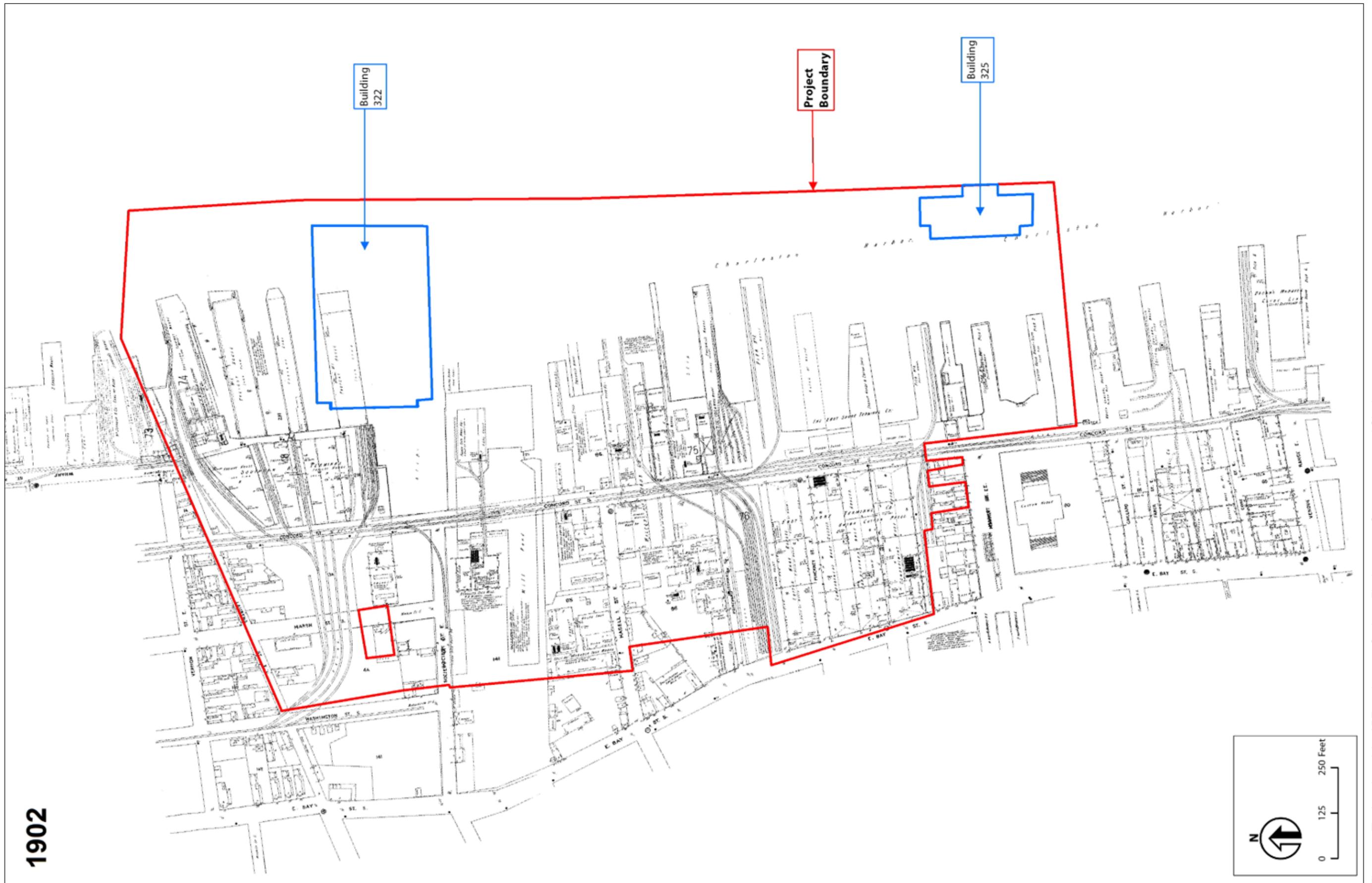


Figure 2.6 The location of the APE on the 1902 Sanborn Fire Insurance Company maps of Charleston.

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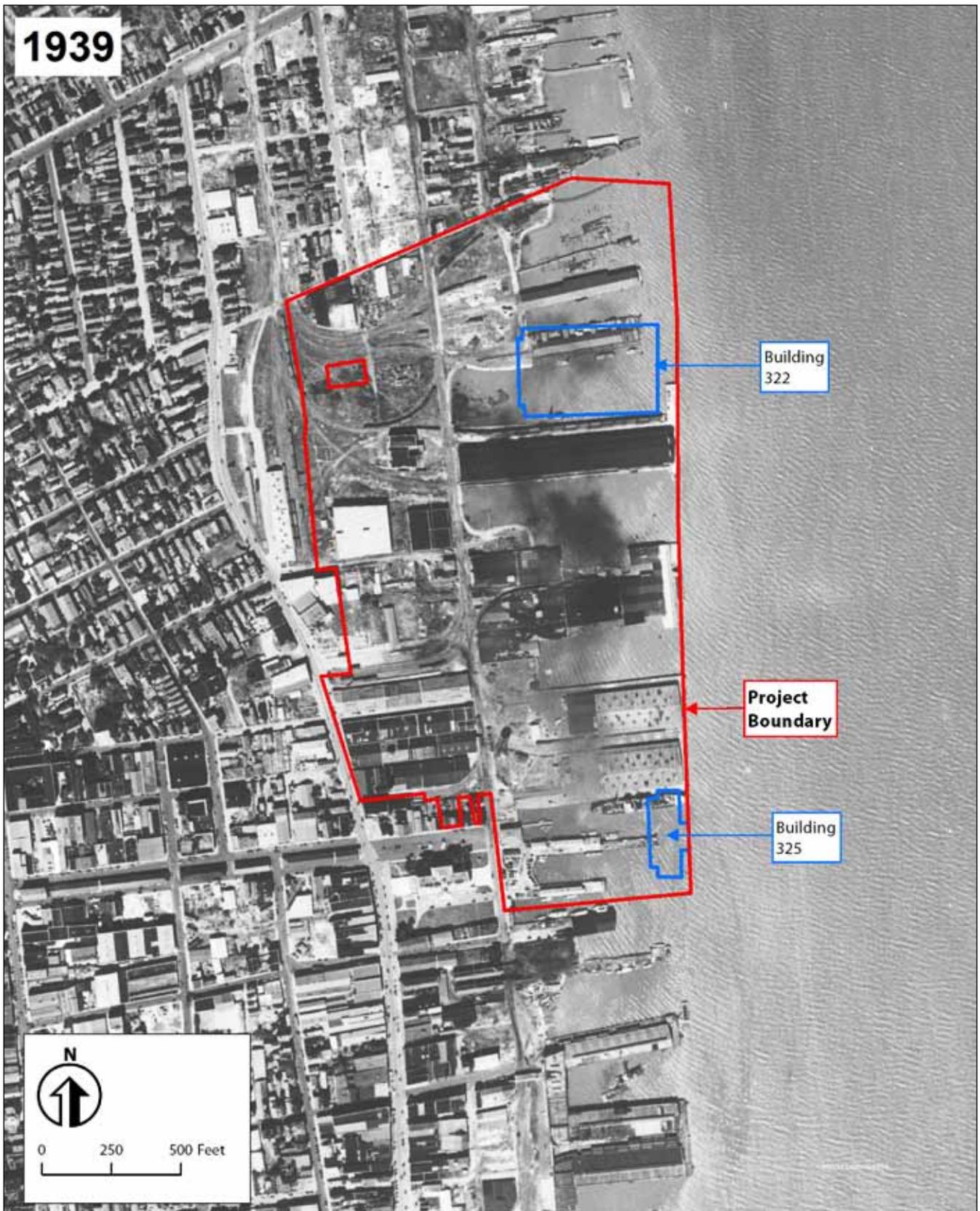


Figure 2.7 The Union Pier Terminal APE in 1939.

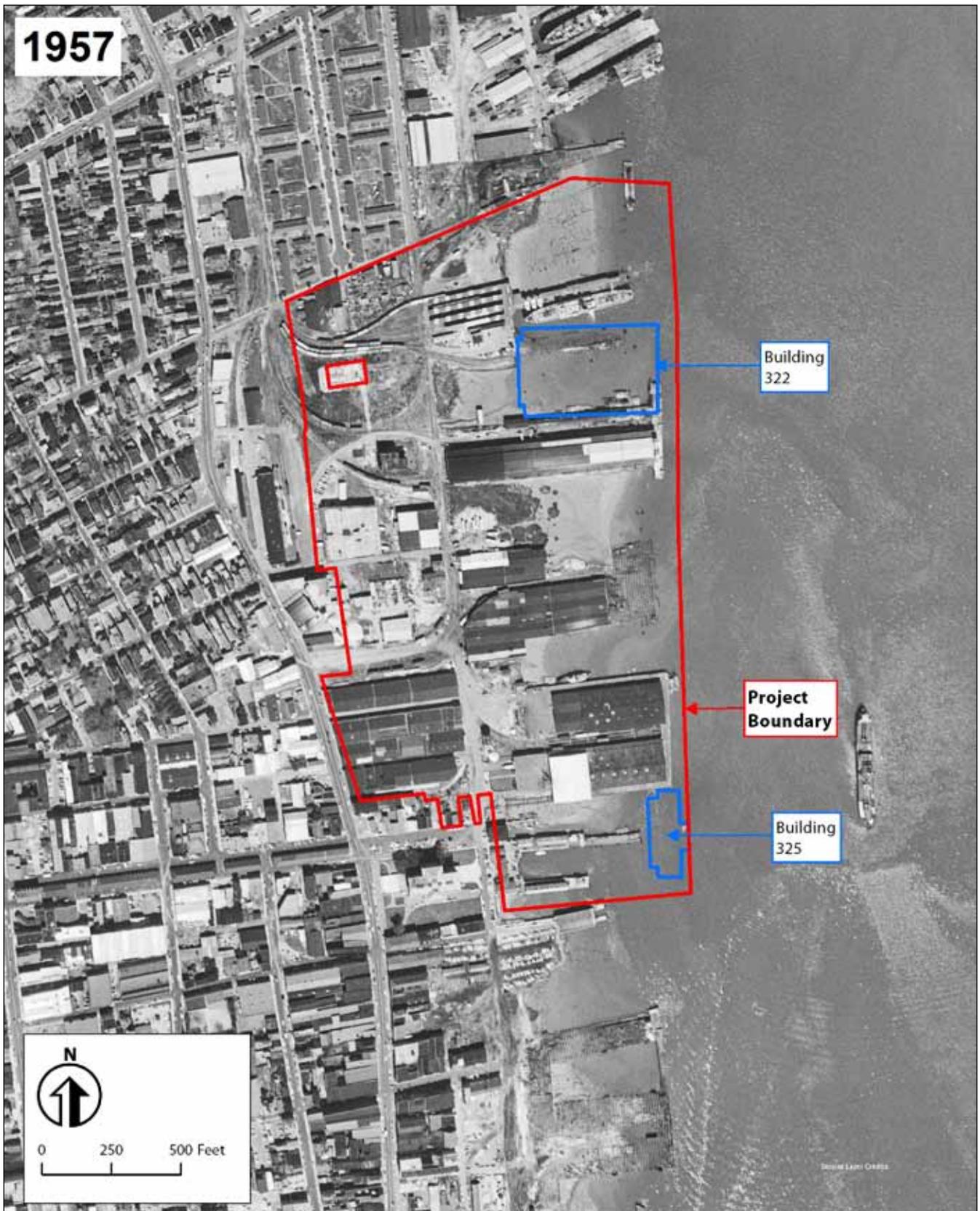


Figure 2.8 The Union Pier Terminal APE in 1957.

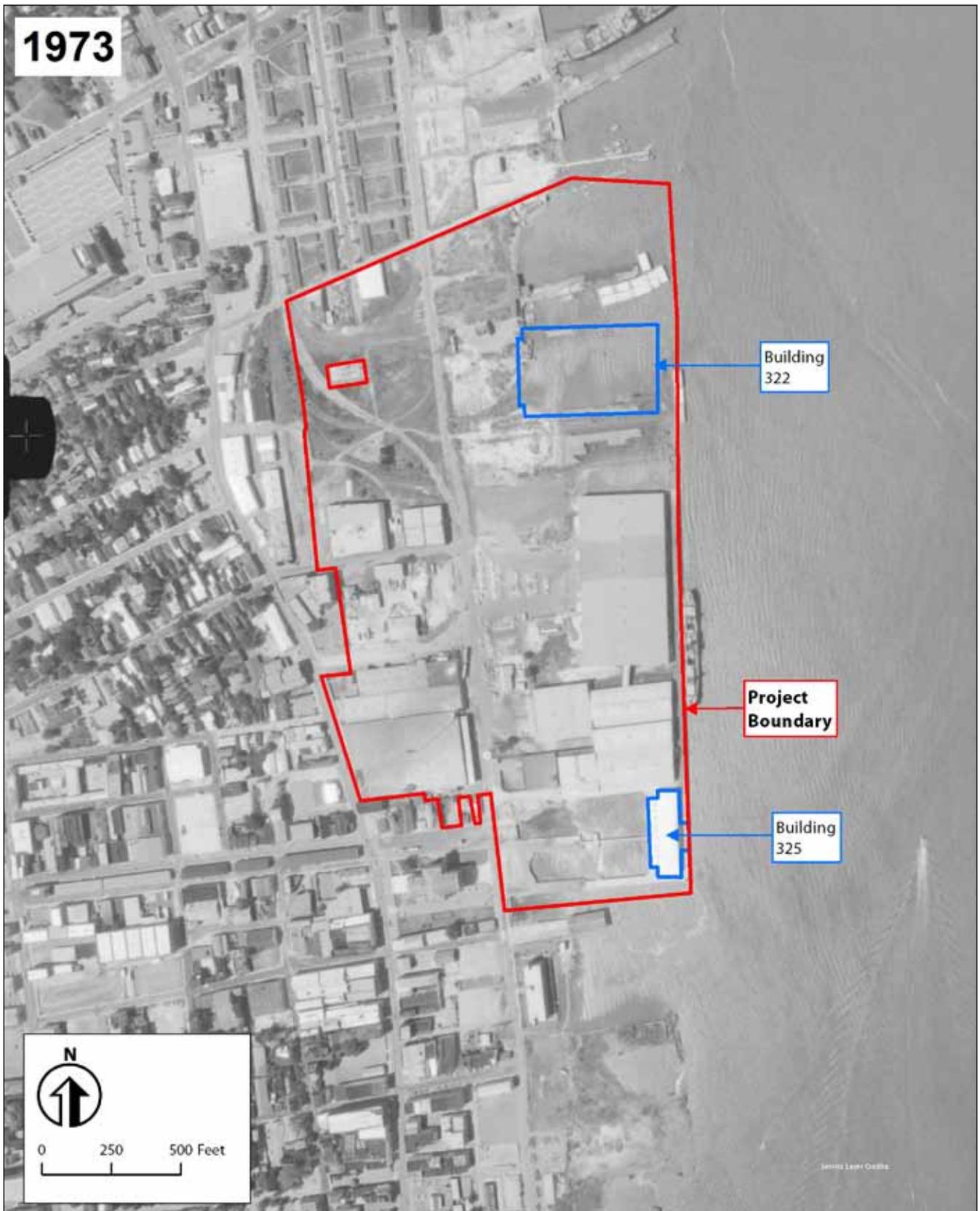


Figure 2.9 The Union Pier Terminal APE in 1973.

322 on the north end of Union Pier Terminal will result in the closing of the rail lines that serve the northern end of Union Pier Terminal and eliminate future cargo operations on the site. Building 325 will be available for public events, such as visiting “tall ships” or other vessels of interest, should cruise operations move to Building 322.

The closing decades of the twentieth century and the early years of the twenty-first century witnessed a growth in the cargo facilities of the Port of Charleston. The SCSPA opened terminals on the Wando River in Mt. Pleasant and in North Charleston. The northern end of Union Pier Terminal (as it exists today) including Building 322 was built in the late 1970s by the SCSPA to support increased maritime commerce. By the 1990s, Charleston was the fourth busiest container port in the United States. Container operations moved farther up the Cooper River to the Cumberland Street Terminal, and to the Wando and North Charleston facilities. The SCSPA is currently constructing another container facility on the southern end of the former U.S. Navy Base Charleston. The SCSPA assisted the state and city with the replacement of the U.S. Highway 17 bridge over Charleston Harbor to ensure that larger commercial vessels could reach its cargo facilities north of the highway crossing on the Cooper and Wando Rivers. The SCSPA continues to ensure that maritime commerce remains at a high level, supporting the economic growth of the City of Charleston, South Carolina, and the United States.

3.0 Character of Historic Properties On and Near Union Pier Terminal

The NRHP attempts to preserve important historic sites “as a living part of our community life and development in order to give a sense of orientation to the American people” (National Historic Preservation Act of 1966 as amended - 16 U.S.C. A-470 et seq.) Historic properties provide connections between significant events, processes, or themes that highlight or reflect important parts of the development of the United States. As such, they are created for the education and inspiration of the American people. They help us understand our past and how we developed as a people and a nation. To be eligible for the NRHP, a historic site must:

- A. be associated with events that have made a significant contribution to the broad pattern of history
- B. be associated with the lives of persons significant in the past
- C. embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction
- D. have yielded, or is likely to yield, information important to history or prehistory

Historic properties also must possess sufficient integrity to reflect the periods or themes of significance. There are seven aspects of integrity that, in concert with their historical associations/context, support eligibility for the NRHP. These aspects of integrity include location, design, setting, materials, workmanship, feeling, and association (36 CFR 60.4; Savage and Pope 1997). All of these aspects of integrity may not be critical for a specific historic property. Alteration of one or more of these aspects of integrity or the separation of a property from its historic context/associations may compromise the property’s NRHP eligibility.

Actions that alter the aspects of integrity or the historical relationships/contexts will affect the property. Effects can range from beneficial to benign to adverse. One must identify the salient characteristics of a property and how these characteristics may be

altered in order to assess the nature of effects related to a specific action.

The Charleston HD occupies most of peninsular Charleston south of U.S. Highway 17/Septima P. Clark Expressway west of Interstate Highway (I-) 26 and south of Lee Street east of I-26. Notable exceptions along the east (Cooper River) side of the peninsula are the wharves and railroads of the Port of Charleston’s Columbus Street Marine Container Terminal, the area between the South Carolina Aquarium and Laurens Street, and Union Pier Terminal. On the west side, the Medical University of South Carolina (MUSC) campus and the MUSC/Veterans’ Administration/Roper St. Francis Hospitals areas, located roughly west of President Street north of Calhoun Street and west of Gadsden Street south of Calhoun, lie between the District and the Ashley River.

The District contains a collection of buildings (originally more than 650 and many more today) that reflect the eighteenth, nineteenth, and early twentieth century development of the City of Charleston and the United States. A 1974 inventory of the District identified 24 buildings with exceptional architectural merit, 82 buildings with excellent architectural merit, and 292 with significant architectural merit. Forty-six district buildings are listed in the Historic American Building Survey due to their great historical significance or their outstanding representation of the architectural heritage of the United States. All of the historic buildings in the District reflect the social and architectural history of the United States. The boundaries of the District were extended on several occasions to include most of the area north of Calhoun Street and east of East Bay Street as well as individual buildings or sites outside the original district boundaries and the many commercial buildings of the late nineteenth and early twentieth centuries that line King and Meeting Streets. The SC SHPO notes that buildings associated with commercial activities (including warehouses along the Cooper River waterfront), tourism (hotels, automobile service stations, etc.), and various other non-residential functions built during the first half of the twentieth century contribute to the NRHP eligibility of the District given

their role in making Charleston the city that it is today. The period of significance also was expanded from 1700-1899 to 1700-1941.

Residences and public buildings from the eighteenth and nineteenth centuries are the majority of the contributing elements of the Charleston HD, with commercial, service, and industrial buildings of the late nineteenth and twentieth centuries being added when the District was expanded. The number of these buildings and their proximity to each other along many of the streets create the feeling of an American city during past eras despite the presence of numerous buildings of more recent construction or lacking the architectural merit or historical associations of the contributing elements. The ability of visitors to see individual buildings and their relationship to neighboring buildings as well as the relationship of these buildings to significant historic themes and events is vital to the historical significance of the District and its eligibility for the NRHP.

The Charleston HD is not a static representation of a single historical era; its elements convey associations with multiple historical periods and associated themes that reflect the history and development of the City of Charleston and the United States between 1700 and 1941 within a vibrant, living city. The District remains an active and vital part of the City of Charleston, with operating commercial enterprises and many full-time residents. Its residents, workers, and visitors all conduct their daily routines within the *mélange* of historic settings that constitute the District.

Numerous intrusions, both modern and historical, exist within the District. Not every building, not even every building that is greater than 50 years of age (the basic age limit for NRHP eligibility), contributes to the District. Some buildings were designed to mimic or reflect older architectural styles and complement the historically significant buildings as much as possible. Some of these intrusions detract from the historical feeling of past eras. And the ongoing development and functioning of the City of Charleston daily injects modern and dynamic elements that detract from the District. These include modern vehicles traveling and parked along the city streets, aircraft that pass overhead, construction cranes, utility conduits, and other elements of twenty-first century technology that are necessary for life today.

The individual historic properties within the Charleston HD closest to the Union Pier Terminal APE are the U.S. Customs House (200 East Bay Street) and McCrady's Tavern and Long Room (153 East Bay Street). Buildings in the District that are documented in the Historic American Buildings Survey (HABS) or are considered to have national significance (as stated in the District's NRHP nomination form for its extended boundaries) and lie within roughly two blocks of the APE include French Coffee Shop/Harris Tavern (120 East Bay Street), Old Exchange and Provost Dungeon (122-126 East Bay Street), Farmers' and Exchange Bank (141 East Bay Street), Moses C. Levy House (301 East Bay Street), Stephen Shrewsbury House (311 East Bay Street), Morris-Gadsden House (329 East Bay Street), Primrose House (332 East Bay Street), house at 71 Anson Street, and Colonel William Rhett House (54 Hasell Street). All are summarized in Table 3.1 and shown in Figure 1.

The historic property immediately adjacent to Union Pier Terminal is the U.S. Navy Fleet Landing Building, which stands 80 to 100 feet to the south. This building served as a clearinghouse for embarking/debarking U.S. Navy personnel in Charleston during World War II. After the war, the U.S. Navy discontinued use of the building, and in the 1960s, the Navy sold it to the SCSPA. Since 2004, the building has housed Fleet Landing restaurant. The building retains its exterior appearances (for the most part) and its original construction materials. It remains at the location where it served its historic purpose and retains its geographic relationships with the City of Charleston and Charleston Harbor. The U.S. Navy was a major contributor to the economic growth of the City of Charleston and its associated expansion during the first half of the twentieth century. Fleet Landing Building is one of the few highly visible and accessible remnants of U.S. Navy activities within the City of Charleston today.

In summary, historic properties within and near the Union Pier Terminal APE include the Charleston HD (which includes 11 individual properties within 1,150 feet of the APE) and the Fleet Landing Building immediately south of the APE. The Fleet Landing Building currently retains its integrity of location, design, setting, materials, workmanship, feeling, and, to a lesser extent, association. The

Table 3.1 Charleston HD individual historic properties and significant elements near the Union Pier Terminal APE.

Building	Address	Status	Proximity (in feet) to		
			APE	Bldg 325	Bldg 322
US Customs House	200 East Bay	Listed on NRHP	150	900	2,000
McCrary's Long Room and Tavern	153 East Bay Street	Listed on NRHP	800	1,600	3,100
Old Exchange and Provost Dungeon	122-126 East Bay Street	Listed on NRHP	1,000	1,900	3,400
French Coffee Shop/Harris Tavern	120 East Bay Street	National significance	1,150	2,000	3,500
Farmers' and Exchange Bank	141 East Bay Street	Listed on NRHP	900	1,850	3,250
Moses C. Levy House	301 East Bay Street	Listed in HABS	400	2,300	1,700
Stephen Shrewsbury House	311 East Bay Street	National significance	300	2,500	1,700
Morris-Gadsden House	329 East Bay Street	Listed in HABS	500	2,900	1,850
Primrose House	332 East Bay Street	Listed in HABS	300	2,700	1,650
house	71 Anson Street	Listed in HABS	1,000	2,800	2,350
Colonel William Rhett House	54 Hasell Street	Listed in HABS	950	2,250	2,300

Charleston HD retains its integrity of location, setting, feeling, and association, with individual elements retaining their integrity of design, materials, and workmanship. One of the aspects of the Charleston HD is the integration of contributing and non-contributing elements. There are large and small clusters of contributing elements intermingled with large and small clusters of non-contributing elements, all dating from one or more of the periods of development of the City. This diversity reflects the living nature and continued growth of the City of Charleston and will be necessary for the City's continued growth and development.

4.0 Assessment of Effect

Renovation of Union Pier Terminal Building 322 for use as the new Port of Charleston cruise operations facility will require the installation of pilings beneath the existing pier/wharf to support elements of the new facility. Union Pier Terminal and Building 322 lie outside the boundaries of the Charleston HD; the Charleston HD lies west, south, and north of the Union Pier Terminal APE. Historic property Fleet Landing Building (built in 1942) stands immediately adjacent to the south end of Union Pier Terminal. The buildings on Union Pier Terminal and the current wharf/pier beneath Building 322 were constructed during the last quarter of the twentieth century. They lack any historical associations with the Charleston HD other than proximity and contemporaneity of use and occupation since construction. They do share an important theme that reflects the historical development of the City of Charleston: maritime commerce.

We should consider whether there are potential effects to historic properties adjacent to the APE that could alter these properties to such an extent that their NRHP eligibility is compromised. Effects may be related to both the actual renovations (placement of pilings and renovation of Building 322 into a cruise facility) and the use of Union Pier Terminal and Building 322 by cruise ships that call on the Port of Charleston. We will discuss these aspects of the project in two parts, the physical construction and the operation of cruise ships, for each of the historic properties. We will consider direct effects (actions/processes directly related to the construction and operation of the cruise terminal) and more long-range or cumulative effects related to the increase in visitors to the Charleston HD associated with the operation of the cruise terminal. We will also discuss how the operation of the cruise terminal at its present site may affect the Charleston HD, representing a “No Action” alternative for the USACE permits necessary to complete the proposed renovations of Union Pier Terminal. First, we present a quick overview of the methods employed to gather information presented in this assessment.

4.1 Methods

We compiled historic maps and plats of the APE to trace the historical development of Union Pier Terminal, particularly the northern end and Building 322, to determine the relationship of this portion of the waterfront to the Charleston HD. Maps were gathered from the Charleston County Register of Mesne Conveyance, the collections of the South Carolina Historical Society, the Special Collections of the Charleston County Public Library, the South Carolina Department of Archives and History (SCDAH), and the South Caroliniana and Thomas Cooper Libraries at the University of South Carolina. Aerial photographs of the Charleston waterfront were obtained from the City of Charleston GIS Department. We reviewed reports of previous cultural resources investigations and assessments of effect related to Port operations (e.g., the environmental impact statements prepared by the USACE, Charleston District, for the former proposed Daniel Island and Charleston Naval Complex (CNC [former U.S. Navy Base Charleston]) marine container terminals. Reports were obtained from SCDAH or the South Carolina Institute of Archaeology and Anthropology at the University of South Carolina (SCIAA), or they were in Brockington’s company library. We gathered information on the location of historic properties in relation to the Union Pier Terminal APE from ArchSite, the online GIS database maintained by the SCDAH - State Historic Preservation Office (SHPO) and the SCIAA. We reviewed the NRHP nomination forms for the Charleston HD and its expanded boundaries (also obtained from the SCDAH). Information on the number of tourists or visitors to the Charleston area and the Charleston HD were obtained from the Charleston Visitors Bureau, the City of Charleston April 2014 summary of its Tourism Management Plan Forum, and the 2015 update of the City’s Tourism Management Plan. The numbers of vessels calling on the Port of Charleston, numbers of cruise passengers, and personal vehicles entering the Port were provided by the SCSPA.

Scans of the historic maps and plats were georeferenced using ArcGIS in order to see what kinds of facilities and activities were mapped within the APE in the past. We overlaid the historic imagery

on modern aerial photographs or projected the APE onto the historic maps, plats, and photographs to permit the identification of past facilities. We calculated estimates of the numbers of visitors and cruise passengers in future years based on the average increase in cruise vessel visits and visitors over the past five years. We used all of this information to examine the relationship of the cruise terminal (existing and proposed) and cruise operations to the Charleston HD. These data then provided the basis for the assessment of effect presented below.

4.2 Direct Effects

The renovations to Union Pier Terminal will permit relocation of cruise ship operations to Building 322 in the northeast corner of the APE. Cruise ships will berth at the existing wharf beside the renovated building; cruise passengers will access the berthed vessels through the north end of Union Pier Terminal. The following discussions consider the effects of these activities (both renovations and operations) on the historic properties near the Union Pier Terminal APE.

4.2.1 Fleet Landing Building

The proposed renovations to Union Pier Terminal will not alter the location, design, setting, materials, workmanship, feeling, or association of the Fleet Landing Building. The proposed activities will not require that the location of the Fleet Landing Building be adjusted. There will be no alteration to the Fleet Landing Building, preserving its current design. The new building will not alter the setting of the historic property in such a way that the associations of the Fleet Landing Building with Charleston Harbor and the City of Charleston will be compromised. The Fleet Landing Building lost its historical association with U.S. Navy operations in the Port of Charleston at the end of World War II. The renovations will not alter views onto the harbor from the building nor the wharf/parking lot that connects the building to the intersection of Concord and Cumberland Streets. At least five warehouses and the current cruise facility separate the Fleet Landing Building from the area of the proposed renovations. No changes related to the renovations will occur in the parking lots that lie adjacent to the historic

property. Since the Fleet Landing Building will not be altered, its materials and workmanship will not be affected by the proposed actions. As noted above, the Fleet Landing Building lost most of its association with its historic function and role when the U.S. Navy departed Charleston Harbor. The building's new uses do not detract from its original association, nor is the feeling that it evokes compromised by its current uses. Since there will be no alteration to this building related to the proposed Union Pier Terminal renovations, there will be no alteration of the current feeling associated with this building. Therefore, the construction activities related to the proposed undertaking will not affect the Fleet Landing Building historic property.

Similarly, cruise operations at Union Pier Terminal will not alter the location, design, setting, materials, workmanship, feeling, or association of the Fleet Landing Building. The building was originally constructed on a working wharf/pier that served numerous commercial vessels at the time of construction. It was designed to absorb or withstand vibrations associated with maritime commerce although many of the vessels that visit the Port of Charleston today are larger than those that called routinely during the mid-twentieth century. Currently, cruise ships berth 500 to 600 feet north of the historic property. To date, there have been no identified effects to the building related to vibrations and noise associated with these operations. Cruise operations at the proposed new terminal will result in the berthing of ships approximately 1,600 feet north of the Fleet Landing Building. Given the former association of the building with port operations, this distance is adequate to prevent any adverse effects related to vibrations and noise. Thus, the proposed project and future cruise operations on the north end of Union Pier Terminal will not affect historic property Fleet Landing Building.

Should the renovations not occur and cruise operations remain at the southern end of Union Pier Terminal, the Fleet Landing Building will not be affected. These activities will continue in the same fashion as they currently happen. As noted above, there has been no effect noted to the Fleet Landing Building since the initiation of cruise operations at Union Pier Terminal and none are expected to occur into the indefinite future.

Thus, Fleet Landing Building will not be affected by the proposed renovations of Union Pier Terminal or the operation of a cruise facility on Union Pier Terminal at either the existing or the proposed locations.

4.2.2 Charleston HD

As noted above, the Charleston HD lies adjacent to the Union Pier Terminal APE in some areas. However, individual historic properties within the District all lie 150 to 1,150 feet from the APE, 900 to 2,500 feet from Building 325 (the existing cruise facility), and 1,650 to 3,500 feet from Building 322 (the proposed cruise facility: see Table 1 and Figure 1). The renovation of the northern end of Union Pier Terminal and the resultant cruise operations will not alter the location of the Charleston HD nor any of its individual historic properties or contributing elements. Similarly, should cruise operations continue at the southern end of Union Pier Terminal, the location of the District will not be altered, nor the location of any of its elements.

The Charleston HD does not possess a specific design. Therefore, the renovation of the northern end of Union Pier Terminal and the resultant cruise operations cannot alter the District's design. The same applies to continued cruise operations at the southern end of Union Pier Terminal. The design of individual elements of the District also will not be affected since only buildings on Union Pier Terminal which lie outside the District will be altered. Continued cruise operations on the southern end of Union Pier Terminal also will not alter the design of any nearby individual historic properties or contributing elements of the Charleston HD.

The renovation of Building 322 on the northern end of Union Pier Terminal will not alter the setting of the Charleston HD nor any of its individual contributing elements/historic properties. The area of renovation on the northeast corner of Union Pier Terminal is separated from the Charleston HD by open parking areas (within the APE) and by a block of commercial buildings between East Bay and Washington Streets (East Bay Street serves as the boundary of the historic district in this area). Two elements of the Charleston HD lie east of East Bay Street: the commercial block at 280 East Bay Street that today houses the Ansonborough Inn and the Primrose House at 332 East Bay Street. The Ansonborough Inn

building was constructed as a commercial warehouse in 1901, this building was converted in the mid- and late twentieth century for domestic and tourism-related residential use. One extant warehouse stands at the foot of Hassel Street between 280 East Bay Street and Building 322. The parking areas west of Building 322 that will serve the proposed new cruise facility are visible from this building. Renovation of Building 322 and its operation as a cruise facility will not alter the physical relationship of this former warehouse with the waterfront that it once served. The new terminal and the berth for cruise vessels lie approximately 1,300 feet east of the building, with a warehouse standing between the two buildings. This distance is adequate to prevent any alterations to the setting of this building.

The Primrose House stands 300 feet northwest of the northwest corner of the APE, on the south side of the intersection of Vernon and East Bay Streets. This excellent example of a Charleston single house sits on the corner lot with modern commercial buildings on the lots fronting Washington Street to its rear and on East Bay Street to the north. Another historic residence stands at 328 East Bay Street, with a landscaped parking area continuing south to Laurens Street. The present cruise operations are focused 2,700 feet to the southeast. Building 322 and the proposed new cruise terminal/berth will be 1,600 feet to the east. Like the Ansonborough Inn, modern buildings and parking areas lie between the Primrose House and the proposed new cruise terminal, with additional warehouses and port-associated buildings between it and the existing terminal. Cruise operations within the Union Pier Terminal APE do not alter the setting of this building. The distance (1,600 feet) between the Primrose House and the proposed cruise operations is adequate to prevent any alterations of the setting to this building.

Three other elements of the Charleston HD (three residences with national significance or listed in the HABS) lie on the west side of East Bay Street (see Table 1 and Figure 1). All stand 300 to 500 feet west of the Union Pier Terminal APE, with the current cruise operations centered 2,300 to 2,900 feet to the southeast. The proposed new cruise operations will be 1,700 to 1,850 feet to the east. The Morris-Gadsden House (329 East Bay Street) stands in the

middle of the block between George and Calhoun Streets. Numerous modern commercial buildings and a number of historic buildings (including Primrose House) stand between 329 East Bay Street and the Union Pier Terminal APE. The Stephen Shrewsbury House (311 East Bay Street) stands on the northwest corner of Laurens and East Bay Streets. Historic houses stand along East Bay Street to the north and south and along Laurens Street to the west. Modern commercial buildings stand to the east along East Bay Street and Washington Street although a parking lot at the corner of East Bay and Laurens Streets provides a view to the parking areas within the Union Pier Terminal APE and Building 322. The Moses C. Levy House (301 East Bay Street) stands near the corner of East Bay and Society Streets. Historic residences extend along the west side of East Bay Street north of 301 East Bay; modern commercial buildings line both sides of the street to the south. A parking area separates 301 East Bay Street from the Union Pier Terminal APE, with parking areas within the APE between there and Building 322. The general setting of this collection of residential buildings contains numerous modern intrusions, and they were always one block away from the industrial and maritime facilities within the Union Pier Terminal APE. Cruise operations within the Union Pier Terminal APE do not alter the setting of these buildings. Like the buildings discussed above, the distance between these buildings is adequate to prevent any alterations of the setting of these buildings.

Two other elements of the Charleston HD listed in the HABS stand farther west, the Colonel William Rhett House (54 Hasell Street) and the house at 71 Anson Street. Numerous residential and commercial buildings stand between these buildings and the Union Pier Terminal APE, with modern commercial buildings between East Bay Street (the edge of the historic district at this point) and the Union Pier Terminal APE. The distance from the APE is 950 to 1,000 feet with cruise operations at 2,250 to 2,800 feet away or 2,300 to 2,350 feet away from the proposed new terminal (see Table 1 and Figure 1). Cruise operations within the Union Pier Terminal APE will not alter the setting of these buildings.

Near its southwest corner, the APE includes small lots along North Market Street that lie within

the Charleston HD. None of the proposed renovations to Building 322 will affect this portion of the APE. Adjoining buildings within the District are late nineteenth century warehouse/domestic buildings converted into restaurants in the late twentieth century. Given their former associations with maritime activities, their recent renovations/reconstructions, and the distance from Building 322 and the cruise vessel berth (1,300 to 1,500 feet), these buildings will not suffer alterations to their settings as a result of the renovation of Union Pier Terminal. Numerous warehouse buildings stand between these restaurants and Building 322 as well.

Farther south, the U.S. Customs House, built during the mid-nineteenth century, stands adjacent to the APE on the southeast corner of the intersection of South Market and East Bay Streets. The building and its associated yard and parking areas extend from East Bay Street to Concord Street. This building was constructed to facilitate the maritime commerce that flowed through the Port of Charleston during the nineteenth and twentieth centuries and continues to function in this capacity as well as provide other services undertaken in Charleston by the U.S. government. The renovation of Building 322 and Union Pier Terminal to accommodate cruise operations will not alter the relationship of this important public element of the Charleston HD with Charleston Harbor, the renovated/altered maritime commercial buildings within the District, or the actively used wharves and piers that continue to support maritime commerce in the Port of Charleston. The operation of cruise ships on the northeast corner of Union Pier Terminal will move these activities farther away from the U.S. Customs House (1,600 to 1,700 feet compared to the current 800 to 900 feet). Also, there are numerous commercial warehouses that stand between the U.S. Customs House and Building 322. Renovation of the northeast corner of Union Pier Terminal will not alter any of the existing views from the U.S. Customs House to the harbor or the City of Charleston. Therefore, the proposed renovations and the ensuing cruise operations will not alter the setting of the U.S. Customs House.

Four elements of the Charleston HD listed in the NRHP or with national significance stand along East Bay Street 800 to 1,150 feet to the southwest of the

Union Pier Terminal APE. These include McCrady's Tavern and Longroom (153 East Bay Street), the Farmers' and Exchange Bank (141 East Bay Street), the Old Exchange and Provost Dungeon (122-126 East Bay Street), and the French Coffee Shop/Harris' Tavern (120 East Bay Street). These buildings are a collection of commercial and public buildings associated with the colonial and nineteenth century development of Charleston. McCrady's Tavern stands in a block of commercial buildings north of the intersection of East Bay Street and Unity Alley; Pearlz and McCrady's Restaurants today occupy this building. Numerous commercial buildings, historical and modern, line the street to the north and south. The Farmers' and Exchange Bank (141 East Bay Street) stands in a block of two commercial buildings south of the intersection of Unity Alley and East Bay Street. Parking lots lie immediately north and south with modern and historic commercial buildings lining the street to the north and south. The Old Exchange and Provost Dungeon (122-126 East Bay Street) stands on the east side of East Bay Street at the foot of Broad Street. This is the oldest surviving customs house in Charleston; it was built just before the Revolutionary War and served as a public building during most of its existence. Today, it contains a museum and exhibit hall operated by the City of Charleston. Numerous historic and modern commercial buildings line East Bay Street to the north and south and Broad Street to the west. The French Coffee Shop/Harris Tavern (120 East Bay Street) stands on the southeast corner of East Bay Street and Exchange Street. Commercial buildings line East Bay Street to the north and south and Exchange Street to the east (including warehouses associated with former wharves now converted into offices or residences). Residential buildings also are present to the south along East Bay Street. The distance from the APE is 800 to 1,150 feet with cruise operations at 1,600 to 2,000 feet away or 3,100 to 3,500 feet away from the proposed new terminal (see Table 1 and Figure 1). Numerous modern and historic buildings stand between all of these buildings and the Union Pier Terminal APE. Cruise operations within the Union Pier Terminal APE will not alter the setting of these buildings.

By extension, if the construction of a cruise facility at Building 322 on the northeast corner of Union

Pier Terminal will not alter the settings of the closest elements of the District, then the project will not alter the setting of the Charleston HD as a whole.

One must also consider the scale of the renovated building with respect to the elements of the Charleston HD to determine if the setting will be altered, not just the physical distance between the District/its elements and the renovated building. The Charleston Board of Architectural Review (BAR), who enforces the City's zoning restrictions concerning the nature of buildings within both the Charleston HD and the other portions of the City, approved the design of the proposed renovations to Building 322 in 2012. Therefore, the proposed new facility is compatible with other buildings in its neighborhood and will not alter the Charleston waterfront to such an extent that the setting of the Charleston HD or its contributing elements and individual historic properties are compromised.

Finally, one should also consider visual intrusions on the District from the cruise vessels themselves and the effect of the wakes associated with the passage of cruise ships in and out of Charleston Harbor on the southern end of the District (the seawall and elements that extend over the Harbor). Considerations of the operation of marine container terminals upriver at the CNC and on Daniel Island by the USACE determined that the passage of larger and more frequent container ships (many the same size or larger than the cruise vessels that call at Union Pier Terminal) would not affect the historic properties adjacent to Charleston Harbor. Cruise ships represent approximately 4.8 percent of all ships that called on the Port of Charleston between 2010 and 2014. Table 4.1 summarizes the vessels that called on the Port of Charleston during this period. This percentage likely will stay the same or decrease when the CNC terminal opens. Cruise vessels will berth immediately adjacent to the District rather than pass near the District in the shipping channels of Charleston Harbor, but they are assisted in berthing and disembarking by tugs that limit their wakes. Thus, ship movement associated with cruise operations will not affect the Charleston HD.

Visual intrusions on the Charleston HD by cruise vessels (both the vessels that currently call routinely at the Port of Charleston and larger vessels that may call after the proposed renovation of

Table 4.1 Vessels calling on the Port of Charleston during 2010-2014.

Year	Terminal											
	Union Pier				Columbus Street				North Charleston			
	Cruise	Cargo	Total	%Cruise	Cruise	Cargo	Total	%Cruise	Cruise	Cargo	Total	%Cruise
2010	65	165	230	28.30%	1	140	141	0.70%	0	284	284	0.00%
2011	88	35	123	71.50%	0	231	231	0.00%	0	394	394	0.00%
2012	83	2	85	97.60%	0	258	258	0.00%	0	468	468	0.00%
2013	88	22	110	80.00%	1	284	285	0.40%	0	444	444	0.00%
2014	84	24	108	77.80%	0	271	271	0.00%	0	417	417	0.00%
Total	405	251	656	61.70%	2	1,184	1,186	0.20%	0	2,007	2,007	0.00%

Year	Terminal				Total			
	Wando Welch							
	Cruise	Cargo	Total	%Cruise	Cruise	Cargo	Total	%Cruise
2010	0	858	858	0.00%	66	1,447	1,513	4.40%
2011	0	890	890	0.00%	88	1,553	1,638	5.40%
2012	0	898	898	0.00%	83	1,626	1,709	4.90%
2013	0	929	929	0.00%	89	1,679	1,768	5.00%
2014	0	1,002	1,002	0.00%	84	1,714	1,798	4.70%
Total	0	4,577	4,577	0.00%	407	8,019	8,426	4.80%

Building 322) will not alter the setting of the District to such an extent that its NRHP eligibility is compromised. Both cargo and cruise vessels berthed on Union Pier Terminal rise above the buildings on the wharf and are visible from portions of the District along its eastern boundary. To create an adverse effect, these intrusions have to alter the character of the District to the extent that its eligibility for the NRHP is compromised. The Charleston HD and the City of Charleston share a longstanding connection with maritime traffic, of which the cruise industry is a part. Passenger service was an integral part of the maritime traffic in and out of the Port of Charleston from the establishment of the City at Oyster Point in 1680 up through the mid-twentieth century. The growth of air travel and expanded highway systems after World War II resulted in a severe decline in ocean-passenger service throughout the world. The last decades of the twentieth century and the early twenty-first century witnessed a rebirth of ocean-passenger service centered on recreational travel (the cruise industry) rather than as a mode of transportation. As such, it reflects a very important, if not

crucial factor, in the historical development of the City of Charleston. Without the port and the maritime traffic that passed through the city, Charleston would not have been one of the wealthiest cities of the eighteenth and nineteenth centuries nor a center of U.S. Navy and maritime trade activities during the early and middle twentieth centuries. Like the wakes associated with ships in Charleston Harbor, the USACE determined that large vessels (container ships) moving in the shipping channels in the harbor do not alter the character of the Charleston HD sufficiently to compromise its NRHP eligibility. Although specifically directed at cargo vessels, similar considerations apply to cruise vessels when they enter and leave the harbor.

Large ocean-going vessels tied to a wharf designed to accommodate such vessels do not alter the setting of the District sufficiently to compromise its NRHP eligibility. Vessels of all sizes berthed along the Cooper River waterfront is a reflection of the conditions that provided one of Charleston's major economic drivers throughout its history and today. There are many paintings, drawings, and photo-

graphs that show the Cooper River waterfront lined with vessels, obscuring the views of the City from the harbor. There are few views from the City into the harbor during the same period but it is easily interpreted that anyone standing in the City would have their view of the harbor impaired by the many vessels docked along the Cooper River wharves. Architectural and landscape elements of the wharves that served Charleston's maritime traffic are present and preserved in the Charleston HD. Former warehouses and storehouses that stood on the wharves have distinctive external elements (long, narrow configurations perpendicular to the waterfront pierced by arched doorways/windows). However, all have been converted to residential or office/retail uses. None retain their original functions or are directly associated with the piers and docks that serve vessels on the Cooper River today. It is difficult for visitors to understand the historical relationship of these buildings to maritime commerce. Numerous modern office and residential buildings stand between the former warehouses and the harbor throughout the southeast portion of the Charleston HD. Streets today extend from East Bay Street east to Concord and Prioleau Streets where the slips that accommodated ships docking at the wharves once were present. All of the former water-filled slips have been filled to provide additional land for non-maritime activities. Many retain the names associated with the wharves that operated at the locale (e.g., North and South Adger's Wharf). The ability of today's streets to convey their connection with maritime commerce is severely limited. Ship traffic in Charleston Harbor remains the primary visual connection between the Charleston HD and the historically significant role of maritime commerce in the development of the City of Charleston. As such, visual intrusions on the Charleston HD by berthed cruise vessels reflect the maritime traditions that helped make Charleston one of the foremost ports and cities on the east coast of the United States. As such, they provide a connection between the City and its maritime heritage that is difficult to obtain merely through its architectural remnants. They do not alter the historical setting of the District.

The observations presented above in relation to the design of the District and its individual elements/historic properties apply to alterations of materials

and workmanship as well. Neither of these features of the District, the individual historic properties within the District, or any contributing elements of the District will be altered in any way by the proposed project. The continued use of Building 325 as a cruise facility also will not alter these aspects of the District or its contributing elements/individual historic properties. There have been reports of sooting and particulates from vessel exhausts in residential areas near Union Pier Terminal. All analyses of air quality conducted to date reveal no threats to human health from berthed vessels, including evaluations conducted for the Daniel Island and CNC Marine Container Terminal EIS, studies specifically conducted on Union Pier Terminal (e.g., Schewer 2013), ambient air quality monitors maintained by the S.C. Department of Health and Environmental Control, and a monitor maintained at Union Pier Terminal by the SCSPA. With the more stringent U.S. and international requirements for cleaner fuels and exhaust scrubbing to be implemented over the next two years, air quality should improve beyond its current condition. Use of the proposed new facility also will reduce the volume of car and bus traffic associated with the embarkation/debarkation of cruises that start/return to Charleston. Therefore, there will be no alteration of the materials of the individual historic properties or NRHP contributing elements of the Charleston HD by cruise operations on Union Pier Terminal.

The proposed renovations to Union Pier Terminal and cruise operations on either the northern end or the southern end of Union Pier Terminal will not alter the feeling created for visitors to the Charleston HD. The District contains small to large groups of buildings that convey a sense of a city from earlier eras through its excellent collection of period architecture. These contributing elements (as well as the individual historic properties within the District) possess the characteristics of national architectural styles that reflect the growth and development of Charleston, our nation, and the world. Obviously, cruise vessels (and all other vessels that ply Charleston Harbor today other than the very few restored or reconstructed vessels of past periods of significance that occasionally visit) are modern in construction and appearance. They typically are berthed at Union Pier Terminal 8 to 12 hours per day on 85

to 104 days per year. Large container vessels ply the harbor and routinely dock along the Cooper River to the north of Union Pier Terminal much more frequently. Also, the cruise ships when berthed are visible from limited portions of the District, primarily along East Bay and Concord Streets between Vendue Range and Charlotte Street. Many modern buildings lie between the proposed cruise facility/cruise vessel berth (and between the current cruise facility and berth on the southern end of Union Pier Terminal) and most of the contributing elements of the Charleston HD. Thus, cruise vessels berthed at Union Pier Terminal create, at best, temporary visual intrusions on the easternmost portions of the Charleston HD. However, they also provide a connection (albeit a modern one) to the maritime history of the City that is difficult to visualize or feel from the renovated buildings and structures that originally served this important aspect of the city's, region's, and nation's economy. Also, there are numerous modern intrusions that fill the Charleston HD. Modern buildings are interspersed with the District's contributing elements. Streets and other infrastructure have been upgraded to twenty-first century standards to accommodate the many visitors, full-time residents, and commercial enterprises that pass through, live in, and operate in the District. Modern vehicles are present throughout the District on almost every street at every hour of the day, both in transit and parked. The District does not convey a feeling of a single historic period but rather a broad range of periods from the early eighteenth century to the mid-twentieth century. All of these modern intrusions do not alter the District to such an extent that one cannot feel the periods and themes of significance associated with individual District elements. Also, the BAR has determined that the proposed renovations of Building 322 will be compatible with the other buildings in the immediate area and thus does not detract from the Charleston HD. Thus, the proposed project does not alter the feeling conveyed by the District's elements nor its individual historic properties to such an extent that the NRHP eligibility of the District is compromised.

The proposed renovation of the northern end of Union Pier Terminal and cruise operations on the northern or southern end of the pier do not alter the associations of the District or its contributing

elements and individual historic properties. The proposed alterations to Building 322 are compatible with the other buildings in the neighborhood, and there are limited visual intrusions by modern vessels and vehicles that do not alter the feeling of the District nor interrupt the physical associations of the District's elements. Thus, cruise ships berthed on Union Pier Terminal do not alter the ability of the Charleston HD to reflect its periods of significance or its historically significant themes.

In summary, activities and actions directly associated with the construction and operation of a cruise terminal on Union Pier Terminal, to include renovation of Building 322, will not alter any aspect of the Charleston HD. Elements of the District with the highest significance lie 900 to 2,900 feet from the existing terminal and berth and 1,650 to 3,500 feet from the proposed new terminal and berth. This distance is sufficient to prevent effects to District elements that may result from noises or vibrations associated with construction activities and the operation of cruise vessels. There are a number of intervening structures that obstruct views from the District to the cruise terminal and vessel berth except for a few areas along East Bay and Concord Streets. Visual intrusions are temporary, lasting 8 to 12 hours at a time, 85 to 104 days per year (based on the current and anticipated cruise calendar). Many of the closest elements of the Charleston HD historically were associated with maritime commerce. Thus, the operation of cruise vessels does not alter their historical associations. In fact, this is the only maritime activity other than the passage of cargo vessels through Charleston Harbor that provides a visual connection to the past use and function of these buildings. Neither the proposed project nor cruise operations on Union Pier Terminal alter the location, design, setting, materials, workmanship, feeling, or association of the Charleston HD (or any of its contributing elements or individual historic properties) in such a way that the District's NRHP integrity is compromised. Therefore, the proposed project and cruise operations at Union Pier Terminal will not affect the Charleston HD.

4.3 Cumulative Effects

Two issues related to ongoing cruise operations on Union Pier Terminal may create long-range or cumulative effects to the Charleston HD when considered in combination with other activities within the District. The number of passengers on cruise vessels that visit Charleston increases the number of visitors to the District. The travel of passengers to and from the vessels that embark and debark from Charleston increases the number of personal vehicles that enter and pass through the District. The numbers of cruise passengers and their associated vehicles that passed through the Port of Charleston between 2010 and 2014 and projections of these numbers over the next five years indicate that the increase has not and will not affect the Charleston HD.

In order to address potential effects related to increased visitors and vehicles to the Charleston HD, we compared the number of cruise passengers who arrived each year from 2010 through 2014 as well as the number we anticipate will arrive from 2015 through 2020 with the number of visitors to the District over the same periods. Cruise passenger numbers and associated vehicles were taken from the calendars of cruise operations and vehicle counts from the years 2010 through 2014 provided by the SCSPA. Visitor numbers to the Charleston HD were provided by the Charleston Visitors Bureau based on the total number of visitors to Charleston County; the Bureau estimates that 80 percent of the people who come to Charleston County visit the Charleston HD (Perrin Lawson, Deputy Director Charleston Visitors Bureau, personal communication, February 2015). Note that these numbers do *not* include people visiting Berkeley or Dorchester Counties that may visit the Charleston HD during their stay in the area. Nor do the cruise passenger counts include cruise vessel crew members. Note that the SCSPA currently has set an internal limit of two cruise vessels per week (104 total per year) calling on the Port of Charleston.

We calculated the projected numbers of cruise passengers for 2015 through 2020 based on the average percent increase in the number of cruise vessels that called on the Port of Charleston over the period from 2011 through 2014 and the average number of passengers aboard visiting cruise vessels during the same period. We calculated projected numbers of

vehicles for 2015 through 2020 in a similar fashion. We calculated the projected numbers of visitors to the Charleston HD for 2015 through 2020 based on the average percent increase in visitors to the District over the period from 2010 through 2013. We calculated the number of vehicles associated with visitors to the Charleston HD based on information presented by the City of Charleston's Tourism Management Plan in April 2014. Researchers at the College of Charleston estimate that 71 percent of the visitors to the Charleston HD arrive by personal vehicle. Based on the average age of visitors (51 to 52 years old, also calculated by the College of Charleston), we estimated the average number of visitors per vehicle at three. We summarize these data in Table 4.2.

Increased visitors to the Charleston HD may affect the District adversely through their movements, creating noises and vibrations that could alter, degrade, or damage elements of the District. Personal vehicles traveling through the District could have the same effects. Also, the number of people within the District or a specific portion of the District at the same time can alter or degrade the District's feeling to the extent that it is difficult to appreciate or understand the associations of the District and its elements with its significant historic themes.

As summarized in Table 4.2, cruise passengers increased from 134,154 people in 2010 to 185,787 people in 2014. During this same period, visitors to the Charleston HD increased from 3,152,000 to 4,063,858. The average increase in cruise passengers for this period is 8.7 percent; the average increase in visitors to the Charleston HD overall is 6.7 percent. This suggests that the number of cruise passengers has increased more rapidly than the number of visitors overall. However, if one looks at the percentage of visitors represented by cruise passengers, there was a rise from 2010 to 2011 and then a steady decline through 2014 (4.3 percent to 5.5 percent to 4.6 percent, or 4.9 percent over the entire five-year period). Thus, while the number of cruise passengers has increased over this period, the percentage of the total number of visitors to the Charleston HD represented by cruise passengers has declined. The 4.9 percent average is less than the overall 6.7 percent increase in visitors reported over the period of 2010 through 2014.

Since 2011, a relatively stable number of cruise vessels has visited the Port while District visitors overall has increased. Using our projections, the percentage of cruise passengers among visitors to the Charleston HD will continue to decline. Should larger vessels begin to call after the renovation of Building 322, there will be an increase in 2017 (when larger vessels can first visit), followed by a small but steady decline. In these simulations, cruise passengers represent 3.8 to 4.8 percent (with same size vessels) or 4.8 to 6.0 percent (with larger vessels) of all visitors to the Charleston HD. This percentage is below the overall 6.7 percent annual increase in visitors expected over the next five years. Figures 4.1, 4.2, and 4.3 summarize these data.

To date, there have been no verified reports of damage or degradation to individual elements of the Charleston HD related to the increased number of visitors. Thus, neither foot traffic nor vehicle traffic within the District has been identified to date as a threatening impact to the integrity of design, materials, or workmanship of individual elements that needs to be monitored or controlled.

The feeling aspect of integrity is somewhat subjective and dependent on the nature of the individual element(s) of the District. One person may find five to 10 people too many for them to appreciate or understand a particular building, its architecture, and its associations. Another person may be capable of understanding the same building with hundreds of people on the street at the same time. Thresholds of effect in this case must be judged over a broad population of visitors to the historic property. That is, when will most visitors fail to understand or appreciate the historical significance of the Charleston HD and its many elements because there are so many people standing near or passing the same location within the District? Unfortunately, we do not have any real data collected from visitors that can be applied to this issue.

Over the entire period that witnessed increased cruise passengers, the City of Charleston (and the Charleston HD) witnessed a continuing rise in the number of overall visitors. At some point in the future, should the number of visitors continue to increase, the number of people present could begin to detract from visitors' experience. Once this happens, numbers of visitors can be expected to decline (this

assumes that the Charleston HD and its historical significance is the reason that most visitors come to Charleston). Until that threshold is reached, the contribution of cruise passengers to the degradation of the feeling one has when visiting the Charleston HD (based on the percentage of visitors who are also cruise passengers) is less than the overall increase in visitors to the District. Thus, the numbers of cruise passengers does not affect or threaten the integrity of the Charleston HD any more than the increased number of overall visitors per year.

One should consider the daily numbers of visitors as well as the overall numbers. Cruise passengers average 2,180 people per ship at present or 2,958 people if larger ships call at the Port. Cruise vessels visit the Port of Charleston 85 to 104 times per year. In addition, 78 percent of all cruise vessels calling at the Port of Charleston are embarking and debarking passengers (based on the number of visits since 2010). Thus, 4,360 to 5,916 visitors to the Charleston HD are added on these 71 to 82 days each year (2,180 to 2,958 people debarking before 2,180 to 2,958 people embark). The average number of visitors to the Charleston HD per day in 2014 was approximately 11,134 people, and is expected to increase to 16,447 people by 2020. Cruise passengers represent a substantial percentage of the average number of visitors each day (39 percent in 2014, 26.6 to 36 percent in 2020).

Although embarking/debarking cruise passengers represent 25 to 40 percent of HD visitors during the period examined, they are marshalled to facilitate movement into and out of the Port with as little disruption of local travel as possible. And, only half of the number of cruise passengers will be outside the cruise operations area during the entire period of call since embarking passengers must arrive at the terminal well before departure and debarking passengers exit over the initial few hours of a visit. Passengers are directed along a specific route to access the cruise facility as they enter and leave the Port. This route has been selected to minimize impacts to traffic entering into and circulating within the City of Charleston. Coincidentally, it minimizes the movement of people to and from the cruise facility within the Charleston HD. Traffic (carrying cruise passengers/visitors to the District) passes along East Bay Street at the northeast corner of the District

Table 4.2 Cruise vessels, cruise passengers, and visitors to Charleston HD per year.

Year	Cruise Vessels per Year			Change per Year				Cruise Passengers			Visitors to			Change Per Year			
	Port of Call	Embark/Debark	Total	#	Average		%	Counted	AVG/Ship	Estimated+1,000‡	CHS County	CHS HD (80% total)^	HD/day	#	%	AVG	
2010	16	50	66					134,154			3,940,000	3,152,000	8,636	216,000	7.4%	2010-2014	
2011	20	68	88	22		33.3%	186,502			4,210,000	3,368,000	9,227	216,000	6.9%			
2012	14	69	83	-5	6.0	2010-2015	8.7%	-5.7%	189,445		4,500,000	3,600,000	9,863	232,000	6.9%		
2013	20	69	89	6				7.2%	188,082	11-14	4,760,000	3,808,000	10,433	208,000	5.8%		6.7%
2014	16	68	84	-5				-5.6%	185,787	2,180		4,063,858	11,134				
*2015	25	71	96	12	2.0	2011-2015	2.6%	14.3%	209,251			4,336,908	11,882				
†2016			98						213,610			4,628,303	12,680				
†2017			100						217,970		295,970	4,939,278	13,532				
†2018			102						222,329		301,329	5,271,146	14,441				
†2019			104						226,689	17-20	307,689	5,625,313	15,412				
†2020			104						226,689	2,958	307,689	6,003,276	16,447				
Average (%)		78.00%															

*Scheduled

†Number of Vessels = Average % Change 2011-2015; Number of Embark/Debark Vessels= 78% of total vessels; Number of Passengers = Number of Vessels * Average/Ship 2011-2014 except 2020= limit

‡Number of Passengers with Larger Vessels (3,500 vs. 2,500 capacity) = Estimated Number of Passengers + 1,000 * 78% of Estimated Number of Vessels

^Visitors to CHS HD = 80% of total visitors to Charleston County; Number of Visitors for 2015-2020 = Average % Increase 2010-2014 each successive year

Year	No Action Alternative / Project with Same Size Vessels							Project with Larger Vessels						
	Vessels	Passengers	%Increase	HD Visitors	%P/V	HD V/day	%/day	Vessels	Passengers	%Increase	HD Visitors	%P/V	HD V/day	%/day
2010	66	134,154		3,152,000	4.3%	8,636	25.2%	66	134,154		3,152,000	4.3%	8,636	25.2%
2011	88	186,502	39.0%	3,368,000	5.5%	9,227	23.6%	88	186,502	39.0%	3,368,000	5.5%	9,227	23.6%
2012	83	189,445	1.6%	3,600,000	5.3%	9,863	22.1%	83	189,445	1.6%	3,600,000	5.3%	9,863	22.1%
2013	89	188,082	-0.7%	3,808,000	4.9%	10,433	20.9%	89	188,082	-0.7%	3,808,000	4.9%	10,433	20.9%
2014	84	185,787	-1.2%	4,063,858	4.6%	11,134	19.6%	84	185,787	-1.2%	4,063,858	4.6%	11,134	19.6%
2015	96	209,251	12.6%	4,336,908	4.8%	11,882	18.3%	96	209,251	12.6%	4,336,908	4.8%	11,882	18.3%
2016	98	213,610	2.1%	4,628,303	4.6%	12,680	17.2%	98	213,610	2.1%	4,628,303	4.6%	12,680	17.2%
2017	100	217,970	2.0%	4,939,278	4.4%	13,532	16.1%	100	295,970	38.5%	4,939,278	6.0%	13,532	21.9%
2018	102	222,329	2.0%	5,271,146	4.2%	14,441	15.1%	102	301,329	1.8%	5,271,146	5.7%	14,441	20.5%
2019	104	226,689	2.0%	5,625,313	4.0%	15,412	14.1%	104	307,689	2.1%	5,625,313	5.5%	15,412	19.2%
2020	104	226,689	0.0%	6,003,276	3.8%	16,447	13.3%	104	307,689	0.0%	6,003,276	5.1%	16,447	18.0%

P= Cruise Passengers

V/HD V= Historic District Visitors

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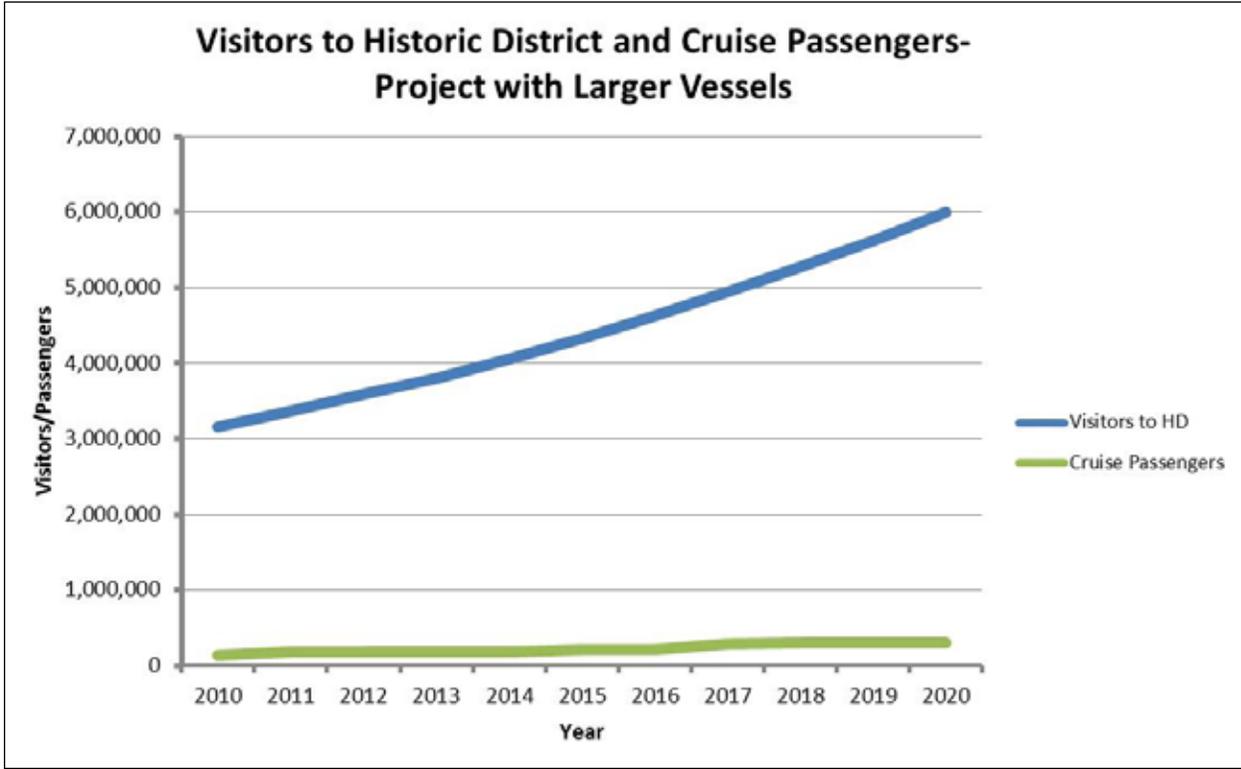
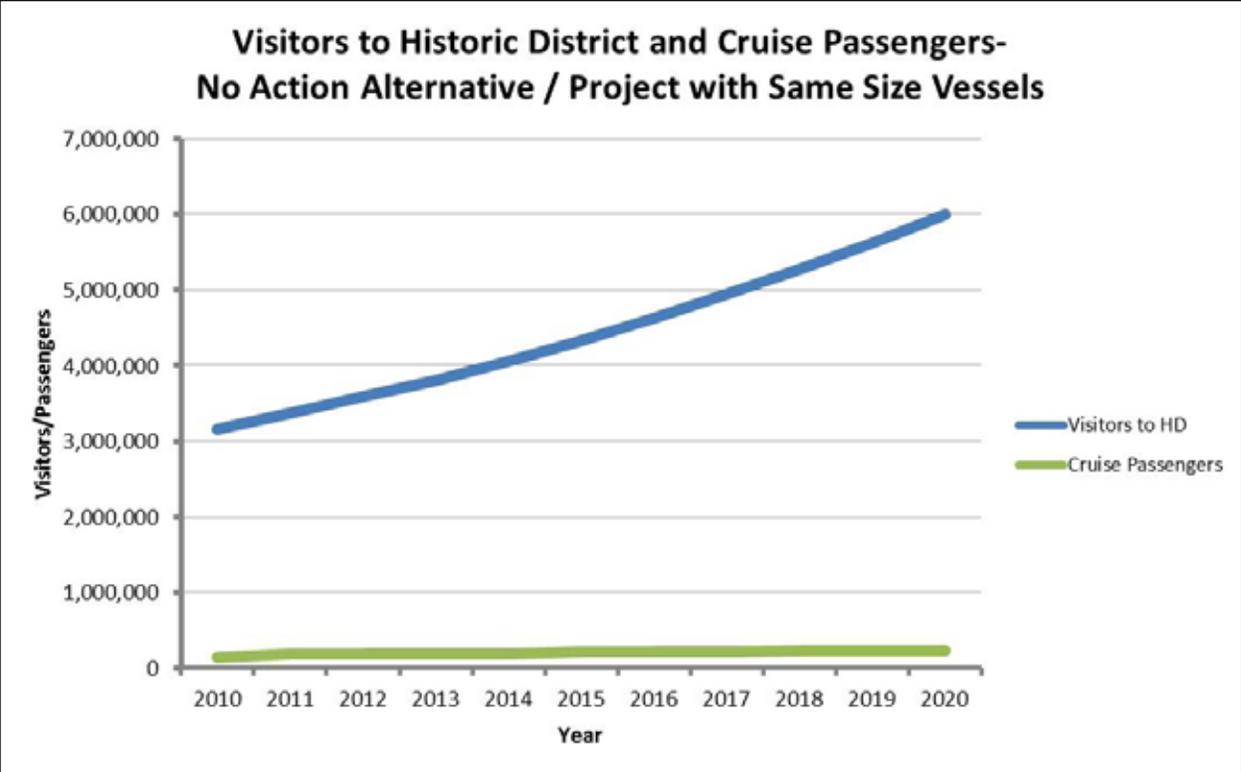


Figure 4.1 Number of cruise passengers and visitors to Charleston HD 2010-2015.

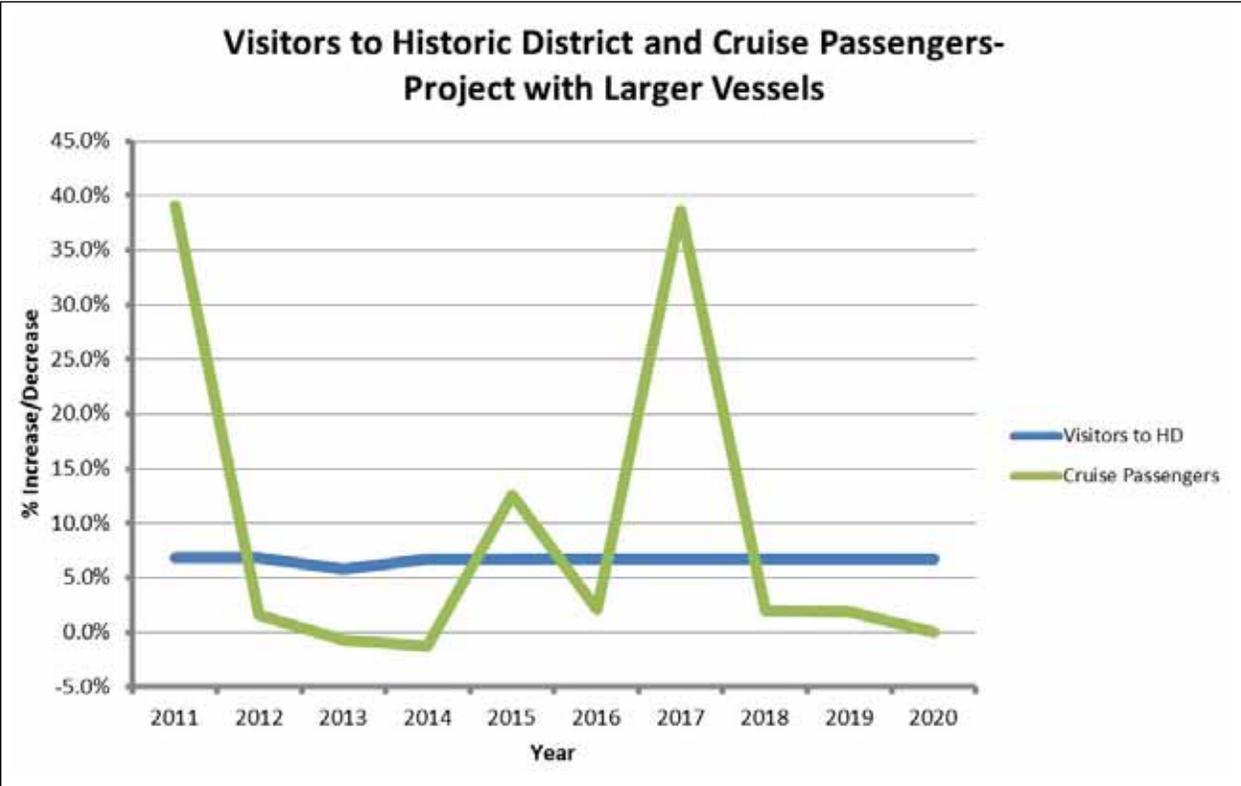
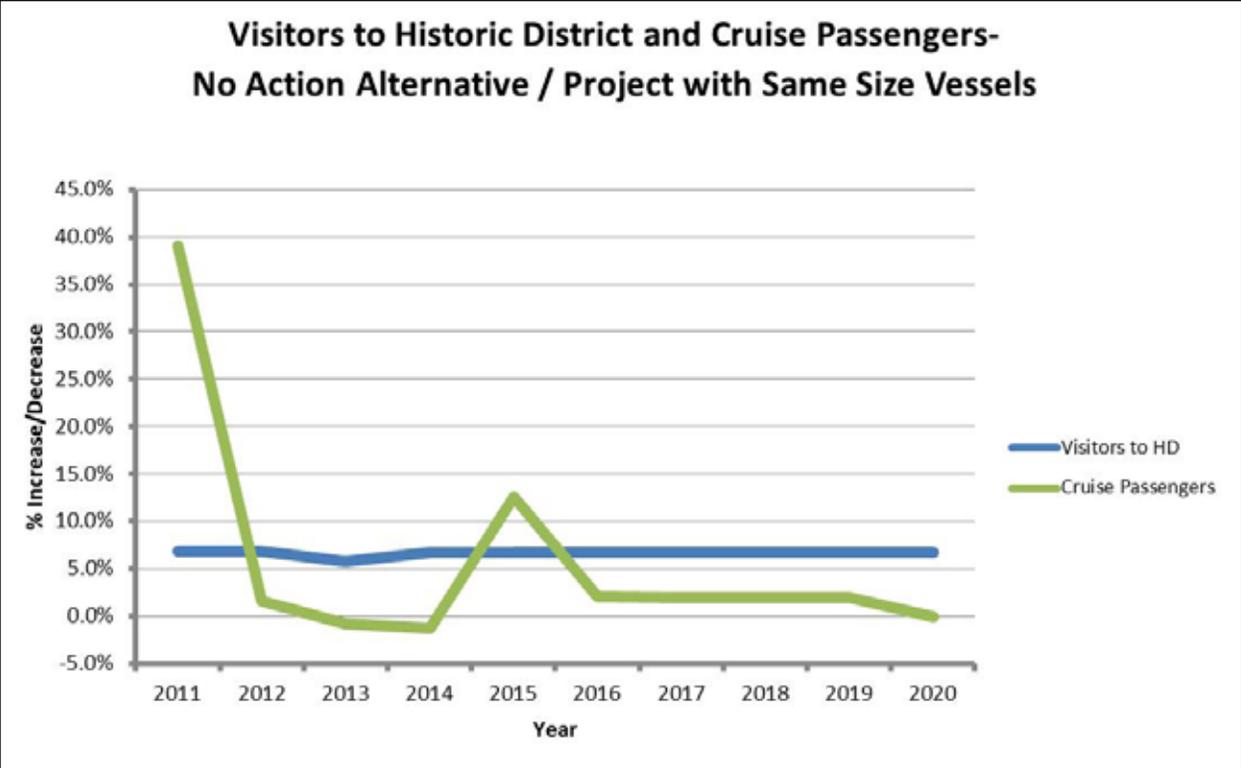


Figure 4.2 Relative changes in cruise passengers and visitors to the Charleston HD 2011-2015.

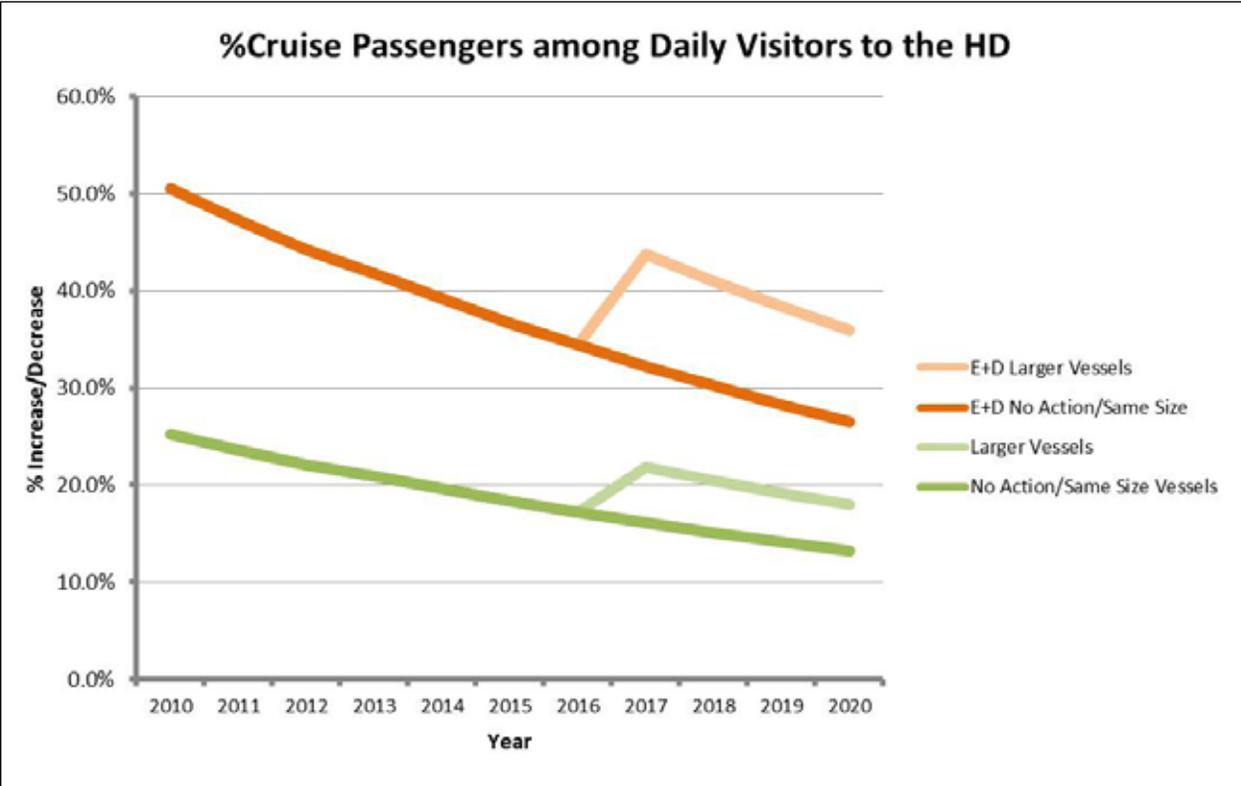
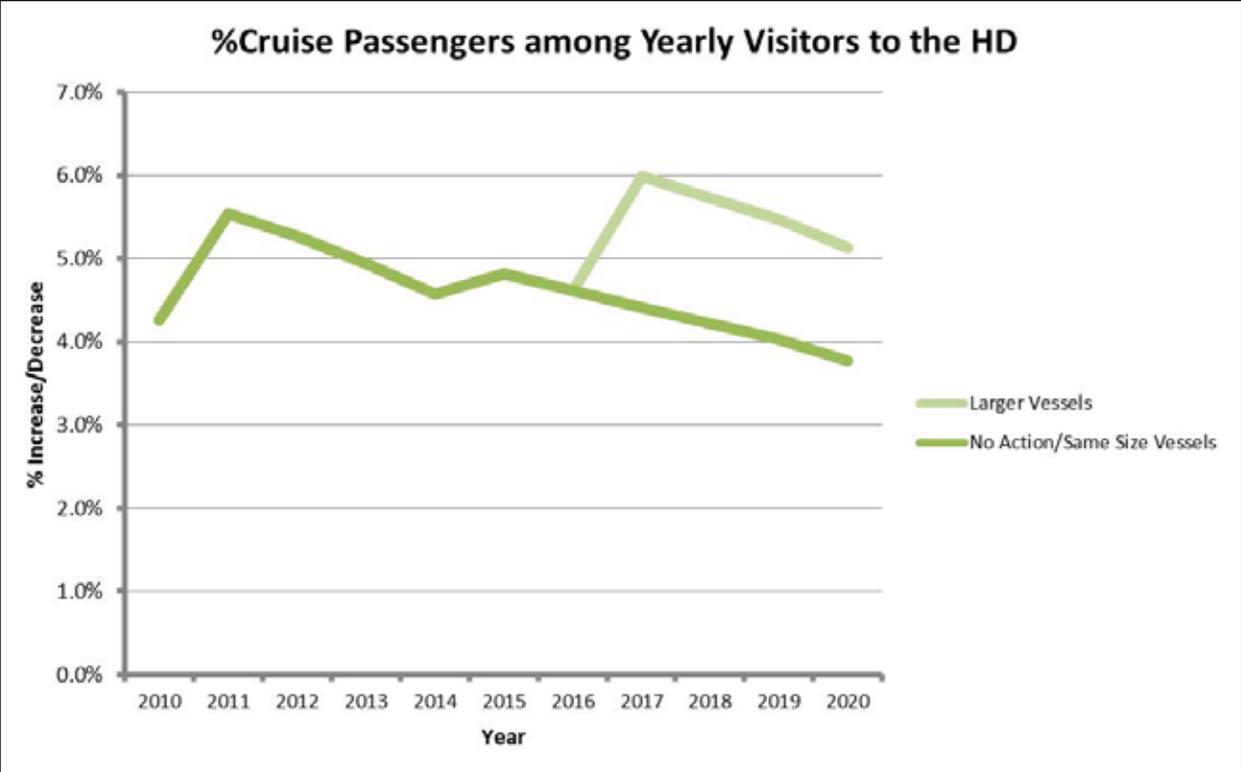


Figure 4.3 Relative frequency of cruise passengers and visitors to the Charleston HD 2010-2020.

and then proceeds via Chapel, Washington, Charlotte, and Concord Streets, where it enters the Port of Charleston and the parking areas for cruise operations (current and proposed). Figure 4.4 presents this route. The route parallels the eastern boundary of the Charleston HD for four blocks along East Bay Street, approximately one block along Charlotte Street, and two blocks along Concord Street. It passes through the District between Charlotte and Calhoun Streets. The portion of the District east of East Bay Street and south of Charlotte Street contains one building, the remnants of the city's former gasification plant, now owned by South Carolina Electric and Gas Company, that serves as an electrical substation and marshalling area for their vehicles and equipment. It is surrounded by a high brick wall. Other elements of the District in this area include the former location of Gadsden's Wharf (Calhoun to Laurens Streets, Washington Street to Charleston Harbor), which also once contained Ansonborough Homes, one of the first urban housing projects in the United States (now demolished). This area currently is being developed by the City of Charleston as Gadsdenborough Park. Thus, there are few architectural elements of the District along this route that may be affected by the movement of people or vehicles (see below). Foot and vehicle traffic is limited to the streets and sidewalks and several feet of fill covers most areas beyond the street not covered by buildings. This fill prevents disruptions or intrusions into any archaeological deposits associated with the historic structures and buildings that once stood in this portion of the District.

Using the same threshold as above, we would expect the number of visitors overall to decline if the increased number of visitors was affecting the feeling of the District. To date, the City has not witnessed such a decline. Therefore, the increased number of visitors to the Charleston HD derived from cruise passengers does not affect the Charleston HD. Thus, the movement of cruise passengers into and out of the Port of Charleston along this route will not affect the Charleston HD.

As noted above with regard to foot traffic, there are no verified reports of damage or degradation to specific elements of the District created by vehicle traffic. Thus, the effect of vehicle traffic associated with cruise operations within the Port of Charleston

is no greater than that associated with vehicle traffic related to overall visitation to the Charleston HD or daily movement of residents, workers, and service vehicles into and out of the District.

If we compare the number of personal vehicles associated with cruise passengers and those associated with other visitors, there are more personal vehicles associated with normal tourist visits than cruise passengers. Based on three visitors per vehicle, approximately 1,026,402 personal vehicles will visit the Charleston HD in 2015 with this number increasing to 1,420,775 by 2020. Personal vehicles associated with cruise vessels during this same period are approximately 40,243 in 2015 and increasing to 43,597 or 59,175 in 2020, for vessels of the same size or larger vessels respectively. This represents 3.9 percent of personal vehicles visiting the Charleston HD in 2015 declining to 3.1 percent in 2020. Even if larger vessels call at the Port commencing in 2017, the relative frequency increases to 4.9 percent in 2017 but falls to 4.2 percent by 2020. This percentage of visitor vehicles associated with cruise passengers falls below the 6.7 percent increase estimated for the visitors' vehicles overall for this period. Table 4.3 and Figure 4.5 summarizes these data.

Like passengers, one should consider the impact of vehicles per day as well. Approximately 2,812 personal vehicles will enter the Charleston HD daily during 2015 carrying visitors; this number will increase to 3,893 by 2020 (see Table 4 and Figure 4.6). This does not include vehicles operated by residents and workers or service vehicles. On the 71 to 82 days per year when a cruise ship is embarking/debarking passengers over the same period, 1,134 to 1,076 vehicles (567 to 538 for embarking plus 567 to 538 for debarking passengers) will enter the Charleston HD carrying cruise passengers to and from the berthed vessel. Cruise related vehicles represent approximately 40 percent of the daily visitor vehicle traffic in 2015 and approximately 27 percent of the daily visitor vehicles in 2020. If larger cruise ships become the norm, the number of personal vehicles associated with cruise passengers will increase to 731 vehicles per cruise based on an average of 2017 to 2020 estimates (1,462 total for embarking and debarking passengers), or 36 to 43 percent of District visitors' vehicles per day over the same period. While this represents a sizeable portion of visitor vehicles to

the District on these days, the route and timing of vehicles into and out of the Port reduces their impact. Cruise related personal vehicles are marshalled onto a route along the east side of the Charleston Peninsula that minimizes as much as possible passage through the Charleston HD (see Figure 14). Thus, the effect of vehicles has been minimized to the greatest extent possible. Further, use of the proposed new cruise facility at a renovated Building 322 will reduce the number of vehicles necessary to support the embarking and debarking passengers by consolidating parking nearer to the cruise facility.

Also, it is unlikely that all of the vehicles used by the two groups of passengers associated with each embarking/debarking cruise vessel will actually be in operation simultaneously within the District. Vehicles must marshal along the route in order to deliver passengers to the cruise terminal, with many remaining at the Port where they are stored until the cruise vessel returns and debarking passengers collect their vehicles. Thus, the percentage of cruise related personal vehicles per day may be closer to 14 to 17 percent or 19 to 22 percent, for same-size or larger vessels respectively, from 2015 to 2020. All of these actions prevent potential impacts to the District. Therefore, vehicular traffic related to cruise operations on Union Pier Terminal do not affect the Charleston HD.

Table 4.3 Personal vehicles associated with cruise vessels, cruise passengers, and Charleston HD visitors.

Year	Embarking / Debarking Cruise Vessels								Visitors to the Charleston HD						
	No Action Alternative / Project with Same Size Vessels				Project with Larger Vessels				HD Visitors	By Vehicle†	Vehicles‡	Vehicles/Day			
	Vessels	Passengers	Vehicles	Passengers/Vehicle	Vehicles/Vessel	Passengers	Vehicles	Vehicles/Vessel							
*2010	50	104,725	25,801		516	104,725	25,801	516	3,152,000	2,237,920	745,973	2,044			
*2011	68	145,590	35,868		527	145,590	35,868	527	3,368,000	2,391,280	797,093	2,184			
2012	69	147,887	36,736	4	532	147,887	36,736	532	3,600,000	2,556,000	852,000	2,334			
2013	69	146,823	34,947	4.2	506	146,823	34,947	506	3,808,000	2,703,680	901,227	2,469			
2014	68	145,031	36,654	4	539	145,031	36,654	539	4,063,858	2,885,339	961,780	2,635			
*2015	71	163,348	40,243		567	163,348	40,243	567	4,336,908	3,079,205	1,026,402	2,812			
*2016	76	166,751	41,082		541	166,751	41,082	541	4,628,303	3,286,095	1,095,365	3,001			
*2017	78	170,154	41,920		537	231,044	56,921	730	4,939,278	3,506,887	1,168,962	3,203			
*2018	79	173,557	42,759		541	235,227	57,952	734	5,271,146	3,742,514	1,247,505	3,418			
*2019	81	176,960	43,597		538	240,192	59,175	731	5,625,313	3,993,972	1,331,324	3,647			
*2020	81	176,960	43,597		538	240,192	59,175	731	6,003,276	4,262,326	1,420,775	3,647			
Average 2012-2014			4.1												
*Number of Vehicles = Number of Passengers / Average Passengers per Vehicle 2012-2014								†Number of HD Visitors * 71%				‡HD Visitors by Vehicle / Estimated # per vehicle (3.0)			
Year	No Action Alternative / Project with Same Size Vessels							Project with Larger Vessels							
	Vessels	Vehicles	Vehicles/Vessel	Vehicles to HD	Vehicles/Day	%Total	%/day	Vessels	Vehicles	Vehicles/Vessel	Vehicles to HD	Vehicles/Day	%Total	%/day	
2010	50	25,801	516	745,973	2,044	3.50%	25.20%	50	25,801	516	745,973	2,044	3.50%	25.20%	
2011	68	35,868	527	797,093	2,184	4.50%	24.20%	68	35,868	527	797,093	2,184	4.50%	24.20%	
2012	69	36,736	532	852,000	2,334	4.30%	22.80%	69	36,736	520	852,000	2,334	4.30%	22.80%	
2013	69	34,947	506	901,227	2,469	3.90%	20.50%	69	34,947	532	901,227	2,469	3.90%	20.50%	
2014	68	36,654	539	961,780	2,635	3.80%	20.50%	68	36,654	518	961,780	2,635	3.80%	20.50%	
2015	71	40,243	567	1,026,402	2,812	3.90%	20.20%	71	40,243	565	1,026,402	2,812	3.90%	20.20%	
2016	76	41,082	541	1,095,365	3,001	3.80%	18.00%	76	41,082	539	1,095,365	3,001	3.80%	18.00%	
2017	78	41,920	537	1,168,962	3,203	3.60%	16.80%	78	56,921	730	1,168,962	3,203	4.90%	22.80%	
2018	79	42,759	541	1,247,505	3,418	3.40%	15.80%	79	57,952	734	1,247,505	3,418	4.60%	21.50%	
2019	81	43,597	538	1,331,324	3,647	3.30%	14.80%	81	59,175	731	1,331,324	3,647	4.40%	20.00%	
2020	81	43,597	538	1,420,775	3,893	3.10%	13.80%	81	59,175	731	1,420,775	3,893	4.20%	18.80%	

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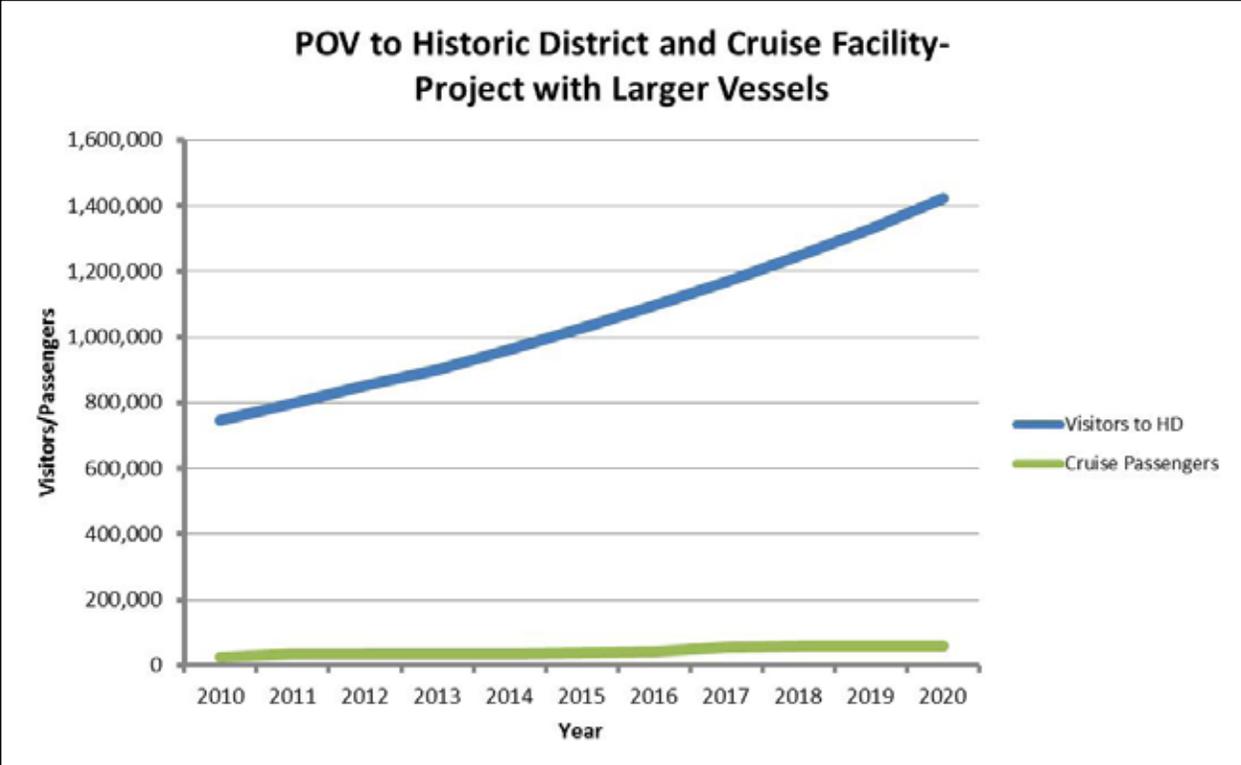
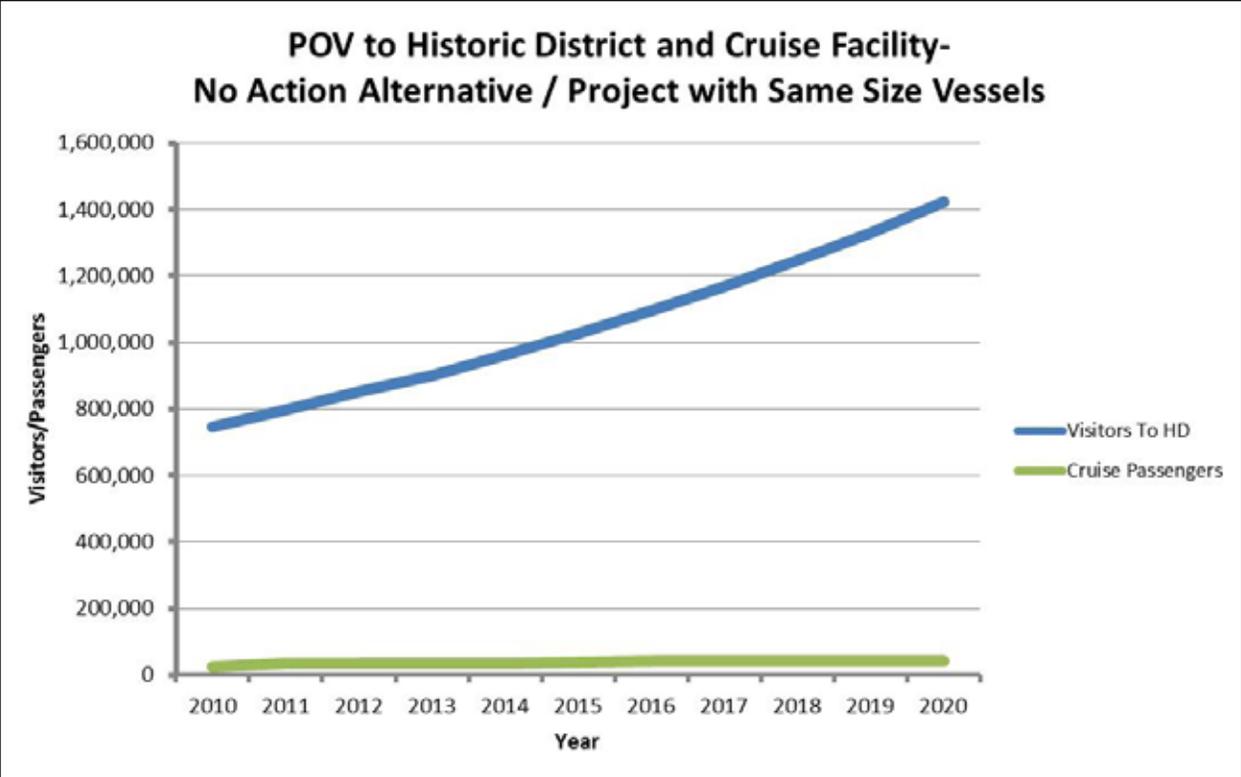


Figure 4.5 Number of personal vehicles (POV) carrying visitors to the Charleston HD and the cruise facility.

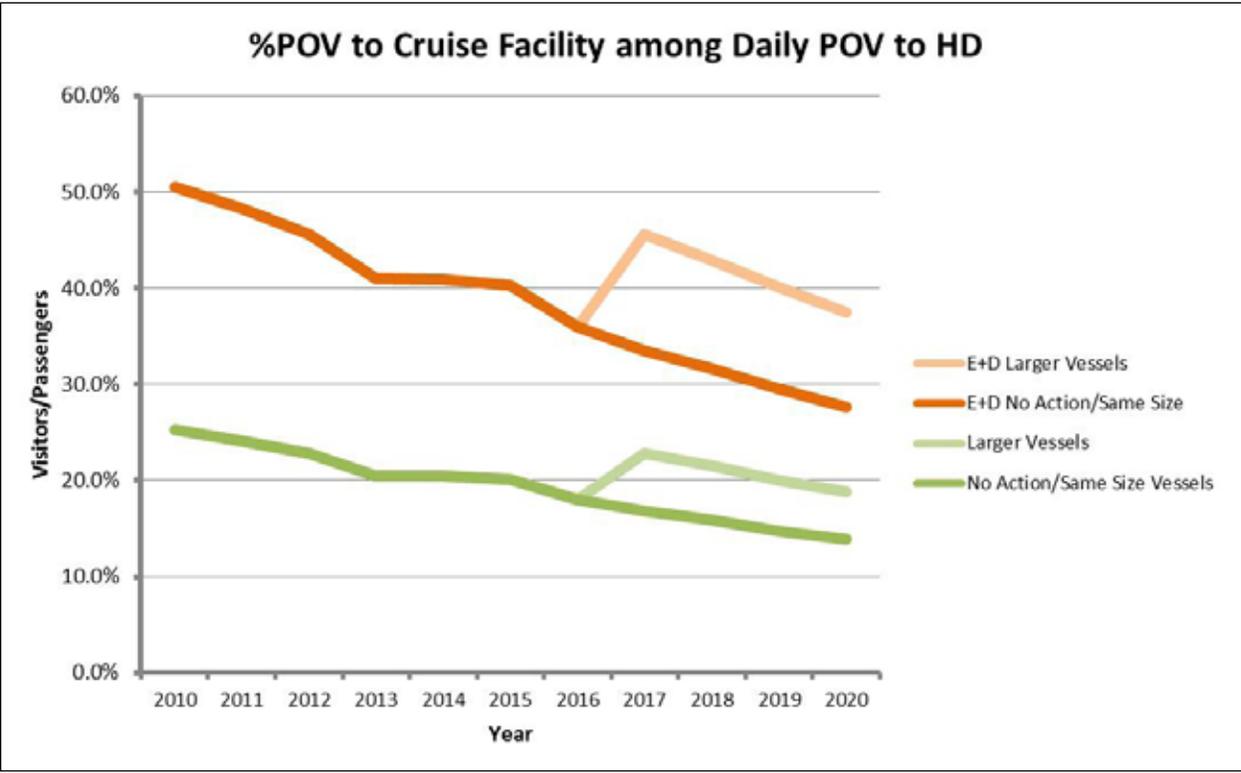
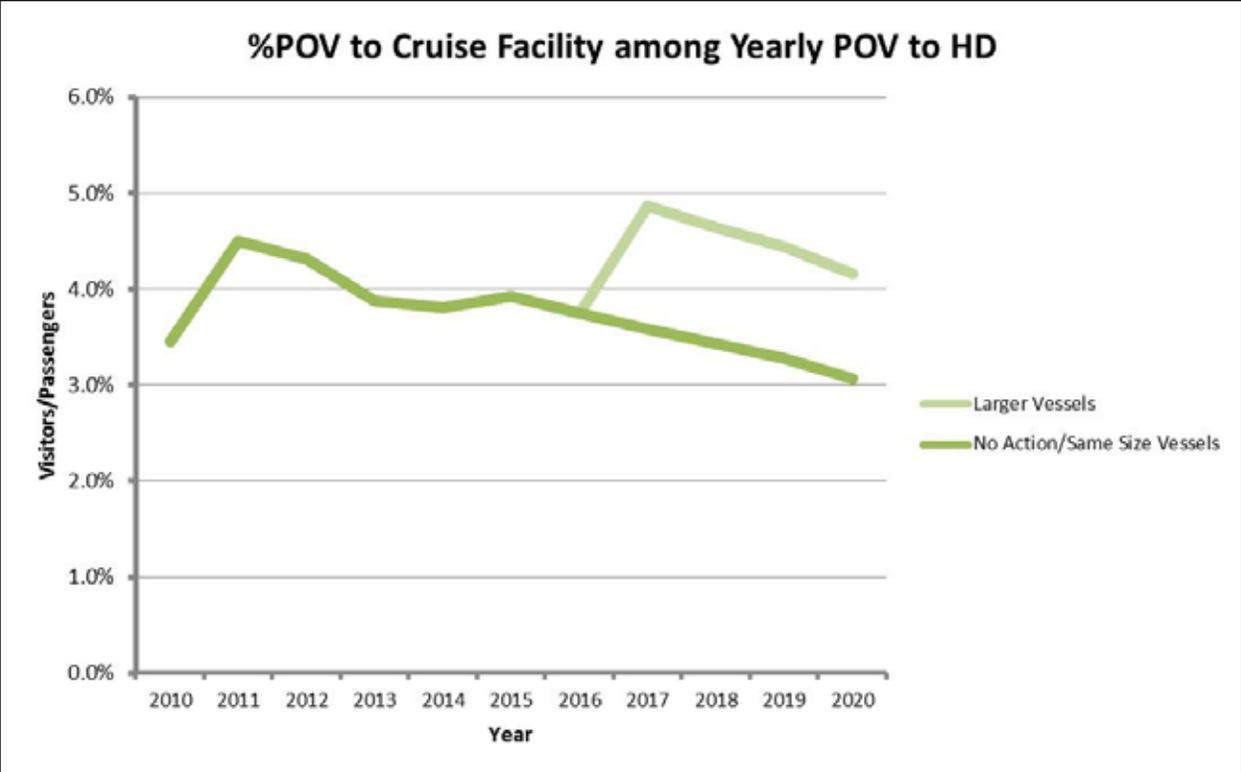


Figure 4.6 Relative frequency of POV carrying visitors to the Charleston HD and the cruise facility.

5.0 Summary

The Union Pier Terminal APE is adjacent to two historic properties; the Fleet Landing Building and the Charleston HD. Renovation of Union Pier Terminal will not alter the location, design, setting, materials, workmanship, feeling, or association of the Fleet Landing Building. The building was originally constructed on a working wharf/pier that served numerous commercial and military vessels at the time of construction. It was designed to absorb or withstand vibrations associated with maritime commerce and traffic. The Proposed Project will not affect the Fleet Landing Building. Also, cruise operations on the southern end of Union Pier Terminal have not altered location, design, setting, materials, workmanship, feeling, or association of the Fleet Landing Building. Therefore, continued cruise operations at the southern end of Union Pier Terminal will not affect the Fleet Landing Building.

Review of the historic development of Union Pier Terminal and its historical association with the Charleston HD provides a starting point for evaluating the effect of cruise ship operations on the District. Although the City of Charleston developed as a port city, there are few elements of the District that retain their historical associations with the wharves, docks, and piers that provided the connection between vessels carrying people and goods into and out of the city. Union Pier Terminal is a relatively modern construction that encapsulates historic wharves and buildings. It retains its connections with maritime commerce through its active use as a cruise passenger and cargo terminal. It provides a visible connection for the Charleston HD with its maritime past that is not readily visible elsewhere.

Union Pier Terminal borders the Charleston HD along its southwest edge and lies one to two blocks from the District along its central and northern reaches. There are numerous modern commercial and industrial buildings, some on Union Pier Terminal and others within the intervening blocks between the District and the pier, that separate Union Pier Terminal from the District and some of its most significant elements. Given the distance between the elements and the present and proposed cruise terminals (900 to 2,900 feet and 1,650 to 3,500 feet respectively) as well as the intervening buildings

and facilities, the operation of a cruise terminal (at its present location or the proposed location) does not alter individual elements of the District due to noise, vibration, or visual intrusions. The temporary berthing of cruise vessels at Union Pier Terminal (96 to 104 times per year over the next five years) and the passage of cruise vessels through Charleston Harbor do not intrude upon the District in such a fashion that the associations of individual District elements with historical themes and events cannot be understood or appreciated. Thus, cruise terminal operations at Union Pier Terminal, at the present cruise terminal (No Action Alternative) or at a renovated Building 322 (Proposed Project) will not affect the Charleston HD.

The increased numbers of visitors and vehicles to the Charleston HD associated with cruise operations do not alter the feeling of the District and do not detract from visitors' ability to understand and appreciate the associations of District elements with significant historical themes and events. They have not deterred or slowed an overall increase in visitors to the District, and there is no expectation at present that a decline in visitation is expected. The marshalling of cruise passengers and their associated personal vehicles along routes that travel primarily adjacent to the District helps to minimize or prevent effects. Thus, the increased number of visitors who are cruise passengers and their personal vehicles do not affect the Charleston HD.

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