

with the survey results and recommendations of NRHP eligibility for individual resources. As part of the Section 106 consultation process, the Corps, FRA, SHPO, Advisory Council on Historic Preservation (ACHP), the Muscogee (Creek) Nation, and the Applicant have met throughout 2016 to date to discuss the Proposed Project with respect to historic and archeological resources in the Cultural Resources study area. A revised final survey was prepared and submitted to SHPO in December 2016 (Appendix G). SHPO's final concurrence with the survey results and effects determinations is the signed Cultural Memorandum of Agreement (MOA).

3.11 VISUAL RESOURCES AND AESTHETICS

3.11.1 Introduction

The affected environment considers the location of both the visual resources and the viewers (i.e., in relatively close proximity to the Project footprint) within the study area. For the purposes of this analysis, the Visual Resource study area (VRSA) has been defined as within one-half mile of the boundaries of the Project site (Figure 3.11-1). As the Project site is flat, this prescribed VRSA is spatially sufficient to address the potential visual impacts that may result from the construction and operation of Alternative 1 (Proposed Project) or one of the alternatives. This section identifies and discusses the visual setting within the VRSA and includes a discussion of viewer sensitivity.

Visual resources are those visible natural or manmade elements that are particularly valued by a community and are afforded protection from alteration or obstruction through an adopted policy or regulation. Examples are water or land formations, trees, parks, buildings or clusters of buildings, or other distinctive manmade elements. The visual character of a resource is defined by its form, line, color, and texture. For example, building height and bulk, the density of vegetation, and distinct architectural styles would contribute to the visual character of a structure.

Viewer sensitivity is the degree to which viewers are sensitive to changes in the visual character of visual resources in the VRSA.

3.11.2 Visual Setting

Visual setting includes scenic views, natural features, built features, and existing light and glare. A landscape has two primary components: natural features, such as topography and vegetation, and built features, such as roads, buildings, and fences. In combination, natural and built features create the form, line, height, colors, and textures of an area—the visual setting of the landscape. Slightly more than 20 percent of land use in the City of North Charleston is industrial, 10.5 percent is single-family residential, and 22.1 percent is multi-family residential. The largest land use in the City of North Charleston is vacant, at nearly 29 percent (City of North Charleston 2008a).

The Project site is located within the CNC and is adjacent to mixed residential and commercial land uses within portions of both the City of North Charleston and the City of Charleston. The River Center project site is located north and slightly west of the Proposed Project, north of McMillan Avenue, and would be located between Noisette Boulevard and St. Johns Avenue. It would occupy former navy base housing sites as well as the abandoned naval hospital property fronting Noisette Boulevard.

Visual setting includes:

- scenic views
- natural features
- built features
- existing light and glare

3.11.2.1 Scenic Views

Scenic views can be either panoramic (over a broad expanse) or focal (viewable only close to the visual resource). Because of the flat topography and mature trees in the VRSA, scenic views are limited, and include the scenic overlook at Riverfront Park, the banks of Noisette Creek, and views of the Cooper River facing east from near the water's edge (i.e., beyond the existing and adjacent Port facilities east of the site). There are no long- or middle-distance views of Noisette Creek, the marshlands, Riverfront Park, or the Cooper River from viewpoints south of Noisette Creek; these natural features are only visible to a viewer in the immediate vicinity. North of Noisette Creek, the residential uses at the southern end of the Olde North Charleston neighborhood have views of Noisette Creek facing south, as well as Riverfront Park across the Creek. A portion of the Cooper River may also be viewed from this location. Down the view corridors of the north-south streets of St. Johns Avenue, Noisette Boulevard, and North Hobson Avenue, narrow and very limited views of the Project site exist. Similarly, the northern portion of the Project site may be narrowly viewed facing east from McMillan and Reynolds Avenues. The historic resources in Riverfront Park are only visible from close in to the resource. Ben Tillman School, Ben Tillman Homes, and Chicora School are visible from motorists on Spruill Avenue, as well as residential uses in the immediate vicinity of the resource. Spruill Avenue is not a designated state scenic highway.

Scenic views can be either panoramic (over a broad expanse) or focal (viewable only close to the visual resource).

3.11.2.2 Natural Features

Natural features consist of vegetation, landforms, and watercourses. The topography of the area is flat coastal plain, with no hills, mountains, or rock outcroppings. The dominant natural features within the VRSA are the Cooper River to the east, Noisette Creek to the north, and Shipyard Creek to the south of the Project sites. Mature vegetation exists throughout the western and northern portions of the VRSA. Trees are 20 to 50 feet in height. Residential neighborhoods include native vegetation and mature trees. There are residual marsh floodplains containing wetland vegetation along Noisette Creek and more

Natural features consist of vegetation, landforms, and watercourses

extensive native plants and trees within two of the former naval base housing areas located east of Noisette Boulevard and St. Johns Avenue.

Noisette Creek retains a primarily natural visual appearance and is used for recreational purposes, primarily by kayakers. Shipyard Creek is used for recreational purposes, while the Cooper River is used for recreational purposes and shipping operations.



Aerial of the project site facing north.



Aerial of River Center project site facing west (Riverfront Park lower right foreground)

3.11.2.3 Built Features

Built features are any man-made structures, roads, fencing, and railroad tracks. The Cooper River is dredged for commercial shipping; Noisette and Shipyard Creeks are currently crossed by a number of bridges/trestles and pipelines.

Built features are any man-made structures, roads, fencing and railroad tracks.

The main north-south road in the VRSA is Spruill Avenue (SR 10-32), which runs just west of both Project sites. Other north-south roadways include Noisette Boulevard and North Hobson Avenue. East-west roads include numerous small neighborhood streets as well as larger roads with access to the Port, such as McMillan Avenue, which runs between the Project site and the River Center project site, and Reynolds Avenue, which is farther south and directly accesses the Project site. Viaduct Road accesses the Project site at its southern boundary. There is no designated scenic highway in the VRSA (SCDOT 2014).

The VRSA contains numerous rail tracks, some of which are not in operation. The railroad ROW paralleling Spruill Avenue is currently not in use. This ROW south of English Street is lined with large trees that mostly obscure views of the tracks, with the tree cover thinning with southern progression along the ROW. North of English Street, the ROW parallels Spruill Avenue and is visible from residential uses west of Spruill Avenue. The line of mature trees along the ROW is approximately 35 to 40 feet in height and obscures views of the industrial



Example of railroad tracks in the VRSA.

areas to the east except for limited views along east-west roads, such as along McMillan Avenue and Reynolds Avenue. The Project site is not visible from the residential uses to the west due to mature vegetation and structures except for down view corridors such as McMillan Avenue and Reynolds Avenue, which are further discussed below. The River Center project site is also not visible from residential areas north of Noisette Creek. The River Center project site is visible from residential uses along St. Johns Avenue east of the ROW.

Operational rail tracks farther east traverse the VRSA, including several freight rail lines servicing the existing CSX and Norfolk Southern intermodal facilities and Port of Charleston. There is an at-grade rail crossing at Spruill Avenue and Bexley Street. The VRSA also contains numerous one- to two-story industrial buildings, residential neighborhoods, telephone poles, and electrical lines.

The VRSA west of the Spruill Avenue is predominantly residential, with newer developments north of McMillan Avenue and older, single-family residential areas south of McMillan Avenue. Commercial uses are more prevalent in the northern portion of this area, but there are smaller, neighborhood commercial uses intermittently along Spruill Avenue. The commercial uses along Spruill Avenue are primarily community-scale barbershops, convenience stores, delis, social clubs, and small auto mechanic shops.

Visual evidence of the former naval base exists throughout the eastern portion of the VRSA (east of Spruill Avenue), where base buildings remain, either vacant or having been adapted to industrial or commercial uses, and roads and parking lots remain vacant and show varying degrees of wear and tear. The vacant naval hospital buildings remain west of Noisette Boulevard in the upper portion of this area, part of the River Center project site. The study area also contains numerous one- to two-story industrial buildings, neighborhood commercial use, residential neighborhoods, telephone poles, and electrical lines.



Example of commercial buildings in the VRSA. On Baxter Street looking southeast at Spruill Avenue.

East of Spruill Avenue north of Shipbuilding Way lies Riverfront Park, located on the banks of the Cooper River within the former naval base officer housing area. Mature trees abound in the park, which is a memorial to the base and the military and civilian personnel who served there when the base was in operation. Today, the park includes active and passive recreational activities along with historical memorial exhibits of the U.S. Navy and the Charleston naval base. The park facilities include a scenic overlook on the Cooper River, fishing pier, recreational trails, and naval memorial exhibits. Open space within the park serves numerous community purposes for festivals, displays, and exhibits.



In Riverfront Park looking east at Cooper River.

There are small mixed-use neighborhoods on both sides of St. Johns Avenue and North Hobson Avenue (the site of former naval officer quarters) that form a visual sub-unit due to similar land uses and visual characteristics within the east visual unit. There are many examples of Revival Period architecture in this area (Pennsylvania Historic & Museum Commission 2014). There is mature vegetation in this sub-unit, consisting of trees and native shrubs.



Former Navy Base housing.

South of Riverfront Park are large-scale, active waterfront commercial/industrial uses. Industrial-scale infrastructure, including wharves, dry docks, railroad lines, and cranes, are evident within the industrial area. The eastern portion of the VRSA has been used for marine support facilities both before and during the use of the land for the naval base.



Overall, while the VRSA is in an urban context, the western portion of the area, west of the ROW, gives the appearance of a country-like setting, with large lots, mostly single-story housing, local businesses along the major access roads, and grassy open spaces and mature trees.

Residential areas in the VRSA include the neighborhoods of Chicora-Cherokee, River Place, Horizon Village, Olde North Charleston, Windsor, and Union Heights. Another residential neighborhood to the north is Park Circle, but this neighborhood is outside of the VRSA.

Chicora-Cherokee—The Chicora-Cherokee residential neighborhood lies on both sides of Spruill Avenue and is bisected by North Carolina Avenue. The portion of the neighborhood east of North Carolina Avenue is the closest land use to the Project site, with the neighborhood streets and the first row of housing terminating within the Project site boundary. This neighborhood is situated on two-lane streets accessed from North Carolina Avenue, each terminating within the Project site boundary. A large portion of this neighborhood lies southwest of North Carolina Avenue and across Spruill Avenue.



Chicora-Cherokee Neighborhood on Orvid Street looking east at Proposed Project Site.

The visual character of this neighborhood is urban residential, with sidewalks, overhead power lines, and landscaping. The neighborhood landscape includes an empty school, boarded-up homes, and shuttered businesses. The homes are primarily one and two stories, consisting of stucco and wood siding and shingle roofs. The homes present a relatively cohesive ranch architectural style. There are



Chicora-Cherokee Neighborhood - on Leland Street looking east at Proposed Project Site.

scattered multi-family residential units that have an architectural style dissimilar to the single-family homes. There is a recently dedicated 2,300-square-foot playground adjacent to the Chicora Place Community Garden, where residents volunteer time and grow fresh produce and vegetables. This garden is one block from the Project boundary. This neighborhood includes Sterett Hall⁶², a community recreation center. Storefronts and churches line

⁶² Sterett Hall was closed and demolished in spring 2016.

Reynolds Avenue as it cuts through the Chicora-Cherokee Neighborhood between Rivers Avenue and Spruill Avenue.

River Place and Horizon Village—Both River Place and Horizon Village are urban redevelopment areas with single- and multi-family residential and mixed community and recreational facilities within. River Place contains single-family homes with a modern architectural style that is cohesive throughout the development. Horizon Village consists of urban townhomes, of a cohesive modern architecture, with community commercial uses along Spruill Avenue. These neighborhoods include private recreational facilities such as playgrounds, ball fields, swimming pools, and community centers. The current views facing east from River Place and Horizon Village are of Spruill Avenue, an urban arterial, and the abandoned railroad ROW to the east of this arterial roadway.

Olde North Charleston—Residential land uses in Old North Charleston, between Spruill Avenue and O’Hear Avenue, include single- and multi-family dwelling units that back up to the currently inactive railroad ROW. Only the southernmost portion of this neighborhood is within the VRSA. There are no sidewalks in this area, and overhead power and telephone lines are highly visible. Similar to some of the other residential neighborhoods in the VRSA, the area consists of single-family ranch-style homes on medium to large lots, with community commercial uses located along collector roads. Mature trees are prevalent. Trains currently traverse along Spruill Avenue and Noisette Boulevard in close proximity to this residential area. Neither of the Project sites is visible from these residential uses due to intervening vegetation.



Hunley Waters neighborhood

Windsor and Union Heights —Located in the southern portion of the VRSA, residential housing in these neighborhoods is concentrated between Meeting Street/Carner Avenue and Spruill Avenue. The Windsor Neighborhood is located directly north of Union Heights. The visual character of these neighborhoods is similar to the Chicora-Cherokee Neighborhood, with sidewalks, overhead power lines, and landscaping. The homes are primarily one and two stories, consisting of stucco and wood siding and shingle roofs. The homes present a relatively cohesive ranch architectural style. There are scattered multi-family residential units that have an architectural style dissimilar to the single-family

homes. A variety of local businesses are concentrated along the neighborhood boundaries. Churches are scattered throughout the neighborhoods.

3.11.2.4 Existing Light and Glare

The existing lighting levels in the shipyard are low, as there are no nighttime port activities. Lighting is limited to crane and security lighting, which does not produce a substantial level of sky glow; however, views of the night sky are somewhat obscured because of existing urban development. Lights on gantry cranes, as well as for other port activities, are visible to the St. Johns neighborhood, recreational users on Noisette Creek and residents in the southern part of Olde North Charleston due to the height of the infrastructure. There is negligible night glow from port operations visible from the residential uses. Light from truck headlights is visible along the existing port haul routes to SR 52 and I-26. Minimal lighting exists at Riverfront Park. The mixed uses along St. Johns Avenue have lighting typical of residential neighborhoods and small neighborhood commercial, and there is some street lighting. Lighting levels in the western portion of the VRSA are also low, typical of residential neighborhoods. There is some street lighting, and light from commercial uses along Spruill Avenue, Reynolds Avenue, and McMillan Avenue. The lighting levels increase slightly north of McMillan Avenue due to the more dense residential development at River Place and Horizon Village, but overall lighting levels would be considered low. Vehicle headlights also provide a source of night lighting, particularly for the residents closest to Spruill Avenue, McMillan Avenue, and Reynolds Avenue. Train headlights are visible to the residents of Olde North Charleston, the residents in the St. Johns Avenue area and recreational users of Noisette Creek and Riverfront Park, but are otherwise not visible in the VRSA due to screening vegetation.

3.11.3 Visual Conditions on the Proposed Project Site

Existing visual conditions at the Project site include transportation infrastructure, expanses of vacant parking lots, open grassy spaces, two baseball fields, chain link fencing, and overhead power and telephone lines.

From south to north, the Project site includes the Viaduct Road overpass, open fields (previously occupied by storage tanks and storage structures), baseball fields, vacant buildings, and the Sterett Hall Recreation Center⁶³.

Facing east from the Project site, cranes from shipyard operations, ships, and shipyard buildings are highly visible.

There is no lighting currently on the Project site. There are no nighttime port activities, and minimal lighting on cranes and for security. Light levels on the Project site would be considered low.



**Looking west at the project site.
Existing port activities in the foreground.**



**Looking south-southeast from
McMillan Avenue at the project site.**

⁶³ Sterett Hall was closed and demolished in spring 2016.

There is some vegetation in the form of trees, but overall the vegetation is not dense enough to screen views of and from the Project site.



Looking west along western boundary of the project site.

Sterett Hall⁶⁴ is a community recreation center operated by the City of North Charleston.



Sterett Hall

⁶⁴ Sterett Hall was closed and demolished in spring 2016.

3.11.4 Visual Conditions on Alternative 2: River Center Project Site

The River Center project site contains areas of vacant naval housing, as well as the vacant naval hospital. A variety of architecture can be seen to the west in the St. Johns Avenue area that provides visual interest. Vacated streets and mature trees dominate the majority of the site.

The eastern portion of the River Center project site, south of the abandoned hospital property, consists of industrial uses associated with the shipyard. The U.S. Department of Defense (DOD) operates out of a large light industrial building accessed from Truxton Avenue.

Overhead power and telephone lines are visible throughout the site. This site contains more mature trees than the Project site, and views to the east include the forested, historic Officer's Quarters, and to the north, Noisette Creek.



Sample view of vacant housing on River Center project site.



Vacant Navy Base Hospital.

Views to the south and southeast from the River Center project site are of industrial and shipyard operations. The River Center project site is subject to low levels of nighttime lighting where structures are occupied, as well as from street lighting and vehicular traffic on area streets. Overall, the light levels on the River Center project site would be considered to be low.



Example of vacant street in the River Center project site.

The River Center project site includes the West Yard Lofts (built 2010) at 2375 Noisette Boulevard.



Facing southwest from Noisette Boulevard at West Yard Lofts.

Adaptive reuse of several buildings on the River Center project site includes the Lowcountry Innovation Center at 1535 Hobby Street.



Lowcountry Innovation Center.

3.11.5 Viewer Sensitivity at Selected Viewpoints

Locations that would represent the range of visual impacts throughout the VRSA were identified through desktop research and field assessment. The field assessment considered potential viewer locations, existing vegetative conditions, area features, and topography. Photographs and visual characteristics of selected viewpoints in relation to the Proposed Project were collected.

Selected viewpoints were identified as locations where the greatest amount of change would occur that could affect viewer sensitivity. Seven select viewpoints were identified based on viewer sensitivity to or from a select location and where the greatest amount of change could occur (Figure 3.11-1) (e.g., adjacent to the Project sites where tall structures and lighting would be highly visible). No viewpoints were identified east of the Project site along the Cooper River facing west from the industrial area comprising the shipyard operations, as there is low viewer sensitivity from these existing industrial uses. From south to north, the selected viewpoints include:

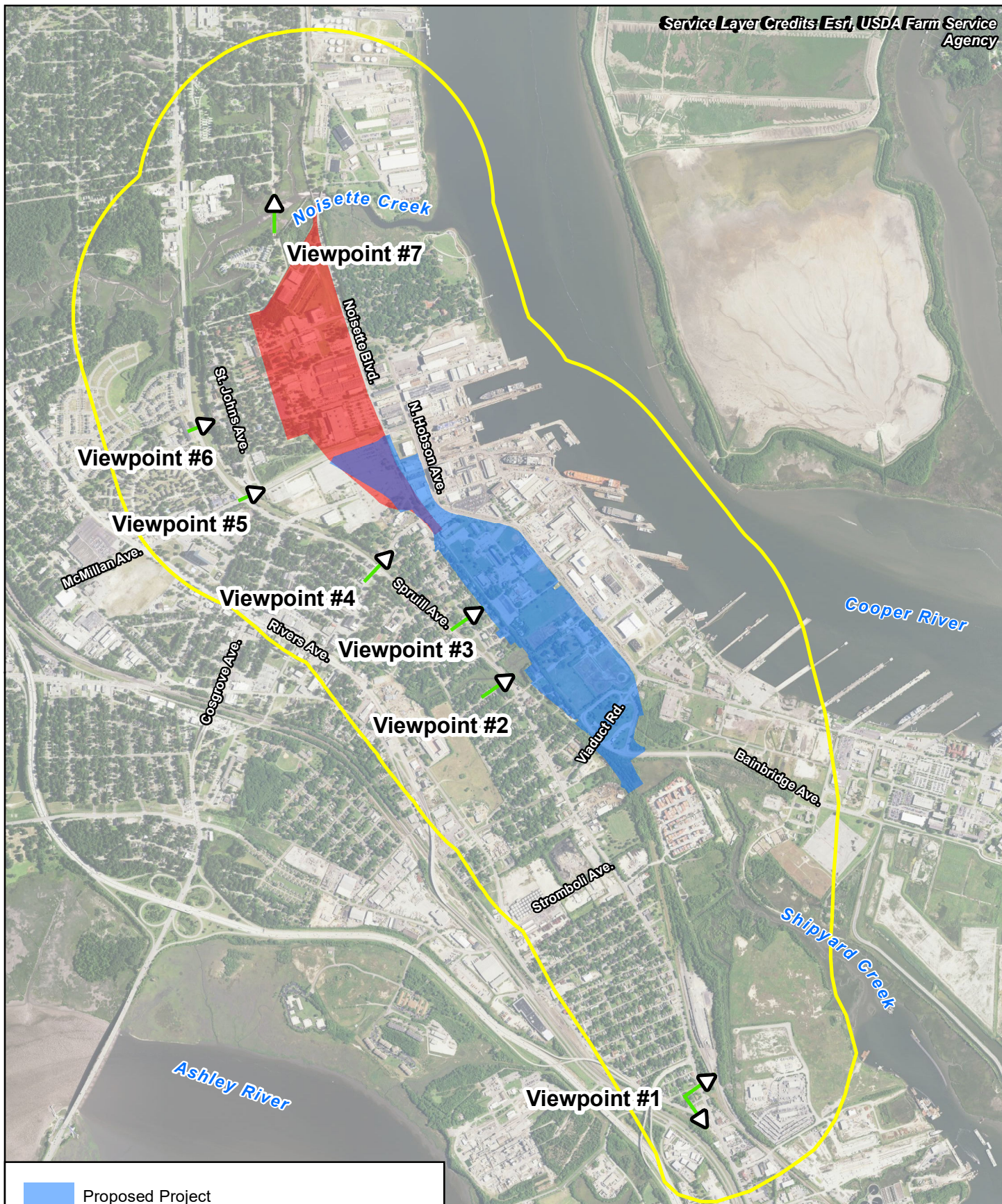
Selected viewpoints were identified as locations where the greatest amount of change would occur that could affect viewer sensitivity.

Viewpoint #1: Southern boundary of Union Heights Neighborhood

The southern boundary of the Union Heights Neighborhood was selected as Viewpoint #1, because the Proposed Project would increase the length and number of trains entering and exiting the area immediately to the south and east of the neighborhood. This area includes existing rail lines east of Spruill Avenue with some commercial buildings located between the rail lines and Spruill Avenue and single family residential properties west of Spruill. Potential visual changes include a new at-grade crossing and increased train activity on inactive or under-utilized rail tracks.



View from Little Avenue facing south along Spruill Avenue at intersection with Meeting Street and Tuxbury Lane.



- Proposed Project
- River Center ICTF
- Visual Resources Study Area

Source: Atkins 2016

0 2,400 4,800
 Feet



NAVY BASE ICTF EIS

Selected Viewpoints
 Figure 3.11-1



Viewpoint #2: Intersection of Baxter Street and Spruill Avenue

This intersection was chosen as a viewpoint because the Project boundary is adjacent to a relatively large area of open space with views from Baxter Street facing east as well as from Spruill Avenue. This area consists of open grassy fields, mature trees, and a few small commercial businesses. There are no sidewalks except along the west side of Spruill Avenue north of Baxter Street. Overhead power and telephone lines are highly visible. The visual character of this area is of moderate quality given the view of open space and mature trees dominating the view. Currently, there is no view of the Project site from this location due to a large stand of mature trees. There are no views from this location of the River Center project site. Potential changes to this view would result from the construction of new vertical elements that include gantry cranes and lighting poles on the Project site behind the stand of trees. These new vertical elements would also be sources of light and glare.



Views from intersection of Baxter Street/Spruill Avenue toward project site. Quitman's Marsh is located behind the trees.

Viewpoint #3: Chicora-Cherokee residential neighborhood east of Spruill Avenue

The Project site includes the line of trees and vegetation at the end of this viewpoint, as well as the first row of houses adjacent to the line of vegetation and trees. The existing views along these residential streets toward the majority of the Project site are buffered with remnant narrow bands of native vegetation, including stands of mature trees and security fencing. The majority of the Project site is not visible currently from this neighborhood due to this visual buffer. The River Center project site is not visible from this neighborhood due to intervening structures and vegetation. Potential changes to this view from the Proposed Project include the removal of existing



View east from Chicora-Cherokee neighborhood to project site boundary.

homes and the existing visual buffer of the site to construct an earthen berm and security fence. The earthen berm would assist in the reduction of potential noise from the Project site. New vertical elements would be visible in the background and include gantry cranes and lighting poles. These new vertical elements would be sources of light and glare.

Viewpoint #4: Chicora-Cherokee residential neighborhood west of Spruill Avenue

Current views to the east of this viewpoint are primarily of mature trees and grassy areas, as well as the abandoned railroad ROW. There are no long-range views from this area due to mature vegetation around the railroad ROW. The Project site is not currently visible from this area except for narrow corridor views facing east down area streets such as Reynolds Avenue. The southern portion of the River Center project site is partially visible from the homes fronting Spruill Avenue in the immediate vicinity of the intersection, although mostly obstructed by intervening structures and trees. The view down the corridor is long range of the port activities in the background. Potential changes to this viewpoint include increased rail activity and the construction of an earthen berm and security fencing blocking views of shipyard activities. New vertical elements would include gantry cranes and lighting poles. These new vertical elements would be sources of light and glare.



View east from Chicora-Cherokee neighborhood west of Spruill Avenue down Reynolds Ave

Viewpoint #5: Intersection of McMillan Avenue and Spruill Avenue

While the majority of the Project site and the River Center project site are not currently visible from this viewpoint or intersection, removal of the mature trees along the ROW would allow both Project sites to be visible. Viewer sensitivity from the River Place and Chicora-Cherokee neighborhoods west of Spruill Avenue near this intersection would have views of the Project site, including the new flyover. Facing eastward down McMillan Avenue, there are views of vacant industrial uses and parking lots along the edges



Looking east on McMillan Avenue from intersection with St. Johns Avenue.

of the street. Beyond, at the far end of this view corridor, one can see the tall cranes and long-distance views of shipyard activities. Potential changes to this viewpoint would occur from the construction of the Cogrove Avenue overpass to McMillan Avenue blocking views of shipyard activities in the background. Construction of either Project site (Proposed Project to the right and River Center to the left) would increase the visibility of new vertical elements that include gantry cranes and lighting poles. These new vertical elements would be sources of light and glare.

Viewpoint #6: River Place and Horizon Village facing east across Spruill Avenue

As noted for the intersection of McMillan Avenue and Spruill Avenue, residents at the far south end of River Place and north end of Chicora-Cherokee west of Spruill Avenue do not currently have views of the Project sites due to intervening mature vegetation. The current views facing east from this viewpoint, River Place and Noisette Village are of Spruill Avenue and a wide railroad ROW lined with mature trees to the east of this roadway. Currently, inactive rail



View toward River Center project site from River Place and Horizon Village

remains in the ROW. Potential changes to this view include increased rail activity on the inactive railtracks and the introduction of new vertical elements, which would include gantry cranes and lighting poles in the background. These new vertical elements would be sources of light and glare.

Viewpoint #7: Riverfront Park and Noisette Creek east of Spruill Avenue

The Project site and River Center project site are not visible from this viewpoint, as it is substantially screened by intervening vegetation; however, pedestrians, bicyclists, residents, and motorists traveling along O’Hear Avenue, Spruill Avenue, and Noisette Boulevard would have views of most or all of the River Center project site, depending on the location of the viewer. In addition, recreational users on Noisette Creek have a clear view of the River Center project site. Potential changes to the scenic views along Noisette Creek include new rail bridges over the creek and marshland.



Looking north on O’Hear Avenue over Noisette Creek at built structures.