

7.0 VISUAL IMPACTS ASSESSMENT

Visual environments are key contributors to people's daily experiences and life styles and can significantly affect moods and feelings of well being. Major public improvement projects and facilities can have varying degrees and types of impacts on the visual environments. The impacts can range from very significant to hardly noticeable. Visual environments can be viewed as negative, or they can improve and contribute in a positive way to the appearance and image of communities.

Following are descriptions of the affected visual environment, visual impacts, and visual impact mitigation of the proposed Norfolk Light Rail Transit project. The descriptions are supplemented with photographs of the project area.

7.1 Applicable Legal Authority

Visual impacts to historic resources are protected under Federal law through Section 106 of the National Historic Preservation Act of 1966, as amended and implementing regulation 36 CFR 800 as revised on May 18, 1999.

7.2 Affected Visual Environment

The Norfolk LRT corridor consists of various visual environments ranging from low-density residential developments to the high-density, high-rise commercial core in downtown Norfolk. One of the key features of the proposed LRT alignment is that, for much of its length, the LRT alignment will be located in the existing Norfolk Southern Railroad corridor. The LRT project will replace the freight line track with two new tracks for LRT passenger service. Thus, most of the proposed LRT corridor already has a 'railroad' character and includes many features such as railroad tracks, railroad crossings, and signals associated with railroad and LRT operations. Another major visual element in the corridor is the I-264 freeway that parallels the LRT corridor for most of its length. The freeway includes numerous highly visible elevated segments, overpasses, and access ramps and interchanges.

Generally, the topography of the project area and the region is very flat and there are few major viewpoints or viewsheds. The LRT corridor project area, overall, has a substantial amount of mature vegetation and the existing railroad corridor has a considerable amount of landscape screening along the

edges. Starting at the westerly end of the project area, following is a description of the general visual characteristics of the proposed LRT corridor by segments. The photo key map (Figure 7-1) illustrates the location of the segments and the existing conditions photo viewpoints. For illustrations of LRT station area conditions, please refer to the land use maps in Chapter 3; for proposed Station Plans, please see Chapter 2.

7.2.1 Eastern Virginia Medical Center to Government Center

The most westerly segment of the proposed LRT alignment, from the Eastern Virginia Medical Center (EVMC) to the Government Center, can be characterized as ‘urban’ and ‘hard-surface’ in that this area is extensively and intensely developed with buildings, paved streets, and bituminous-surface parking lots. It is located in the urban core, which includes many of the major business, government, and entertainment facilities in the region. Mid-rise and high-rise buildings and surface parking lots surround this segment, which is located along Brambleton Avenue, York Street, Duke Street, Bute Street, Charlotte Street, Monticello Avenue, and Plume Street. Figures 7-2 and 7-3 illustrate the general visual conditions in this segment of the LRT corridor.

The Medical Center Station will be located at the EVMC, along the south side of Brambleton Avenue, at the pedestrian overpass that spans Brambleton Avenue (Figure 7-2a). Southeast of the Medical Center Station, the alignment will cross the Smith Creek Inlet to the Hague. In this segment of the corridor, Brambleton Avenue is a wide boulevard with landscaped medians and frontage roads (Figure 7-2b). The LRT crossing of the Smith Creek Inlet will be located on a new bridge, that will be parallel to and approximately at the same elevation as the Brambleton Avenue bridge, and that will offer excellent views from the LRT alignment of downtown Portsmouth across the Elizabeth River.

The LRT alignment will continue east along the south side of Brambleton Avenue until the York Street Station, which will be located along York Street, north of the YMCA, west of Yarmouth Street. East of the York Street Station, the alignment will follow York Street until Duke Street, turn south until Bute Street, then turn east again until Monticello Avenue, and then continue south on Monticello Avenue until the Monticello Avenue Station, which will be located in the center of Monticello Avenue, immediately north of Freemason Street. This segment of the corridor, between the YMCA and Monticello Avenue, is relatively intensely developed with mid-rise buildings. In addition, current City plans call for the development of a new high-density residential complex on the existing parking lots on both sides of York Street, east of the YMCA, (Figure 7-2c).

The proposed Monticello Avenue Station area (Figure 7-2d) includes large surface parking lots and parking ramps, located south of the Scope Civic Center and Chrysler Hall, as well as mid-rise buildings along the west side of Monticello Avenue. Further south along Monticello Avenue the environment becomes very urban with upgraded streetscaping along the recently constructed MacArthur Shopping Center (Figure 7-3a).

At City Hall Avenue, the LRT alignment will turn southeast and continue diagonally across the block where the Kirn Memorial Library is currently located (Figures 7-3b and 7-3c). The Plume Street Station will be located on the library block. Major features in this area are the MacArthur Memorial (visible on the left in Figure 7-3b) and the Monticello Arcade, which is located west of the library site. The segment of Plume Street east of the library site has few streetscape enhancements or amenities, such as benches, planters, and ornamental lighting, or landscaping treatments. It serves primarily as access to parking and loading areas for the adjoining developments.

In the Government Plaza area, the LRT alignment will be routed diagonally across the existing plaza with the Government Center Station located in the westerly half of the plaza. Government Plaza (Figure 7-4a) is a paved open space surrounded by government buildings designed in a ‘modern’ style including the City Hall, the Circuit Courts, and the County Jail. The plaza is framed by rows of mature trees and includes brick paving, a large circular fountain, and a memorial sculpture. The LRT track alignment and the Government Center Station will require the removal of the fountain and the relocation of the police memorial within the plaza.

7.2.2 Government Center to Norfolk State University

This segment of the LRT corridor will be located in a transitional area, at the eastern edge of downtown Norfolk, which includes some newer as well as some older developments. In this segment, the LRT corridor will pass twice under I-264, which is elevated on piers above the surrounding landscape.

East of Government Plaza, the LRT alignment will continue along the south side of Main Street and the south edge of I-264/Park Avenue until the Harbor Park Station, which will be located immediately north of the Harbor Park Stadium parking lots. The alignment will then turn north, pass under I-264 and then cross the Norfolk Southern Lamberts Point Branch railroad line on an elevated structure. The LRT tracks will remain elevated, either on structures or on earth fill north of I-264, until the elevated NSU Station, just west of Brambleton Avenue. The elevated tracks will then cross over to the east side of Brambleton Avenue, where they will return to grade and merge into the Norfolk Southern Railroad corridor just east of Salvage Avenue. An elevated pedestrian overpass, to be developed by others, will cross over Brambleton Avenue immediately north of the NSU Station and will include elevators and staircases on each side of Brambleton Avenue.

Major visual features in this segment include: two- and three-story office and parking structures along Main Street; the large Harbor Park baseball stadium with its associated parking lots (Figure 7-4b); the bridges and structures of the elevated I-264 freeway; and a mixture of older industrial and commercial uses between Harbor Park and Norfolk State University (NSU). The area east of Harbor Park is planned to be redeveloped for commercial/industrial uses. A large, mixed-use office, commercial, and residential development, called Research and Innovation to Support Empowerment (RISE), is being planned for the triangular area between I-264, Norfolk Southern Lamberts Point Branch railroad corridor, and Brambleton Avenue (Figure 7-4c). The RISE complex is planned to include Transit-Oriented Developments and to be linked to Norfolk State University, as well as to the NSU Station.

7.2.3 Norfolk State University to Military Highway

This segment of the LRT alignment will be located in the Norfolk Southern railroad right-of-way, adjacent to the I-264 freeway corridor. East of Brambleton Avenue, the LRT corridor will be located north of I-264 along the southern boundary of NSU. The NSU facilities next to the LRT alignment include a campus maintenance building, a parking lot, the NSU baseball and football stadiums, and a dormitory complex. A major visual element in this segment of the LRT corridor is the high-voltage power line, with tall metal towers, that adjoins the existing railroad tracks east of Brambleton Avenue. The Vehicle Storage and Maintenance Facility (VSMF), which is discussed in Section 7.2.5, will be located directly east of Brambleton Avenue, between NSU and I-264 (Figure 7-4d).

The LRT tracks will cross Ballentine Boulevard at grade, immediately east of the Ballentine Boulevard Station, which will include a 97-space park-and-ride lot. The area around the proposed Ballentine Boulevard Station includes the easterly end of the NSU campus consisting of a surface parking lot,

stormwater drainage pond, practice fields, and mid-density residential developments (Figure 7-5a). East of the Ballentine Boulevard Station, the LRT alignment will cross underneath I-264, over the Norfolk Southern Sewells Point Branch railroad tracks, and over a small creek.

The proposed Ingleside Station will be located adjacent to I-264, in a predominantly single-family residential neighborhood (Figure 7-5b). Parts of the LRT corridor include highway screen walls on one side and low-density residential developments on the other side (Figure 7-5c). East of the Ingleside Station, the LRT alignment will cross over Broad Creek, which offers expansive views across the water to the north (Figure 7-5d) and to the south, on a bridge that will be parallel to and at the same elevation as the existing I-264 bridge. The Military Highway Station, which will be located directly west of Military Highway, will adjoin new commercial developments (Figure 7-6a). The Military Highway Station will include a 232-space park-and-ride lot and the station site may be developed, in the future, as a joint-use Transit-Oriented Development.

7.2.4 Military Highway to Newtown Road

This segment of the LRT corridor contains a mixture of industrial, commercial, and low- and medium-density residential uses, as well as a number of undeveloped parcels. East of the Military Highway Station, the LRT corridor will cross under Military Highway and I-64. The developments along this segment of the corridor are primarily one- and two-story industrial and commercial structures with large parking lots and with very few distinguishing features (Figure 7-6b) and low-density residential developments. Same as in the previous corridor segment, a major visual element in this segment of the LRT corridor is the high-voltage power line with tall metal towers that adjoin the existing railroad tracks.

The Norfolk LRT alignment will terminate at the Newtown Road Station (Figures 7-6c and 7-6d), which will include a 266-space park-and-ride lot in the triangular area between Newtown Road, Kempsville Road, and Bangor Avenue. The area west of the Newtown Road Station contains a small residential neighborhood. The area east of the station includes office, commercial, and institutional uses. The Sentara Leigh Memorial Hospital is located to the north, across I-264.

7.2.5 LRT Vehicle Storage and Maintenance Facility

The LRT Vehicle Storage and Maintenance Facility (VSMF) for the proposed LRT system will be located east of Brambleton Avenue, between the Norfolk Southern railroad tracks and I-264 (Figure 7-4d). The site currently includes some abandoned industrial uses and vacant parcels. The VSMF will accommodate storage, maintenance, and repair facilities for the LRT vehicles and equipment. It will include two-story buildings for light maintenance and repair, a vehicle car wash, storage areas, and administrative office space.

7.3 Visual Impacts

The visual aspects of the proposed LRT facility will impact two types of viewers – people who will use the system and have views of the surrounding landscape, and people along the LRT corridor who will have views of the LRT facilities. People who will use the system includes daily riders going to work, shopping, or on other types of trips and visitors who are seeing the area for the first time. People who will have views of the LRT system includes the people approaching the stations to use the system as well as those not using the system, but who will have views of the facility either from their places of work,

homes, or some other indoor or outdoor spaces. Both groups are important and will be considered in evaluating visual impacts and mitigation. For users of the system, it will be important to maintain and improve existing views in order to enhance the LRT experience. For people along the LRT corridor it will be important to improve the LRT facilities themselves in order to maintain and enhance the existing visual environment. Following is an evaluation of the visual impacts of the Preferred Alternative:

7.3.1 Construction Impacts

The construction activities related to the project will have only a temporary impact on the visual environment. The activities and impacts will vary, based upon the type of construction required. The construction impacts, in general, will include the movement of construction machinery, construction of temporary roads and access ways, scaffolding and construction equipment, and temporary construction fences and screens. The most visible construction impacts will be at sites where bridges or overpasses are required for grade-separation of the LRT from area roadways, or existing railroad tracks.

7.3.2 Surface LRT Tracks

The LRT tracks will consist of steel rails, rail supports, and infill material around the rails. Surface tracks will be either ballasted tracks or embedded tracks. Ballasted tracks, which consist of rails on ties surrounded by rock ballast, will be used where the rail system is in its own exclusive right-of-way and where pedestrian movement across the tracks is not a factor. Embedded tracks, which consist of rails embedded in pavement, will be used at street crossings, where the tracks share the right-of-way with other modes of transportation, where pedestrians cross the tracks, or where special urban design treatments are desirable, such as in the downtown area.

The most consistent change to the existing visual environment will be the new LRT tracks that will extend the full length of the LRT corridor. In place of the current single freight track there will be two, side-by-side LRT tracks and the tracks will be slightly closer to the adjoining property lines than the current, single freight track. The LRT tracks will not have a significant visual impact, because they will be, for the most part, at ground level and, in the railroad corridor segment, not much different than the existing freight tracks. The one area where the tracks will be more noticeable will be in downtown Norfolk and the Government Plaza, where the tracks will be embedded in the street and plaza pavements.

7.3.3 Elevated LRT Tracks

Some of the tracks, where they cross major roadways or railroad tracks, will be constructed either on an embankment, structural fill, or on a structure. Embankments and structural fill will be used for the approaches to the elevated structures in the segment between Harbor Park and NSU and at the Norfolk Southern Sewells Point Branch railroad crossing. The embankment will consist of a berm with slopes; the structural fill will be built up with retaining walls.

Where the elevation is too high for structural fill, the tracks will be built on elevated bridge structures, which will require support piers, pier caps, and a structural guideway with beams, rail bed, and railings. The elevated segments of the LRT tracks will be some of the most visible components of the proposed LRT system, because they will have a height of approximately 25 feet above the surrounding landscape. Elevated bridge structures for the tracks will be required at three locations: across the Norfolk Southern Lamberts Point Branch railroad line; across Brambleton Avenue; and across the Norfolk Southern Sewells Point Branch railroad line. Additional bridge structures will be required across the Smith Creek

Inlet, west of the downtown, and across Broad Creek, but, since these structures will be at the elevation of the adjoining existing roadway bridges, they will not have the visual impact that the elevated bridges will have.

7.3.4 Overhead Catenary System Wires and Supports

The Overhead Catenary System (OCS), for supplying electrical power to the LRT vehicles, will include support structures and overhead wires. Where other support structures, such as buildings or existing light or power poles are not available, special support poles for the LRT system will be installed. The OCS supports will consist of poles with cantilevered bracket arms or poles on either side of the tracks with support wires strung across the tracks. Typically, for straight segments of track, support poles will be located every 100 feet, or so. For curved segments, more frequent pole spacing will be required.

Two types of OCS wire support systems will be used. For most of the LRT corridor, a two-wire system will be used where the top wire will be a catenary support wire with the power cable hung below it. This system will require the most wires and will have the greatest visual impact. In downtown Norfolk, a single, trolley-type wire, that is supported by cross-wires, will be used. The trolley-type wire application will have less of a visual impact than the two-wire system will.

7.3.5 LRT Stations

The proposed LRT system will include ten at-grade stations and one elevated station at NSU. The stations will have approximately 90-foot long center or side platforms. The two concept images in Figure 7-7 illustrate typical configurations and appearance of center-platform and side-platform stations. The grade-separated NSU Station will be constructed on a bridge structure, immediately west of Brambleton Avenue (Figure 7-8). The visual appearance of the elevated station will be similar to the elevated track segments, discussed previously, except that the elevated station will also include elevators, staircases, and station canopies elevated approximately 35 feet above Brambleton Avenue. In order to provide for expansion of the system in the future, if that becomes necessary, the system is designed to accommodate extending the elevated station platform, across Brambleton Avenue, to 270 feet for three-car trains. The stations will have low-rise platforms that will be approximately 14 inches above top of rail. The platforms will be 18 to 24 feet wide for center-platform stations, or 12 feet wide for the side-platform stations. The at-grade stations will have short access ramps, at 5% slope, for access to both ends of the platforms. Station platforms will provide level boarding to meet ADA accessibility requirements.

The stations will include canopy structures that will extend approximately one-third of the station platform lengths. In addition, the stations will include safety railings, ticket vending and validating machines, map and information cases, light standards, and urban design elements and furniture such as wind screens, benches, and litter receptacles. The station canopies will be modular in design and will be scaled and detailed to blend in with the urban character of most of the corridor. Figures 7-9 and 7-10, using the Monticello Avenue Station and the Ingleside Station as examples, illustrate typical stations within and outside of the downtown area of Norfolk.

In addition to the LRT station platforms and structures, some of the stations will also include bus bays, drop-off/pick-up areas, parking lots for park-and-ride use, and stormwater storage ponds. The sizes of the total station areas vary, depending upon the program requirements for each station. The smallest stations will be the walk-on stations, such as the ones in downtown Norfolk. The largest will be the Military Highway Station, which will include three bus bays, a drop-off/pick-up area, and 232 park-and-ride parking spaces, and the Newtown Road Station, which will include four bus bays, a drop-off/pick-up area,

266 park-and-ride parking spaces, and a stormwater drainage pond. Figure 7-11 illustrates the potential appearance at the Newtown Road Station park-and-ride lot.

7.3.6 LRT Vehicles

The LRT vehicles for the system will be approximately 9 feet wide, 12 feet high, and 91 feet long – slightly longer than two regular 40-foot long buses. They will be operated as single-car trains. In the future, if the system were to be expanded to two or three-car trains, each train will be approximately 182 or 273 feet long, respectively. Due to their relatively small scale and quiet operations, the LRT vehicles will blend in well with the various environments along the corridor including downtown Norfolk, the EVMC, the NSU campuses, and the residential neighborhoods.

7.3.7 LRT Vehicle Storage and Maintenance Facility

The LRT Vehicle Storage and Maintenance Facility (VSMF) for the proposed LRT system will be located adjacent to and will be partially visible from the NSU campus. Part of the VSMF will be screened from the campus by the elevated LRT guideway. A security fence and landscaping screens will enclose the facility. The facility will include miscellaneous items, such as storage tracks, OCS poles and wires, buildings, and site lighting. The VSMF will be compatible, in use and appearance, with the general character of the area. Figure 7-12 illustrates the general configuration and appearance of the proposed VSMF.

7.3.8 Miscellaneous Structures

Additional elements and structures, which will be required in the corridor, as part of the proposed LRT system, include electrical Traction Power Substations (TPS), new traffic signals, track crossing gates, signal control boxes, storage buildings, and, rest rooms for drivers. The electrical TPS, will be enclosed in small, approximately 20-foot by 40-foot, structures, which will be enhanced with landscaping screens. The restroom facilities for the drivers will be located in existing buildings close to the LRT alignment.

7.3.9 Shadows

Shadows cast by the LRT facility will have a minimal impact on the existing uses along the corridor, since most of the system will be at-grade and the shadows cast by structures, such as the LRT shelters, will impact only the station sites. Slightly more extensive shadows will be cast where the LRT tracks will be elevated, such as at the grade-separated crossings and the elevated NSU station, however, no shade-sensitive uses will be impacted.

7.3.10 Nighttime Lighting

The primary nighttime lighting impacts will be from general platform lighting, site and parking lot lighting at the stations, internal lights and headlights of the LRT vehicles, and from the VSMF. The lighting at the stations will be a positive impact since it will contribute to the safety and convenience of the system users. The lights on the vehicles will have a limited impact, since they will similar to car and truck lights on the area roadways. Any spillover lighting from the VSMF will have little negative impact, because no light sensitive land uses are located adjacent to the VSMF.

7.3.11 Summary of Visual Impacts

A. No-Build Alternative

The No-Build alternative will have no new or additional impacts on the existing visual environment and resources in the project area.

B. TSM Alternative

The TSM alternative will have no new or additional impacts on the existing visual environment and resources in the project area.

C. Preferred Alternative

Because of the built-up and urbanized nature of much of the LRT corridor and because the LRT corridor is located, for most of its length, in an existing railroad right-of-way, the visual impacts of the proposed LRT system will be relatively minor or hardly noticeable. The most significant visual impacts will be in the downtown area, where the LRT facility will introduce new elements to the existing streetscape, and at NSU, where the track and the station will be elevated. The Preferred Alternative will travel through the Downtown Norfolk Historic District and adjacent to the West Freemason Historic District, and will add a new element to the historic visual character of these historic districts.

7.4 Visual Impact Mitigation

Mitigation measures for ameliorating negative visual impacts, or for enhancing the general visual environment of the proposed Norfolk Light Rail Transit Project facilities, will be achieved in a number of different ways. Mitigation and enhancement techniques can be grouped into three categories: design of the basic infrastructure components; embellishment of the basic infrastructure facilities; and enhancement of the visual environment around the facilities. While the specific detailed visual enhancements will not be identified until the final design is completed, HRT is committed to working with the City of Norfolk to enhance the proposed LRT facility and to coordinating with City and State historic review agencies to ensure that the design components are consistent with the historic context of downtown Norfolk.

7.4.1 Design of the Basic Infrastructure Components

Careful design of the basic system components will help mitigate many potentially negative visual impacts. Treatments or components that fall into this category include items such as the use of the trolley-type OCS wire in the downtown area, vinyl covering for chain-link fencing, integrally-colored concrete for station platform surfaces, color, or the use of rust-resisting materials such as stainless steel or aluminum for fixtures and site amenities, and landscaping materials for screening.

To minimize the visual impacts of the system, trolley-type OCS or low profile catenary wire will be used in the downtown Norfolk segment of the LRT corridor. This will not only minimize visual intrusion, but it will also reduce clutter above the downtown streets. In addition, special OCS support poles in the historic districts will be designed to match the existing street light pole designs. Another example for

ameliorating visual impacts will be to use integrally-colored concrete for platform surface treatments. This will add color to all the stations and it will help blend the stations into the downtown streetscape, which contains a large amount of special colored sidewalk pavements, as well as into pedestrian spaces and environments, such as the Government Center plaza. Also, parking lot light fixtures will include light distribution patterns or shields that will minimize light spill-over into adjoining residential neighborhoods.

7.4.2 Embellishment of the Basic Infrastructure Facilities

A second approach for mitigating negative visual impacts and/or enhancing the visual appearance of the LRT transit system will be to include special treatments and detailing, and to add complementary features or elements to the basic infrastructure elements. Special treatments or detailing will include items such as unique textures or patterns in concrete work and enhancing shelter structures and railings with details that go beyond the purely functional requirements. Finally, special landscaping treatments will be used to create green edges, break up large paved areas, and provide screening along the LRT corridor and around the station sites.

7.4.3 Enhancement of the Visual Environment

The third approach for mitigating and/or enhancing the visual environment will be to improve or embellish the overall environment around the LRT facilities. This will need to be a coordinated effort between the City of Norfolk, HRT and the area business community. This approach will include items such as improving the streetscapes around the stations and creating or embellishing public spaces at, or adjacent to, the LRT facilities. This will help improve the visual impact of the facilities, improve access to the stations, and contribute to overall comfort and safety. Examples of station area improvements include adding pedestrian lighting, street trees, special pavement, or special street furniture to streets, paths, or trails interconnecting adjoining neighborhoods and business districts with the LRT stations.

Another method to improve the visual appearance of station areas will be to redevelop under-utilized and marginal land in the station vicinities or to create new higher-density developments, or Transit-Oriented Developments (TODs), in conjunction with the LRT stations. Examples of TODs that will support and enhance the proposed LRT system include the proposed Fort Norfolk redevelopment area south of the Medical Center Station, the proposed high-density residential development at the York Street Station, the redevelopment of the Kim Memorial Library site at the Plume Street Station, the RISE development at the NSU Station, and the potential joint-use development at the Military Highway Station.

The mitigation and enhancement measures discussed above represent a total program to fit the proposed LRT project into the existing urban settings and to improve and embellish the overall visual environments.

7.4.5 Compatibility with Historic Districts

In downtown Norfolk, visual impacts to the Downtown Norfolk Historic District and the West Freemason Historic District will be fully mitigated. The LRT will run on a trolley-type OCS, which, although it will introduce a new visual element into the streetscape, will have relatively minor visual impacts. Additionally, three stations and a yet-to-be-determined number of signs will be installed within or adjacent to the downtown Norfolk Historic District and the West Freemason Historic District. To ensure that the LRT project components within these areas are consistent with the visual character of the downtown historic districts, care will be taken that the design of the project is compatible with the West

Freemason Historic and Cultural Conservation District Design Guidelines and that the designs are reviewed by the City of Norfolk and the Virginia Department of Historic Resources.