19.0 Public Health, Elderly, and Persons with Disabilities

19.1. Introduction

This chapter defines the public health, elderly, and persons with disabilities resources pertinent to the Long Bridge Project (the Project), and defines the regulatory context, methodology, and Affected Environment. For each Action Alternative and the No Action Alternative, this chapter assesses the potential short-term and long-term impacts on public health, elderly, and persons with disabilities. This chapter also discusses proposed avoidance, minimization, and mitigation measures to reduce adverse impacts of the Project.

Assessments of **public health** for the purposes of this analysis include the resources and crucial issues or concerns relating to human health and welfare.

19.2. Regulatory Context and Methodology

This section describes the most pertinent regulatory context for evaluation of impacts to public health, elderly, and persons with disabilities. It also summarizes the methodology for evaluating current conditions and the probable consequences of the alternatives. This section also includes a description of the Study Area. **Appendix D1, Methodology Report**, provides the complete list of laws, regulations, and other guidance considered, and a full description of the analysis methodology.

19.2.1. Regulatory Context

The National Environmental Policy Act of 1969 requires consideration of the potential effects of Federal actions on public health, elderly, and persons with disabilities.[1] The Federal Railroad Administration's *Procedures for Considering Environmental Impacts* state that the "Environmental Impact Statement shall assess impacts of the alternatives on the transportation and general mobility of the elderly and handicapped."[2]

Many of the laws and regulations protecting public health are resource-specific—for example, the Clean Air Act of 1970 and its amendments of 1990,[3] and the National Ambient Air Quality Standards.[4] However, it is important to consider these laws and the impacts from resources in regard to overall public health concerns. The Occupational Safety and Health Administration is responsible for governing public health conditions at places of employment nationwide.

Public health also includes the protection of more vulnerable populations. Vulnerable populations include children, the elderly, and persons with disabilities. The Department of Health and Human Services is the Lead Agency for connecting elderly persons to care, resources, and information.

[1] 42 USC 4321
[2] 64 CFR 28545
[3] 42 USC 7401
[4] 40 CFR 50

The Americans with Disabilities Act of 1990 (ADA) ensures persons with disabilities are not discriminated against or disproportionately impacted in transportation, employment, access, and public places.[5] Many agencies play a part in guiding policies and projects to improve and safeguard these policies. Federal agencies' responsibilities lie with the sector they oversee. The United States Department of Transportation enforces regulations governing transit, which includes the accessibility of Federal, state, and local roadways and pedestrian facilities (for example, bus, subway, and rail stations).

19.2.2. Methodology

The Local Study Area (**Figure 19-1**) includes the Project Area and 0.5 miles immediately adjacent to the Project Area. It includes the tracks, interlockings, bridges, and related railroad infrastructure that the Project would modify. The Local Study Area accounts for effects that may be felt outside the area of direct impacts, such as changes in air quality, noise, or vibration. To the extent that the Local Study Area varies for referenced sections (**Chapter 6, Water Resources and Water Quality**; **Chapter 8, Solid Waste Disposal and Hazardous Materials**; **Chapter 10, Air Quality and Greenhouse Gases**; **Chapter 13, Noise and Vibration**; and **Chapter 18, Safety and Security**), the public health Regional Study Area is consistent with those chapters.

The analysis considers impacts related to elderly and disabled persons at a regional scale unlikely because of the scope of this Project. Impacts to these populations, if any, would be limited to the Local Study Area. Therefore, the analysis does not include a Regional Study Area.

The Affected Environment documentation for public health, the elderly, and persons with disabilities included a summary of existing emergency medical services and accessibility barriers. The assessment considered existing populations of users within the Local Study Area that may face impacts from public health factors related to the Project. This section also describes the existing elderly and disabled population in the Local Study Area, as well as those who may use the existing infrastructure.

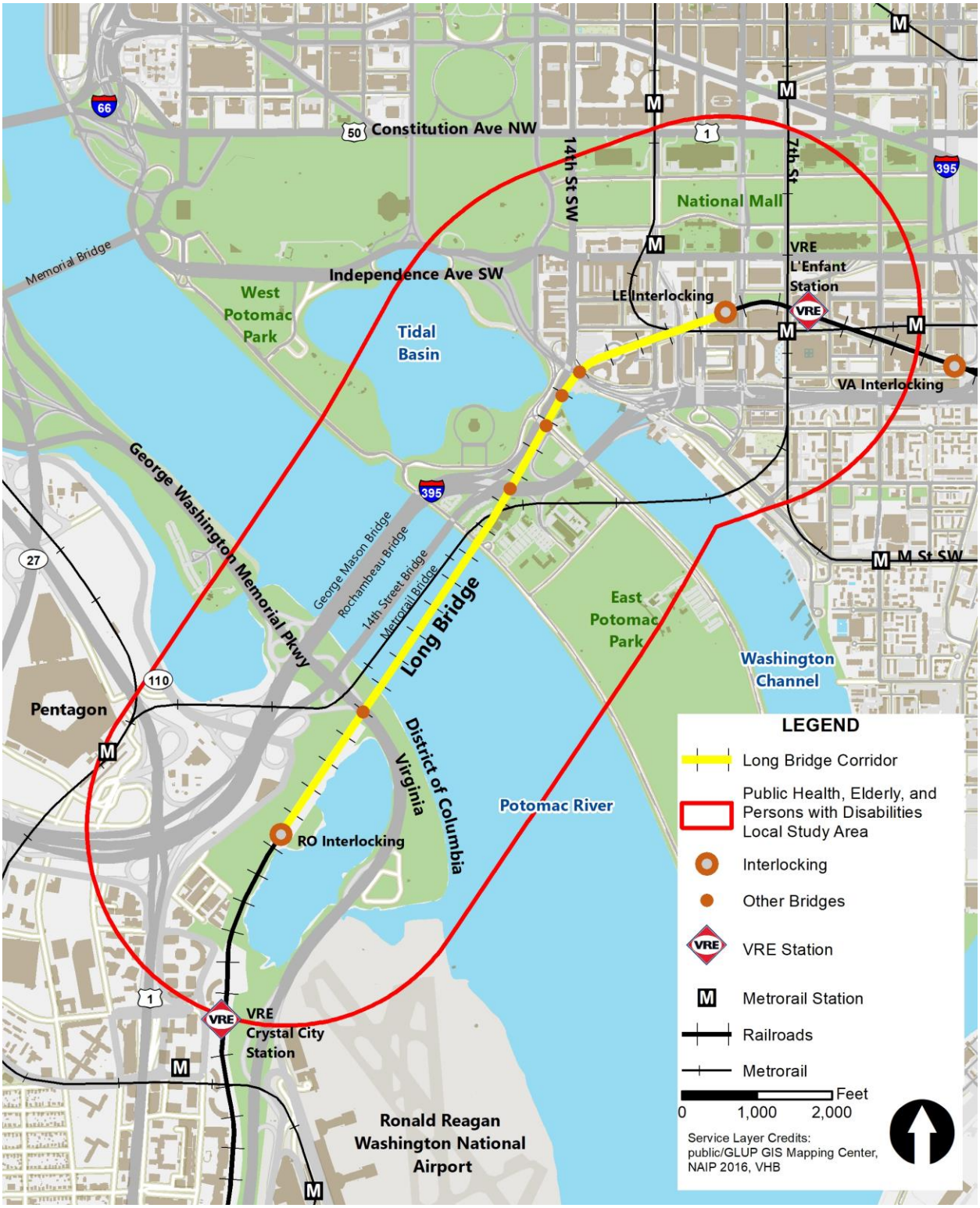
The impact analysis evaluated direct and indirect impacts to public health, elderly, and persons with disabilities. The analysis included a qualitative description of how the Project could affect health based on a literature review approach, followed by a discussion of avoidance and minimization measures if needed. On the issue of the elderly and people with disabilities, the analysis identified impacts and benefits to accessibility, if any, associated with the proposed Project. The analysis considered impacts for both passenger and commuter rail users and people within the Local Study Areas, as appropriate.

19.3. Affected Environment

This section summarizes the existing conditions of the public health, elderly, and persons with disabilities resources. For a complete description of the Affected Environment, see **Appendix D2, Affected Environment Report**.

[5] 42 USC 126

Figure 19-1 | Local Study Area for Public Health, Elderly, and Persons with Disabilities



Chapter 6, Water Resources and Water Quality; Chapter 8, Solid Waste Disposal and Hazardous Materials; Chapter 10, Air Quality and Greenhouse Gases; Chapter 13, Noise and Vibration; and Chapter 18, Safety and Security, describe existing conditions related to public health. Within the Local Study Area, all railroad operators use diesel engines, as the Corridor is not electrified. Long Bridge Park is adjacent to the tracks and may receive some exhaust from diesel trains. Additionally, freight trains operated by CSX Transportation may carry hazardous materials through the Local Study Area. In the case of a derailment or other incident, these hazardous materials may pose a risk to human health. While at-grade railroad crossings can be a public health concern due to safety risks, no at-grade railroad crossings exist within the Local Study Area.

Elderly people are more susceptible to contaminants in related topic areas (air quality, water quality, solid waste disposal, and hazardous materials). In the Arlington Census tracts within the Local Study Area, Census estimates identify 335 persons over 65 (6.7 percent of the total population). In the District of Columbia (the District) Census tracts within the Local Study Area, Census estimates identify 468 persons older than 65 years of age (18.1 percent of the population) within the Local Study Area. Data show no nursing homes or assisted living facilities within the Local Study Area.

Children are also more susceptible to contaminants in these topic areas. In the Arlington Census tracts within the Local Study Area, Census estimates identify 371 children younger than 18 years of age (6.1 percent of the total population). In the District, Census estimates identify 225 children younger than 18 years of age (5.9 percent of the total population). In the District, schools within the Local Study Area include Apple Tree Early Learning Public Charter School (680 I Street SW), Jefferson Middle School (801 7th Street SW), and Washington Global Public Charter School (525 School Street SW). In Arlington, two schools are located within the Local Study Area: Sparkles! Child Care Facility (1235 South Clark Street) and the Everbrook Academy PreSchool (201 12th Street S).

The Project Area is an active railroad right-of-way that is not open to the public. Therefore, ADA compliance and accessibility are not relevant.

19.4. Permanent or Long-Term Effects

This section discusses the permanent or long-term effects following the construction of the No Action Alternative and Action Alternatives on public health, elderly, and persons with disabilities resources within the Local and Regional Study Areas. For a complete description of the permanent or long-term effects, see **Appendix D3, Environmental Consequences Report**.

19.4.1. Public Health

19.4.1.1. No Action Alternative

With the No Action Alternative, railroad conditions related to public health in the Local Study Area would remain the same as existing and there would be no impacts.

19.4.1.2. Action Alternative A (Preferred Alternative)

Action Alternative A would cause a negligible permanent direct adverse impact to public health due to negligible impacts on solid waste disposal and hazardous materials, which would not equal measurable public health effects, see **Chapter 8, Solid Waste Disposal and Hazardous Materials**. Action Alternative

A would cause negligible permanent indirect adverse impacts to public health due to air quality effects from the emissions from the additional trains using the Corridor. However, the slight increase in emissions would have negligible public health effects. For more information, please see **Chapter 10, Air Quality and Greenhouse Gases**.

While Action Alternative A would cause moderate to major impacts on sensitive noise receptors within the Long Bridge Corridor, none of these locations are near schools, child care facilities, healthcare facilities, and nursing homes. Noise Receptors at the Mandarin Oriental Hotel and Portals V Residences currently in construction adjacent to the Long Bridge Corridor showed severe noise impacts as a result of train operations, specifically wheel squeal as a result of curve in track infrastructure. However, mitigation measures would reduce the noise levels at or below those of Existing Conditions. Therefore, Action Alternative A would not cause direct or indirect impacts to public health due to noise. For more information on noise impacts and mitigation measures, please see **Chapter 13, Noise and Vibration**.

19.4.1.3. Action Alternative B

Action Alternative B would cause the same direct and indirect impacts on public health resources as Action Alternative A.

19.4.2. Elderly Persons

19.4.2.1. No Action Alternative

With the No Action Alternative, railroad conditions related to elderly persons in the Local Study Area would remain the same as existing and there would be no impacts.

19.4.2.2. Action Alternative A (Preferred Alternative)

Action Alternative A would have no impact on elderly persons. The increase in daily train operations would cause future noise levels along the Long Bridge Corridor to range from 56 to 92 dBA (see **Chapter 13, Noise and Vibration**). Data show no nursing homes or concentrations of elderly persons in the Local Study Area and noise impacts would not be disproportionate to elderly persons in residential areas.

Action Alternative A would not cause permanent direct or indirect effects on air quality that would negatively affect the elderly. Local concentrations of air pollutant emissions caused by Action Alternative A would be below the *de minimis* thresholds (see **Chapter 10, Air Quality and Greenhouse Gases)**. Operators would appropriately handle and manage solid waste or freight trips carrying hazardous materials because of increased operations as required by regulations (see **Chapter 8, Solid Waste Disposal and Hazardous Materials**). Therefore, Action Alternative A would cause no additional public health impacts to elderly persons.

19.4.2.3. Action Alternative B

Action Alternative B would have the same direct and indirect impacts on elderly persons as Action Alternative A.

19.4.3. Persons with Disabilities

19.4.3.1. No Action Alternative

With the No Action Alternative, there would be no permanent direct or indirect impacts to persons with disabilities. There are no at-grade crossings of the railroad with the public right-of-way that might affect access for persons with disabilities. Projects in the No Action Alternative that might affect access (the L'Enfant and Crystal City VRE Station projects) would be completed in compliance with the Americans with Disabilities Act (ADA).

19.4.3.2. Action Alternative A (Preferred Alternative)

Action Alternative A would cause minor permanent direct beneficial impacts on persons with disabilities by replacing the existing pedestrian crossing of Maine Avenue. This crossing is not accessible to persons with disabilities because of a broken elevator, which inhibits safe access over Maine Avenue. The new pedestrian crossing would have a fully ADA-compliant ramp. Action Alternative A does not add at-grade crossings, stations, or platforms that require accessibility or adversely impact persons with disabilities.

19.4.3.3. Action Alternative B

Action Alternative B would cause the same direct and indirect impacts on persons with disabilities as Action Alternative A.

19.5. Temporary Effects

This section discusses the direct or indirect temporary effects of the No Action Alternative and Action Alternatives during construction, based on conceptual engineering design. For the complete technical analysis of the potential impacts to public health, elderly, and persons with disabilities resources, see **Appendix D3, Environmental Consequences Report**.

19.5.1. Public Health

19.5.1.1. No Action Alternative

The No Action Alternative may have temporary direct and indirect adverse impacts on public health as it relates to air quality, noise and vibration, and hazardous materials. Temporary construction activities of other projects may increase emissions and cause noise and vibration that would adversely affect public health. These impacts would be assessed and mitigated within the context of each project. Temporary construction activities for railroad projects included in the No Action Alternative could potentially encounter hazardous soils and require proper removal. The No Action Alternative would not have temporary direct and indirect adverse impacts on public health as it relates to water because temporary construction activities of other projects are not anticipated to extend into the water table.

19.5.1.2. Action Alternative A (Preferred Alternative)

Action Alternative A would have minor temporary direct adverse impacts on public health due to construction activities. Consistent exposure to elevated noise levels (daytime and nighttime) could result in annoyance and activity disruption negatively impacting the welfare and public health of people within or near the Corridor. Construction noise levels would exceed the District's daytime noise limit at three

receptors. One of the receptors, the National Park Service National Mall and Memorial Parks Headquarters, houses office workers who could be affected by construction noise over an extended period. Construction at this location would last approximately 4 years and 1 month. Daytime users at the other two receptors where construction levels exceed daytime noise limits, the Mandarin Oriental Hotel and the Rock Creek Trail, would not be similarly affected because their use is more intermittent.

Construction activities would exceed the District and Arlington's nighttime noise limits at several other receptors. However, none of these receptors are within residential areas and therefore noise from construction activities would not impact public health. On-site diesel equipment during construction, increased truck traffic to and from the construction sites, and fugitive dust would cause pollutant emissions. However, construction activities would not cause exceedances of the *de minimis* thresholds for air quality (see **Chapter 7, Air Quality and Greenhouse Gases**).

19.5.1.3. Action Alternative B

Action Alternative B would cause similar temporary impacts as Action Alternative A. However, the temporary impacts under Action Alternative B would last longer than under Action Alterative A in some parts of the Corridor. Overall, construction of Action Alternative B would last 8 years and 3 months rather than 5 years for Action Alternative A.

19.5.2. Elderly Persons

19.5.2.1. No Action Alternative

The No Action Alternative would not cause temporary impacts related to elderly persons as none of the projects are expected to affect accessibility. These impacts would also apply to elderly persons.

19.5.2.2. Action Alternative A (Preferred Alternative)

Construction activities from Action Alternative A would have minor temporary direct adverse impacts on elderly persons. Sidewalk closures may affect elderly persons who walk along those routes by increasing the travel distance required to reach certain destinations.

19.5.2.3. Action Alternative B

The temporary impacts under Action Alternative B would be similar to the impacts described under Action Alternative A. However, the potential for temporary impacts under Action Alternative B would be longer than Action Alterative A. The estimated duration of construction for Action Alternative B is nearly double Action Alternative A (8 years and 3 months versus 5 years, respectively).

19.5.3. Persons with Disabilities

19.5.3.1. No Action Alternative

The No Action Alternative may have temporary adverse impacts to access for persons with disabilities, depending on the location of construction areas and whether construction will require any sidewalk closures that may require detours that would increase the travel distance required to reach certain destinations.

19.5.3.2. Action Alternative A (Preferred Alternative)

Construction activities from Action Alternative A would have minor temporary direct adverse impacts on persons with disabilities. Sidewalk closures, including removal of the pedestrian bridge over Maine Avenue SW for the duration of construction, may affect persons with disabilities along those routes as detours may increase the travel distance required to reach certain destinations.

19.5.3.3. Action Alternative B

The temporary impacts under Action Alternative B would be similar to impacts described under Action Alternative A. However, the potential for temporary impacts under Action Alternative B will be longer than Action Alterative A. The estimated duration of construction for Action Alternative B is nearly double Action Alternative A (8 years and 3 months versus 5 years, respectively), resulting in additional years of potential impacts to persons with disabilities.

19.6. Avoidance, Minimization, and Mitigation Measures

This section describes proposed mitigation for the impacts to public health, elderly, and persons with disabilities resources. Avoidance, minimization, and mitigation measures that would be employed to reduce the adverse impacts of both Action Alternatives on public health, elderly persons, and persons with disabilities are discussed in other resource chapters, including **Chapter 6, Water Quality**; **Chapter 8, Solid Waste Disposal and Hazardous Materials**; **Chapter 10, Air Quality and Greenhouse Gases**; **Chapter 13, Noise and Vibration**; and **Chapter 18, Safety and Security**. The measures the Virginia Department of Rail and Public Transportation, the project sponsor for final design and construction, would consider include:

- Reducing wheel squeal by implementing a wayside top-of-rail friction modifier system and using gauge-face lubrication.
- Developing spill prevention plans, personal protective equipment, Construction Noise and Vibration Control Plan, and safety trainings to ensure public and worker safety during construction. These measures include requiring all temporarily relocated sidewalks to be accessible to persons with disabilities, to the extent practicable.
- Mitigating construction noise. Due to the daytime construction noise impacts at three receptors in the District and potential nighttime construction noise impacts at most receptors in the Local Study Area, there is a need for construction noise mitigation. Given the duration of construction activities and the relatively close proximity of sensitive receptors, the contractor would prepare a Construction Noise and Vibration Control Plan prior to beginning construction to reduce noise impacts on public health, the elderly, and persons with disabilities.