

## **13.3 Visual Resources**

This section describes visual resources that the proposed Port MacKenzie Rail Extension could affect. Section 13.3.1 describes the concepts behind a visual resource assessment; Section 13.3.2 describes the regulations governing visual resources; Section 13.3.3 describes the study area; Section 13.3.4 describes the methodology used to analyze impacts to visual resources; Section 13.3.5 describes the affected environment (existing conditions); and Section 13.3.6 describes potential environmental consequences (impacts); and Section 13.3.7 describes unavoidable environmental consequences of the proposed action to visual resources.

### **13.3.1 Introduction**

#### **13.3.1.1 Concepts and Terminology**

Identifying a project area's visual resources and conditions involves 3 steps:

1. Objective identification of the visual features (visual resources) of the landscape;
2. Assessment of the character and quality of those resources relative to overall regional visual character; and
3. Determination of the importance to people, or sensitivity of views, of visual resources in the landscape.

The aesthetic value of an area is a measure of its visual character and quality, combined with the viewer response to the area (FHWA, 1988). Scenic quality can be described best as the overall impression that an individual viewer retains after driving through, walking through, or flying over an area (BLM, 1980). Viewer response is a combination of viewer exposure and viewer sensitivity. Viewer exposure is a function of the number of viewers, number of views seen, distance of the viewers, and viewing duration. Viewer sensitivity relates to the extent of the public's concern for a particular viewshed. These terms and criteria are described in detail below.

#### **13.3.1.2 Visual Character**

Natural and artificial landscape features contribute to the visual character of an area or view. Visual character is influenced by geological, hydrological, botanical, wildlife, recreational, and urban features. Urban features include those associated with landscape settlements and development, including roads, utilities, structures, earthworks, and the results of other human activities. The perception of visual character can vary significantly seasonally, even hourly, as weather, light, shadow, and other elements that compose the viewshed change. The basic components used to describe visual character for most visual assessments are the elements of form, line, color, and texture of the landscape features (U.S. Forest Service, 1995; FHWA, 1988). The appearance of the landscape is described in terms of the dominance of each of these components.

### 13.3.1.3 Visual Quality

Visual quality is evaluated using the well-established approach to visual analysis adopted by the FHWA, employing the concepts of vividness, intactness, and unity (FHWA, 1988; Jones *et. al.*, 1975), which are described below.

- Vividness is the visual power or memorability of landscape components as they combine in striking and distinctive visual patterns.
- Intactness is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements; this factor can be present in well-kept urban and rural landscapes and in natural settings.
- Unity is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the landscape.

Visual quality is evaluated based on the relative degree of vividness, intactness, and unity, as modified by visual sensitivity. High-quality views are highly vivid, relatively intact, and exhibit a high degree of visual unity. Low-quality views lack vividness, are not visually intact, and possess a low degree of visual unity.

### 13.3.1.4 Visual Exposure and Sensitivity

The measure of the quality of a view must be tempered by the overall sensitivity of the viewer. Viewer sensitivity or concern is based on the visibility of resources in the landscape, proximity of viewers to the visual resource, elevation of viewers relative to the visual resource, frequency and duration of views, number of viewers, and type and expectations of individuals and viewer groups.

The importance of a view is related in part to the position of the viewer to the resource; therefore, visibility and visual dominance of landscape elements depend on their placement within the viewshed. A viewshed is defined as all of the surface area visible from a particular location (such as an overlook) or sequence of locations (such as a roadway or trail) (FHWA, 1988). To identify the importance of views of a resource, a viewshed must be broken into distance zones of foreground, middleground, and background. Generally, the closer a resource is to the viewer, the more dominant it is and the greater its importance to the viewer. Although distance zones in a viewshed could vary between different geographic regions or types of terrain, the standard foreground zone is 0.25 to 0.5 mile from the viewer, the middleground zone spans from the foreground zone to 3 to 5 miles from the viewer, and the background zone is from the middleground to infinity (Jones *et. al.*, 1975).

Visual sensitivity depends on the number and type of viewers and the frequency and duration of views. Visual sensitivity is also modified by viewer activity, awareness, and visual expectations in relation to the number of viewers and viewing duration. For example, visual sensitivity is generally higher for views seen by people who are driving for pleasure; people engaging in recreational activities such as hiking, biking or camping; and views seen by homeowners. Sensitivity tends to be lower for views seen by people driving to and from work or as part of their work (U.S. Forest Service, 1995; FHWA, 1988; U.S. Soil Conservation Service, 1978).

Commuters and nonrecreational travelers have generally fleeting views and tend to focus on commute traffic, not on surrounding scenery; therefore, they are generally considered to have low visual sensitivity. Residential viewers typically have extended viewing periods and are concerned about changes in the views from their homes; therefore, they are generally considered to have high visual sensitivity. Viewers using recreation trails and areas, scenic roadways, and scenic overlooks are usually assessed as having high visual sensitivity.

Judgments of visual quality and viewer response must be made based in a regional frame of reference (U.S. Soil Conservation Service, 1978). The same landform or visual resource appearing in different geographic areas could have a different degree of visual quality and sensitivity in each setting. For example, a small hill could be a significant visual element on a flat landscape but could have very little significance in mountainous terrain.

### **13.3.2 Regulatory Setting**

The state and local regulatory setting includes applicable policies on visual resources and aesthetics as they are presented in each respective management and comprehensive plan. Only policies, objectives, or goals pertaining to visual resources and aesthetics are included from each plan, and the text appears as written in each plan.

#### **13.3.2.1 Federal Regulations**

##### **National Environmental Policy Act of 1969**

The National Environmental Policy Act (NEPA) criteria for determining adverse affects are listed in 40 C.F.R. § 1508.27. Section 1508.8 states that “effects and impacts as used in these regulations are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative.”

#### **13.3.2.2 State Regulations**

The Susitna Basin Recreational Rivers and the Susitna Flats State Game Refuge both have management plans and applicable policies to protect visual resources and aesthetics. However, the Willow Creek State Recreation Area does not have an available management plan (Division of Parks and Outdoor Recreation, 2010).

##### **Alaska Scenic Byways**

The existing ARRC main line on the northern edge of the project area is an officially designated state scenic byway (ADOT&PF, 2010). This scenic byway does not have a corridor management plan (Moulton, 2010). Policy and Procedure, Policy and Procedure Number 01.03.020, for the Scenic Byways Program (ADOT&PF, 2006) contains the following policy:

The program designates transportation routes and sites as scenic byways and provides for development of improvements to them. As a result, the transportation system complements the scenic, recreational, natural, historic, cultural, and archaeological resources that can be accessed by the system. Scenic byways can include roads, ferries, airports, railroads, coastal waterways, marine parks and portages, navigable rivers, and trails. The scenic byways program uses transportation system development to enhance the quality of

life for Alaskans and visitors by improving access to and appreciation of the state's unique features; develops partnerships with federal, state, and local governments; and promotes economic development throughout the state.

## Susitna Basin Recreational Rivers Management Plan

The Little Susitna Recreation River, Lower Little Susitna River Subunit, is the management unit within the Susitna Basin Recreational Rivers Management Plan (Division of Land and Resources Section, 1991) that the proposed rail line would affect. As described in the plan, “scenic values are highest on the upper river where the water is clear and there are views of the Talkeetna Mountains. The lower river is silty and slow-moving and visibility is reduced by rolling terrain and tall trees. In the middle reaches, near the Parks Highway, the visual quality is diminished by powerlines, bridges, and other structures.”

### Areawide Land & Water Management Policies

**Riparian Management Areas - Scenery.** Protect and maintain the scenic qualities of rivers, lakes, and their viewsheds.

**Recreation - Scenic qualities.** Maintain and enhance for viewing the existing characteristic natural landscape within the Recreation Rivers.

**Fish & Wildlife Habitat - Recreation and economic use.** Ensure continued recreation and economic use of and enjoyment by the public including activities such as fishing, hunting, wildlife viewing, and trapping.

### 1a. Lower Little Susitna River Subunit

**Management Intent.** The subunit features high quality fishing, hunting, and camping opportunities for powerboaters, floaters, and bank fishermen in a relatively remote, undeveloped setting. In the winter, the subunit features numerous snowmachine, dogsledding, and cross-country skiing trails. It also includes winter moose habitat and salmon spawning habitat. The subunit will be managed to provide and enhance these recreation opportunities and fish and wildlife habitat. Maintaining levels of low development and an essentially unmodified natural environment will be the focus of management.

## Nancy Lake State Recreation Area Master Plans

As described in the Nancy Lake State Recreation Area Master Plan (Division of Parks, 1983), the Nancy Lake State Recreation Area was established to reserve lands within the area “for public recreation and from all uses incompatible with public recreation.” It is stated that “the significance of the area is its quiet, graceful, and natural beauty,” in addition to its location near Anchorage and availability of providing recreational activities year-round.

**Natural Resource Inventory – Scenic values.** As stated in the Master Plan, there are some quite spectacular views of the Chugach Mountains and the Alaska Range to be had from hilltops and ridges throughout the recreation area. Some of the best long vistas are gained from and across the many lakes and placid ponds. Scenic values of the recreation area also include views of seasonal changes, such as brilliant fall colors or new snowfall; lily ponds; wetlands, bogs and lake reflections; and the overall quiet solitude that accentuates the beauty of Nancy Lake State Recreation Area.

**Implications:** Development plans should incorporate and maintain scenic values.

**Management and Development Recommendations – Utility and transportation corridors.** As stated in the Master Plan, corridors which would alter the landscape or otherwise detract from the enjoyment of recreation area visitors shall not be routed through the Nancy Lake State Recreation Area. Corridors adjacent to the recreation area should be planned to avoid or minimize their impact. All utility lines within or through the Nancy Lake State Recreation Area will be placed underground with vegetation being

restored to a natural appearance. All new and existing roadways will be designed to follow existing contours, and any necessary cuts or fills will be revegetated and returned to a natural appearing condition.

## **Susitna Flats State Game Refuge Management Plan**

The Susitna Flats State Game Refuge Management Plan (Divisions of Habitat and Game, 2010) states that the refuge was established to protect fish and wildlife in addition to providing public use, “viewing, photography, and general public recreation in a high quality environment.” The plan defines high quality environment as “the natural values for which the refuge was established including diverse and productive fish and wildlife habitats, abundant fish and game populations, undisturbed open space, and scenic beauty.” The Little Susitna River Public Use Facility is located within the refuge. The following goals and objectives relate to visual resources in the project area, as stated in the Management Plan:

**Public Use Objective 1.** Maintain and, where appropriate, enhance public access to the refuge.

**Public Use Objective 3.** Maintain and enhance opportunities to view, photograph, and study fish and wildlife and use the refuge habitat in a high quality environment.

**Multiple Use Activities Object 1.** Evaluate proposals that require approval under Alaska Administrative Code (Alaska Admin. Code § 95.420) for use of the refuge on a case-by-case basis and determine compatibility with the goals and other objectives of the refuge plan. Allow compatible activities under terms and conditions consistent with protecting, preserving, and enhancing fish and wildlife habitat populations and public use and general recreation in a high quality environment.

### **13.3.2.3 Local Regulations**

According to the MSB comprehensive plans, the Big Lake Community Council, City of Houston, Point MacKenzie District, and City of Willow have management plans and applicable policies to protect visual resources and aesthetics. The Knik-Fairview Comprehensive Plan (MSB Planning and Land Use Department, 1997) does not include goals or objectives related to visual resources in the project area.

## **Big Lake Community Council Area Comprehensive Plan Update**

The Big Lake Community Council Area Comprehensive Plan Update (Big Lake Planning Team *et. al.*, 2009) includes the following goals and objectives related to visual resources in the project area:

**Land Use and Environment Goals.** The overarching goal of this plan is to protect Big Lake’s special character as a place to live and visit while accepting and even encouraging growth. Without guidance, as the area grows, the community risks losing these qualities that makes Big Lake a distinctive place – its undeveloped open spaces, good views, wildlife, and out-the-door access to recreation. At the same time, growth in the community can bring many benefits – providing new places for people to live, creating new opportunities for local employment, and generally leading to a more vital community.

**Strategy 1.** Develop a land use “roadmap” setting out general intentions for the location and intensity of development – to provide for growth, protect Big Lake’s environment and rural character, encourage concentrated commercial development, and allow for the efficient provision of community infrastructure.

**Strategy 3.** Identify and protect key features of the natural environment. The Big Lake natural environment is at the heart of the community’s quality of life and economy. Over the course of the meetings to prepare this plan, the public was clear on what they value about the Big Lake natural environment:

- Natural beauty – retain the landscape that reflects the natural beauty of the land
- Dark night skies – minimize light pollution

**Strategy 4.** Establish community-wide development guidelines. General development guidelines include:

- Natural Vegetation/Site Disturbance – Encourage retention of existing natural vegetation and replant disturbed areas. Grading and clear cutting the entire parcel prior to selling or developing land is strongly discouraged.
- Lighting – Maintain dark skies by encouraging downward directed lighting; minimize glare of lighting onto adjoining properties. Discourage glaring into adjoining or surrounding properties.
- Underground Utilities – Underground utilities are recommended for all future development in the Big Lake community – discuss with community; this issue is likely adequately addressed under existing MSB policy.

**Transportation Goal 3.** Port MacKenzie Rail Spur: Support regional development through improvements in Borough transportation infrastructure. The alternatives developed by the Alaska Railroad for the extension of the line to Port MacKenzie will pass near or through the Big Lake Community Council area. Big Lake’s preference is for the new rail line to be built west of the Big Lake area, rather than to pass through the community. In any case, the route needs to be designed carefully to minimize impacts to residential areas, trails, and sensitive environmental areas, but still be an efficient route for the railroad. The preferable corridor from the community’s perspective is the Willow to Port MacKenzie Corridor. In any case, when the line is built, it will be critical that accommodation be made for trail and future road crossings, along with routing that minimizes visual and noise impacts on residents.

**Economic Development Goal 1.** Keep the natural environment clean and green. It is arguable that Big Lake’s most important economic resource is its natural setting – its lakes, streams, views and open space. These are the features that attract and hold many year round and seasonal residents, as well as short term visitors. The community has identified several strategies that will both maintain the natural character of the Big Lake region while enhancing the economic vitality of the community.

## City of Houston Comprehensive Plan

The City of Houston Comprehensive Plan (MSB Planning and Land Use Department, 2003) includes the following goals and objectives related to visual resources in the project area:

**Economic Goal.** To help develop a broadly-based economy that is responsive to the requirements of the community by providing opportunities for employment, commercial service, and economic growth while maintaining an economical, aesthetically high standard of living not in conflict with established residential, commercial, and light industrial development goals.

**Environmental Goal.** To actively work toward ensuring that the natural environment of Houston, including but not limited to air and water quality, fish and wildlife habitat, and natural vegetation, is enhanced and maintained by encouraging land uses and development that are consistent with the natural characteristics of the community.

### Community Environmental Objectives:

- Encourage an understanding of the relationship between human well-being and environmental quality.
- Encourage activities and development practices that promote preservation of as much vegetation within the community as possible, including revegetation programs as necessary.

## Draft Point MacKenzie Comprehensive Plan

The Draft Point MacKenzie Comprehensive Plan (MSB Planning and Land Use Department, 2010) includes the following goals and objectives related to visual resources in the project area:

**Land Use Goal 5.** Encourage the routing of any major “linear” infrastructure project to locate away from any existing or planned commercial or residential areas. Limited available public land for development in the Point MacKenzie community will result in a majority of the development occurring along Point MacKenzie Road. Every effort should be made to retain the open nature and natural beauty of this corridor.

**Objective 1.** New “linear” projects should locate along existing easements and right-of-ways.

## **Willow Area Comprehensive Plan Update Draft**

The Willow Area Comprehensive Plan Update Draft (MSB Planning and Land Use Department, 2009) includes the following goals and objectives related to visual resources in the project area:

**Land Use Goal 1.** Maintain the rural character of Willow. Rural character is many times a perception unique to the individual. Regardless of anyone’s idea of rural character, it remains true that as more people are attracted to rural areas, preserving the unique character of an area becomes more of a challenge. Ultimately, it is the community’s own definition of rural character that is the single most important part of its preservation. It is up to each community to decide what its rural character is and, subsequently, how it can be maintained.

### **Recommendations:**

- Guide Willow’s growth while protecting important environmental resources and community character, encourage development at the existing town center, make efficient use of roads and buildings, and support a healthy local economy.

**Land Use Goal 3.** Maintain the area’s scenic, recreational, and residential qualities. Safeguarding the Willow area’s aesthetically pleasing visual environment can be supported by promoting development which is sensitive and complementary to natural settings. Waterfront or hillside development should maintain the natural qualities and character of terrain, vegetation, trees, habitat, and water quality.

### **Recommendations:**

- Support development on hillsides and along roads and waterways that is visually unobtrusive and that addresses the importance of protecting the scenic vistas and environment.
- Protect scenic and visual corridors and green areas.
- Retain the undeveloped character of land along the Willow Freeway Bypass portion of the Parks Highway, with substantial “green spaces” separating developed areas.

**Land Use Goal 5.** Maintain the quality of Willow’s natural environment and scenic beauty, while allowing for necessary improvements to support growth. Development can affect our everyday lives – our homes, our health, our schools, the taxes we pay, our daily commute, the natural environment around us, economic growth in our community, and opportunities to achieve our dreams and goals. What, where, and how communities build will affect our lives for generations to come. Most Willow property owners and residents will agree that one of the reasons they live there is because of the area’s natural beauty and the scenic views of and access to wilderness.

### **Recommendations:**

- Retain land suitable for parks and natural undeveloped areas.
- Provide tax relief for landowners who guarantee retention of undeveloped land parcels, including but not limited to, farmed land.

**Recreation Goal 1.** Encourage the community to identify natural and scenic resources, as well as cultural and historical areas, needed to meet present and future public recreation needs.

**Recommendations:**

- Public land holders should consult the community and this plan before classifying or disposing of land in the Willow area.
- The inventory should include, but not be limited to, the quantity and quality of the following resources: fish and wildlife habitats; ecologically and scientifically significant natural areas; outstanding scenic views and sites; hydrological resources such as wetlands, watersheds, and groundwater; wilderness areas; historic areas, sites, structures, and objects; cultural areas; and existing and future recreation trails, parks, and recreation sites.
- Where conflicting uses are identified concerning a natural, cultural, or scenic resource proposal, the recreational, environmental, and economic impacts will be weighed by the community.
- If a transportation corridor such as a roadway or railroad is proposed, impacts to recreation resources and the environment should be minimized by the corridor location and design.

### **13.3.3 Study Area**

The visual study area is in the Susitna River valley and extends between the Susitna River, Cook Inlet, Knik Arm, and the existing ARRC main line (see Figure 2-2).

### **13.3.4 Analysis Methodology**

Using the concepts and terminology described at the beginning of this section, analysis of the visual effects of the rail line are based on:

- direct field observation from public vantage points, including neighboring recreational areas and roadways (Conducted September 14 to 17, 2010);
- photographic documentation of public key views of and from the proposed rail line, as well as regional visual context;
- review of proposed rail line alignment and conceptual design drawings; and
- review of the rail line in regard to compliance with state and local ordinances and regulations and professional standards pertaining to visual quality.

Visual resources consist of views of the project area. Many viewsheds could be affected by any given alternative, thus affecting a variety of viewer groups. Important views or key observation points include public vantage points that have views of the proposed rail line, including immediate views from trail, road, and waterway crossings of the proposed rail line and more distant views of the proposed rail line from vantages such as local roadways, lakes, or by air. Analyses of the visual impacts of the proposed rail line are also based on photo-realistic simulations of representative photographs for vantages of the study area that have been chosen to the best degree possible to depict (a) existing conditions and (b) rail line affected environment for the purpose of illustrating the impact of the proposed rail line upon the landscape as seen by viewer groups.

#### **13.3.4.1 Professional Standards**

Professional standards result from professional and direct expertise gained by staff working on visual analyses and consulting with other experienced staff and clients on visual effects,

including knowledge gained from public input on a broad range of projects. The effects listed represent collective knowledge that is professionally agreed upon and represents common, general public concerns. According to professional standards, a project could be considered to have adverse effects if it would substantially:

- conflict with local guidelines or goals related to visual quality;
- alter the existing natural viewsheds, including changes in natural terrain;
- alter the existing visual quality of the region or eliminate visual resources;
- increase light and glare in the project vicinity;
- result in backscatter light into the nighttime sky;
- result in a reduction of sunlight or introduction of shadows in community areas;
- obstruct or permanently reduce visually important features; or
- result in long-term (that is, persisting for 2 years or more) adverse visual changes or contrasts to the existing landscape as viewed from areas with high visual sensitivity.

### **13.3.5 Affected Environment**

#### **13.3.5.1 Existing Conditions**

The proposed rail line is located in the MSB and its southern extent is less than 5 miles north of Anchorage, across the Knik Arm of the Cook Inlet. However, to reach the project area, one must travel between 40 to 50 miles around the Knik Arm on Glenn and West Parks highways to reach local roadways that access the southern project extents. West Parks Highway also provides access to local roadways that reach the central and northern portions of the project area. The proposed rail line alternatives cover an area that is approximately 37 miles long by 17 miles wide.

The project area is broken into a southern and northern region. The southern region contains the Mac East, Mac East Variant, and Mac West segments and the northern region contains the Willow, Houston, Houston North, Houston South, and Big Lake segments. These regions are visually different from each other. The Connector 1, Connector 2, Connector 2a, Connector 3, and Connector 3 Variant segments connect the northern segments to the southern segments.

The southern region is primarily comprised of the Point MacKenzie Agricultural Project (agricultural area). The agricultural area is bounded to the north by Ayrshire Avenue and Little Su River Road, to the east by Point MacKenzie Road, to the south by undeveloped land, and to the west by the undeveloped lands of the Susitna Flats State Game Refuge. The visual character of the southern region is predominantly rural land that has been cleared for agricultural production and is surrounded by undeveloped land that largely retains its natural undeveloped state. The Little Susitna River Public Use Facility is located just northwest outside the agricultural area, provides access to the Little Susitna River, and is accessible via local roadways traveling through the project area (Appendix P, Photo 1). The agricultural area is generally flat (Appendix P, Photo 2) to slightly rolling at its eastern extents (Appendix P, Photo 3). Public views in the area exist from public roadways as most farms are closed to the public.

The farms utilize hedgerows, which often surround the fields on several sides and tend to limit views to the foreground and the roadway corridor (Appendix P, Photo 4). Views to the middleground and the interior of fields exist where there are gaps in hedgerows or there is a span where hedgerows are not present. Views of the background are not present due to the lack of ground relief and of vegetation. Common visual elements in this rural setting include farm homes, barns, silos, and related farm infrastructure; rectangular fields defined by hedgerows; tractors using local roadways to access fields; hay bales; agricultural production activities; and the occasional fruit and vegetable stand. The agricultural area is high in vividness, intactness, and unity due to the uniqueness of the rural area compared to its surrounding landscape and within Alaska itself and due to its freedom from encroaching visual elements that would act to disrupt the character or uniformity of the rural visual landscape, which is highly pastoral.

The undeveloped natural areas that surround the agricultural area are visually defined by their terrain and vegetative communities. The terrain is flat to more rolling and highly influenced by glaciation, and there are a number of small lakes and ponds scattered throughout the landscape. Many of the lakes and ponds are not visible, as they are surrounded by tall vegetation, unless a roadway transects or passes by them. As described in Section 5.2, Vegetation Resources, wetland habitats and evergreen, deciduous, and mixed forest stands comprise the project area outside of the agricultural area. Scrub/shrub wetland communities are generally dominated by willow or alder and include sedges, bog blueberry, leatherleaf, sphagnum moss, horsetail, or other wetland plants dependent upon wetland type and composition. Riparian areas are dominated by willows, alder, balsam poplar, and white spruce. Evergreen forests are comprised of a mix of white spruce and black spruce that often have tall alder and willow understories. Deciduous forests are dominated by paper birch or quaking aspen. Mixed forests are most often comprised of paper birch or quaking aspen with a smaller population of black and/or white spruce. All of these habitat types can be seen from local roadways surrounding the agricultural area.

Private, agricultural lands and a lack of public roadways prevent access to the natural areas south and west of the agricultural area. Therefore, much of the year-round visual access is limited to the natural areas north and east of the agricultural area as available along public roadways. However, activities such as construction, mining, and parking for trailheads are visible from these roadways (Appendix P, Photo 5). The vividness, intactness, and unity of the natural areas surrounding the agricultural area in the southern region are moderately high due to the natural, largely undeveloped character, which is fairly common to areas surrounding the southern region, and due to the presence of human activity upon the landscape that does not dominate or greatly segment natural areas.

The northern region is visually defined by generally flat to rolling terrain with some areas of steeper terrain, by the influence of glaciation and numerous lakes and ponds scattered throughout the landscape, by rivers and creeks flowing through the region, by vegetative communities, and by developed areas that largely occur in the Big Lake area and along West Parks Highway, such as Houston and Willow. Many lakes have views that are accessible from public roadways, often that pass private properties. However, many are not visible as they are surrounded by tall vegetation or flatter bog or marsh lands that prevent access in warmer months. A large number of lakes are only visible through air travel or in the winter when accessed through the various forms of winter recreation occurring in the region. Lakes used for recreating provide visual

interest through the presence of water with its reflective qualities (Appendix P, Photo 6) or ice that is visually interesting and provides a different recreational experience on the lake. The scenic rivers and creeks in the region travel over and around exposed gravel bars and deposits, bordered by dense, tall trees that create an enclosed and winding corridor (Appendix P, Photo 7). Similar to lakes and ponds, rivers and creeks are often only visible from crossing roadways unless they are accessed by foot, boat, snowmachine, or dog sled. The Little Susitna State Recreation River, Nancy Lake State Recreation Area, and Willow Creek State Recreation Area are located in the northern region.

Developed areas in the northern regions consist of more densely populated areas, like Big Lake proper; of smaller clusterings of moderately developed areas, like east of West Parks Highway near Big Lake; and of sparsely developed areas within state lands or on the outskirts of developed areas, such as around Red Shirt Lake and near Willow Creek State Recreation Area. Individual residences range from year-round to seasonal properties, which get used during different times of year for recreation, such as hunting or boating, and for relaxation and the general enjoyment of the outdoors. Residences vary from well-kept dwellings to structures that appear to be in ill-repair or in the process of repair. No trespassing signage is a common element that deters access to private lands along public roadways. The primary and connector roadways accessing developed areas off of the highway are commonly paved, with secondary roadways being graveled or unpaved.

Roadways sometimes offer panoramic views over the landscape when a combination of higher elevations and breaks in vegetation offer such scenes (Appendix P, Photo 8). These views extend to the background and can reach to Mount McKinley in Denali National Park, approximately 100 miles away, when atmospheric conditions are clear and free of haze, rain, or snow. The Talkeetna Mountains to the east are much closer, less than 30 miles away, as are the Chugach Mountains to the south, less than 50 miles away, and are visible on a more regular basis where views are offered. Views to the Alaska Range, 90 miles to the west, are also visible on clearer days.

The vividness, intactness, and unity of the northern region are moderate to moderately high due to the combination of both developed and undeveloped natural landscapes. Both landscapes are fairly common to areas surrounding the northern region, and the presence of human activity upon the landscape, which at times detracts from the natural character, is generally centralized so it does not dominate or greatly segment natural areas throughout the northern region.

In both the southern and northern regions, dark green spruce contrast against the lighter green deciduous trees and understory shrubs, which give way to hues of yellow, orange, and brown in the fall. Seasonal interest, such as wildflowers in the spring, deciduous fall colors, and snow-covered ground and mountains in the distance, transform viewsheds throughout the year.

### **13.3.5.2 Viewer Groups**

#### **Residents and Businesses**

Where residences and businesses are adjacent to the proposed alternatives, views are generally within the foreground or middleground and contain tall and sometimes dense stands of trees.

Residents and businesses with views are predominantly located in the area of the Big Lake Segment, while other segments, like the Houston Segment, pass by residential areas at a distance. Residents and businesses would have high sensitivity to changes in their visual environment due to a sense of ownership over their surrounding viewsheds and an appreciation for their natural character.

### **Roadway Users**

One of the largest viewer groups of the proposed rail line would be travelers along local roadways that are crossed by or have views of the proposed rail line. Major roadways affected include Point MacKenzie Road, West Holstein Avenue, South Guernsey Road, Little Su River Road, West Susitna Parkway, Hollywood Road, West Big Lake Road, West Parks Highway, West Papoose Twins Road, Willow Creek Parkway, and several smaller local roadways. Many of these roadways are used for recreation and recreation access, freight transport, and by local residents. Speeds generally range from 10 to 65 miles per hour depending on if the road is paved, the condition of the roadway, if it is a highway or local route, the curvature of the roadway, and weather conditions.

Viewers who travel roadways in the area generally possess moderate visual sensitivity to their surroundings. The roadways vary greatly: from straight to tight, winding curves; smooth to a gravel covered, rutted surface; partial or full shade to full sun-exposed surface; dense to open canopy cover on either side of the roadway; and level to moderate roadway gradients. Higher roadway speeds often require extra attention and focus on the roadway itself, but speeds of 10 to 25 miles per hour allow for viewers to observe their surroundings and experience the passing landscape and changing views.

### **Recreationists**

Likely the largest viewer group of the proposed rail line would be recreationists. The project area supports active and passive recreation such as dog sledding, snowmachining, off-highway vehicle use (such as quads and dirt bikes), hiking, snowshoeing, cross-country skiing, mountain biking, hunting, fishing, floating and boating, camping, and travelers on the Alaska Railroad's passenger rail service. These uses are discussed in more detail in Section 13.2, Parks and Recreation Resources. Winter recreation offers more visual access to the proposed rail line, as winter trails are generally not passable until the ground and waterbodies are frozen and there is snow on the ground. Recreationists are more likely to regard the natural and built surroundings as a holistic visual experience and, therefore, would have a high sensitivity to changes occurring as a result of the proposed rail line.

### **Air Travelers**

Air travel is a commonly used mode of transportation in the MSB and includes float and ski-planes, small passenger planes/air taxis, and military aircraft. Air travel within the project area is known to utilize the many lakes, in both their frozen and thawed conditions, to aid in accessing remote areas or areas where roads tend to become impassable in the high rain or snow. Because smaller aircraft fly at lower altitudes, passengers generally have direct and expansive views out of the plane, and would, therefore, have direct aerial views of the proposed rail line. Air travelers familiar with the area likely enjoy air travel and its associated panoramic views of the

area and would regard the natural and built surroundings as a holistic visual experience. Therefore, air travelers would have moderately high sensitivity to changes occurring as a result of the proposed rail line.

### **13.3.6 Environmental Consequences**

This section describes the impact analysis relating to visual resources for the proposed rail line and alternatives. It describes the methods used to determine the proposed rail line's effects and lists the thresholds used to conclude whether an effect would be adverse. Because evaluating visual effects is inherently subjective, Federal and professional standards of visual assessment methodology have been used to determine potential effects on the aesthetic values of the project area.

#### **13.3.6.1 Proposed Action**

##### **Common Impacts**

###### **Construction**

Construction of the proposed rail line would create temporary changes in views of and from the project area. Construction is expected to occur throughout the year except when severe weather limits construction, such as in the winter, and would require approximately 2 years.

Construction activities would introduce considerable heavy equipment and associated vehicles, including bulldozers, graders, scrapers, and trucks, into the viewshed of adjacent viewers. The location of construction staging areas and associated facilities are, generally, to be located within the 200-foot ROW. However, these locations would be determined later in the final design process and specific locations are currently unknown. Staging areas would be restored once construction of the rail line is complete. Activities involving the use of heavy equipment, transport of soils and material, and other visual signs of construction would occur within the rail line ROW, along public roadways, and at construction staging areas. Because construction would take 2 years and would migrate along the corridor, visual changes resulting from construction are considered short term and temporary.

These temporary visual changes would be most visible to recreationists, roadway users, and residents or businesses adjacent to or in the 200-foot ROW. Temporary visual changes would be greater if there were a greater number of viewers and a greater visible area of the proposed rail line from public vantages. Residents and businesses, roadway users, and recreationists are likely accustomed to seeing heavy machinery, shipping trucks, and vehicles on or near the roadway as construction, mining, timber, and snow removal operations are common in the project area.

ARRC has indicated that there could be construction activity at night. While construction would not occur at night where environmental and human constraints exist, there could still be nighttime construction activities occurring. Nighttime construction activities would involve the use of lighting equipment that could cause glare, potentially affecting the sensitive viewers adjacent to the proposed rail line. This would result in an adverse effect.

## Operation

Once the proposed rail line is complete, permanent facilities would include the terminal reserve area, up to 3 new communications towers, new permanent access roads to communications towers, track siding to the north of the proposed tie-in point with the main line, and the constructed rail line. Visual features associated with the terminal reserve area would consist of yard sidings, storage areas, and a terminal building to support train maintenance within an area that is approximately 1,000 feet wide and 9,800 feet long. The 3 communications towers would be spread out with one located near Port MacKenzie, one in the middle of the selected alternative, and one near the proposed tie-in point with the ARRC main line. New access roads could be needed if tower sites are not accessible from existing roadways. The 8,000-foot double-ended siding would allow trains to pass and provide access to rail services.

Visual changes resulting from these permanent features would include a conversion of the existing land use (agriculture, forest, wetland, developed, etc.) to a use that includes permanent, built features at the terminal reserve area or a permanent linear corridor including the rail line, access road, transmission line, culverts under the tracks, and vegetative maintenance within the 200-foot ROW. As described in Section 13.1, Land Use, the largest forested areas affected by the proposed rail line would be in the Willow, Mac East, Mac East Variant, Mac West, and Big Lake segments. The remaining segments have limited forest land and contain large wetland areas, as described in Section 5.2, Vegetation Resources. Removal of vegetation and construction within the 200-foot ROW of associated rail line elements and the terminal reserve area would affect visual resources associated with the loss of vegetation. This is similar to existing conditions shown in Appendix P, Photo 9. In addition, the sound and motion of the train passing would draw attention to the rail line where nearby viewers are present. Other features associated with the rail line would include bridges and grade-separated or at-grade crossings. The proposed rail line includes 10 potential locations for bridges over the Little Susitna River; Willow Creek; Rogers Creek; tributaries to Little Willow Creek and Little Lake Creek; and several unnamed streams. A bridge at any of these locations would introduce an elevated feature crossing the waterway into the viewshed of recreationists, as shown in Figure 13.3-1. Such a structure would create a visual massing that acts to segment views upstream and downstream of the bridge, where natural views presently include no human-made elements and extend along the river or creek until bends in the waterway and adjacent vegetation act to limit views. It also would introduce a long, vertical, raised structure that would cross open to semi-open viewsheds and introduce a human-made linear feature into the landscape where none presently exist. Grade-separated crossings are proposed for Parks Highway; W. Big Lake Road; Baker Farm Road; W. Holstein Avenue; and W. Hollywood Road. Grade-separated crossings are also proposed for officially recognized trails, where practicable, or the trails could be relocated to avoid crossing the rail line. These trails are identified in Section 13.2, Parks and Recreation Resources. These trails include the Iditarod National Historic Trail, which traverses the study area and intersects the Willow, Houston, and Big Lake segments. Recreational impacts are discussed in more detail in Section 13.2, Parks and Recreation Resources, including impacts to the Iditarod National Historic Trail.



Figure 13.3-1. Existing and Simulated Views of the Willow Segment Crossing the Little Susitna River

Similar to bridges, grade-separated crossings would introduce an elevated feature crossing the roadway or trail into the viewshed of roadway users year round, and of recreationists on trails primarily in the winter, as shown in Figure 13.3-2. Such structures would create a visual massing that acts to segment views on approach to the crossing. Where the segments cross the aforementioned roadways, the roadways are generally straight, flat, and have longer views down the roadway corridor, and the crossing would greatly limit this view and reduce the visible skyline upon approach. On trails, there are generally a lack of human-made elements and views that extend along the trail corridor and out to the surrounding areas until curves, topographic variation, and adjacent vegetation act to limit views. Grade-separated crossings over trails would alter these views by adding a built feature where none presently exist, reducing visible skyline on approach, and altering the surrounding topography and vegetation. Grade-separated crossings would also introduce a long vertical, raised structure that would cross open to semi-open viewsheds and introduce a human-made linear feature into the landscape where none are likely to presently exist, even in more developed areas. Relocation of trails would alter the existing visual experience by moving the trail to a new location, yet the experience is likely to be as scenic as, similar to, or better than the existing trail. However, viewers could perceive relocation negatively, causing adverse affects. Trails for which ARRC would not provide crossings would be blocked, and ARRC's trespassing regulations would prohibit crossing of the ROW. This would affect visual resources and those using these trails because it would confine trail users to a smaller subset of trails and completely eliminate visual access to those trails without provided crossings.

As stated in Chapter 11 of the EIS, ARRC has proposed to equip proposed at-grade crossings with roads having annual average daily traffic of more than 500 vehicles per day with active warning devices such as flashing lights and gates, while those with annual average daily traffic of less than 500 vehicles per day would be marked with passive warning devices such as crossbucks and stop signs. There would be no elevated structures associated with the at-grade crossings, so it would have a smaller visual impact upon the landscape. Gates, signage, and the rail line itself would generally not be visible from a distance, especially in a flatter landscape or where bends in the road would prevent immediate views of the crossing until the viewer is closer to the crossing. Being a vertical element, signage and gates would tend to blend in with existing trees until the viewer is closer to the crossing. These elements would stand out more where there is less development and the area is more natural, but would blend in better in more developed areas where utility lines and signage are already common to the landscape. Crossings would be more visible when they are located at the peak in the roadway (Appendix P, Photo 10), where signage and gates stand out against the skyline, or when traveling downhill and the rail line passes at the bottom of the hill, allowing views down onto the rail line. Flashing warning lights would not be high-intensity and would only be activated as the train passes for a short duration; thus, they would not introduce a substantial new light source.

Views from the existing ARRC main line would not be greatly affected by the connections of the main line to the Willow, Houston North, Houston South, and Big Lake segments because there visually similar features in the areas that are moderately developed and rail passengers would quickly pass the connection location at normal rail speeds, thus providing only fleeting views. Aerial views will be impacted across all segment and segment combinations.



Figure 13.3-2. Existing and Simulated Views of the Big Lake Segment Crossing Big Lake Road

## Impacts by Segment and Segment Combination

### Southern Segments and Segment Combinations

#### *Mac West-Connector 1 Segment Combination*

Public views of the Mac West segment mostly would be available from South Guernsey Road where gaps in hedgerows and views across fields exist. Movement and sound of the train would draw attention to the rail line where views are present. In addition, the farmland between South Guernsey Road and the Susitna Flats State Game Refuge is in private ownership, preventing public access into the interior of the fields that would offer more views. West Holstein Avenue becomes private property west of Farmer Lake, preventing public access to views of the proposed rail line. The Figure 8 Lake Loop Trail would also have views of this segment and require at least 1 crossing and potential relocations in a few areas. Views from private agricultural lands would be the most affected.

The Connector 1 Segment mostly would be visible as it crosses West Little Su River Road, which serves as the entrance to the Little Susitna River Public Use Facility. It also could be visible to trail users traveling on unofficial trails. Most of the land the Connector 1 Segment would affect is natural and undeveloped.

#### *Mac West-Connector 2 Segment Combination*

Impacts from the Mac West Segment would be as previously described.

The Connector 2 Segment would travel east from the Mac West Segment across the agricultural area and along the southern boundary of the Point MacKenzie Correctional Farm and forested lands across from the correctional facility (Appendix P, Photos 11 and 12). The fence line of the correctional facility along South Guernsey Road lacks dense vegetation and allows views of the alignment west of South Guernsey Road when traveling south toward the connector (Appendix P, Photo 11). Forested lands prevent views to the east when traveling south. When traveling north on South Guernsey Road, public views are limited because of dense hedgerows along the roadway and would mainly comprise the at-grade crossing of South Guernsey Road. The farmland is in private ownership, preventing public access into the interior of the fields that would offer more views. Movement and sound of the train would draw attention to the rail line where views are present.

#### *Mac East-Connector 3 Segment Combination*

Public views of the Mac East Segment mostly would be available from Point MacKenzie Road, where gaps in vegetation allow views across a small portion of agricultural lands and wetland or forested areas (Appendix P, Photos 13 and 14), or from West Holstein Avenue, which the segment would cross. Movement and sound of the train would draw attention to the rail line where views are present. Much of the proposed rail line would be buffered by thick bands of existing vegetation along Point MacKenzie Road. Three acres of land in agricultural use would be affected by the footprint of the Mac East Segment, but this would not be visible to public viewers.

The Connector 3 Segment mostly would be visible as it would cross near Ayrshire Avenue, West Carpenter Lake Road, and Farmers Road. It also could be visible to trail users traveling on unofficial trails. Most of the land the Connector 3 Segment would affect is natural and undeveloped.

### *Mac East Segment*

Potential impacts from the Mac East Segment would be as previously described.

### *Mac East Variant-Connector 2a Segment Combination*

Public views of the Mac East Variant Segment mostly would be visible from South Guernsey Road, Reddane Avenue, and Holstein Avenue where gaps in hedgerows and views across fields exist. Movement and sound of the train would draw attention to the rail line where views are present. In addition, the farmland between South Guernsey Road and Point MacKenzie Road is in private ownership, preventing public access into the interior of the fields that would offer more views.

The Connector 2a Segment is the eastern end of the Connector 2 Segment. It travels northeast from the Mac East Variant Segment across the agricultural area and through the forested lands across Point MacKenzie Correctional Farm. Dense hedgerows and forested lands would prevent views to the east of the Connector 2a Segment from South Guernsey Road.

### *Mac East Variant-Connector 3 Variant Segment Combination*

Impacts from the Mac East Variant Segment would be as previously described.

The Connector 3 Variant Segment mostly would be visible as it crosses Ayrshire Avenue and Farmers Road. It also could be visible to trail users traveling on unofficial trails. Most of the land the Connector 3 Variant Segment would affect is natural and undeveloped.

## **Northern Segments and Segment Combinations**

### *Willow Segment*

Public views of the southern portion of the Willow Segment mostly would be available from winter-use trails in the area, due to the predominance of wetland areas greatly limiting the time of year there would be available views. Public views of the northern portion of the Willow Segment would be present from winter-use trails, Willow Creek, and road crossings, including Deshka Landing Road and Willow Creek Parkway. Willow Creek Parkway serves as the entrance to the Willow Creek State Recreation Area and also doubles as the Lucky Shot Trail in the winter and would have an at-grade crossing (Appendix P, Photo 15). Portions of the Willow Segment also would be visible to trail users traveling on unofficial trails that could be blocked by the rail line. Views of the rail line from Red Shirt Lake would not be available, as shown in Appendix P, Photo 6. The proposed rail line likely would not be visible from the 3 mile hiking trail to Red Shirt Lake as topography and dense vegetation limit views to the trail when looking toward the Willow Segment (Appendix P, Photo 16). However, in the late fall and winter, there

could be a limited number of views that might be available after the trees have dropped their leaves.

### *Big Lake Segment*

The Big Lake Segment crosses through the most developed portion of the project area and would cross the greatest number of roadways. It also would require realignment of Hawks Lane to accommodate the proposed rail line segment connection to the ARRC main line (Appendix P, Photo 17) and the taking of 5 residences. Public views of the Big Lake segment would mostly be available from local roadways in the area, such as from Big Lake, Hollywood, and La Rae roads (Appendix P, Photos 18 and 19). At times, elevation and gaps in vegetation allow for limited, yet panoramic views over the landscape and toward the Big Lake Segment, such as from Hollywood and Sculp roads (Appendix P, Photos 20 and 21). Official trails that would have views of this segment would require crossings or relocation in a few areas. Public views from trails would be mostly available during the winter due to the predominance of wetland areas and existing vegetation greatly limiting the time of year there would be available views (Appendix P, Photo 22). However, some limited views could be present from trail areas where elevation allows views over wetland areas (Appendix P, Photo 23). Large portions of the Big Lake Segment also would be visible to trail users traveling on unofficial trails that could be blocked by the rail line. Movement and sound of the train would draw attention to the rail line where views are present.

### *Houston-Houston North Segment Combination*

There is limited visual access to this segment combination, which is mainly available from 2 road crossings and winter-use trails. The Houston Segment would cross West Susitna Parkway and Papoose Twins Road, which are both undulating, unpaved roadways (Appendix P, Photo 24). Official trails that would have views of this segment would require crossings or relocation in a few areas. Public views from trails would be mostly available during the winter due to the predominance of wetland areas and existing vegetation greatly limiting the time of year there would be available views.

Large portions of the Houston North Segment also would be visible to trail users traveling on unofficial trails that could be blocked by the rail line. Even in areas where the segment passes in proximity to trails, visual access is limited by a lack of direct access to the segment, flat terrain, and vegetation that obscures nearby views (Appendix P, Photo 25). Movement and sound of the train would draw attention to the rail line where views are present.

### *Houston-Houston South Segment Combination*

Impacts along the Houston Segment would be as previously described.

The Houston South Segment has the least visual access, which is mainly available from the crossing of West Parks Highway and winter-use trails. The Houston South Segment crosses Millers Reach Road, which is an undulating, unpaved roadway (Appendix P, Photo 26) that would provide limited views of the segment. The segment would not be visible to other nearby roads due to the flat terrain and presence of tall vegetation. Public views of the Houston South Segment would mostly be available from West Parks Highway where elevation and gaps in

vegetation allow views across the landscape (Appendix P, Photo 27). The only official trail that would have views of this segment and would require a crossing is the Houston Lake Loop Trail. Public views from the trail would be mostly available during the winter time due to the predominance of wetland areas and existing vegetation greatly limiting the time of year there would be available views. Portions of the Houston South Segment also would be visible to trail users traveling on unofficial trails that could be blocked by the rail line. Movement and sound of the train would draw attention to the rail line where views are present.

### **Summary of Potential Impacts by Rail Line Alternative**

All alternatives would affect existing visual resources in the project area and alter the existing visual character of undeveloped, natural, and agricultural areas by converting them into a rail transportation corridor with trail and waterway crossings, as described under Operation Impacts in Section 13.3.6.1. Developed areas could also be adversely affected by the taking of residences and buildings and the addition of road crossings, especially those that are grade-separated. Visual effects resulting from the taking of residences and buildings would vary based on location, and landowners and adjacent viewers could perceive the take neutrally, adversely, or beneficially.

The level of impact to visual resources is very similar across all alternatives since all alternatives would alter the existing visual landscape in similar ways. However, the primary difference lies in the availability of views of each alternative and the presence of disturbed and natural lands, which has been used to evaluate overall impacts by alternative. It is uncertain how many unofficial trails in the project area would be affected by various alternatives. However, these trails are of value to the user and impacts to these trails would negatively affect visual resources by segmenting and eliminating views allowed by them. Furthermore, the Mac East, Mac East Variant, Mac West, Connector 1, Connector 2, Connector 2a, Connector 3, and Connector 3 Variant segments would all be located within and/or adjacent to the agricultural area and would tend to have a similar visual impact when viewed in comparison at the alternative level, as a whole. Therefore, OEA's analysis of potential impacts to visual resources in this EIS has focused on the northern segments.

Alternatives that include the Willow Segment would have the greatest visual impact. While these areas could receive fewer viewers, the alternatives containing the Willow Segment would pass through 3 state recreation areas and a refuge, cross several waterways noted for their recreation and visual resources, cross a number of official trails, and alter larger areas of natural, undisturbed forested and wetland habitats.

Alternatives that include the Big Lake Segment would have the second largest visual impact, since the Big Lake Segment would require the most road crossings, taking of property, and a large impact to forested and wetland habitats. It is the only alternative that would displace 5 residences, which could alter the visual character of the surrounding area. These alternatives also would have the largest amount of sensitive viewer types. These alternatives run through areas that are already developed or have been influenced by human disturbance, such as lands converted to agriculture, unlike the Willow Segment, which is highly natural, undisturbed, and visually intact.

Those alternatives including the Houston-Houston North and Houston-Houston South segment combinations would have the least impact to visual resources. The Houston, Houston North, and Houston South segments would cross undisturbed lands in proximity to developed areas. The area surrounding these segments is not as developed as the Big Lake Segment, but is more developed and in closer proximity to disturbed areas than the Willow Segment. These areas also would receive less viewers from developed and recreation areas, such as official trails, when compared to both the Big Lake and Willow segments. They also would have only a few roadway crossings on smaller local roadways, as described in the segment analysis. Only Houston North would cross through the Little Susitna State Recreation River.

### **13.3.6.2 No-Action Alternative**

Under the No-Action Alternative, ARRC would not construct and operate the proposed Port MacKenzie Rail Extension, and there would be no impacts to visual resources from the proposed rail line.

### **13.3.7 Unavoidable Environmental Consequences of the Proposed Action**

To avoid or minimize the potential environmental impacts to visual resources from the proposed rail line as described above in Section 13.3.6.1, OEA is recommending that the Board impose up to 3 mitigation measures, including 1 alternative-specific mitigation measure, to reduce glare from lighting, minimize clearing at road and trail crossings, and require the use of native plants in revegetation plans (see Section 19.9). Notwithstanding OEA's recommended mitigation measures, there still would be potential unavoidable impacts to visual resources from the proposed rail line. Potential impacts would include: a conversion of existing land use to a use that includes permanent, built features at the terminal reserve area or a permanent linear corridor including the rail line, access road, transmission line, culverts under the tracks, and vegetative maintenance within the 200-foot ROW. Trains operating over the proposed rail line could impact the experience of people engaged in hunting, fishing, wildlife viewing, and/or other recreational activities in the project area.