

3.5 Intermodal Facility Traffic

This section describes the approach, affected environment, and potential environmental consequences for intermodal facility traffic. The Proposed Acquisition could result in impacts on traffic and roadway systems by increasing operations at certain intermodal facilities, which could increase truck traffic on local roadways that provide access to those facilities.

3.5.1 Approach

The Applicants' Operating Plan identified U.S. intermodal facilities that would experience increases in truck traffic on nearby local roads as a result of the Proposed Acquisition. OEA analyzed six intermodal facilities that the Applicants project would experience an increase in truck traffic of at least 50 trucks per day, a 10 percent increase in average daily truck traffic, or both (**Table I.2-1** in **Appendix I**). OEA identified local roadways near the six intermodal facilities, as well as major routes and connecting routes. OEA also considered limiting factors, such as truck route designations, truck restrictions (signed or physical), and minor local roadways. Based on these criteria, applicable roadway segments were selected for evaluation. For the purposes of this analysis, OEA assumed there would be no physical changes to roadway networks resulting from the Proposed Acquisition.

OEA calculated the AADT for the 2027 No-Action Alternative using the base year 2022 AADTs with a 1.5 percent annual organic growth rate, derived from a survey of sample data from the HPMS. OEA estimated traffic in 2027 under the Proposed Acquisition by adding the projected additional truck trips to the base 2027 AADTs.

OEA conducted a capacity analysis for the roadway network based on the HCM (Transportation Research Board 2016), the Simplified Highway Capacity Calculation Method for the HPMS, and Generalized Service Volume Tables in HPMS. For roadway segments where HPMS data were not available, OEA used the HCM default values based on the roadway's functional class, context (urban, small urban, or rural), and observations of traffic data at the state and local levels. OEA conducted a capacity evaluation separately for freeway (full control of access), multilane highway (partial or no control of access), two-lane highway (partial or no control of access), and signalized highway corridors.

OEA calculated v/c ratios for roadways in the study area based on AADTs and service volumes reported in FHWA's Simplified Highway Capacity Calculation Method Tables (FHWA 2018).¹ OEA determined facility performance capacity using the service volumes associated with LOS E. A roadway segment operating at LOS E represents a perceptible level of delay for drivers and roadway conditions that are nearing over capacity. For this assessment, a v/c ratio over 1.0 represents a roadway where the calculated volumes exceed the assigned capacity.

¹ The v/c ratio, also referred to as degree of saturation, represents the sufficiency of an intersection to accommodate the vehicular demand (FHWA 2013).

See **Appendix I** for more details on the approach for intermodal facility traffic.

3.5.2 Affected Environment

The local roadways near the six intermodal facilities are primarily used by motor vehicles, including passenger vehicles and trucks. However, in more urban areas, pedestrian and bicycle facilities are also present along some of the roadways. The Intermodal Facility Summary Tables (**Tables I.2-1 through I.2-9**) in **Appendix I** provide a detailed summary of segments that OEA identified along the local roadways. OEA determined the capacity of each roadway segment based on roadway characteristics and service volumes, as explained in detail in **Appendix I**. OEA determined the v/c ratios for each roadway segment based on the current AADT of the segment and the projected AADT under the Proposed Acquisition and the No-Action Alternative. OEA identified four roadway segments that are currently operating with a v/c over 1.0 (exceeding the roadway capacity): one segment at the Minneapolis Intermodal Management System facility at Minneapolis, Minnesota; one segment at the International Freight Gateway in Kansas City, Missouri; and two segments at the Wylie KCS Terminal in Wylie, Texas. All other roadway segments currently operate within the roadway capacity, based on the v/c ratios that OEA calculated.

3.5.3 Environmental Consequences

3.5.3.1 Proposed Acquisition

The Proposed Acquisition would result in increased truck traffic on some local roads in the vicinity of intermodal facilities because activities at those intermodal facilities (such as loading and unloading trains) would increase. However, the Proposed Acquisition would not cause the v/c ratio to exceed 1.0 for any roadway segments beyond those that would already exceed 1.0 under the No-Action Alternative. OEA estimated that the v/c ratio on roadways near intermodal facilities would increase by less than 0.0045 as compared to the No-Action Alternative, which is a minor increase that would have a negligible effect on safety or delay on those roads. As shown in **Table I.2-3** in **Appendix I**, OEA projects that the Proposed Acquisition would result in an increase in average truck trips per mile of less than 1.5 percent for all intermodal facilities. Based on the results of the intermodal facility network assessment, this projected increase in truck traffic would not result in degradation along the network roadways as compared to the No-Action Alternative. **Table I.2-4 through Table I.2-9** in **Appendix I** provide a detailed summary table of roadway segments for each intermodal facility.

3.5.3.2 No-Action Alternative

Under the No-Action Alternative, the Board would deny the Proposed Acquisition and CP would not acquire KCS. Therefore, there would be no increase in activities at intermodal facilities and no increase in truck traffic on roadways near intermodal facilities as a result of the Proposed Acquisition. However, OEA expects that activities at intermodal facilities and truck traffic on nearby roadways would increase as a result of general economic growth. OEA predicts that increased truck traffic unrelated to the Proposed Acquisition would cause

three roadway segments near intermodal facilities in the study area to exceed roadway capacity (i.e., the v/c ratio would increase from less than 1.0 to more than 1.0). Two of those roadway segments are located near the Wylie KCS Terminal and one segment is located near the International Freight Gateway. **Table I.2-4** through **Table I.2-9** of **Appendix I** provides a detailed summary table of roadway segments in the study area for each intermodal facility.

3.5.4 Conclusion

The Proposed Acquisition would result in an increased number of trucks on roadways near the six intermodal facilities that OEA evaluated. However, the additional trucks would account for only a small proportion of total daily traffic on roadways near those facilities and the v/c ratios for those roadways would be largely unaffected. As a result, OEA concludes that these increases would have a negligible effect on the networks surrounding the intermodal facilities. Accordingly, OEA is not recommending any mitigation related to effects on local roadways near intermodal facilities.