

Transportation Analysis Technical Report

Rail Tie Wind Project Albany County, Wyoming



Prepared for:

ConnectGen Albany County LLC

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1 INTRODUCTION

At the request of ConnectGen Albany County LLC (ConnectGen), Tetra Tech, Inc. (Tetra Tech) has prepared this Transportation Analysis Technical Report for the Rail Tie Wind Project (Project). This document is intended to provide the Western Area Power Administration (WAPA) and other regulatory agencies with qualitative and quantitative information on the potential impacts to transportation infrastructure from development of the Project.

1.1 Project Background

The Project is located in southeastern Albany County, Wyoming, and encompasses approximately 26,000 acres of rangeland on private and state lands near Tie Siding, Wyoming (Project Area; Figure 1). The Project would include 120 wind turbine generators, each 4.2 megawatts (MW) in size, with a combined maximum generating capacity rating of 504 MW. The Project proposes to interconnect to the existing transmission system of WAPA via the Ault-Craig 345-kilovolt transmission line that runs through the Project Area.

For construction planning and site optimization, the Project consists of two separate stages, each approximately 252 MW. These stages are defined as the East stage and the West stage as differentiated by U.S. Highway 287 (U.S. 287). Construction of the Project is expected to begin in 2022, and will require 2 years to fully construct. It is anticipated that the first 252 MW West stage would be completed and fully operational by the end of 2022, and the second East stage operational in 2023.

For the purposes of this analysis, a representative Project layout and associated Siting Corridor is provided in Figure 1 to reflect the location of proposed Project features, including access roads and laydown areas. Actual locations of these Project features may vary within the Siting Corridor based on final Project design.

1.2 Analysis Area

During construction, operations and maintenance (O&M), and decommissioning of the Project, roadways would be used as haul and delivery routes for Project components and associated equipment and materials, and as travel routes for Project workers. At the time of this analysis, routes for delivering Project components have not yet been selected because delivery routes will depend on the locations of turbine and Project component manufacturers. In addition to component delivery routes, there would be a significant percentage of the workforce residing in nearby towns, at recreational campgrounds, and commercial recreational vehicle (RV) park locations that can only be estimated at this time based on proximity and other factors.

To provide a conservative estimate of potential impacts to transportation resources, the Analysis Area includes all potential routes and roadways that may be used during construction, O&M, and decommissioning of the Project for workers and material deliveries. It was assumed that the workers will arrive via I-80 and/or U.S. 287 similar to truck traffic and that they will also use local

roads in each of the nearby cities. Therefore, for the consideration of potential impacts to transportation, the Analysis Area for the Project includes:

- The I-80 corridor from I-25 to Laramie
- The I-25 corridor in Wyoming and Colorado to I-80
- The U.S. 287 corridor in Wyoming and Colorado to I-80
- Portions of the city of Laramie in the vicinity of the Union Pacific Railroad (UPRR) yard

It is important to note that while the I-25 and State Highway 287 corridors in Colorado are included in the Analysis Area, they may or may not be used to transport wind turbine parts and other materials and supplies. Colorado interstate and state highway segments are not quantitatively analyzed in this report. Any impacts that could occur would be similar to those along the same highway segments in Wyoming. Because Interstate highways and state highways are designed and operated to accommodate the vehicle types needed to support construction, O&M, and decommissioning of this Project, no improvements or excessive road use would be expected in Colorado.

Rail and air transportation may be used in the construction of the Project. While there are no quantitative methods for characterizing the amount of impact to air and rail infrastructure, it was assumed that existing infrastructure in the Analysis Area is designed to accommodate Project-related air and rail deliveries if required, therefore air and rail impacts are not addressed as part of this analysis.

Because of the rural setting of the Project and surrounding transportation network, there is no available public transportation (e.g., bus, passenger rail), bicycle, or pedestrian facilities in the Analysis Area and as a result, these transportation modes are not included in this analysis.

The Project Area includes these local public and private roads (Figure 2):

- Hermosa Road
- Dale Creek (Private Road)
- Cherokee Park Road
- Pumpkin Vine Road
- Sportsman Lake Road
- Boulder Ridge Road
- Vedauwoo Road
- Monument Road
- Unnamed access road

This analysis addresses impacts to local public roads and intersections.

2 REGULATORY FRAMEWORK

2.1 Federal Regulations

2.1.1 National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires the disclosure of potential environmental impacts for projects with a federal action as defined by 40 Code of Federal Regulations [CFR] 1508.18, through either a Categorical Exclusion, Environmental Assessment, or Environmental Impact Statement as well as a process of public and agency review and comment.

WAPA's decision to enter into an interconnection agreement is considered a federal action subject to NEPA in accordance with Council on Environmental Quality regulations for implementing NEPA and Department of Energy NEPA Implementing Procedures (40 CFR Parts 1500–1508, 10 CFR Part 1021). This technical report provides information to assist WAPA in analysis of the potential effects to the natural and human environments associated with approving or denying the interconnection request.

2.1.2 Manual on Uniform Traffic Control Devices

The Manual on Uniform Traffic Control Devices (MUTCD; 23 CFR 655.603) is the national standard for all traffic control devices installed on any street, highway, or trail open to public travel. This includes temporary signage used for construction and permanent signage on roadways.

2.2 State Regulations

2.2.1 Wyoming Industrial Development Information and Siting Act

The Wyoming Department of Environmental Quality Industrial Siting Division administers the Wyoming Industrial Development Information and Siting Act (Act; Wyoming Statute § 35-12-101:119) and the Rules and Regulations of the Industrial Siting Council (ISC), Chapters 1 and 2. The Act is designed to protect Wyoming's environmental, social, and economic fabric of communities from unregulated large-scale industrial development. By consolidating the review of 19 independent state agencies into one comprehensive permitting process, the Act offers the public and affected agencies a thorough analysis of the potential impacts from development.

Pursuant to the Act, all wind energy projects consisting of 30 or more turbines (in all planned phases of the installation) and/or exceeding the statutory threshold construction cost amount of \$222.8 million are subject to review and approval by the ISC. For facilities permitted under Wyoming Statute (W.S.) § 35-12-102(a)(vii)(E) and (F), a site reclamation and decommissioning plan and a financial assurance plan are required pursuant to W.S. § 35-12-105(d) and (e).

As part of the review and approval process, the ISC requires submittal of an application that outlines the evaluation of a project's potential impacts and mitigation measures related to environmental, social, and economic resources.

2.2.2 Wyoming Department of Transportation

The Wyoming Department of Transportation (WYDOT) released guidelines for conducting traffic engineering studies on roads under the jurisdiction of the WYDOT called the WYDOT Traffic Studies Manual (WYDOT 2011). This manual adopts MUTCD methods for signal warrant analysis and signage, specifies methods for turning movement counts and sight distance studies, and various other transportation-related studies.

WYDOT's Utility Accommodation Regulation (WYDOT 1990) provides the permit, encroachment, and occupancy requirements for project-related construction and operations activities. The WYDOT Utility Accommodation Regulation governs all facilities within the highway right-of-way (ROW), including transmission lines that cross highway ROWs.

WYDOT's Statue 37 provides the regulations and guidelines for use, encroachment, and crossing of railroads.

2.2.2.1 Road Use Agreement

As a condition of the ISC approval, a Road Use Agreement would be required by WYDOT prior to use of state roads by the Project traffic. The applicant shall provide financial assurance for state road repairs and maintenance as determined by WYDOT.

2.2.2.2 Access Permit

Widening or building an approach from land joined to a state highway ROW requires an access permit from the WYDOT. The application includes the submittal of a site plan. The applicant is responsible for the costs of construction, maintenance, and removal (if necessary) of the approach.

2.2.2.3 Utility Permit

Constructing a cable in a state highway ROW that includes crossing overhead, underground, or adjacent and parallel to a state road ROW requires a Utility Permit (M-54 license permit) from the WYDOT. The application includes the submittal of a site plan.

2.2.2.4 Oversize/Overweight Permits

Vehicles exceeding legal size and/or weight limits must obtain oversize/overweight permits from the WYDOT before traveling on Wyoming highways. Permits may be requested and obtained from the ports of entry within the state. Legal size and weight requirements are provided by the Wyoming Highway Patrol (WHP 2019).

2.2.2.5 Fuel Permit/Registration Permit

A Fuel Permit would be required to travel and work in Wyoming if the trucking company currently does not have an International Fuel Tax Agreement License. A Registration Permit would be

required to travel and work in Wyoming if the trucking company does not currently have a registration number for the state.

2.2.3 Colorado Department of Transportation

The Colorado Department of Transportation (CDOT) Code of Colorado Regulations 2 CCR 601 State Highway Access Code dictates requirements for use of Colorado state roadways for commercial use. Project component haul routes have not yet been determined and in the event that that I-25 and State Highway 287 in Colorado were used as delivery routes for Project components, all CDOT regulations would be adhered to, including acquiring any necessary permits. No roadway improvements or excessive road use would be expected in Colorado.

2.3 Local Regulations

2.3.1 Wind Energy Conversion System Permit

The Albany County Commercial Wind Energy and Solar Energy Siting Regulations (Regulations; Chapter 5 Section 12) require that all facilities with an aggregate generating capacity greater than 25 kilowatts apply for a Wind Energy Conversion System (WECS) Permit (Albany County 2020). Albany County is currently considering proposed ordinance revisions to the current Regulations, anticipated for formal adoption in March 2021. The information provided in this analysis has been developed to comply with both the existing Regulations and proposed ordinance revisions, specifically siting requirements outlined in Chapter 5, Section 12, G.9 of the Regulations (as proposed) regarding the use of roads. The application process involves the review and recommendation of the Planning and Zoning Commission and the approval of the Board of County Commissioners, as well as community input during a defined and requisite public hearing and comment period (§§18-5-502(a)). The WECS permit applicants must certify that the Project would comply with all applicable state and county zoning and land use regulations. As part of the application, potential impacts to resources such as transportation, economic, air quality, water quality, general nuisances, soil disturbance, wildlife, and cultural resources must be addressed.

2.3.2 Approach License

When building an approach from land joined to a county road ROW, an approach permit is required from the Albany County Road and Bridge Department. The application includes the submittal of a site plan. The applicant is responsible for the costs of construction, maintenance, and removal (if necessary) of the approach.

2.3.3 Utility License

A utility license is required from the Albany County Road and Bridge Department for occupancy of a county road ROW by all utility facilities, including private lines. There are specific requirements for underground and overhead utilities being placed in the county road ROW.

2.3.4 Road Improvement and Maintenance Agreement

As a condition for the WECS approval, a Road Improvement and Maintenance Agreement will be developed with the Albany County Road and Bridge Department prior to use of county roads by Project traffic. Typically, the department will meet with the applicant to discuss the transportation plan for the Project, determine potential impacts to county roads, and outline any improvement and/or maintenance requirements to include in the agreement.

3 METHODOLOGY

3.1 Desktop Review

A desktop review was conducted to determine existing transportation resources within and around the Project Area. Tetra Tech reviewed publicly available information contained on websites, databases, and maps to identify current traffic and road conditions within the Project Area, including:

- Wyoming Annual Automatic Traffic Recorder Report Map (WYDOT 2019b).
- Monthly Reports from the WYDOT automatic traffic recorders (WYDOT 2019b).
- WYDOT Interactive Transportation System Map (WYDOT 2019a)
- Long Range Transportation Plan (WYDOT 2010)
- Aerial imagery via Google Earth
- Online Transportation Information System (OTIS; CDOT 2019)

3.2 Traffic and Transportation Analysis

In addition to the desktop review, Tetra Tech has conducted a traffic and transportation analysis to evaluate potential impacts associated with routing Project traffic in and out of the major intersections anticipated to be used for access to the Project Area, as well as the potential impacts of the Project on the region's transportation system. The planning process is ongoing, and Project elements are still in development. Therefore, all major county roads off U.S. 287 with access to the Project Area are considered potential major intersections for Project access.

As the locations of the haul routes are not fully known at this stage of Project planning, analysis of intersections located farther away, such as in Laramie or Fort Collins, would be speculative. Second, because workers will likely be coming from multiple locations, and because the material source locations are unknown, the Project vehicle routes will be spread out until vehicles get close to the Project Area, where all will be combined onto a few roads and intersections. Therefore, a specific level of service (LOS) analysis was performed only for intersections near the Project Area where road use will be concentrated (Figure 2). The intersections farther out from the Project Area are discussed as locations of possible impact but are not analyzed quantitatively since the impacts would be less severe and more speculative than those analyzed.

The analysis evaluates the potential change to the LOS rating of the roadways and proposed intersection locations anticipated to be impacted by Project development. LOS is a qualitative

measure used to relate the quality of trips experienced by motorists using the infrastructure. LOS is used to analyze roadways and intersections by categorizing traffic flow and assigning quality levels of traffic based on performance measures like vehicle speed, density, congestion, etc.

Procedures used in the analysis are based on the Highway Capacity Manual (HCM) guidelines for determining LOS, which is the nationally accepted standard used by most transportation engineering professionals and transportation analysis software (TRB 2016). The LOS performance measure for an intersection is based on the delay that an average vehicle will experience after approaching the intersection. Unsignalized intersections include driveway accesses, two-way and all-way stop-controlled intersections, and roundabouts. The LOS analysis provides a standardized means of categorizing traffic flow by assigning a letter grade to it. As shown in Table 1, LOS ranges from A to F, with A and B representing the best conditions (i.e., little to no delay). LOS C is considered the lowest acceptable LOS in rural areas, LOS D is considered the lowest acceptable LOS in urban areas, E is reflective of a road or intersection at its maximum capacity, and F represents failure of the infrastructure (unacceptably high congestion and delays). The delay must be analyzed independently for each movement of the intersection.

Table 1: Level of Service

Level of Service	Delay (in Seconds)
A	0–10
B	10–15
C	16–25
D	26–35
E	36–50
F	>50

To analyze LOS, intersections are broken up into turning movements. A turning movement is the individual movements that can be taken by a vehicle at an intersection (i.e., westbound left turn, northbound through movement, etc.) There are many variables that impact intersection function and how humans behave within them, including geometry, presence of pedestrians and bikes, lane width, grade, theoretical maximum movement counts if no traffic is present at any other movement/lane group, and conflicting traffic demand volume. Geometry is the physical layout of the intersection such as “T” or “4 leg” intersection and the number of lanes for each direction. Pedestrian and bike crossings will impede traffic, so estimates on the hourly pedestrian volumes are important but are assumed to be zero as the area is very rural. Lane width affects a driver’s comfort and ultimately how quickly the driver can negotiate the movement as well as the length of time it takes a pedestrian to cross. The theoretical maximum capacity (i.e., saturation flow rate from the HCM), is 1,800 passenger cars per hour per lane (pcphpl) for a free-flowing lane (TRB 2016). Finally, conflicting volume is the number of cars that would impede completing a safe movement (e.g., right turns merge with conflicting cross traffic).

Traffic data are only available for roadways; therefore, to analyze intersections, assumptions had to be made for the turning movement counts. The turning movement counts are presented in Appendix B. For highway segments, the LOS is determined by the density of the traffic in pcp/hpl, which is determined using HCM analyses methods and the associated Highway Capacity Software (HCS7) software package.

As outlined in Section 4.1 below, the LOS analysis was focused along the U.S. 287 corridor at locations where Project traffic will enter or exit the highway, as well as Exit 329 to Vedauwoo Road from I-80 (Figures 1 and 2). The remainder of the existing and proposed Project access roads are not a concern for LOS impacts and delays as almost all traffic on these roads is anticipated to be Project traffic. However, there may periodically be very short-term delays at these intersections while a turbine component is being transported through an intersection or along a road.

3.3 Project Traffic Estimation Methodology

The total traffic estimates calculated for the Project factor in background traffic data, peak construction, O&M, or decommissioning data, as were estimates of total trips made by Project vehicles throughout the Project Area each day. The analysis assumes that the majority of workers will be commuting south to the Project along U.S. 287 from Laramie, Wyoming, with a smaller number of workers commuting from other locations, such as Cheyenne, Wyoming; Fort Collins, Colorado, or other nearby temporary housing locations, such as local RV parks. The Project development process is ongoing. Workforce housing locations, materials sourcing locations, and methods of delivery have not been identified. Therefore, estimates for the number of vehicles using each intersection or roadway at a particular time are based on professional judgment and previous experience with preparing traffic analyses for wind energy projects.

The construction of the Project is anticipated to take 20 months, during which time the average monthly workforce is estimated to average 120 workers and peak at 195 workers. While worker numbers may vary, decommissioning is anticipated to be approximately the same average number of workers as construction. During peak construction and decommissioning, it was assumed that approximately 50 heavy vehicles, including but not limited to semi-trucks, component delivery trucks, water trucks, heavy machinery, and concrete trucks arrive per day. These peak daily values are assumed to represent the largest number of vehicles that would feasibly access the Project Area in a day. The analysis is concerned with the worst-case conditions that occur during the peak hours (commuting hours) in the morning and evening. Quantitative analysis is not performed for daytime hours because any potential impacts would be significantly less. However, worker, materials, and equipment traffic would be moving throughout the Project Area during all hours of the workday. The analysis added peak construction traffic volumes to existing local traffic data (Appendix A) in a way that was reflective of a realistic and substantially conservative scenario for potential Project traffic impacts.

As mentioned previously, the Project will be constructed in two separate stages, each approximately 252 MW. These stages are defined as the East stage and the West stage as differentiated by U.S. 287. These two stages are roughly equivalent in size and scope, with the exception of the construction of the electrical transmission line as part of the East stage. The peak workforce is estimated at 178 workers for the West stage and 195 for the East stage.

It is typical for projects such as this to have carpooling among workers. Carpool rates for the Project are estimated at 25 percent. This value is often much higher, especially if the location where workers reside is far from the Project location. Nearly all of these trips are assumed to occur during the morning peak hour (approximately 7 AM) to make the daily site safety and daily task meeting. Based on these assumptions, the peak hour worker trip estimate at peak construction (195 workers) was estimate at 147 worker vehicle trips. The evening peak is expected to be less severe as workers departure times will likely be staggered over several hours as they complete daily tasks. Additionally, the peak hour worker trip estimate of 147 was analyzed as cumulative with the existing background traffic peak hour, which generally occurs mid-day. This was done to ensure a conservative analysis and because the existing background traffic peak and quantity varies significantly day to day (WYDOT 2019b). Heavy vehicles were estimated at 15 percent for both the existing conditions and peak hour construction conditions. This means for the peak hour trip analysis that 15 percent of Project vehicles were analyzed as 3.0 passenger car equivalents, the HCM standard method for analyzing heavy vehicles. This factor varies based on analysis type—intersections, highways, etc.. Estimating heavy vehicles this way allows the analysis to be inclusive of fluctuations in number of workers carpooling or deliveries that occur during the peak hour.

Two Project laydown yard locations have been identified, one in the northeastern portion of the Project Area (East stage) and one in the southwestern portion of the Project Area (West stage; Figure 1), that will be used sequentially for each stage. For the purposes of this analysis, the 147-vehicle morning peak estimate was added to each of the Project intersections to provide a conservative analysis of maximum potential traffic impact at each of these locations. In reality, this peak is anticipated only for the intersection(s) that will provide access to the laydown area used for the morning tailgate meeting during the peak of construction. All other intersections would likely see significantly less than the 147-vehicle morning peak. It is also anticipated that many workers would drive to multiple locations within the Project throughout the day, resulting in more vehicle trips than actual vehicles on site; however, this traffic activity is anticipated to be far lower than the vehicle peak occurring during the morning arrival hour.

It was assumed that most Project deliveries will be normal semi-truck size loads. Deliveries would include construction materials such as rebar, anchor bolts and rings, aggregate, concrete, water, turbine hubs, and construction equipment. Oversized loads would be associated with delivery of the turbine blades, nacelles, and tower sections, which are the largest Project components and would require special vehicles to transport (along with escort vehicles for safety). It was assumed that tower components will be delivered at a rate of 10 towers per week during a 6-day work week. For the purposes of the analysis, tower deliveries are assumed to include three blades, four tower

sections, a nacelle, and a hub (an average of 15 components per day), although it is likely that complete turbines will be delivered each day. Most days will see the delivery of two turbines delivered (18 components); some days will see the delivery of only one turbine (9 components).

It was assumed that turbine component deliveries would be scheduled for delivery to the Project Area outside of the peak morning arrival time for workers. These oversized vehicle deliveries are not given special consideration in terms of LOS as the impacts and delays caused by component deliveries are anticipated to be negligible outside of peak hours. Escort vehicles may have to block traffic for short periods to allow oversized component trucks to make turns at a Project Area intersection; however, it is anticipated that very few vehicles would experience the delay and the delay would not last more than a few minutes. It is also assumed that a concrete batch plant will be set up on site; therefore, cement trucks would travel to the site during mobilization but are not expected to complete daily trips to the site from local cement plants.

Based on an estimated 23 permanent employees during Project O&M, operational traffic estimates for the Project assumed a maximum of 20 vehicles per day (VPD) associated with routine maintenance activities throughout the Project Area for the approximately 35-year operating life of the Project.

3.4 Other Transportation Resources

Rail and aviation resources lack specific methodology for calculating or analyzing impacts to their infrastructure. In consideration of potential impacts, however, the various local resources were considered with respect to the likelihood and amount of their use, their capacities, their proximity to the Project, gaining approval for their use, and how their potential use could impact that infrastructure. It was assumed that air and rail existing transportation infrastructure in the Analysis Area is designed to accommodate the types shipments they may be used for and are not addressed as part of this analysis.

4 EXISTING ENVIRONMENT

4.1 Affected Road Facilities

As mentioned previously, ConnectGen has not yet determined the primary delivery routes for the turbines and other Project components to the Project Area. Project materials and workers could arrive by a number of routes in the Analysis Area, including Colorado segments of I-25 and U.S. 287. The potentially impacted road segments are described below.

The major roads and highways that are likely to be used by vehicles associated with the Project are described below. Figures 1 and 2 show the affected roads and key intersections in the Analysis Area. WYDOT records traffic data on a regular basis at numerous points throughout the state and the relevant recording stations are described with their corresponding roadway. The data from these stations are available as annual average daily traffic (AADT), monthly average daily traffic (MADT), monthly average weekday traffic (MAWDT), monthly average weekend traffic

(MAWET), and hourly distributions for individual days. The relevant data are shown in Appendix A. Analysis of traffic data is typically performed using AADT for simplicity; however, all of the data are relevant in determining peak times for planning. Traffic data are not collected on county roads, but comparative traffic volumes on these roads are typically extremely light.

4.1.1 Interstate Highways

I-80 and I-25 would be the primary haul routes for turbines and other Project components. Both interstates are major components of the nation's interstate highway system and both are designed to accommodate commercial hauling including oversized loads.

4.1.1.1 Interstate 80

I-80 is a four-lane divided freeway with grade-separated interchanges for uninterrupted flow. I-80 stretches from New Jersey to San Francisco via Cheyenne and Laramie and is a major national freight route. It is well maintained and in excellent condition. The speed limit on I-80 is 80 miles per hour (mph).

As outlined in Figure 2, it was assumed that Project components being delivered along I-80 will travel north on I-25 between the Colorado state line and the I-80 interchange in Cheyenne, then west along I-80 to the Vedauwoo Exit (Exit 329), which provides access to the northeastern portion of the Project Area. It is anticipated that a small percentage of workers would also commute west from Cheyenne along I-80 to the Project Area via the Vedauwoo Exit. It is also possible that Project components being delivered via truck along I-80 from I-25 may travel north along I-80 to the U.S. 287 interchange in Laramie, then south along U.S. 287 to the Project Area.

Tetra Tech assumed that Project components being delivered along I-80 from the UPRR rail line in Laramie will travel southeast along I-80 to the Vedauwoo Exit. Delivery of the Project components from the Laramie rail yard would likely utilize the portion of I-80 between Snowy Range Road (Exit 311) and U.S. 287.

Traffic between Cheyenne and Laramie is generally consistent (i.e., few vehicles are entering and exiting at the various minor exits between the two cities). Therefore, potential impacts are assumed to be consistent along this stretch of the I-80 analysis area.

For information on I-80, WYDOT has an Automatic Vehicle Classifier station near Buford (designated recorder 101), approximately 5 miles east of the Project Area. Based on analysis of the data provided for I-80 (WYDOT 2019b), there is approximately 20 percent more traffic on weekends than on weekdays, and approximately 46 percent more traffic in the summer than in the winter. The peak hour times for existing traffic on I-80 are generally between 10 AM and 1 PM. The data also indicate that traffic is split about evenly between the eastbound and westbound lanes. The traffic that uses I-80 is about 47 percent truck traffic.

4.1.1.2 Interstate 25

I-25 is a well maintained four-lane divided freeway with grade-separated interchanges. It stretches from New Mexico to Buffalo, Wyoming, intersecting a number of major cities including Denver, Colorado, and Cheyenne, Wyoming. The speed limit is 75 mph except when it passes through cities, such as Denver, where the speed limit is 55–65 mph depending on location.

Component deliveries may use I-25 as a primary delivery route if components are not delivered by rail. As stated above, and as outlined in Figure 2, it was assumed that any Project components being delivered along I-25 would travel north on I-25 in Wyoming and possibly Colorado to the I-80 interchange in Cheyenne, then west along I-80 to either the Vedauwoo Exit (Exit 329) or the U.S. 287 interchange in Laramie.

For traffic information on I-25, there is a “weigh in motion” station south of Cheyenne in Wyoming (designated recorder 59). Limited data are available near the weigh in motion station, but they show that I-25 has approximately 5 percent more traffic on weekends than on weekdays, and approximately 35 percent more traffic in the summer than in the winter. The peak hour times for existing traffic on I-25 are not available at this location. The I-25 data also indicate that traffic is split about evenly between the northbound and southbound lanes, and about 15 percent of this traffic is truck traffic as indicated by CDOT data collected near the Wyoming border. Traffic loads on the Colorado I-25 segment are assumed to be similar.

4.1.2 State Highways

4.1.2.1 U.S. Highway 287

The U.S. 287 segment between Fort Collins, Colorado, and Laramie, Wyoming, is approximately 60 miles long. Near the Project Area it is a divided four-lane highway. According to WYDOT, U.S. 287 is classified in Wyoming as a principal arterial and is in excellent condition near the Project Area (WYDOT 2019a). It was restriped in 2019 for safety purposes. The nearby bridges are in fair condition, have no weight restrictions, and are not a concern for Project deliveries. The speed limit on U.S. 287 is 70 mph. In Colorado, the segment between Fort Collins and the Wyoming state line is primarily an undivided winding, two-lane roadway with passing lanes in key areas.

U.S. 287 is expected to be the primary route for both workers and deliveries accessing the Project Area from the north in and around Laramie. As outlined in Figure 2, it is currently anticipated that Project components may arrive by rail from the UPRR system in or near Laramie and then be transferred to trucks for delivery south to the Project Area via U.S. 287, or via truck using the I-25 to I-80 to U.S. 287 haul route. It was assumed that both construction and O&M workers associated with the Project will primarily be based out of Laramie, traveling south to the Project Area along U.S. 287.

If Project components are trucked from the manufacturer directly to the Project Area, it was assumed that the southern approach to the Project Area via U.S. 287 from Fort Collins would be

primarily an alternate route because U.S. 287 does not connect directly to I-25 and trucks would be required to navigate through or around Fort Collins.

WYDOT has an automatic vehicle classifier station (designated recorder 60) located just south of Tie Siding along U.S. 287 (WYDOT 2019b). This station provides useful traffic information on existing conditions along U.S. 287 within the Project Area. Based on analysis of the data provided for U.S. 287 (WYDOT 2019b), there is approximately 14 percent more traffic on weekends than on weekdays, and approximately 50 percent more traffic in the summer than in the winter. The peak hour times for existing traffic on U.S. 287 are generally between 11 AM and 2 PM. The data also indicate that traffic is split about evenly between the northbound and southbound lanes. The traffic that uses U.S. 287 is about 17 percent truck traffic. Traffic volume estimates for the Colorado segment of U.S. 287 would be similar.

Restriping along U.S. 287 near the Project Area was completed in 2019, and there are no additional upgrades planned along U.S. 287 at this time, according to the WYDOT State Transportation Improvement Program. A snow fence study was conducted and found that some locations along U.S. 287 south of Laramie would benefit from additional snow fencing; however, it is not currently scheduled for installation.

4.1.3 Project Area Local Roads

As outlined in Figures 1 and 2, access to the Project Area from U.S. 287 would be available via multiple county roads: Hermosa Road (County Road [CR] 222), Cherokee Park Road (CR 31), Pumpkin Vine Road (CR 241), Sportsman Lake Road (CR 316), and Boulder Ridge Road (CR 319).

From I-80, Project facilities would be accessed via the Vedauwoo Exit (Exit 329), which then connects to Monument Road (CR 234) and Hermosa Road (CR 222; Figures 1 and 2).

Various parts of the Project Area would also be accessible via smaller public and private roads. These local roads provide access to privately owned rangeland, a limited number of homes, and state lands. These roads are unpaved and typically carry extremely low traffic volumes.

4.2 Project Access Intersections

There are six primary intersections that could serve as main access points for both workers and Project component deliveries to the Project Area (Figures 1 and 2). These intersections include four of the county roads listed above that intersect U.S. 287, the private Dale Creek Road (which also intersects U.S. 287), an unnamed paved turn-off along U.S. 287 identified for development as a new Project access road, and the Vedauwoo Road Exit off I-80. Aerial images of each intersection are provided in Figure 3.

It was assumed that most of the Project components will be delivered via U.S. 287 from Laramie; however, components for the northeastern portion of the Project may be delivered via I-80 at the Vedauwoo Road Exit (Exit 329). Additionally, as described above, it was assumed most workers

would access the Project Area via U.S. 287 from the north; however, a smaller number of workers may access the Project Area via I-80 from the east or U.S. 287 from the south. A description of each anticipated Project access intersection is provided below. Additionally, there are multiple minor intersections of county roads and private roads that may be used over the life of the Project; however, these roads are not anticipated to incur any significant LOS impacts.

Intersection 1: U.S. 287 and Sportsman Lake Road (CR 316): This intersection lies approximately 1.1 miles northwest of Tie Siding near the northwestern portion of the Project Area (Figure 1). Sportsman Lake Road is a gravel county road that proceeds west from the intersection at U.S. 287 and provides access to the northern portion of the Project Area on the western side of U.S. 287. There is no road on the northeast side of U.S. 287 at this location. There are dedicated turn lanes from U.S. 287 onto Sportsman Lake Road, but they have no acceleration lanes for merging vehicles.

Intersection 2: U.S. 287 and Hermosa Road (CR 222)/ Cherokee Park Road (CR 31): Hermosa Road comprises the eastern side of this intersection at U.S. 287 at Tie Siding, located in the center of the Project Area (Figure 1). Cherokee Park Road (CR 31) is located on the western side of this intersection. Hermosa Road is a gravel county road that provides access to the northeastern portion of the Project and connects to the east to Monument Road (CR 234), which provides access to I-80 via Vedauwoo Road. There is an at-grade railroad crossing approximately 1 mile east of U.S. 287, which may restrict delivery of Project components along this road. There are dedicated turn lanes from U.S. 287 onto Hermosa Road, but no acceleration lanes for merging vehicles.

Cherokee Park Road comprises the western side of this intersection and is a gravel county road providing access to the western portion of the Project, including one of the proposed laydown areas (Figure 1). Cherokee Park Road connects to Boulder Ridge Road (CR 319) along the western edge of the Project Area, which provides access to the proposed O&M facility. There are dedicated turn lanes from U.S. 287 onto Cherokee Park Road, but no acceleration lanes for merging vehicles.

Intersection 3: U.S. 287 and Dale Creek Road: Dale Creek Road (formerly CR 231) lies approximately 0.7 mile southeast of Tie Siding (Figure 1). It is a T intersection that provides access to the northeast portion of the Project Area, including one of the proposed substation locations, and runs generally parallel to the UPRR. It connects to an above-grade railroad crossing that may be utilized by the Project. There are dedicated turn/deceleration lanes for both directions accessing Dale Creek Road. As Dale Creek Road is now a private road, landowner permission would need to be obtained in order to utilize this as a Project access road.

Intersection 4: U.S. 287 and Unnamed Access Road: This location consists of an unnamed paved turn-off of U.S. 287 that is proposed for development as a new access road on the west side of U.S. 27 that will provide access to one of the proposed substation locations (Figure 1). The turn-off is paved for approximately 100 feet before transitioning to a two-track road that

provides access to a cell tower about 1,900 feet southwest of the intersection. There are currently no turn lanes at this intersection; however, the road pavement is wide enough to allow for striping of the turn lanes.

Intersection 5: U.S. 287 and Pumpkin Vine Road (CR 241): Pumpkin Vine Road lies approximately 3 miles southeast of Tie Siding (Figure 1). It is a T intersection with the minor leg headed northeast out of the intersection that provides access to the southeastern portion of the Project Area, including one of the proposed laydown areas. It makes an abrupt shift to the south immediately after exiting the intersection on the minor leg. It does have a dedicated turn lane for southbound (left-turning) vehicles but not for the northbound (right-turning) vehicles.

Intersection 6: I-80 and Vedauwoo Road (Exit 329): This intersection is a low-traffic volume, grade-separated exit off of I-80 located approximately 1 mile northeast of the Project Area (Figure 1). Traffic on the cross street does not affect interstate traffic. Immediately outside the interchange, Vedauwoo Road intersects Monument Road to the west, which runs south along the eastern edge of the Project Area and interconnects with Dale Creek Road and Hermosa Road, providing access through the eastern portion of the Project Area.

4.3 Existing Traffic Volume Summary

Tables 2 and 3 provide a breakdown of estimated baseline traffic volumes for 2022, when construction is planned to commence on the Project, using Annual Average Daily Traffic (AADT) and peak hour volume (PHV) along the major interstates/highways and intersections potentially impacted by the Project. Based on analysis of the available data, the approximate yearly growth rate of traffic counts is 2 percent. Because AADT and PHV have not been updated since 2016 (WYDOT 2019b), the estimated growth rate of 2 percent was added to these values. This value was checked for accuracy using the MADT data from May and October of 2019, which both have monthly averages that most closely match the AADT for years on record (WYDOT 2019b).

The PHV, based on the observed data, fluctuates between 7 and 14 percent, but tends to be approximately 10 percent of the total daily traffic. The local peak hours fall in the middle of the day and should not coincide with the Project commuting peak hour traffic, where potential traffic impacts would be anticipated to be the worst. Existing hourly traffic data for the anticipated Project commuter peak hour (approximately 7 AM) was conservatively assumed to be 8 percent AADT.

It is anticipated that in 2022, at the start of Project construction, all roads and intersections within the Analysis Area will be performing at LOS A or B with excellent functionality, indicating relatively low traffic volumes compared to the capacity of the roadway. As described in the methodology section, LOS is calculated from Peak Hour (PH) delay for intersections and Passenger Cars Per Mile Per Lane (PCPMPL) for highways.

Table 2: Estimated Existing Road Summary (2022) and Baseline LOS

Highway/ Freeway	Location Description	% Trucks	AADT (2022)	Commute Peak Hour	Number of Lanes	PHV (2022)	PH Density (PCPMPL)	Peak Hour LOS
I-80	East of Laramie	47%	13,918	10AM-1PM	4	1132	5.9	A
U.S. 287	Near Tie Siding, WY	17%	4,676	11AM-2PM	4	375	2.0	A
I-25	South of Cheyenne	15%	22,682	Unknown	4	2308	10.0	A

Table 3: Estimated Existing Intersection Summary (2022) and Baseline LOS

Intersections	Location Description	% Trucks	AADT (2022)	Commute Peak Hour	PHV (2022)	PH Delay	Peak Hour LOS
Intersection 1	U.S. 287, Sportsman Lake Road (CR 316)	15%	4686	11AM-2PM	381	10.5	B
Intersection 2	U.S. 287, Cherokee Park Road (CR 31)/ Hermosa Road (CR 222)	15%	4736	11AM-2PM	384	10.4	B
Intersection 3	U.S. 287, Dale Creek Road	15%	4686	11AM-2PM	376	9.4	A
Intersection 4	U.S. 287, Unnamed Access Road	15%	4676	11AM-2PM	373	NA ²	A
Intersection 5	U.S. 287, Pumpkin Vine Road (CR 241)	15%	4686	11AM-2PM	378	9.4	A
Intersection 6	I-80, Vedauwoo Road Exit	NA ¹	40	10AM-1PM	NA ¹	NA ¹	NA ¹

¹ Vedauwoo Road is a grade-separated intersection at I-80. Project traffic utilizing this intersection will not affect the traffic on I-80. No data are available, but traffic counts on Vedauwoo Road are expected to be minimal. This intersection may require radii modifications but is not of concern for LOS.

² It was assumed that vehicle use is currently so seldom that on average 0 vehicles use it during peak hour.

4.4 Other Transportation Infrastructure

4.4.1 Rail

The UPRR runs south through the central portion of the Analysis Area to just east of Tie Siding, where two lines then run northeast and southeast through the eastern portion of the Project Area (Figure 1). There is a small railroad siding that is approximately 1,200 feet long associated with this line. This siding is assumed to be too small for parking and offloading rail cars with tower components, and it is likely cost prohibitive to increase the size of the siding to meet Project needs. Therefore, it was assumed that turbine deliveries by rail would offload to trucks at the UPRR rail facilities in Laramie for delivery south along U.S. 287 or east along I-80 to the Project. Existing rail infrastructure in Laramie is adequate to accommodate Project deliveries and would not be negatively impacted by use for Project component delivery.

The proposed Project access road layout was designed to avoid any new at-grade railroad crossings; however, there are some local roads that currently cross the railroad at-grade. These at-grade crossings may be deemed off limits for Project workers to eliminate the potential for conflict with the additional traffic in the area.

4.4.2 Aviation

The closest public airport to the Project Area is the Laramie Regional Airport, located approximately 12 miles northwest. It is anticipated that this airport could be used by helicopters

for stringing and constructing transmission lines. The closest private airport is the Rock & Hard Place Ranch Airport, located approximately 7 miles north of the Project Area.

5 TRANSPORTATION ANALYSIS RESULTS

This section describes the potential impacts of the Project on the region’s transportation system. Construction of the Project is expected to require up to 2 years and the Project is expected to have an approximately 35-year lifespan. Transportation impacts due to construction were evaluated based on projected conditions that would occur during Year 1 peak construction, while impacts from decommissioning are evaluated based on projected conditions approximately 30 years after operations begins. Impacts from operations are also evaluated based on projected conditions in 2057 (i.e., just before decommissioning starts). This is a conservative estimate that captures the highest background traffic volumes.

5.1 Construction

Wind farm construction generally follows the order of operations shown below. Many of these construction activities would overlap. Turbine siting, geotechnical investigations, designs, and much of the surveying is done prior to construction commencing.

- Site civil work including laydown yard leveling/graveling, concrete batch plant setup, and access road construction
- Turbine area clearing and foundation excavations
- Foundation rebar and concrete work with backfilling operations
- Tower delivery and erection
- Collection line, substation, and transmission line construction
- O&M building construction
- Reclamation of temporary roads, laydown areas, crane walks, etc.

The peak construction worker estimate of 195 will occur in the second year of construction (2023) and will likely occur while foundation rebar and concrete work is taking place as tower components are being delivered and some tower assemblies underway. Tables 4 and 5 summarize the results of the estimated total traffic counts during peak construction.

Table 4: Estimated Road Use and LOS during Peak Construction

Highway/Freeway	Location Description	% Trucks	AADT (2023)	Commute Peak Hour	PHV (2023)	PH Density (PCPMPL)	Peak Hour LOS
I-80	East of Laramie	47%	14,120	10AM-1PM	1281	6.2	A
U.S. 287	Near Tie Siding, WY	17%	5,376	11AM-2PM	530	3.9	A
I-25	South of Cheyenne	15%	22,782	Unknown	2311	10.1	A

Table 5: Estimated Intersection Use and LOS during Peak Construction

Intersections	Location Description	% Trucks	AADT (2023)	Commute Peak Hour	PHV (2023)	PH Delay	Peak Hour LOS
Intersection 1	U.S. 287, Sportsman Lake Road (CR 316)	15%	4696	11AM-2PM	546	9.4	A
Intersection 2	U.S. 287, Cherokee Park Road (CR 31)/ Hermosa Road (CR 222)	15%	4736	11AM-2PM	534	14.2	B
Intersection 3	U.S. 287, Dale Creek Road	15%	4686	11AM-2PM	533	10.7	B
Intersection 4	U.S. 287, Unnamed Access Road	15%	4676	11AM-2PM	519	10.7	B
Intersection 5	U.S. 287, Pumpkin Vine Road (CR 241)	15%	4686	11AM-2PM	527	10.6	B
Intersection 6	I-80, Vedauwoo Road Exit	NA ¹	215	10AM-1PM	NA ¹	NA ¹	NA ¹

1 Vedauwoo Road is a grade-separated intersection at I-80. Project traffic utilizing this intersection will not affect the traffic on I-80. No actual data are available, but traffic counts on Vedauwoo Road are expected to be minimal. This intersection may require radii modifications but is not of concern for LOS.

5.1.1 Affected Road Facilities

Regardless of which delivery method is chosen, it is likely that all haul routes (I-80, I-25, and U.S. 287) will see at least a slight increase in traffic from estimated baseline traffic (Table 2) from Project component deliveries and worker access as reflected in the AADT counts in Table 4. In general, all major highways and interstates are designed to facilitate truck traffic and all component trucks will comply with highway axle weight regulations in Wyoming and Colorado. Therefore, it is anticipated that the physical impacts to the highway portion of haul routes would be negligible. As reflected in Table 4, impacts to LOS would be negligible and would not change the LOS rating for any of the proposed haul routes from estimated baseline conditions (Table 2).

Various local public roads and private roads will be used to access the Project Area from U.S. 287 (Hermosa Road, Cherokee Park Road, Pumpkin Vine Road, Sportsman Lake Road, and Boulder Ridge Road) and from I-80 (Monument Road and Hermosa Road). These roads are unpaved and typically carry extremely low traffic volumes. Project-related traffic would dramatically increase the daily traffic volumes on these roads during construction and decommissioning periods. Disruptions or delays to traffic on local public roads could occur as a result of increased use by the Project. However, these effects would most likely occur at or near intersections of local public roads with U.S. 287 and I-80. Further analysis of the use and level of service at these intersections is provided below.

5.1.2 Project Access Intersections

The estimated existing background traffic is nearly identical at Intersections 1–5 (Table 3) since the major leg of each intersection is U.S. 287. The major difference influencing LOS at each of these locations is the intersection’s geometry. Intersections that have two minor legs have cross traffic, versus the entering and exiting traffic at T intersections. Additionally, the presence of dedicated lanes at an intersection reduce LOS impacts as turning vehicles do not have to slow down the through traffic while waiting to turn. The delays described in Table 5 are the delays

experienced by the minor stopped legs of the intersection. Because the major legs of the intersections (I-80 and U.S. 287) are continuous flow, the impacts to these roads from the addition of Project traffic would be negligible. Primarily, delays will be experienced by workers who have to wait for a gap in the cross-traffic along U.S. 287 to move from the minor leg of the intersection.

It is assumed that most construction workers will arrive on site well before the commuter peak hours identified for I-25, I-80, or U.S. 287 (Table 4). Therefore, impacts to local traffic from workers arriving on site are estimated to be negligible; however, some deliveries could occur during the commuter peak hour. This will have a greater effect on traffic if the deliveries use an intersection that does not have dedicated deceleration lanes. Traffic effect may be decreased by temporary or permanent modifications to the intersection geometry, i.e., adding deceleration lanes. In addition, workers could experience longer wait times when attempting or merge onto U.S. 287 during the commuter peak hour; however, the increased delay would only be experienced along the minor leg intersections and would not qualitatively impact traffic along U.S. 287.

The intersection of I-80 and Vedauwoo Road (Intersection 5) is a grade-separated intersection and is thus likely unaffected by traffic along I-80. Additionally, Vedauwoo Road experiences very low traffic volumes. Traffic data along Vedauwoo Road are not available, thus no peak hour LOS estimates could be calculated at this intersection (Tables 3 and 5), but it is estimated that fewer than 20 VPD use the southbound lane, where Project traffic would travel. Although road improvements and temporary intersection radii modifications may be necessary to accommodate Project component delivery vehicles, there is not a quantifiable amount of current traffic, so no impacts to LOS at this intersection would be anticipated from Project traffic.

As stated above, the laydown locations and associated access routes have yet to be finalized. For the purposes of this analysis, the 147-vehicle morning peak estimate was added to each of the Project intersections to provide a conservative analysis of potential traffic impacts at each of these locations. In reality, this peak is anticipated only for the intersection(s) that will provide access to the laydown areas used for the morning tailgate meetings during the peak of construction. There will likely be one laydown location for each stage, East and West, of the Project. All other intersections will either see significantly less utilization, or utilization solely as through traffic on U.S. 287 during peak hour. Additional use of each intersection will occur outside peak hour and may happen occasionally during peak hour dependent upon which portions of the Project would be under construction at that time.

As outlined in Tables 3 and 5, Intersection 1 shows a LOS improvement from B to A with the addition of peak Project traffic; however, this is misleading. When multiple turn movements share a lane (eastbound left turn and right turn onto U.S. 287 in this case), the capacities of the two movements are an average of the two separate movement capacities weighted by the number of vehicles making each movement. Because this intersection is the northernmost intersection, it was assumed that most Project vehicles will be making a right turn (southbound on U.S. 287 to the rest of the Project). Right turns have a much higher capacity than left turns, so the average capacity increases significantly and shows a lower average delay. However, left-turning vehicles

(i.e., northbound on U.S. 287) would still experience a similar delay to the baseline conditions (LOS B; Table 3).

For Intersection 5, the addition of peak Project traffic reduces the LOS from A to B (Tables 3 and 5). Also, as outlined in Tables 3 and 5, the addition of peak Project traffic does not change the LOS for the remaining Intersection 2-4 (remaining at LOS B).

5.1.3 Other Transportation Infrastructure

Rail and air transportation have no quantitative methods for characterizing the amount of impact to the local resources so there are no specific analysis results. Rail and air transportation infrastructure are designed to handle the types of deliveries that would be scheduled. Discussion of potential impacts is in Section 6.

5.2 Operations

The Project facilities primarily will be operated and maintained from the onsite O&M building. Once construction has been completed, an estimated maximum of 20 VPD will be used for daily O&M over the approximately 35-year lifespan of the Project.

Operations workers are expected to work normal shifts with staggered arrival times to provide more onsite coverage for maintenance or emergencies. Workers will commute to and from the Project during typical hours, generating an anticipated average of four 1-way trips during the peak hours on a daily basis. Based on the very low number of VPD associated with operational activities, the operational phase vehicle trips on all affected road facilities are considered a negligible impact to estimated background traffic.

5.3 Decommissioning

The Project has a projected operational life of about 35 years and would potentially be decommissioned in approximately 2057. At the end of the useful life of the Project, the turbines would be removed from service. At such time, structures would be removed, access roads revegetated, foundations removed to below ground surface, and other reclamation and rehabilitation actions taken as required.

It is estimated that the decommissioning process will require an average monthly workforce that is comparable to the average monthly workforce required for construction (120 workers), although decommissioning activities would occur over a shorter duration. Tables 6 and 7 summarize the results of the estimated total traffic counts during decommissioning. This estimate conservatively assumes a constant growth rate; however, it is possible that the growth rate will decrease over time. In addition, the estimates presented in Tables 6 and 7 are based on the current best available information. However, the results are speculative as it is difficult to account for future changes in technology, decommissioning practices, and other influences that may impact estimated traffic levels in the area.

Baseline existing conditions for the year 2057 were not analyzed independently due to a high degree of uncertainty in how transportation infrastructure and use, type of vehicles, etc. may change. Tables 6 and 7 estimate the LOS during peak decommissioning assuming the only change is population growth. Project traffic will result in decreased LOS of one letter grade from existing baseline (Tables 2 and 3) along I-25 and along Intersections 2–5 at the start of decommissioning. This does not necessarily mean that it represents a decrease in LOS from what the actual LOS will be in 2057. To determine this, an analysis would need to be conducted prior to commencement of decommissioning.

Table 6: Future Road LOS Estimates During Decommissioning

Highway/Freeway	Location Description	% Trucks	AADT (2057)	Commute Peak Hour	PHV (2057)	PH Density (PCPMPL)	Peak Hour LOS
I-80	East of Laramie	47%	24,327	10AM-1PM	1,930	10.2	A
U.S. 287	Near Tie Siding, WY	17%	8,606	11AM-2PM	922	4.4	A
I-25	South of Cheyenne	15%	39,732	Unknown	3,170	14.0	B

Table 7: Future Intersection LOS Estimates During Decommissioning

Intersections	Location Description	% Trucks	AADT (2057)	Commute Peak Hour	PHV (2057)	PH Delay	Peak Hour LOS
Intersection 1	U.S. 287, Sportsman Lake Road (CR 316)	15%	8836	11AM-2PM	835	10.0	B
Intersection 2	U.S. 287, Cherokee Park Road (CR 31)/ Hermosa Road (CR 222)	15%	8896	11AM-2PM	823	15.7	C
Intersection 3	U.S. 287, Dale Creek Road (CR 231)	15%	8836	11AM-2PM	819	13.5	B
Intersection 4	U.S. 287, Unnamed Access Road	15%	8856	11AM-2PM	819	13.5	B
Intersection 5	U.S. 287, Pumpkin Vine Road (CR 241)	15%	8836	11AM-2PM	811	10.8	B
Intersection 6	I-80, Vedauwoo Road Exit	NA ¹	215	10AM-1PM	NA ¹	NA ¹	NA ¹

¹ Vedauwoo Road is a grade-separated intersection at I-80. Project traffic utilizing this intersection will not affect the traffic on I-80. No data are available, but traffic counts on Vedauwoo Road are expected to be minimal. This intersection may require radii modifications but is not of concern for LOS.

6 POTENTIAL EFFECTS ANALYSIS

This analysis evaluated the potential transportation impacts to the local infrastructure caused by the proposed Project. This section also discusses other Project traffic effects that are not quantifiable but will still impact the local transportation environment.

Based on the information provided, the conservative estimates of anticipated Project traffic numbers, and engineering judgment from experience with similar projects, Project-generated traffic from construction, O&M, or decommissioning will not impede any analyzed intersection or roadway to a level that would require the use of mitigation measures during peak hours. Additionally, adherence to the environmental protection measures (EPMs) provided in Section 7 would minimize the Project’s effects on traffic and local infrastructure.

6.1 Affected Road Facilities

One of the primary purposes of the interstate highway system is to facilitate commerce through the easy, cheap, and quick transportation of goods and materials via truck. Transportation of equipment for the construction of the Project is directly in line with what the highways are built for and designed to accommodate. Increased traffic volume is an inevitable by-product of the construction process.

As outlined in Tables 2, 4, and 6, LOS thresholds for I-80, I-25, and U.S. 287 are not estimated to fall below LOS B with the addition of peak construction or decommissioning traffic, and therefore would not result in qualitative changes to LOS beyond normal wear and tear.

During the 35-year lifespan of the facility, the small amount of operational traffic would only result in negligible impacts to transportation service along these haul routes. Possible increases to estimated operational traffic may be associated with Project repowering during its lifetime; however, it is not anticipated that traffic associated with repowering would exceed the construction or decommissioning phase impacts.

6.1.1 Worker Commuting and Project Access Routes

For the purpose of impacts to the transportation system; the worker commuting impact is primarily quantifiable at the Project location since workers may come from various locations and towns. As demonstrated, there is a drop in LOS from A to B at Intersection 5. LOS B is still considered highly desirable and delays experienced by motorists are minimal.

It is worth noting that agreements are often set up with local hotels to house Project workers. This could mean that many workers will be coming from the same location in a local town such as Laramie. If so, some LOS impacts within Laramie or other local communities that house workers could result; however, the infrastructure surrounding a hotel would have had a similar analysis when the hotel was constructed, demonstrating the possible impacts when the hotel is full. Even if the rooms are filled with workers for the Project, the resulting impacts to the transportation system in Laramie or other nearby towns would not likely be more severe than was approved for the construction of the hotel.

A small number of workers may bring RVs and stay at local RV parks or campgrounds. Again, these workers would be concentrated at the Project location during arrival times and would be an insignificant addition to traffic near the location of the trailer parks or campgrounds.

During operations, it is estimated that approximately 23 workers would live locally and commute from home, resulting in negligible impacts to traffic along their commute.

6.1.2 Traffic Safety

The increase in overall traffic, including oversized loads such as tower components, increases the risk of traffic accidents in the Analysis Area. This will be particularly true on U.S. 287, where

the speed limit is 70 mph and Project vehicles will routinely be entering and exiting at-grade intersections. U.S. 287 currently has a low safety rating; however, some striping and safety signage improvements were completed in 2019 to increase safety and reduce the number of incidents along this stretch of road. Safety procedures such as road signage, reduced speeds, and avoidance of heavy truck use during peak background hours, will be developed as part of the Road Use Agreements with WYDOT and Albany County Road and Bridge Department to address Project-related traffic safety concerns, including those along U.S. 287. Additionally, a traffic control plan will be developed for the Project that will specify certain safety measures and locations such as; signage to signal motorists of construction entrances, cones or concrete barriers for work near the shoulder of the road, etc. Spotter/escort vehicles will be used for the larger tower component deliveries to ensure communication of intent to turn to local motorists and warn them to use caution near the oversized load.

6.1.3 Road Damage

It is anticipated that Project-related traffic may result in road damage along the unpaved county roads within the Project Area. Appropriate practices to avoid or minimize road damage may include, grading, plowing, culvert maintenance, etc., beyond what is currently provided by Albany County. It is anticipated that any additional maintenance requirements for these roads as a result of Project-related traffic will be outlined in the Road Use Agreement developed in conjunction with the Albany County Road and Bridge Department.

6.2 Project Access Intersections

LOS thresholds for all Intersections are not estimated to fall below LOS B with the addition of peak construction traffic and therefore would not result in qualitative changes to LOS along the major or minor legs. In addition, the worst LOS experienced would only be anticipated during peak commuting hours at the peak of construction and thus would be temporary in nature. The delays will predominantly be experienced by Project workers as they would be the main users of the minor legs of the intersections. U.S. 287 will remain free flowing even if short backups did occur on side streets. Intersection 6 is a grade-separated interchange, so even with the potentially significant volume of Project traffic, no impacts to LOS at this intersection would be anticipated from peak construction or decommissioning traffic.

During the 35-year operation of the facility, the small amount of operational traffic should result in negligible impacts to transportation service at these intersections.

As stated above, at the start of decommissioning, the current estimated Project traffic will result in decreased LOS of one letter grade from existing baseline (Tables 2 and 3) along I-25 and along Intersections 2–5. However, the results are speculative as it is difficult to account for future changes in technology, decommissioning practices, and other influences that may impact estimated traffic levels in the area. Therefore, these estimates do not necessarily represent a decrease in LOS from what the actual LOS will be in 2057. To determine this, an analysis would need to be conducted prior to commencement of decommissioning.

As stated above, the use of EPMs may be necessary during exceptional cases such as large component delivery or a significant change in estimated peak worker numbers. Use of EPMs, and required road signage, will be planned and executed as needed and in accordance with WYDOT and the Albany County Road and Bridge Department through Road Use Agreements and the MUTCD.

6.3 Other Transportation Infrastructure

Wind tower components are routinely transported by rail and as such are not likely to result in unusual or excessive wear to the rail system if the UPRR is used for component delivery to Laramie. Other wind farms have used the Laramie rail yard for offloading, so it is equipped to handle such deliveries. There is the possibility that the rail yard will be occupied with Project component delivery and unable to accept other regular shipments in a timely manner; however, it was assumed that UPRR rail shipment coordination would take place so that such conflicts would be avoided. Any impacts to the rail system would be minimal.

As stated above, helicopters may be used during construction of transmission lines for the Project. These helicopters would likely utilize Laramie Regional Airport and would comply with all required Federal Aviation Administration safety regulations and would be anticipated to have negligible impacts to existing local or regional air traffic.

7 APPLICANT-PROPOSED ENVIRONMENTAL PROTECTION MEASURES

ConnectGen has developed EPMs that when implemented would serve to avoid or minimize adverse effects to environmental resources from construction, O&M, and decommissioning of the Project. The EPMs listed in Table 8 would both directly and indirectly avoid or reduce potential effects associated with the Project on transportation infrastructure and the public.

Table 8: Proposed Environmental Protection Measures Related to Transportation Infrastructure for the Rail Tie Wind Project

Resource Category	Measure	Implementation			
		Preconstruction	Construction	Operations	Decommissioning
General					
GEN-3	Construction travel will be restricted to existing roads and permanent or temporary access roads identified in the final Project Site Plan.		X		
GEN-4	The Project will implement speed limits on construction and permanent access roads to minimize potential for fugitive dust, impacts to wildlife, and for safety purposes. Speed limit signs will be posted as appropriate.		X	X	X
Air Quality					
AQ-2	All unpaved roads and disturbed areas where construction activities are occurring, including temporary laydown areas, will be treated with water or other surfactants as frequently as necessary to control fugitive dust. Wind erosion control techniques such as windbreaks, water, WY DEQ-approved chemical dust suppressants, and/or vegetation will be applied to soil disturbance areas that could potentially result in wind-blown soils.		X		X
AQ-3	All construction equipment vehicle tires will be cleaned via track pad entrances as necessary to limit tracking of soil onto public roadways prior to leaving the construction site.		X		
AQ-4	All vehicles that are used to transport solid bulk material on public roadways and have the potential to cause visible dust emissions on public roadways either will be covered or the materials sufficiently wetted in a manner to minimize fugitive dust emissions.		X		X
Public Health and Safety					
PHS-12	The Project will post any roads it constructs as being private roads only for use by authorized personnel in connection with Project operations.		X	X	X
Geology and Soils					
GEO-3	Roads will be designed to follow existing contours and to avoid steep slopes that would require extensive cut-and-fill construction.	X			

Resource Category	Measure	Implementation			
		Preconstruction	Construction	Operations	Decommissioning
Transportation					
TRANS-1	Rail Tie will coordinate with WYDOT and Albany County to implement a Transportation and Traffic Management Plan that minimizes risks and inconvenience to the public, while ensuring safe and efficient construction of the Project. The plan will focus on turbine component deliveries, traffic and circulation primarily within and in the vicinity of the Project area. It will be designed to minimize potential hazards from increased truck traffic and worker traffic and to minimize impacts to traffic flow in the vicinity of the Project.	X	X		
TRANS-2	To minimize conflicts between Project traffic and background traffic, deliveries of project components will be scheduled around local volume peaks to the extent feasible.		X		
TRANS-3	Road clearances may include temporarily blocking road intersections via construction cones and/or staffing blocked intersections with a traffic-control flagger to allow haul trucks sole access to the road while delivering Project components. If required, public road closures are not expected to exceed 15 minutes during each/any road closure event.		X		X
TRANS-4	The Project will coordinate with WY DOT to determine whether temporary speed limit reductions during construction are applicable where Project access points intersect with State Highway 287.	X	X		
TRANS-5	Construction deliveries would be coordinated to avoid major traffic-generating events in Laramie including on the University of Wyoming campus, to the extent practicable.		X		
TRANS-6	The Project would coordinate with local law enforcement, to manage traffic flows and monitor traffic speed during deliveries.		X		X
TRANS-7	All staging activities and parking of equipment and vehicles would occur within the Project Area and would not occur on maintained Albany County roads.		X		
TRANS-8	Equipment and material deliveries to the site would be performed by professional transportation companies familiar with the type of equipment, loads involved, and U.S. DOT, WYDOT, and Albany County regulations.		X		X

Resource Category	Measure	Implementation			
		Preconstruction	Construction	Operations	Decommissioning
TRANS-9	Road signs would be erected to notify travelers and local residents that construction is occurring in the area and provide information regarding the timing and route for oversized vehicle movements and deliveries. The erection/placement of road signs and the Project construction activities would be performed in accordance with the Albany County Zoning Resolution (Albany County 2011) and coordinated with the Albany County Road and Bridge Department and WYDOT.		X		
TRANS-10	Escort vehicles would assist delivery of oversized turbine components to give drivers additional warning of oversized loads.		X		

8 LITERATURE CITED

- Albany County. 2020. Albany County Zoning Resolution. Originally Adopted August 1, 1997. Last Amended October 6, 2020. Albany County Planning Department. Available online at: <https://www.co.albany.wy.us/DocumentCenter/View/1004/Zoning-Resolution-PDF>. Accessed January 2021.
- CDOT (Colorado Department of Transportation). 2019. Online Transportation Information System (OTIS). Available online at: <http://dtdapps.coloradodot.info/otis>. Accessed December 2019.
- TRB (Transportation Research Board). 2016. Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis. October 2016. Available online at: <http://www.trb.org/Main/Blurbs/175169.aspx>. Accessed December 2019.
- WYDOT (Wyoming Department of Transportation). 2019a. Interactive Transportation System Map. Available online at: <https://apps.wyoroad.info/itsm/map.html>. Accessed December 2019.
- . 2019b. Traffic Data. Available online at: http://www.dot.state.wy.us/home/planning_projects/Traffic_Data.html. Accessed December 2019.
- . 2011. WYDOT Traffic Studies Manual. March 2011. Available online at: <http://www.dot.state.wy.us/files/live/sites/wydot/files/shared/Traffic%20data/Traffic%20Studies%20Manual.pdf>. Accessed December 2019.
- . 2010. WYDOT Long Range Plan. Available online at: <http://www.dot.state.wy.us/files/live/sites/wydot/files/shared/Planning/Long%20Range%20Transportation%20Plan%202010.pdf>. Accessed December 2019.
- . 1990. WYDOT Utility Accommodation Regulation. April 1990. Available online at: http://www.dot.state.wy.us/files/live/sites/wydot/files/shared/Highway_Development/Utilities/WYDOT%20Utility%20Accommodation%20Regulations_Jan%202017.pdf. Accessed December 2019.
- WHP (Wyoming Highway Patrol). 2019. Legal Sizes and Weights. Available online at: http://www.whp.dot.state.wy.us/home/size_and_weight/size_limits.html. Accessed December 2019.

FIGURES

Figure 1: Project Area and Representative Project Layout

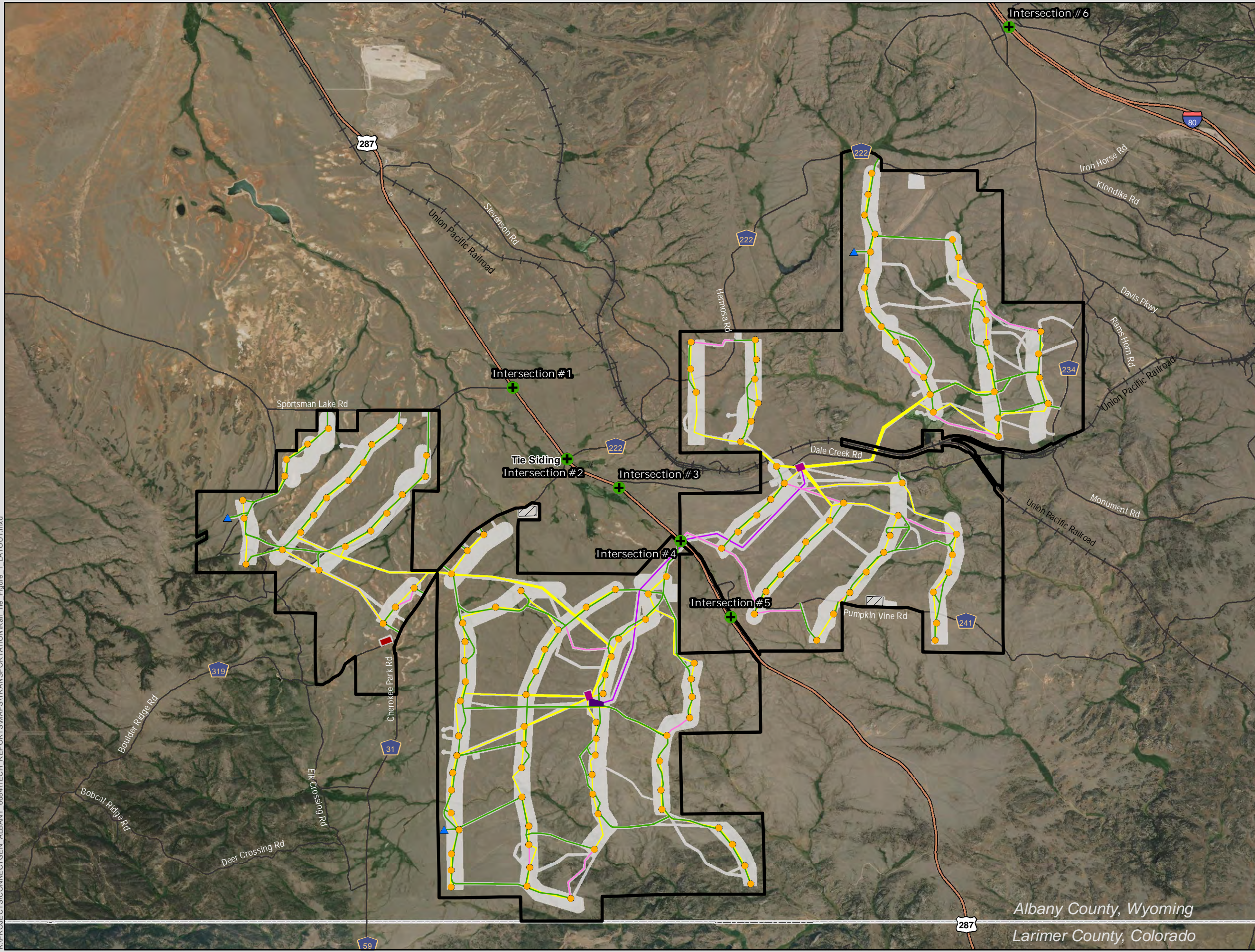
Figure 2: Transportation Analysis Area

Figure 3: Project Intersections

Rail Tie Wind Project

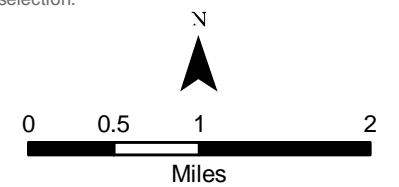
Figure 1 Project Area and Representative Project Layout

Albany County, WY

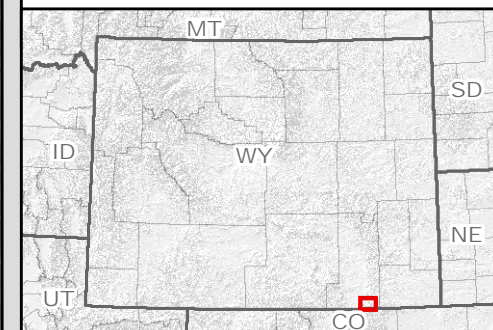


- Project Area
- Siting Corridor
- Representative Project Layout**
- Turbine
- Met Tower
- Access Road
- Collection Line
- Crane Path
- Transmission Line
- Project Substation
- Interconnection Substation
- Laydown Yard
- O&M Site
- State/County Boundary
- Highways
- County Roads
- Railroads
- Intersection

NOTE: WTG locations shown in the figure are representative and may change based on final engineering, environmental review and WTG model selection.



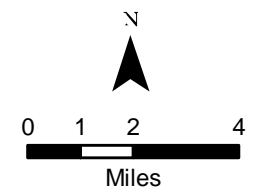
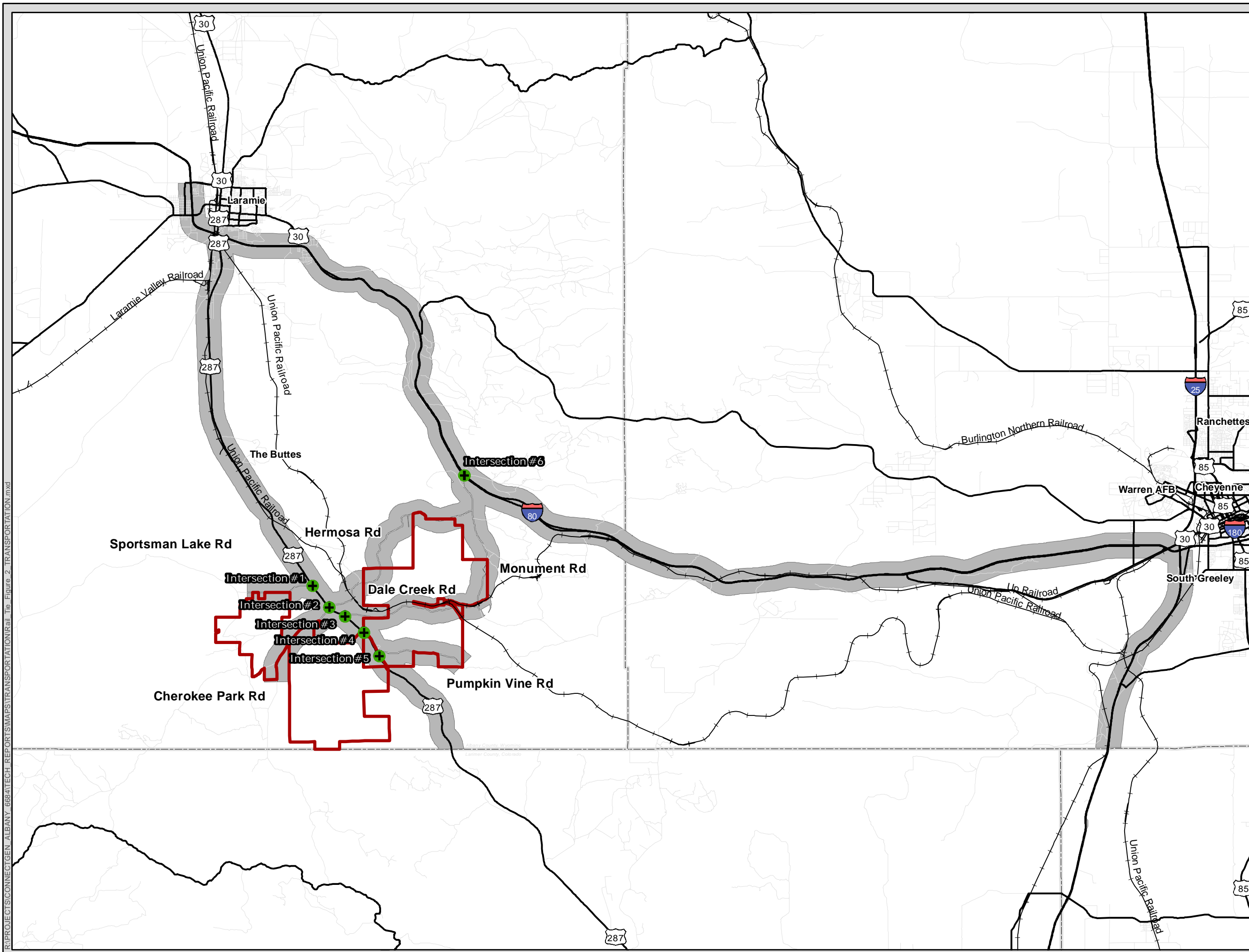
NOT FOR CONSTRUCTION



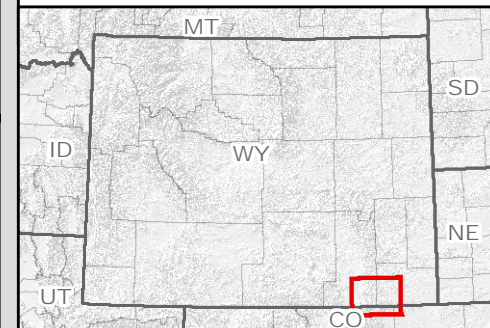
Albany County, Wyoming
Larimer County, Colorado

R:\PROJECTS\CONNECTGEN_ALBANY_6684\TECH_REPORTS\MAPS\TRANSPORTATION\Rail Tie Figure 1_LAYOUT.mxd

- Project Area
- Transportation Analysis Area
- Intersection
- State/County Boundary



NOT FOR CONSTRUCTION



R:\PROJECTS\CONNECTGEN_ALBANY_6684\TECH_REPORTS\MAPS\TRANSPORTATION\Rail Tie Figure 2_TRANSPORTATION.mxd

Intersection #1
Highway 287 / Sportsman Lake Rd



Intersection #2
Hermosa Road / Cherokee Park Road



Intersection #3
Highway 287 / Dale Creek Rd.



Intersection #4
Highway 287 / Unnamed road



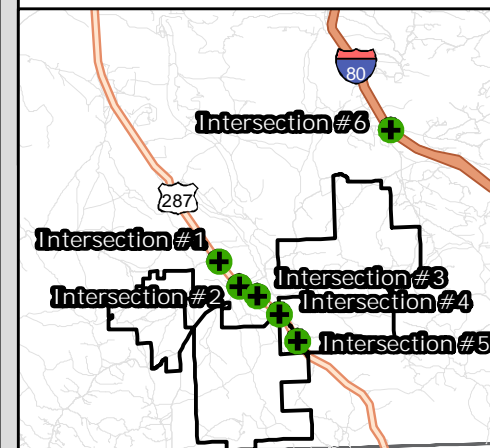
Intersection #5
Highway 287 / Pumpkin Vine Rd



Intersection #6
Interstate 80 / Vedauwoo Rd



NOT FOR CONSTRUCTION



R:\PROJECTS\CONNECTGEN_ALBANY_6684\TECH_REPORTS\MAPS\TRANSPORTATION\Rail_Tie_Figure 3_INTERSECTIONS_20200107.mxd

APPENDIX A: WYDOT Traffic Data

Wyoming Department of Transportation

Annual Day of Week Summary for 2016

Site Names: 000060

Seasonal Factor Group: South East

County: Albany

Daily Factor Group: South East

Funct. Class: R Principal Arterial - Other

Axle Factor Group: South East

Location: US 287 SOUTH OF TIE SIDING

Growth Factor Group: Rural

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	MADT	MAWDT	MAWET	% POS
Jan	3,320	3,052	2,717	2,783	2,751	3,238	3,563	3,060	2,826	3,442	51
Feb	3,861	2,782	2,178	3,040	2,897	4,084	4,230	3,296	2,724	4,045	50
Mar	4,424	3,734	3,292	2,344	3,598	4,291	4,341	3,718	3,242	4,383	50
Apr	3,615	3,399	3,324	3,438	3,831	4,325	4,012	3,706	3,498	3,814	50
May	4,782	4,550	3,995	4,053	4,532	5,573	5,372	4,694	4,282	5,077	51
Jun	6,164	4,961	4,724	4,892	5,480	6,190	5,656	5,438	5,014	5,910	51
Jul	7,007	5,627	5,382	5,430	5,805	7,373	6,711	6,191	5,561	6,859	50
Aug	6,886	5,339	4,935	5,111	5,660	6,760	6,293	5,855	5,261	6,589	50
Sep	6,070	5,463	4,277	4,316	4,966	6,296	6,021	5,344	4,755	6,045	50
Oct	5,377	3,852	3,745	3,821	4,267	5,483	5,367	4,559	3,921	5,372	50
Nov	4,616	3,484	3,749	3,977	3,316	4,282	4,743	4,024	3,631	4,679	50
Dec	2,781	3,317	3,419	3,408	3,947	4,127	3,468	3,495	3,523	3,125	51

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	AADT	AAWDT	AAWET	% POS
2016	4,909	4,130	3,811	3,884	4,254	5,168	4,981	4,448	4,020	4,945	50
2015	4,263	3,458	3,179	3,235	3,553	4,343	4,220	3,750	3,356	4,242	51
2014	4,030	3,292	3,108	3,232	3,378	4,196	4,099	3,619	3,253	4,064	51
2013	3,679	2,969	2,708	2,851	3,066	3,715	3,655	3,235	2,898	3,667	50
2012	3,631	2,940	2,760	2,851	3,066	3,783	3,669	3,243	2,904	3,650	50
2011	3,565	2,987	2,870	2,938	3,112	3,880	3,705	3,294	2,977	3,635	50
2010											
2009											
2008											
2007											

Wyoming Department of Transportation

Annual Day of Week Summary for 2016

Site Names: 000101
 County: Albany
 Funct. Class: R Principal Arterial - Interstate
 Location: I-80 EAST OF BUFORD

Seasonal Factor Group: I-80
 Daily Factor Group: I-80
 Axle Factor Group: I-80
 Growth Factor Group: I-80

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	MADT	MAWDT	MAWET	% POS
Jan	9,040	8,525	9,352	10,248	10,020	10,184	11,507	9,839	9,536	10,273	49
Feb	11,043	7,531	8,379	10,554	9,706	12,131	10,989	10,047	9,042	11,016	49
Mar	12,176	8,912	10,292	7,211	11,329	12,397	13,287	10,801	9,436	12,732	49
Apr	10,881	10,382	9,676	12,392	12,604	12,621	11,418	11,425	11,263	11,149	50
May	13,421	11,289	12,110	13,922	13,983	15,000	14,538	13,466	12,826	13,980	49
Jun	16,046	13,391	14,134	15,665	15,610	16,486	16,429	15,394	14,700	16,237	49
Jul	17,002	13,460	14,439	16,049	16,170	17,591	18,314	16,146	15,029	17,658	50
Aug	16,672	13,550	14,269	15,906	15,853	16,660	17,348	15,751	14,895	17,010	50
Sep	16,154	13,348	13,415	15,100	15,397	16,831	17,713	15,423	14,315	16,934	50
Oct	14,704	11,222	12,717	14,052	14,183	15,397	17,180	14,208	13,043	15,942	50
Nov	12,787	10,011	10,631	12,963	8,477	13,131	15,055	11,865	10,521	13,921	49
Dec	8,291	8,538	9,786	10,378	11,335	11,114	10,977	10,060	10,009	9,634	49

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	AADT	AAWDT	AAWET	% POS
2016	13,185	10,846	11,600	12,870	12,889	14,129	14,563	12,869	12,051	13,874	49
2015	13,887	11,063	11,883	13,031	13,206	13,840	14,711	13,089	12,295	14,299	50
2014	12,621	10,680	11,196	12,643	12,608	13,473	14,067	12,470	11,782	13,344	50
2013	13,701	10,957	11,263	12,635	12,829	13,879	14,929	12,885	11,921	14,315	49
2012											
2011											
2010											
2009											
2008											
2007											

		Year	MADT	% chg	MAWDT	% chg	MAWET	% chg	# days
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January 2019

000060	Albany	2019	3,416	-1.20	3,076	-5.59	3,937	9.90	30
US 287 SOUTH OF TIE SIDING		2018	3,458		3,258		3,583		29

February 2019

000060	Albany	2019	3,414	-.43	2,960	-3.57	4,016	5.40	22
US 287 SOUTH OF TIE SIDING		2018	3,429		3,070		3,810		27

March 2019

000060	Albany	2019	4,018	-1.19	3,595	-1.14	4,637	.82	29
US 287 SOUTH OF TIE SIDING		2018	4,067		3,636		4,599		29

April 2019

000060	Albany	2019	4,338	3.38	3,751	-.60	5,105	6.20	27
US 287 SOUTH OF TIE SIDING		2018	4,196		3,773		4,806		29

May 2019

000060	Albany	2019	5,180	3.94	4,592	1.37	5,836	7.42	31
US 287 SOUTH OF TIE SIDING		2018	4,983		4,530		5,433		30

June 2019

000060	Albany	2019	6,140	6.92	5,623	7.49	6,793	6.81	29
US 287 SOUTH OF TIE SIDING		2018	5,742		5,231		6,360		30

July 2019

000060	Albany	2019	6,796	8.39	6,064	9.02	8,030	11.34	30
US 287 SOUTH OF TIE SIDING		2018	6,270		5,562		7,212		31

August 2019

000060	Albany	2019	6,355	5.60	5,619	5.74	7,226	4.48	30
US 287 SOUTH OF TIE SIDING		2018	6,018		5,314		6,916		31

September 2019

000060	Albany	2019	5,984	8.34	5,336	8.94	6,962	7.42	27
US 287 SOUTH OF TIE SIDING		2018	5,523		4,898		6,481		29

October 2019

000060	Albany	2019	4,796	4.58	4,269	6.45	5,275	2.72	30
US 287 SOUTH OF TIE SIDING		2018	4,586		4,010		5,135		31

ROUTE	SECTION DESCRIPTION	# of lanes	ROUTE SIGNS SYS RTE	2014		2015		2016		2017		2018		VEHICLE MILES	
				ALL VEH.	TRUCKS	ALL VEH.	TRUCKS	ALL VEH.	TRUCKS	ALL VEH.	TRUCKS	ALL VEH.	TRUCKS	AVMT	TVMT
23	JCT I 80 (SARATOGA INT)	2	US 30/287	551	83	782	78	758	69	852	101	747	85	12,897	1,468
23	TIE SIDING	2	US 287	3,619	677	3,750	638	3,651	493	4,608	733	4,672	771	36,839	6,079
80	VEDAUWOO INT	2	US 30	6,288	2,944	6,609	2,984	6,413	2,942	7,102	3,765	6,628	3,115	38,376	18,036

Wyoming Department of Transportation

Road, Monthly Hourly Volume for January 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp: Rural Principal Arterial
 Daily Factor Grp: Rural Principal Arterial
 Axle Factor Grp: Rural Principal Arterial
 Growth Factor Grp: Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	8	16	12	19	21	20	27	67	100	117	191	261	294	336	357	323	328	268	181	128	98	60	41	33	3,306
02	19	17	24	19	30	60	85	150	197	241	302	335	274	346	297	328	329	238	186	112	93	93	69	52	3,896
03	45	27	35	30	41	74	79	160	231	234	300	314	262	294	313	318	332	293	188	138	131	92	62	57	4,050
04	43	38	40	36	48	71	106	182	264	326	317	333	336	336	334	378	406	309	201	177	148	122	85	58	4,694
05	53	26	25	28	40	59	100	181	302	311	331	409	336	347	373	428	431	389	238	185	127	117	82	51	4,969
06	39	33	30	26	22	34	49	109	180	252	244	301	337	353	360	370	286	314	196	121	101	78	58	27	3,920
07	32	9	18	22	32	72	83	158	169	157	199	204	220	186	198	217	186	125	83	77	46	22	43	27	2,585
08	31	18	22	25	35	55	93	163	183	222	247	252	204	225	239	253	256	228	137	101	85	63	63	37	3,237
09	41	32	25	31	36	68	93	169	186	229	258	221	236	252	260	279	234	194	133	96	97	77	57	45	3,349
10	26	26	23	39	40	78	107	185	202	241	239	251	263	253	270	305	268	242	126	139	100	82	65	39	3,609
11	27	33	28	46	39	61	86	119	166	263	241	209	220	247	274	269	237	262	167	116	96	59	47	38	3,350
12	28	22	10	24	16	42	79	142	178	207	232	226	234	246	280	257	339	248	161	131	80	44	55	32	3,313
13	22	22	21	13	11	42	54	95	177	185	235	301	302	287	319	352	379	280	212	184	124	79	48	34	3,778
14	35	11	16	22	36	56	80	137	176	182	221	235	246	225	231	223	220	219	138	119	78	68	53	43	3,070
15	25	22	19	25	43	70	86	182	202	209	211	194	233	242	234	257	250	174	155	102	100	59	50	48	3,192
16	36	23	19	28	38	63	81	158	208	213	212	233	236	220	236	248	256	182	157	120	107	80	58	56	3,268
17	33	15	17	11	22	58	95	144	185	254	252	267	243	270	258	298	264	196	135	90	88	62	48	28	3,333
18	22	21	18	22	31	46	88	144	175	194	196	200	205	209	244	219	184	209	153	118	93	69	56	40	2,958
19	33	26	26	13	12	46	76	179	223	246	314	325	276	249	328	292	308	270	183	125	18	0	0	0	3,568
20	0	12	11	19	16	22	55	116	212	230	251	276	320	318	332	360	378	295	192	153	124	90	52	41	3,875
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23	31	12	25	22	31	59	84	153	175	158	183	220	217	208	246	233	225	194	104	76	47	54	47	24	2,828
24	31	12	21	17	25	51	58	94	122	124	166	162	207	224	205	209	203	166	123	74	60	39	23	30	2,446
25	27	16	15	30	28	58	100	144	227	230	223	268	287	292	327	378	346	286	188	146	129	88	66	51	3,950
26	20	29	19	22	21	49	92	170	237	260	294	313	326	276	315	310	331	294	205	146	115	70	67	36	4,017
27	20	18	17	8	19	32	50	124	161	209	266	287	290	355	366	404	406	316	243	160	136	90	42	38	4,057
28	27	13	25	18	32	45	76	113	125	122	146	167	201	202	191	209	225	171	112	83	94	48	46	33	2,524
29	31	12	19	26	36	54	83	158	163	175	198	198	192	197	238	238	215	209	138	82	91	74	51	39	2,917
30	19	22	23	29	35	65	84	158	163	178	213	194	206	212	232	216	218	204	112	106	82	62	49	50	2,932

Wyoming Department of Transportation

S, Monthly Hourly Volume for January 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp:
 Daily Factor Grp:
 Axle Factor Grp:
 Growth Factor Grp:

Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	4	9	7	11	18	12	17	54	73	83	120	162	173	173	181	131	133	107	89	58	51	30	16	22	1,734
02	11	12	11	6	14	41	56	103	138	157	200	210	147	172	140	143	142	94	84	59	46	42	44	29	2,101
03	25	15	17	18	24	37	50	122	158	135	167	180	133	155	151	134	125	121	98	77	78	49	32	32	2,133
04	22	21	23	19	21	39	71	123	176	188	178	184	180	155	156	172	172	127	103	88	88	77	48	30	2,461
05	30	9	9	10	15	39	71	118	198	187	169	211	152	164	146	158	174	161	105	105	71	65	43	33	2,443
06	14	17	13	13	14	21	25	74	130	140	141	143	149	150	133	121	110	139	82	60	54	44	25	13	1,825
07	14	3	6	11	17	40	47	88	100	82	112	110	120	90	107	105	105	80	61	56	35	19	37	12	1,457
08	16	11	13	9	20	31	52	95	106	106	119	118	90	99	111	97	107	89	60	61	55	32	40	21	1,558
09	24	24	12	10	16	36	52	105	104	110	136	118	109	128	124	134	110	82	67	48	52	40	29	25	1,695
10	12	10	12	20	20	40	58	108	98	130	122	122	126	119	124	134	113	124	74	68	63	37	46	25	1,805
11	13	16	14	21	17	35	44	80	86	105	132	126	100	114	128	122	114	163	117	64	48	30	30	24	1,743
12	16	9	5	9	6	27	54	103	107	115	119	127	123	115	135	96	127	104	72	62	43	17	26	17	1,634
13	15	10	13	8	5	18	33	69	125	96	122	141	152	122	105	124	130	112	118	94	63	44	24	19	1,762
14	17	3	11	11	18	25	50	86	107	101	121	131	126	117	112	93	93	121	59	56	37	35	29	22	1,581
15	13	9	8	11	19	37	47	103	109	115	116	107	115	121	88	92	102	83	83	51	59	39	24	33	1,584
16	20	12	7	14	16	40	41	83	94	103	121	105	114	98	98	114	112	76	61	70	69	72	43	41	1,624
17	29	12	13	7	16	38	60	101	99	128	134	137	107	120	125	142	137	93	73	57	70	41	30	16	1,785
18	11	9	13	15	14	32	59	80	115	118	110	107	110	121	149	131	97	138	96	70	48	45	36	22	1,746
19	15	12	10	7	8	19	49	134	152	133	148	158	137	110	137	117	131	105	98	83	14	0	0	0	1,777
20	0	8	6	9	7	14	34	89	137	129	114	127	155	135	139	137	145	126	90	89	58	52	32	19	1,851
21	13	7	8	18	13	33	63	103	130	112	113	138	121	110	140	115	142	82	69	53	31	44	8	3	1,669
22	6	2	0	2	3	1	5	5	29	44	41	54	56	61	71	62	51	68	46	28	29	32	23	18	737
23	17	5	9	11	15	41	40	94	94	80	97	120	97	109	122	106	112	105	68	60	39	39	27	15	1,522
24	16	5	15	10	13	32	23	46	58	61	71	76	106	129	109	112	102	80	73	44	35	32	22	15	1,285
25	9	6	10	18	14	32	51	93	120	127	120	153	141	137	159	188	156	152	110	88	79	55	40	34	2,092
26	15	18	9	13	10	30	56	104	154	128	138	159	140	138	159	166	159	165	126	101	73	50	44	29	2,184
27	12	15	11	6	11	12	35	102	101	113	131	132	154	156	149	188	172	127	123	91	67	56	29	24	2,017
28	18	5	17	13	14	28	46	75	73	73	77	94	111	99	92	73	93	74	59	42	45	26	24	16	1,287
29	15	7	9	12	17	25	47	90	85	97	108	104	99	101	115	89	88	90	65	44	48	43	33	22	1,453
30	12	12	12	12	15	40	53	95	83	91	111	99	107	109	110	102	94	94	54	73	50	29	26	34	1,517

Wyoming Department of Transportation

N, Monthly Hourly Volume for January 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp: Rural Principal Arterial
 Daily Factor Grp: Rural Principal Arterial
 Axle Factor Grp: Rural Principal Arterial
 Growth Factor Grp: Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	4	7	5	8	3	8	10	13	27	34	71	99	121	163	176	192	195	161	92	70	47	30	25	11	1,572
02	8	5	13	13	16	19	29	47	59	84	102	125	127	174	157	185	187	144	102	53	47	51	25	23	1,795
03	20	12	18	12	17	37	29	38	73	99	133	134	129	139	162	184	207	172	90	61	53	43	30	25	1,917
04	21	17	17	17	27	32	35	59	88	138	139	149	156	181	178	206	234	182	98	89	60	45	37	28	2,233
05	23	17	16	18	25	20	29	63	104	124	162	198	184	183	227	270	257	228	133	80	56	52	39	18	2,526
06	25	16	17	13	8	13	24	35	50	112	103	158	188	203	227	249	176	175	114	61	47	34	33	14	2,095
07	18	6	12	11	15	32	36	70	69	75	87	94	100	96	91	112	81	45	22	21	11	3	6	15	1,128
08	15	7	9	16	15	24	41	68	77	116	128	134	114	126	128	156	149	139	77	40	30	31	23	16	1,679
09	17	8	13	21	20	32	41	64	82	119	122	103	127	124	136	145	124	112	66	48	45	37	28	20	1,654
10	14	16	11	19	20	38	49	77	104	111	117	129	137	134	146	171	155	118	52	71	37	45	19	14	1,804
11	14	17	14	25	22	26	42	39	80	158	109	83	120	133	146	147	123	99	50	52	48	29	17	14	1,607
12	12	13	5	15	10	15	25	39	71	92	113	99	111	131	145	161	212	144	89	69	37	27	29	15	1,679
13	7	12	8	5	6	24	21	26	52	89	113	160	150	165	214	228	249	168	94	90	61	35	24	15	2,016
14	18	8	5	11	18	31	30	51	69	81	100	104	120	108	119	130	127	98	79	63	41	33	24	21	1,489
15	12	13	11	14	24	33	39	79	93	94	95	87	118	121	146	165	148	91	72	51	41	20	26	15	1,608
16	16	11	12	14	22	23	40	75	114	110	91	128	122	122	138	134	144	106	96	50	38	8	15	15	1,644
17	4	3	4	4	6	20	35	43	86	126	118	130	136	150	133	156	127	103	62	33	18	21	18	12	1,548
18	11	12	5	7	17	14	29	64	60	76	88	93	95	88	95	88	87	71	57	48	45	24	20	18	1,212
19	18	14	16	6	4	27	27	45	71	113	166	167	139	139	191	175	177	165	85	42	4	0	0	0	1,791
20	0	4	5	10	9	8	21	27	75	101	137	149	165	183	193	223	233	169	102	64	66	38	20	22	2,024
21	13	12	13	11	24	24	33	58	78	143	124	141	142	140	142	144	141	119	37	22	20	11	3	1	1,596
22	4	2	0	2	0	2	2	3	16	35	40	42	30	46	61	92	98	81	60	43	34	25	21	11	750
23	14	7	16	11	16	18	44	59	81	78	86	100	120	99	124	127	113	89	36	16	8	15	20	9	1,306
24	15	7	6	7	12	19	35	48	64	63	95	86	101	95	96	97	101	86	50	30	25	7	1	15	1,161
25	18	10	5	12	14	26	49	51	107	103	103	115	146	155	168	190	190	134	78	58	50	33	26	17	1,858
26	5	11	10	9	11	19	36	66	83	132	156	154	186	138	156	144	172	129	79	45	42	20	23	7	1,833
27	8	3	6	2	8	20	15	22	60	96	135	155	136	199	217	216	234	189	120	69	69	34	13	14	2,040
28	9	8	8	5	18	17	30	38	52	49	69	73	90	103	99	136	132	97	53	41	49	22	22	17	1,237
29	16	5	10	14	19	29	36	68	78	78	90	94	93	96	123	149	127	119	73	38	43	31	18	17	1,464
30	7	10	11	17	20	25	31	63	80	87	102	95	99	103	122	114	124	110	58	33	32	33	23	16	1,415

Wyoming Department of Transportation

S Lane1, Monthly Hourly Volume for January 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp:
 Daily Factor Grp:
 Axle Factor Grp:
 Growth Factor Grp:

Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	4	8	7	11	18	11	16	53	72	81	116	157	156	164	176	128	126	103	86	56	50	29	16	19	1,663
02	11	11	11	6	13	39	51	102	131	151	187	189	131	160	122	130	132	87	75	55	42	40	42	27	1,945
03	23	13	17	17	23	36	46	112	150	123	158	159	120	144	140	126	117	112	94	69	75	48	30	31	1,983
04	22	20	20	18	20	38	67	114	155	159	155	162	163	140	140	151	155	119	98	84	82	72	44	25	2,223
05	25	9	7	10	14	38	65	105	173	167	153	187	131	150	134	142	163	149	102	97	69	61	40	32	2,223
06	13	14	13	12	14	20	20	67	120	132	128	123	137	139	122	111	101	126	81	58	49	41	22	12	1,675
07	14	2	6	10	17	38	44	80	89	75	106	94	116	84	98	93	100	73	60	53	33	17	34	12	1,348
08	16	10	12	9	20	28	46	90	97	99	107	110	87	90	100	89	102	74	57	59	53	29	36	21	1,441
09	23	24	10	9	15	33	49	103	99	100	126	109	96	121	113	120	101	75	64	45	48	36	26	22	1,567
10	12	10	10	19	20	38	52	103	91	120	113	95	120	110	113	125	105	116	68	62	62	37	44	25	1,670
11	13	15	13	20	16	33	44	74	86	100	127	125	99	111	120	111	108	139	102	59	44	28	30	23	1,640
12	12	8	5	8	5	25	49	101	103	111	114	120	109	103	119	90	118	96	69	58	42	17	25	17	1,524
13	15	10	12	8	5	14	32	63	120	91	116	127	134	110	100	115	122	105	108	89	59	42	22	19	1,638
14	17	3	10	11	15	23	41	79	101	91	110	118	116	111	102	87	91	109	53	54	35	34	26	18	1,455
15	11	9	8	11	18	35	46	98	102	108	105	97	105	110	80	88	95	78	75	49	57	37	23	33	1,478
16	20	9	6	11	15	36	37	78	91	95	110	92	108	92	85	102	107	71	58	65	63	64	38	39	1,492
17	27	12	12	6	14	33	51	94	93	122	125	126	97	110	120	124	127	87	65	54	61	38	30	16	1,644
18	10	9	12	14	14	32	47	73	108	111	106	104	106	116	125	107	71	129	85	65	44	43	32	20	1,583
19	12	10	9	7	7	19	49	120	128	109	113	139	114	105	124	108	120	99	93	77	13	0	0	0	1,575
20	0	8	6	8	6	14	31	80	126	122	110	119	144	123	131	128	130	121	88	85	57	50	30	17	1,734
21	12	7	8	17	12	32	59	100	124	106	108	125	112	103	133	109	132	73	60	47	27	43	8	3	1,560
22	5	2	0	1	3	1	5	4	27	39	40	51	53	59	70	61	48	64	44	26	25	30	22	18	698
23	16	3	9	10	15	39	39	89	85	76	92	105	89	103	110	101	100	91	61	58	36	37	24	15	1,403
24	16	4	15	9	13	32	22	45	58	59	70	72	104	106	89	95	81	70	69	40	32	31	22	15	1,169
25	8	5	10	18	12	29	49	79	101	99	105	136	130	127	144	157	126	131	89	75	61	45	33	28	1,797
26	15	16	8	10	8	28	45	72	110	114	122	139	128	130	148	153	142	154	117	98	70	45	43	27	1,942
27	10	13	10	5	10	12	30	93	96	101	116	118	142	137	133	170	153	123	114	81	60	50	26	21	1,824
28	16	5	15	12	14	28	45	68	71	72	70	90	105	95	86	72	91	70	56	40	45	26	23	16	1,231
29	15	7	9	12	17	23	44	85	82	92	105	98	92	96	107	85	86	85	63	43	43	40	32	22	1,383
30	12	12	12	12	13	35	47	88	77	84	95	88	95	104	99	87	89	90	50	71	49	27	25	32	1,393

Wyoming Department of Transportation

S lane2, Monthly Hourly Volume for January 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp:
 Daily Factor Grp:
 Axle Factor Grp:
 Growth Factor Grp:

Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	0	1	0	0	0	1	1	1	1	2	4	5	17	9	5	3	7	4	3	2	1	1	0	3	71
02	0	1	0	0	1	2	5	1	7	6	13	21	16	12	18	13	10	7	9	4	4	2	2	2	156
03	2	2	0	1	1	1	4	10	8	12	9	21	13	11	11	8	8	9	4	8	3	1	2	1	150
04	0	1	3	1	1	1	4	9	21	29	23	22	17	15	16	21	17	8	5	4	6	5	4	5	238
05	5	0	2	0	1	1	6	13	25	20	16	24	21	14	12	16	11	12	3	8	2	4	3	1	220
06	1	3	0	1	0	1	5	7	10	8	13	20	12	11	11	10	9	13	1	2	5	3	3	1	150
07	0	1	0	1	0	2	3	8	11	7	6	16	4	6	9	12	5	7	1	3	2	2	3	0	109
08	0	1	1	0	0	3	6	5	9	7	12	8	3	9	11	8	5	15	3	2	2	3	4	0	117
09	1	0	2	1	1	3	3	2	5	10	10	9	13	7	11	14	9	7	3	3	4	4	3	3	128
10	0	0	2	1	0	2	6	5	7	10	9	27	6	9	11	9	8	8	6	6	1	0	2	0	135
11	0	1	1	1	1	2	0	6	0	5	5	1	1	3	8	11	6	24	15	5	4	2	0	1	103
12	4	1	0	1	1	2	5	2	4	4	5	7	14	12	16	6	9	8	3	4	1	0	1	0	110
13	0	0	1	0	0	4	1	6	5	5	6	14	18	12	5	9	8	7	10	5	4	2	2	0	124
14	0	0	1	0	3	2	9	7	6	10	11	13	10	6	10	6	2	12	6	2	2	1	3	4	126
15	2	0	0	0	1	2	1	5	7	7	11	10	10	11	8	4	7	5	8	2	2	2	1	0	106
16	0	3	1	3	1	4	4	5	3	8	11	13	6	6	13	12	5	5	3	5	6	8	5	2	132
17	2	0	1	1	2	5	9	7	6	6	9	11	10	10	5	18	10	6	8	3	9	3	0	0	141
18	1	0	1	1	0	0	12	7	7	7	4	3	4	5	24	24	26	9	11	5	4	2	4	2	163
19	3	2	1	0	1	0	0	14	24	24	35	19	23	5	13	9	11	6	5	6	1	0	0	0	202
20	0	0	0	1	1	0	3	9	11	7	4	8	11	12	8	9	15	5	2	4	1	2	2	2	117
21	1	0	0	1	1	1	4	3	6	6	5	13	9	7	7	6	10	9	9	6	4	1	0	0	109
22	1	0	0	1	0	0	0	1	2	5	1	3	3	2	1	1	3	4	2	2	4	2	1	0	39
23	1	2	0	1	0	2	1	5	9	4	5	15	8	6	12	5	12	14	7	2	3	2	3	0	119
24	0	1	0	1	0	0	1	1	0	2	1	4	2	23	20	17	21	10	4	4	3	1	0	0	116
25	1	1	0	0	2	3	2	14	19	28	15	17	11	10	15	31	30	21	21	13	18	10	7	6	295
26	0	2	1	3	2	2	11	32	44	14	16	20	12	8	11	13	17	11	9	3	3	5	1	2	242
27	2	2	1	1	1	0	5	9	5	12	15	14	12	19	16	18	19	4	9	10	7	6	3	3	193
28	2	0	2	1	0	0	1	7	2	1	7	4	6	4	6	1	2	4	3	2	0	0	1	0	56
29	0	0	0	0	0	2	3	5	3	5	3	6	7	5	8	4	2	5	2	1	5	3	1	0	70
30	0	0	0	0	2	5	6	7	6	7	16	11	12	5	11	15	5	4	4	2	1	2	1	2	124

Wyoming Department of Transportation

N Lane2, Monthly Hourly Volume for January 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp: Rural Principal Arterial
 Daily Factor Grp: Rural Principal Arterial
 Axle Factor Grp: Rural Principal Arterial
 Growth Factor Grp: Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	0	1	0	1	1	1	1	0	2	2	3	3	8	20	27	28	25	25	11	7	1	1	1	0	169
02	0	0	1	1	0	1	2	4	4	7	7	10	10	23	18	28	39	22	11	5	2	4	0	1	200
03	1	1	0	1	0	4	1	2	6	9	14	13	13	12	25	29	33	22	8	2	2	5	2	0	205
04	0	2	1	0	2	3	0	3	8	10	20	12	13	28	23	37	42	32	8	8	4	4	4	3	267
05	0	1	0	0	0	1	3	5	8	8	20	29	25	24	29	47	41	44	13	7	4	5	4	0	318
06	0	1	1	1	1	0	0	2	2	8	11	18	35	27	27	43	21	32	9	6	5	2	3	0	255
07	0	0	0	0	1	2	2	8	7	6	5	4	10	7	10	9	11	3	1	3	0	0	0	0	89
08	2	0	0	0	0	1	0	1	7	17	4	13	10	12	7	16	18	18	7	3	2	2	2	2	144
09	2	0	2	0	0	2	5	3	3	9	8	16	16	13	14	10	20	15	3	2	4	8	1	0	156
10	0	1	1	0	1	1	5	6	10	10	13	11	15	16	16	24	22	10	2	6	3	3	0	2	178
11	0	1	0	2	1	3	0	3	6	22	6	1	0	8	3	16	16	10	8	14	8	0	1	0	129
12	2	1	0	1	1	4	1	0	3	10	12	8	15	22	23	21	57	21	16	10	2	0	3	1	234
13	0	1	0	0	0	1	0	1	2	3	8	18	18	22	24	31	58	19	14	14	7	0	1	1	243
14	5	0	0	0	0	2	2	1	5	7	8	11	10	10	11	14	13	10	4	8	3	4	2	1	131
15	1	2	1	0	0	1	2	5	8	8	9	9	11	15	21	23	25	9	9	5	1	1	2	2	170
16	1	1	0	2	1	3	1	5	7	6	5	9	14	5	20	23	19	5	11	4	4	1	0	2	149
17	0	1	0	0	0	2	1	3	20	16	18	9	16	18	10	29	21	19	6	3	0	1	0	0	193
18	0	0	0	0	1	0	3	4	3	6	7	9	5	4	5	7	9	12	9	6	3	2	0	2	97
19	1	2	0	0	1	2	4	3	8	20	28	35	16	17	33	33	32	37	9	4	0	0	0	0	285
20	0	0	0	0	0	0	2	6	9	6	12	13	31	26	27	42	46	19	7	4	8	3	2	0	263
21	1	1	0	0	1	1	1	2	5	22	15	13	16	12	16	19	12	19	6	5	2	0	0	1	170
22	2	1	0	0	0	0	0	1	3	4	3	5	3	5	0	8	6	3	8	6	0	1	2	0	61
23	0	0	0	0	0	0	1	4	8	7	10	9	21	17	8	15	10	4	0	1	3	0	2	1	121
24	0	0	0	0	1	2	1	3	2	9	10	4	9	6	8	10	6	6	1	0	1	0	0	0	79
25	0	0	0	0	1	3	0	2	11	14	8	3	19	15	16	19	36	23	9	8	3	5	0	1	196
26	1	0	0	0	0	3	6	5	4	8	4	7	26	18	26	18	42	25	7	4	8	3	3	0	218
27	0	0	1	0	0	1	0	0	4	9	17	14	13	28	32	35	42	40	23	9	3	4	0	1	276
28	0	1	0	0	3	0	0	2	5	3	9	1	9	15	14	8	11	12	6	3	4	1	1	1	109
29	0	0	0	0	2	2	0	7	13	7	11	5	8	11	12	18	9	19	7	2	2	0	1	0	136
30	0	0	1	1	1	1	1	5	8	5	5	6	5	8	20	13	18	13	8	1	1	1	1	1	124

Wyoming Department of Transportation

N Lane1, Monthly Hourly Volume for January 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp:
 Daily Factor Grp:
 Axle Factor Grp:
 Growth Factor Grp:

Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	4	6	5	7	2	7	9	13	25	32	68	96	113	143	149	164	170	136	81	63	46	29	24	11	1,403
02	8	5	12	12	16	18	27	43	55	77	95	115	117	151	139	157	148	122	91	48	45	47	25	22	1,595
03	19	11	18	11	17	33	28	36	67	90	119	121	116	127	137	155	174	150	82	59	51	38	28	25	1,712
04	21	15	16	17	25	29	35	56	80	128	119	137	143	153	155	169	192	150	90	81	56	41	33	25	1,966
05	23	16	16	18	25	19	26	58	96	116	142	169	159	159	198	223	216	184	120	73	52	47	35	18	2,208
06	25	15	16	12	7	13	24	33	48	104	92	140	153	176	200	206	155	143	105	55	42	32	30	14	1,840
07	18	6	12	11	14	30	34	62	62	69	82	90	90	89	81	103	70	42	21	18	11	3	6	15	1,039
08	13	7	9	16	15	23	41	67	70	99	124	121	104	114	121	140	131	121	70	37	28	29	21	14	1,535
09	15	8	11	21	20	30	36	61	79	110	114	87	111	111	122	135	104	97	63	46	41	29	27	20	1,498
10	14	15	10	19	19	37	44	71	94	101	104	118	122	118	130	147	133	108	50	65	34	42	19	12	1,626
11	14	16	14	23	21	23	42	36	74	136	103	82	120	125	143	131	107	89	42	38	40	29	16	14	1,478
12	10	12	5	14	9	11	24	39	68	82	101	91	96	109	122	140	155	123	73	59	35	27	26	14	1,445
13	7	11	8	5	6	23	21	25	50	86	105	142	132	143	190	197	191	149	80	76	54	35	23	14	1,773
14	13	8	5	11	18	29	28	50	64	74	92	93	110	98	108	116	114	88	75	55	38	29	22	20	1,358
15	11	11	10	14	24	32	37	74	85	86	86	78	107	106	125	142	123	82	63	46	40	19	24	13	1,438
16	15	10	12	12	21	20	39	70	107	104	86	119	108	117	118	111	125	101	85	46	34	7	15	13	1,495
17	4	2	4	4	6	18	34	40	66	110	100	121	120	132	123	127	106	84	56	30	18	20	18	12	1,355
18	11	12	5	7	16	14	26	60	57	70	81	84	90	84	90	81	78	59	48	42	42	22	20	16	1,115
19	17	12	16	6	3	25	23	42	63	93	138	132	123	122	158	142	145	128	76	38	4	0	0	0	1,506
20	0	4	5	10	9	8	19	21	66	95	125	136	134	157	166	181	187	150	95	60	58	35	18	22	1,761
21	12	11	13	11	23	23	32	56	73	121	109	128	126	128	126	125	129	100	31	17	18	11	3	0	1,426
22	2	1	0	2	0	2	2	2	13	31	37	37	27	41	61	84	92	78	52	37	34	24	19	11	689
23	14	7	16	11	16	18	43	55	73	71	76	91	99	82	116	112	103	85	36	15	5	15	18	8	1,185
24	15	7	6	7	11	17	34	45	62	54	85	82	92	89	88	87	95	80	49	30	24	7	1	15	1,082
25	18	10	5	12	13	23	49	49	96	89	95	112	127	140	152	171	154	111	69	50	47	28	26	16	1,662
26	4	11	10	9	11	16	30	61	79	124	152	147	160	120	130	126	130	104	72	41	34	17	20	7	1,615
27	8	3	5	2	8	19	15	22	56	87	118	141	123	171	185	181	192	149	97	60	66	30	13	13	1,764
28	9	7	8	5	15	17	30	36	47	46	60	72	81	88	85	128	121	85	47	38	45	21	21	16	1,128
29	16	5	10	14	17	27	36	61	65	71	79	89	85	85	111	131	118	100	66	36	41	31	17	17	1,328
30	7	10	10	16	19	24	30	58	72	82	97	89	94	95	102	101	106	97	50	32	31	32	22	15	1,291

Wyoming Department of Transportation

Road, Monthly Hourly Volume for July 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp: Rural Principal Arterial
 Daily Factor Grp: Rural Principal Arterial
 Axle Factor Grp: Rural Principal Arterial
 Growth Factor Grp: Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	72	41	44	43	70	117	185	259	338	401	460	475	429	465	493	477	445	380	303	286	195	136	92	82	6,288
02	55	44	36	38	63	82	161	223	330	358	406	405	423	396	395	437	444	379	333	286	250	141	127	74	5,886
03	62	72	50	49	63	121	222	312	364	444	511	528	544	548	595	652	604	559	538	493	379	250	163	129	8,252
04	97	72	50	63	62	102	169	251	397	441	568	515	457	478	439	385	355	299	266	212	157	101	128	89	6,153
05	60	26	24	31	40	77	166	210	309	448	493	581	526	551	545	531	505	465	386	288	218	147	124	91	6,842
06	53	52	54	25	49	73	121	226	320	486	577	538	614	632	644	632	582	516	399	365	276	219	161	90	7,704
07	69	66	48	29	36	69	138	255	346	501	664	784	854	927	925	877	847	713	571	451	328	186	122	81	9,887
08	48	48	43	41	55	116	172	266	335	410	453	449	467	501	433	424	420	368	297	243	217	139	110	74	6,129
09	64	49	32	44	65	123	154	232	292	338	381	387	408	421	378	416	427	330	248	209	182	182	94	59	5,515
10	43	40	42	41	61	78	185	250	320	405	403	422	419	441	393	405	426	371	339	241	180	156	105	89	5,855
11	61	48	35	42	72	83	197	230	306	376	426	472	439	410	540	634	409	362	299	218	209	141	118	90	6,217
12	49	57	42	41	77	100	176	210	291	415	462	497	479	610	572	548	565	573	439	380	303	199	149	97	7,331
13	84	58	47	40	51	96	149	253	406	443	539	600	575	505	554	574	501	388	340	276	225	200	175	96	7,175
14	74	47	37	36	38	61	131	212	342	462	541	641	668	674	637	685	690	597	452	385	263	191	107	62	8,033
15	58	41	30	58	72	86	172	223	340	360	495	466	452	372	488	444	438	372	287	264	182	140	92	62	5,994
16	50	36	38	40	50	84	171	237	291	388	406	377	397	387	388	397	445	345	249	248	222	143	95	68	5,552
17	43	42	49	46	66	87	193	232	275	391	418	412	444	444	430	386	476	356	316	262	174	165	99	67	5,873
18	63	54	44	42	73	104	169	260	295	369	454	460	495	449	485	470	433	374	317	295	207	165	131	94	6,302
19	57	55	53	38	86	114	170	258	342	471	523	490	472	502	573	573	542	535	460	387	269	193	146	103	7,412
20	74	66	42	44	55	90	149	258	380	488	584	584	568	531	572	536	500	441	408	332	245	191	140	83	7,361
21	61	52	51	32	49	66	127	177	348	487	609	677	672	714	747	724	626	589	442	358	279	197	109	73	8,266
22	48	37	30	43	52	104	194	238	341	380	418	510	451	449	445	429	435	406	323	233	185	149	110	87	6,097
23	60	50	31	37	57	90	153	227	312	365	367	406	391	416	410	449	389	344	258	216	223	141	93	71	5,556
24	54	44	40	49	67	95	176	266	316	370	360	371	372	432	397	401	369	351	323	232	201	161	97	89	5,633
25	54	59	40	45	70	103	176	272	321	385	462	453	487	454	465	462	443	362	289	248	210	172	94	87	6,213
26	71	48	31	52	73	110	162	290	373	446	466	421	501	515	564	576	633	536	461	369	301	188	155	102	7,444
27	79	65	54	54	54	88	141	264	370	515	564	548	527	470	563	590	482	425	353	275	217	162	126	98	7,064
28	60	37	35	22	3	0	0	0	0	0	0	0	0	0	0	0	0	0	30	398	310	171	129	71	1,266
29	40	34	34	41	75	104	163	234	339	449	490	445	445	433	466	485	384	374	291	258	189	150	104	76	5,658
30	63	36	29	43	67	83	155	242	263	356	424	395	420	382	402	428	387	351	309	214	172	147	98	69	5,535
31	65	39	37	52	57	107	165	247	296	369	445	414	428	451	444	487	367	398	283	292	203	142	102	76	5,966

Wyoming Department of Transportation

S, Monthly Hourly Volume for July 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp: Rural Principal Arterial
 Daily Factor Grp: Rural Principal Arterial
 Axle Factor Grp: Rural Principal Arterial
 Growth Factor Grp: Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	43	25	24	24	38	63	116	164	212	255	280	307	255	240	238	221	198	167	123	145	101	87	52	46	3,424
02	29	25	16	18	28	43	90	139	209	204	253	248	232	169	191	198	203	182	171	162	141	81	64	39	3,135
03	30	36	25	28	33	57	148	184	242	280	330	322	306	329	333	358	363	320	363	325	254	166	95	56	4,983
04	66	37	29	41	30	58	109	172	280	322	396	340	265	245	229	171	155	149	119	95	68	48	46	36	3,506
05	32	11	11	18	16	46	104	140	189	277	295	325	291	275	263	253	209	208	214	157	120	69	64	50	3,637
06	26	27	32	10	16	33	79	139	190	294	285	269	282	242	255	215	207	190	136	133	120	98	82	51	3,411
07	40	42	21	13	16	40	83	154	208	293	347	374	357	373	294	301	194	189	177	162	138	87	52	36	3,991
08	26	24	28	24	23	57	112	144	199	228	293	250	250	227	220	201	173	174	136	122	116	74	59	47	3,207
09	38	24	18	25	36	68	82	129	174	203	232	234	215	215	174	178	200	153	115	109	96	82	53	26	2,879
10	30	23	20	15	33	41	107	149	181	273	213	274	229	216	177	163	199	171	151	124	97	90	59	45	3,080
11	34	29	20	21	41	39	114	149	176	236	261	264	248	204	241	204	192	166	147	122	120	81	61	35	3,205
12	27	25	25	20	32	58	105	115	170	257	260	296	243	318	318	263	262	293	230	235	177	108	78	50	3,965
13	52	33	31	18	32	50	83	160	260	284	299	355	311	244	248	276	248	187	172	144	114	105	79	41	3,826
14	33	31	19	17	14	33	86	139	204	249	281	311	308	271	254	246	248	211	173	178	92	113	49	29	3,589
15	31	23	19	31	41	43	101	133	205	234	316	297	246	151	242	183	198	138	121	141	93	72	54	36	3,149
16	26	17	18	22	27	41	106	137	180	234	244	221	206	197	186	205	207	137	118	123	110	81	51	46	2,940
17	31	24	21	20	37	46	105	116	168	225	247	243	252	216	219	173	217	177	172	152	102	94	52	40	3,149
18	35	30	26	21	35	58	97	149	168	231	281	277	260	240	226	247	202	175	153	150	116	82	66	47	3,372
19	28	21	28	19	41	58	101	153	203	260	315	268	222	222	281	295	266	271	242	229	153	103	95	53	3,927
20	37	42	28	21	33	55	88	154	225	270	343	314	266	249	254	244	199	195	179	153	133	108	88	47	3,725
21	26	16	27	13	20	35	72	105	199	246	323	330	278	264	304	274	240	272	188	161	133	89	47	29	3,691
22	30	20	14	21	22	56	109	147	203	208	282	303	237	202	183	155	189	172	170	114	98	94	51	42	3,102
23	27	30	14	19	26	46	92	116	182	207	219	217	200	220	182	180	156	142	123	97	93	71	47	34	2,740
24	34	22	13	26	31	50	98	153	167	196	195	207	187	226	159	155	163	152	143	131	122	95	54	50	2,829
25	24	34	17	25	28	56	107	170	184	232	261	260	256	215	232	213	196	160	130	131	117	97	56	32	3,233
26	44	17	17	23	38	63	101	187	213	269	263	236	269	278	278	299	296	278	253	204	196	114	78	53	4,067
27	34	30	21	30	28	50	86	161	238	308	339	308	270	214	212	255	210	188	152	128	110	83	69	47	3,571
28	31	18	16	13	3	0	0	0	0	0	0	0	0	0	0	0	0	0	15	187	181	90	64	31	649
29	22	16	21	25	40	61	95	141	204		285	273	242	213	233	189	163	133	109	137	85	70	61	46	2,844
30	35	12	12	19	35	34	91	136	145	204	247	234	217	163	173	196	184	153	131	95	91	80	57	41	2,785
31	34	24	22	25	28	58	95	137	175	215	284	247	223	209	206	216	153	153	102	165	109	87	52	42	3,061

Wyoming Department of Transportation

N, Monthly Hourly Volume for July 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp:
 Daily Factor Grp:
 Axle Factor Grp:
 Growth Factor Grp:

Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	29	16	20	19	32	54	69	95	126	146	180	168	174	225	255	256	247	213	180	141	94	49	40	36	2,864
02	26	19	20	20	35	39	71	84	121	154	153	157	191	227	204	239	241	197	162	124	109	60	63	35	2,751
03	32	36	25	21	30	64	74	128	122	164	181	206	238	219	262	294	241	239	175	168	125	84	68	73	3,269
04	31	35	21	22	32	44	60	79	117	119	172	175	192	233	210	214	200	150	147	117	89	53	82	53	2,647
05	28	15	13	13	24	31	62	70	120	171	198	256	235	276	282	278	296	257	172	131	98	78	60	41	3,205
06	27	25	22	15	33	40	42	87	130	192	292	269	332	390	389	417	375	326	263	232	156	121	79	39	4,293
07	29	24	27	16	20	29	55	101	138	208	317	410	497	554	631	576	653	524	394	289	190	99	70	45	5,896
08	22	24	15	17	32	59	60	122	136	182	160	199	217	274	213	223	247	194	161	121	101	65	51	27	2,922
09	26	25	14	19	29	55	72	103	118	135	149	153	193	206	204	238	227	177	133	100	86	100	41	33	2,636
10	13	17	22	26	28	37	78	101	139	132	190	148	190	225	216	242	227	200	188	117	83	66	46	44	2,775
11	27	19	15	21	31	44	83	81	130	140	165	208	191	206	299	430	217	196	152	96	89	60	57	55	3,012
12	22	32	17	21	45	42	71	95	121	158	202	201	236	292	254	285	303	280	209	145	126	91	71	47	3,366
13	32	25	16	22	19	46	66	93	146	159	240	245	264	261	306	298	253	201	168	132	111	95	96	55	3,349
14	41	16	18	19	24	28	45	73	138	213	260	330	360	403	383	439	442	386	279	207	171	78	58	33	4,444
15	27	18	11	27	31	43	71	90	135	126	179	169	206	221	246	261	240	234	166	123	89	68	38	26	2,845
16	24	19	20	18	23	43	65	100	111	154	162	156	191	190	202	192	238	208	131	125	112	62	44	22	2,612
17	12	18	28	26	29	41	88	116	107	166	171	169	192	228	211	213	259	179	144	110	72	71	47	27	2,724
18	28	24	18	21	38	46	72	111	127	138	173	183	235	209	259	223	231	199	164	145	91	83	65	47	2,930
19	29	34	25	19	45	56	69	105	139	211	208	222	250	280	292	278	276	264	218	158	116	90	51	50	3,485
20	37	24	14	23	22	35	61	104	155	218	241	270	302	282	318	292	301	246	229	179	112	83	52	36	3,636
21	35	36	24	19	29	31	55	72	149	241	286	347	394	450	443	450	386	317	254	197	146	108	62	44	4,575
22	18	17	16	22	30	48	85	91	138	172	156	207	214	247	262	274	246	234	153	119	87	55	59	45	2,995
23	33	20	17	18	31	44	61	111	130	158	148	189	191	196	228	269	233	202	135	119	130	70	46	37	2,816
24	20	22	27	23	36	45	78	113	149	174	165	164	185	206	238	246	206	199	180	101	79	66	43	39	2,804
25	30	25	23	20	42	47	69	102	137	153	201	193	231	239	233	249	247	202	159	117	93	75	38	55	2,980
26	27	31	14	29	35	47	61	103	160	177	203	185	232	237	286	277	337	258	208	165	105	74	77	49	3,377
27	45	35	33	24	26	38	55	103	132	207	225	240	257	256	351	335	272	237	201	147	107	79	57	51	3,513
28	29	19	19	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	211	129	81	65	40	617
29	18	18	13	16	35	43	68	93	135	184	217	203	203	220	233	296	221	241	182	121	104	80	43	30	2,814
30	28	24	17	24	32	49	64	106	118	152	177	161	203	219	229	232	203	198	178	119	81	67	41	28	2,750
31	31	15	15	27	29	49	70	110	121	154	161	167	205	242	238	271	214	245	181	127	94	55	50	34	2,905

Wyoming Department of Transportation

S Lane1, Monthly Hourly Volume for July 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp:
 Daily Factor Grp:
 Axle Factor Grp:
 Growth Factor Grp:

Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	36	23	21	23	36	59	109	147	183	223	245	261	230	208	206	194	157	143	114	130	91	82	47	44	3,012
02	27	21	16	15	25	41	83	125	183	176	207	217	201	155	170	170	171	165	155	142	120	74	57	36	2,752
03	29	31	23	27	31	53	138	163	211	238	274	261	269	166	282	294	298	275	292	266	209	149	84	52	4,115
04	56	36	26	39	25	52	102	153	240	257	337	296	217	214	197	154	126	129	107	93	62	47	39	33	3,037
05	28	10	9	16	16	44	97	132	180	236	254	279	245	237	226	222	180	180	179	136	109	60	57	48	3,180
06	26	26	28	9	13	28	75	115	173	242	253	230	248	201	213	198	186	169	127	119	111	92	77	47	3,006
07	38	40	21	11	15	37	79	138	183	251	291	312	292	311	246	258	178	169	161	151	127	82	46	32	3,469
08	21	19	25	22	22	53	101	133	182	195	243	215	219	201	194	183	150	159	119	116	105	65	57	44	2,843
09	34	24	17	23	33	67	77	124	146	178	194	204	189	187	155	157	183	133	111	98	82	75	49	25	2,565
10	29	21	18	13	33	35	98	135	166	239	196	242	204	184	161	145	182	150	135	116	91	85	55	41	2,774
11	32	28	19	19	39	37	108	135	159	203	235	225	216	175	212	183	167	146	129	112	114	72	56	34	2,855
12	26	22	24	19	26	53	98	107	139	216	227	252	204	270	259	228	231	246	204	206	147	93	70	46	3,413
13	47	28	31	16	31	45	76	143	233	250	261	284	259	215	208	239	216	164	158	128	103	96	72	39	3,342
14	33	30	19	14	14	31	81	125	182	223	242	270	261	240	217	220	208	183	153	164	85	100	44	28	3,167
15	30	23	18	29	37	43	92	121	183	201	265	233	214	138	207	163	180	119	39	125	86	70	50	34	2,700
16	22	17	15	21	26	36	101	126	159	193	213	197	185	181	168	178	177	132	110	116	100	75	49	42	2,639
17	29	23	21	20	35	41	100	108	152	186	207	214	218	196	200	156	189	157	155	139	90	84	48	37	2,805
18	34	30	22	21	33	53	90	131	151	199	237	249	221	182	200	210	184	151	139	142	104	76	60	42	2,961
19	25	20	27	19	40	53	90	139	186	224	263	225	201	193	240	248	222	231	210	194	143	94	82	49	3,418
20	34	39	28	20	29	50	85	137	198	238	288	266	220	223	221	216	185	172	166	129	117	98	77	42	3,278
21	25	15	26	13	19	31	68	97	176	218	271	280	232	226	257	251	195	236	164	148	114	78	44	27	3,211
22	28	18	14	19	19	54	105	135	187	183	230	270	124	187	158	144	175	152	157	98	91	85	46	41	2,720
23	26	25	13	19	25	44	86	107	164	185	188	193	185	195	161	165	135	125	109	91	84	67	47	32	2,471
24	29	21	12	22	27	44	92	138	147	181	168	181	171	198	146	143	147	136	124	105	111	87	48	46	2,524
25	22	30	17	20	26	52	97	153	166	206	230	227	216	179	200	189	177	135	109	118	103	89	48	28	2,837
26	42	15	14	21	37	56	91	167	191	227	205	201	233	242	229	261	249	234	208	173	168	106	70	49	3,489
27	27	29	18	28	26	46	75	138	208	279	279	270	250	193	180	224	192	172	135	111	99	76	65	43	3,163
28	27	16	16	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	15	131	149	80	55	30	533
29	21	16	20	24	39	56	89	129	185		229	231	205	183	185	167	142	128	97	128	81	67	54	42	2,518
30	33	12	11	19	33	33	84	123	133	176	205	208	191	148	139	169	163	142	120	90	83	74	53	37	2,479
31	33	24	21	22	28	50	91	127	158	178	239	218	200	185	188	183	134	141	93	140	100	75	48	39	2,715

Wyoming Department of Transportation

S lane2, Monthly Hourly Volume for July 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp:
 Daily Factor Grp:
 Axle Factor Grp:
 Growth Factor Grp:

Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	7	2	3	1	2	4	7	17	29	32	35	46	25	32	32	27	41	24	9	15	10	5	5	2	412
02	2	4	0	3	3	2	7	14	26	28	46	31	31	14	21	28	32	17	16	20	21	7	7	3	383
03	1	5	2	1	2	4	10	21	31	42	56	61	37	163	51	64	65	45	71	59	45	17	11	4	868
04	10	1	3	2	5	6	7	19	40	65	59	44	48	31	32	17	29	20	12	2	6	1	7	3	469
05	4	1	2	2	0	2	7	8	9	41	41	46	46	38	37	31	29	28	35	21	11	9	7	2	457
06	0	1	4	1	3	5	4	24	17	52	32	39	34	41	42	17	21	21	9	14	9	6	5	4	405
07	2	2	0	2	1	3	4	16	25	42	56	62	65	62	48	43	16	20	16	11	11	5	6	4	522
08	5	5	3	2	1	4	11	11	17	33	50	35	31	26	26	18	23	15	17	6	11	9	2	3	364
09	4	0	1	2	3	1	5	5	28	25	38	30	26	28	19	21	17	20	4	11	14	7	4	1	314
10	1	2	2	2	0	6	9	14	15	34	17	32	25	32	16	18	17	21	16	8	6	5	4	4	306
11	2	1	1	2	2	2	6	14	17	33	26	39	32	29	29	21	25	20	18	10	6	9	5	1	350
12	1	3	1	1	6	5	7	8	31	41	33	44	39	48	59	35	31	47	26	29	30	15	8	4	552
13	5	5	0	2	1	5	7	17	27	34	38	71	52	29	40	37	32	23	14	16	11	9	7	2	484
14	0	1	0	3	0	2	5	14	22	26	39	41	47	31	37	26	40	28	20	14	7	13	5	1	422
15	1	0	1	2	4	0	9	12	22	33	51	64	32	13	35	20	18	19	82	16	7	2	4	2	449
16	4	0	3	1	1	5	5	11	21	41	31	24	21	16	18	27	30	5	8	7	10	6	2	4	301
17	2	1	0	0	2	5	5	8	16	39	40	29	34	20	19	17	28	20	17	13	12	10	4	3	344
18	1	0	4	0	2	5	7	18	17	32	44	28	39	58	26	37	18	24	14	8	12	6	6	5	411
19	3	1	1	0	1	5	11	14	17	36	52	43	21	29	41	47	44	40	32	35	10	9	13	4	509
20	3	3	0	1	4	5	3	17	27	32	55	48	46	26	33	28	14	23	13	24	16	10	11	5	447
21	1	1	1	0	1	4	4	8	23	28	52	50	46	38	47	23	45	36	24	13	19	11	3	2	480
22	2	2	0	2	3	2	4	12	16	25	32	33	113	15	25	11	14	20	13	16	7	9	5	1	382
23	1	5	1	0	1	2	6	9	18	22	31	24	15	25	21	15	21	17	14	6	9	4	0	2	269
24	5	1	1	4	4	6	6	15	20	15	27	26	16	28	13	12	16	16	19	26	11	8	6	4	305
25	2	4	0	5	2	4	10	17	18	26	31	33	40	36	32	24	19	25	21	13	14	8	8	4	396
26	2	2	3	2	1	7	10	20	22	42	58	35	36	36	49	38	47	44	45	31	28	8	8	4	578
27	7	1	3	2	2	4	11	23	30	29	60	38	20	21	32	31	18	16	17	17	11	7	4	4	408
28	4	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	32	10	9	1	116
29	1	0	1	1	1	5	6	12	19		36	42	37	30	48	22	21	5	12	9	4	3	7	4	326
30	2	0	1	0	2	1	7	13	12	28	42	26	26	15	34	27	21	11	11	5	8	6	4	4	306
31	1	0	1	3	0	8	4	10	17	37	45	29	23	24	18	33	19	12	9	25	9	12	4	3	346

Wyoming Department of Transportation

N Lane2, Monthly Hourly Volume for July 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp:
 Daily Factor Grp:
 Axle Factor Grp:
 Growth Factor Grp:

Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	0	0	1	1	0	2	7	14	18	17	31	43	33	61	64	75	52	41	33	21	5	7	1	3	530
02	1	4	2	0	2	2	3	9	21	34	20	36	51	46	32	49	50	27	24	14	20	5	4	4	460
03	2	1	1	0	2	6	3	17	18	23	25	33	48	50	56	62	46	46	31	23	16	11	9	5	534
04	0	1	1	0	1	1	4	4	9	16	23	29	32	50	32	34	43	19	8	12	8	5	8	4	344
05	0	0	0	0	0	3	7	6	13	27	29	48	47	55	70	48	66	41	33	14	11	7	6	6	537
06	0	3	1	0	0	0	5	9	13	33	71	52	85	117	105	104	106	73	60	38	23	17	7	2	924
07	2	4	2	0	0	0	2	8	13	36	79	112	153	178	237	178	230	167	98	77	24	8	6	1	1,615
08	0	3	3	1	2	3	5	13	14	26	25	36	35	69	33	36	34	36	18	16	13	5	6	2	434
09	2	2	0	0	3	1	3	11	10	23	20	20	26	37	32	39	47	27	21	14	9	17	1	2	367
10	0	1	1	2	0	0	3	13	10	18	33	25	35	35	31	48	35	45	31	11	13	10	4	4	408
11	2	1	0	2	0	2	4	15	14	10	34	34	35	42	74	118	36	34	26	10	8	5	2	8	516
12	2	6	0	2	2	3	5	7	11	22	36	42	62	86	57	66	69	75	38	24	15	10	6	1	647
13	0	0	1	1	1	5	6	7	20	21	44	46	46	62	75	77	46	29	20	14	11	15	9	3	559
14	2	0	2	1	1	1	1	5	20	34	46	80	84	106	101	116	139	116	61	45	30	14	4	1	1,010
15	1	0	1	0	2	3	2	9	14	13	24	36	35	33	57	61	48	55	27	12	12	8	1	1	455
16	1	0	4	0	1	2	4	9	16	21	19	19	27	33	29	31	35	31	38	14	16	7	4	1	362
17	0	0	1	1	1	3	7	9	11	18	31	20	35	53	45	31	60	27	20	13	5	5	3	0	399
18	2	0	1	1	2	2	5	7	17	20	33	47	61	39	54	64	48	39	34	16	6	15	4	5	522
19	1	0	1	0	2	2	3	11	24	35	45	58	52	65	67	44	53	59	51	33	16	15	4	4	645
20	1	1	0	1	0	2	3	11	18	42	55	48	67	65	72	66	56	60	39	32	17	18	10	1	685
21	0	2	0	0	3	1	2	4	16	36	61	77	89	132	129	121	100	93	49	39	24	16	3	6	1,003
22	1	1	0	1	3	2	7	7	15	25	17	29	34	64	48	70	42	38	21	12	10	6	7	3	463
23	4	0	1	0	1	2	4	11	13	20	22	18	45	22	34	60	33	33	12	21	16	6	3	2	383
24	1	4	3	1	2	2	4	16	27	22	22	34	27	37	42	40	38	36	36	23	8	10	6	5	446
25	2	0	0	0	4	2	4	4	22	20	37	32	47	54	50	42	51	33	26	20	12	8	2	3	475
26	2	1	0	3	3	2	3	9	34	38	37	39	42	49	64	61	87	53	41	34	7	10	9	5	633
27	2	4	7	0	0	5	3	8	17	24	36	35	53	51	136	99	56	51	32	24	9	9	4	6	671
28	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57	23	8	5	5	101
29	1	0	1	1	2	0	5	8	9		31	43	34	44	44	73	39	58	32	20	9	11	6	0	471
30	1	1	1	1	1	2	3	12	5	19	14	24	28	26	29	44	32	41	28	9	9	3	3	0	336
31	2	0	0	0	2	0	4	11	8	12	19	24	39	49	50	66	39	42	27	19	13	4	3	1	434

Wyoming Department of Transportation

N Lane1, Monthly Hourly Volume for July 2019

Site names: 000060
 County: Albany
 Funct Class: R Principal Arterial - Other
 Location: US 287 SOUTH OF TIE SIDING

Seasonal Factor Grp:
 Daily Factor Grp:
 Axle Factor Grp:
 Growth Factor Grp:

Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial
 Rural Principal Arterial

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
01	29	16	19	18	32	52	62	81	108	129	149	125	141	164	191	181	195	172	147	120	89	42	39	33	2,334
02	25	15	18	20	33	37	68	75	100	120	133	121	140	181	172	190	191	170	138	110	89	55	59	31	2,291
03	30	35	24	21	28	58	71	111	104	141	156	173	190	169	206	232	195	193	144	145	109	73	59	68	2,735
04	31	34	20	22	31	43	56	75	108	103	149	146	160	183	178	180	157	131	139	105	81	48	74	49	2,303
05	28	15	13	13	24	28	55	64	107	144	169	208	188	221	212	230	230	216	139	117	87	71	54	35	2,668
06	27	22	21	15	33	40	37	78	117	159	221	217	247	273	284	313	269	253	203	194	133	104	72	37	3,369
07	27	20	25	16	20	29	53	93	125	172	238	298	344	376	394	398	423	357	296	212	166	91	64	44	4,281
08	22	21	12	16	30	56	55	109	122	156	135	163	182	205	180	187	213	158	143	105	88	60	45	25	2,488
09	24	23	14	19	26	54	69	92	108	112	129	133	167	169	172	199	180	150	112	86	77	83	40	31	2,269
10	13	16	21	24	28	37	75	88	129	114	157	123	155	190	185	194	192	155	157	106	70	56	42	40	2,367
11	25	18	15	19	31	42	79	66	116	130	131	174	156	164	225	312	181	162	126	86	81	55	55	47	2,496
12	20	26	17	19	43	39	66	88	110	136	166	159	174	206	197	219	234	205	171	121	111	81	65	46	2,719
13	32	25	15	21	18	41	60	86	126	138	196	199	218	199	231	221	207	172	148	118	100	80	87	52	2,790
14	39	16	16	18	23	27	44	68	118	179	214	250	276	297	282	323	303	270	218	162	141	64	54	32	3,434
15	26	18	10	27	29	40	69	81	121	113	155	133	171	188	189	200	192	179	139	111	77	60	37	25	2,390
16	23	19	16	18	22	41	61	91	95	133	143	137	164	157	173	161	203	177	93	111	96	55	40	21	2,250
17	12	18	27	25	28	38	81	107	96	148	140	149	157	175	166	182	199	152	124	97	67	66	44	27	2,325
18	26	24	17	20	36	44	67	104	110	118	140	136	174	170	205	159	183	160	130	129	85	68	61	42	2,408
19	28	34	24	19	43	54	66	94	115	176	163	164	198	215	225	234	223	205	167	125	100	75	47	46	2,840
20	36	23	14	22	22	33	58	93	137	176	186	222	235	217	246	226	245	186	190	147	95	65	42	35	2,951
21	35	34	24	19	26	30	53	68	133	205	225	270	305	318	314	329	286	224	205	158	122	92	59	38	3,572
22	17	16	16	21	27	46	78	84	123	147	139	178	180	183	214	204	204	196	132	107	77	49	52	42	2,532
23	29	20	16	18	30	42	57	100	117	138	126	171	146	174	194	209	200	169	123	98	114	64	43	35	2,433
24	19	18	24	22	34	43	74	97	122	152	143	130	158	169	196	206	168	163	144	78	71	56	37	34	2,358
25	28	25	23	20	38	45	65	98	115	133	164	161	184	185	183	207	196	169	133	97	81	67	36	52	2,505
26	25	30	14	26	32	45	58	94	126	139	166	146	190	188	222	216	250	205	167	131	98	64	68	44	2,744
27	43	31	26	24	26	33	52	95	115	183	189	205	204	205	215	236	216	186	169	123	98	70	53	45	2,842
28	29	17	18	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	154	106	73	60	35	516
29	17	18	12	15	33	43	63	85	126		153	174	169	176	189	223	182	183	150	101	95	69	37	30	2,343
30	27	23	16	23	31	47	61	94	113	133	163	137	175	193	200	188	171	157	150	110	72	64	38	28	2,414
31	29	15	15	27	27	49	66	99	113	142	142	143	166	193	188	205	175	203	154	108	81	51	47	33	2,471

APPENDIX B: Level of Service Calculations

HCS7 Basic Freeway Report

Project Information

Analyst	ENM	Date	
Agency		Analysis Year	2022
Jurisdiction	WYDOT	Time Period Analyzed	AM Peak Hour
Project Description	Rail Tie Wind Project - I-25 Existing Conditions	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.0	Total Ramp Density (TRD), ramps/mi	0.16
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	74.3
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	0.950
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.939
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2268	Heavy Vehicle Adjustment Factor (fhv)	0.870
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	708
Total Trucks, %	15.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2254
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.6
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	10.0
Total Ramp Density Adjustment	0.7	Level of Service (LOS)	A
Adjusted Free-Flow Speed (FFSadj), mi/h	70.6		

HCS7 Basic Freeway Report

Project Information

Analyst	ENM	Date	
Agency		Analysis Year	2022
Jurisdiction	WYDOT	Time Period Analyzed	AM Peak Hour
Project Description	Rail Tie Wind Project - I-25 Construction Traffic	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.0	Total Ramp Density (TRD), ramps/mi	0.16
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	74.3
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	0.950
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.939
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2278	Heavy Vehicle Adjustment Factor (fhv)	0.870
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	712
Total Trucks, %	15.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2254
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.32
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.6
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	10.1
Total Ramp Density Adjustment	0.7	Level of Service (LOS)	A
Adjusted Free-Flow Speed (FFSadj), mi/h	70.6		

HCS7 Basic Freeway Report

Project Information

Analyst	ENM	Date	
Agency		Analysis Year	2057
Jurisdiction	WYDOT	Time Period Analyzed	AM Peak Hour
Project Description	Rail Tie Wind Project - I-25 Decommissioning Traffic	Unit	United States Customary

Geometric Data

Number of Lanes, In	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.0	Total Ramp Density (TRD), ramps/mi	0.16
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	74.3
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	0.950
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.939
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3170	Heavy Vehicle Adjustment Factor (fhv)	0.870
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	990
Total Trucks, %	15.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2254
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44
Passenger Car Equivalent (Et)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.6
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	14.0
Total Ramp Density Adjustment	0.7	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFSadj), mi/h	70.6		

Design Analysis Table

Number of Lanes, In	2	3	4	5
Density, pc/mi/ln	34.0	19.0	14.0	11.2
LOS	D	C	B	B

HCS7 Basic Freeway Report

Project Information

Analyst	ENM	Date	
Agency		Analysis Year	2020
Jurisdiction	WYDOT	Time Period Analyzed	AM Peak Hour
Project Description	Rail Tie Wind Project - I-80 Existing Baseline	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	80.0	Total Ramp Density (TRD), ramps/mi	0.16
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	79.3
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	0.950
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.939
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1112	Heavy Vehicle Adjustment Factor (fhv)	0.680
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	444
Total Trucks, %	47.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2254
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	75.3
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	5.9
Total Ramp Density Adjustment	0.7	Level of Service (LOS)	A
Adjusted Free-Flow Speed (FFSadj), mi/h	75.3		

HCS7 Basic Freeway Report

Project Information

Analyst	ENM	Date	
Agency		Analysis Year	2020
Jurisdiction	WYDOT	Time Period Analyzed	AM Peak Hour
Project Description	Rail Tie Wind Project - I-80 Construction Traffic	Unit	United States Customary

Geometric Data

Number of Lanes, In	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	80.0	Total Ramp Density (TRD), ramps/mi	0.16
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	79.3
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	0.950
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.939
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1162	Heavy Vehicle Adjustment Factor (fhv)	0.680
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	464
Total Trucks, %	47.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2254
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.21
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	75.3
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	6.2
Total Ramp Density Adjustment	0.7	Level of Service (LOS)	A
Adjusted Free-Flow Speed (FFSadj), mi/h	75.3		

HCS7 Basic Freeway Report

Project Information

Analyst	ENM	Date	
Agency		Analysis Year	2057
Jurisdiction	WYDOT	Time Period Analyzed	AM Peak Hour
Project Description	Rail Tie Wind Project - I-80 Decommissioning Traffic	Unit	United States Customary

Geometric Data

Number of Lanes, In	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	80.0	Total Ramp Density (TRD), ramps/mi	0.16
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	79.3
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	0.950
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.939
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1930	Heavy Vehicle Adjustment Factor (fhv)	0.680
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	771
Total Trucks, %	47.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2254
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	75.3
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	10.2
Total Ramp Density Adjustment	0.7	Level of Service (LOS)	A
Adjusted Free-Flow Speed (FFSadj), mi/h	75.3		

HCS7 Multilane Highway Report

Project Information

Analyst	ENM	Date	
Agency		Analysis Year	2020
Jurisdiction	WYDOT	Time Period Analyzed	Morning Peak Hour
Project Description	Rail Tie Wind Project U.S. 287 Existing Baseline	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	North		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Access Point Density, pts/mi	1.2
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	69.7		

Direction 1 Adjustment Factors

Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	0.950
Driver Population SAF	0.950	Final Capacity Adjustment Factor (CAF)	0.939
Driver Population CAF	0.939		

Direction 1 Demand and Capacity

Volume(V) veh/h	184	Heavy Vehicle Adjustment Factor (fHV)	0.746
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	134
Total Trucks, %	17.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2160
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	66.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (vOL),veh/h	100	Effective Speed Factor (St)	5.19
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	8.59
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS7 Multilane Highway Report

Project Information

Analyst	ENM	Date	
Agency		Analysis Year	2020
Jurisdiction	WYDOT	Time Period Analyzed	Morning Peak Hour
Project Description	Rail Tie Wind Project U.S. 287 Construction	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	North		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Access Point Density, pts/mi	1.2
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	69.7		

Direction 1 Adjustment Factors

Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	0.913
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	0.898
Driver Population CAF	0.898		

Direction 1 Demand and Capacity

Volume(V) veh/h	199	Heavy Vehicle Adjustment Factor (fHV)	0.769
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	140
Total Trucks, %	15.00	Capacity (c), pc/h/ln	2272
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2040
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	63.6
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (vOL),veh/h	108	Effective Speed Factor (St)	5.19
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	7.48
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS7 Multilane Highway Report

Project Information

Analyst	ENM	Date	
Agency		Analysis Year	2020
Jurisdiction	WYDOT	Time Period Analyzed	Morning Peak Hour
Project Description	Rail Tie Wind Project U.S. 287 Construction	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	South		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Access Point Density, pts/mi	1.2
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	69.7		

Direction 2 Adjustment Factors

Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	0.913
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	0.898
Driver Population CAF	0.898		

Direction 2 Demand and Capacity

Volume(V) veh/h	354	Heavy Vehicle Adjustment Factor (fHV)	0.769
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	250
Total Trucks, %	15.00	Capacity (c), pc/h/ln	2272
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2040
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	63.6
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (vOL),veh/h	192	Effective Speed Factor (St)	5.19
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	7.77
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS7 Multilane Highway Report

Project Information

Analyst	ENM	Date	
Agency		Analysis Year	2020
Jurisdiction	WYDOT	Time Period Analyzed	Morning Peak Hour
Project Description	Rail Tie Wind Project U.S. 287 Decommissioning	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	North		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Access Point Density, pts/mi	1.2
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	69.7		

Direction 1 Adjustment Factors

Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	0.913
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	0.898
Driver Population CAF	0.898		

Direction 1 Demand and Capacity

Volume(V) veh/h	199	Heavy Vehicle Adjustment Factor (fHV)	0.769
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	140
Total Trucks, %	15.00	Capacity (c), pc/h/ln	2272
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2040
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	63.6
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (vOL),veh/h	108	Effective Speed Factor (St)	5.19
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	7.48
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS7 Multilane Highway Report

Project Information

Analyst	ENM	Date	
Agency		Analysis Year	2020
Jurisdiction	WYDOT	Time Period Analyzed	Morning Peak Hour
Project Description	Rail Tie Wind Project U.S. 287 Decommissioning	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	South		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Access Point Density, pts/mi	1.2
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	69.7		

Direction 2 Adjustment Factors

Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	0.913
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	0.898
Driver Population CAF	0.898		

Direction 2 Demand and Capacity

Volume(V) veh/h	539	Heavy Vehicle Adjustment Factor (fHV)	0.769
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	381
Total Trucks, %	15.00	Capacity (c), pc/h/ln	2272
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2040
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	63.6
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		

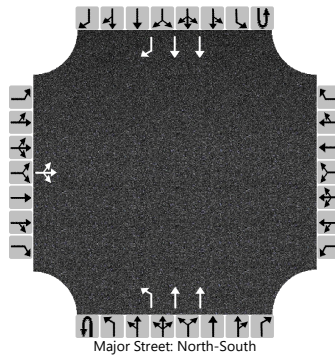
Direction 2 Bicycle LOS

Flow Rate in Outside Lane (vOL),veh/h	293	Effective Speed Factor (St)	5.19
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	7.98
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Sportsman Lake		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Project Access Drive		
Analysis Year	2020			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 1 Existing Baseline						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	2	0	0	0	2	1
Configuration			LTR							L	T				T	R
Volume (veh/h)		1	0	0					0	1	186				186	0
Percent Heavy Vehicles (%)		3	0	3					0	0						
Proportion Time Blocked																
Percent Grade (%)	2															
Right Turn Channelized													No			
Median Type Storage	Left + Thru								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9						4.1						
Critical Headway (sec)		7.96	6.90	7.16						4.10						
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2						
Follow-Up Headway (sec)		3.53	4.00	3.33						2.20						

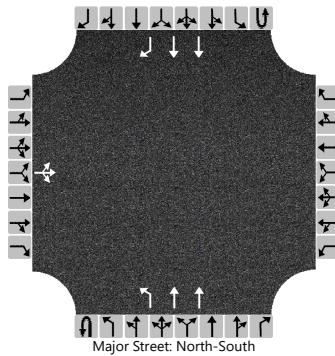
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			1							1						
Capacity, c (veh/h)			641							1382						
v/c Ratio			0.00							0.00						
95% Queue Length, Q ₉₅ (veh)			0.0							0.0						
Control Delay (s/veh)			10.6							7.6						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)	10.6								0.0							
Approach LOS	B															

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Sportsman Lake		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Sportsman Lake		
Analysis Year	2023			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 1 Construction						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	2	0	0	0	2	1
Configuration			LTR							L	T				T	R
Volume (veh/h)		3	0	16					0	5	184				184	147
Percent Heavy Vehicles (%)		15	3	15					3	15						
Proportion Time Blocked																
Percent Grade (%)		2														
Right Turn Channelized															No	
Median Type Storage					Left + Thru								1			

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9						4.1						
Critical Headway (sec)		8.20	6.96	7.40						4.40						
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2						
Follow-Up Headway (sec)		3.65	4.03	3.45						2.35						

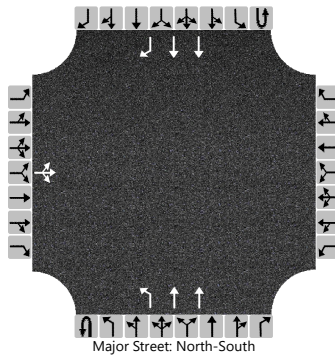
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			21							5						
Capacity, c (veh/h)			830							1107						
v/c Ratio			0.02							0.00						
95% Queue Length, Q ₉₅ (veh)			0.1							0.0						
Control Delay (s/veh)			9.4							8.3						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)		9.4								0.2						
Approach LOS		A														

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Sportsman Lake		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Project Access Drive		
Analysis Year	2057			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 1 Decommissioning						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	2	0	0	0	2	1
Configuration			LTR							L	T				T	R
Volume (veh/h)		3	0	16					0	5	323				323	165
Percent Heavy Vehicles (%)		15	3	15					3	15						
Proportion Time Blocked																
Percent Grade (%)		-2														
Right Turn Channelized															No	
Median Type Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9						4.1						
Critical Headway (sec)		7.40	6.16	7.00						4.40						
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2						
Follow-Up Headway (sec)		3.65	4.03	3.45						2.35						

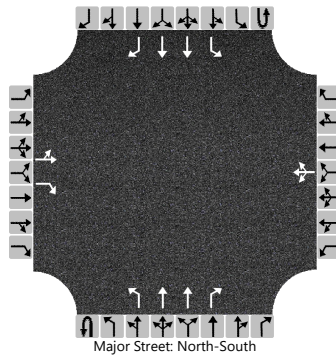
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			21							5						
Capacity, c (veh/h)			736							948						
v/c Ratio			0.03							0.01						
95% Queue Length, Q ₉₅ (veh)			0.1							0.0						
Control Delay (s/veh)			10.0							8.8						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		10.0								0.1						
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Hermosa Road		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Hermosa Road		
Analysis Year	2020			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 2 Existing						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	1		0	1	0		0	1	2	1		0	1	2	1
Configuration		LT		R			LTR			L	T	R		L	T	R		
Volume (veh/h)		2	1	1		1	1	1		0	1	184	1		0	1	184	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3	3				3	3		
Proportion Time Blocked																		
Percent Grade (%)		2				-2												
Right Turn Channelized		No									No				No			
Median Type Storage		Left + Thru									1							

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.96	6.96	7.16		7.16	6.16	6.76		4.16				4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

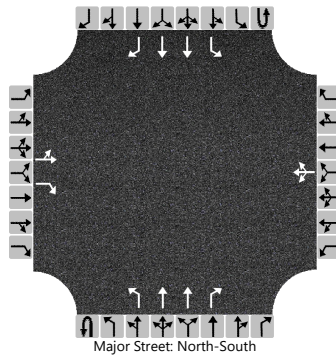
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		3		1		3				1				1				
Capacity, c (veh/h)		609		928		708				1361				1361				
v/c Ratio		0.01		0.00		0.00				0.00				0.00				
95% Queue Length, Q ₉₅ (veh)		0.0		0.0		0.0				0.0				0.0				
Control Delay (s/veh)		10.9		8.9		10.1				7.6				7.6				
Level of Service (LOS)		B		A		B				A				A				
Approach Delay (s/veh)		10.4				10.1					0.0				0.0			
Approach LOS		B				B												

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Hermosa Road		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Hermosa Road		
Analysis Year	2023			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 2 Construction						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	1		0	1	0		0	1	2	1		0	1	2	1
Configuration		LT		R			LTR			L	T	R		L	T	R		
Volume (veh/h)		2	1	1		1	2	1		0	1	184	10		0	146	184	1
Percent Heavy Vehicles (%)		15	15	15		15	15	15		3	15				3	15		
Proportion Time Blocked																		
Percent Grade (%)		2				-2												
Right Turn Channelized		No								No					No			
Median Type Storage		Left + Thru								1								

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1					4.1			
Critical Headway (sec)		8.20	7.20	7.40		7.40	6.40	7.00		4.40					4.40			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2					2.2			
Follow-Up Headway (sec)		3.65	4.15	3.45		3.65	4.15	3.45		2.35					2.35			

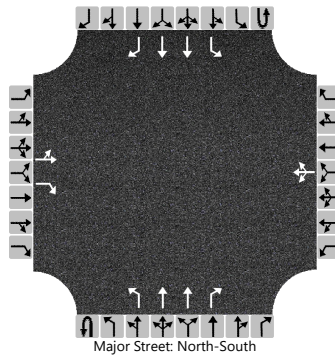
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		3		1		4				1					159			
Capacity, c (veh/h)		335		891		458				1278					1267			
v/c Ratio		0.01		0.00		0.01				0.00					0.13			
95% Queue Length, Q ₉₅ (veh)		0.0		0.0		0.0				0.0					0.4			
Control Delay (s/veh)		15.9		9.0		12.9				7.8					8.2			
Level of Service (LOS)		C		A		B				A					A			
Approach Delay (s/veh)		14.2				12.9				0.0					3.6			
Approach LOS		B				B												

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Hermosa Road		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Hermosa Road		
Analysis Year	2057			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 2 Decommissioning						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	1		0	1	0	0	1	2	1	0	1	2	1	
Configuration		LT		R			LTR			L	T	R		L	T	R	
Volume (veh/h)		10	10	2		1	2	1	0	10	322	1	0	165	322	1	
Percent Heavy Vehicles (%)		15	15	15		15	15	15	3	15			3	15			
Proportion Time Blocked																	
Percent Grade (%)		2				-2											
Right Turn Channelized		No								No				No			
Median Type Storage		Left + Thru								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		8.20	7.20	7.40		7.40	6.40	7.00		4.40				4.40		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.65	4.15	3.45		3.65	4.15	3.45		2.35				2.35		

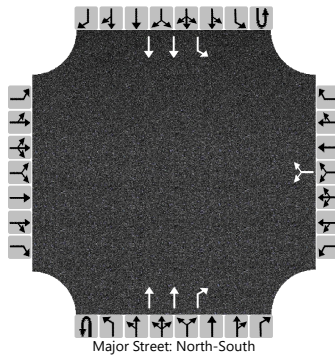
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		22		2		4				11				179			
Capacity, c (veh/h)		227		791		340				1116				1116			
v/c Ratio		0.10		0.00		0.01				0.01				0.16			
95% Queue Length, Q ₉₅ (veh)		0.3		0.0		0.0				0.0				0.6			
Control Delay (s/veh)		22.6		9.6		15.7				8.3				8.8			
Level of Service (LOS)		C		A		C				A				A			
Approach Delay (s/veh)		21.4				15.7				0.2				3.0			
Approach LOS		C				C											

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Dale Creek		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Dale Creek Road		
Analysis Year	2022			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 3 Existing Baseline						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	2	1	0	1	2	0
Configuration							LR				T	R		L	T	
Volume (veh/h)						1		1			184	1	0	1	184	
Percent Heavy Vehicles (%)						3		3					3	21		
Proportion Time Blocked																
Percent Grade (%)						-3										
Right Turn Channelized										No						
Median Type Storage						Left + Thru							1			

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9							4.1	
Critical Headway (sec)						6.26		6.66							4.52	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.53		3.33							2.41	

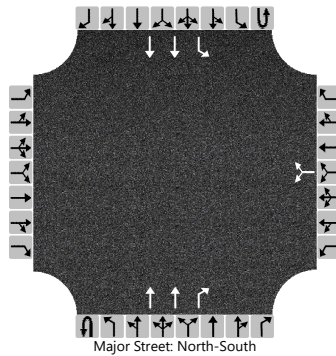
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2									1		
Capacity, c (veh/h)						813									1240		
v/c Ratio						0.00									0.00		
95% Queue Length, Q ₉₅ (veh)						0.0									0.0		
Control Delay (s/veh)						9.4									7.9		
Level of Service (LOS)						A									A		
Approach Delay (s/veh)						9.4								0.0			
Approach LOS						A											

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Dale Creek		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Dale Creek Road		
Analysis Year	2023			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 3 Construction						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	1	0	0	0	2	1	0	1	2	0	
Configuration							LR				T	R		L	T		
Volume (veh/h)						4		4			184	11	0	147	184		
Percent Heavy Vehicles (%)						3		3					3	15			
Proportion Time Blocked																	
Percent Grade (%)						-3											
Right Turn Channelized										No							
Median Type Storage						Left + Thru								1			

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9							4.1	
Critical Headway (sec)						6.26		6.66							4.40	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.53		3.33							2.35	

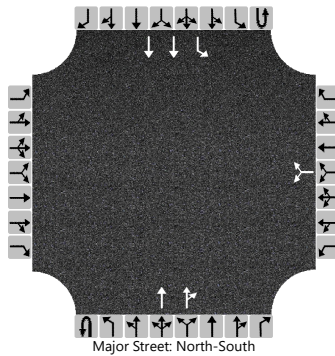
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						9									160		
Capacity, c (veh/h)						642									1266		
v/c Ratio						0.01									0.13		
95% Queue Length, Q ₉₅ (veh)						0.0									0.4		
Control Delay (s/veh)						10.7									8.3		
Level of Service (LOS)						B									A		
Approach Delay (s/veh)						10.7								3.7			
Approach LOS						B											

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Dale Creek		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Dale Creek Road		
Analysis Year	2057			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 3 Decommissioning						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	1	2	0
Configuration							LR				T	TR		L	T	
Volume (veh/h)						4		4			322	15	0	147	322	
Percent Heavy Vehicles (%)						3		3					3	21		
Proportion Time Blocked																
Percent Grade (%)							-3									
Right Turn Channelized																
Median Type Storage							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9							4.1	
Critical Headway (sec)						6.26		6.66							4.52	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.53		3.33							2.41	

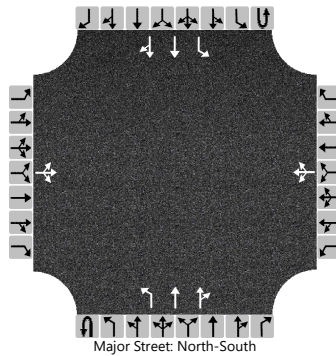
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						9									160	
Capacity, c (veh/h)						431									1063	
v/c Ratio						0.02									0.15	
95% Queue Length, Q ₉₅ (veh)						0.1									0.5	
Control Delay (s/veh)						13.5									9.0	
Level of Service (LOS)						B									A	
Approach Delay (s/veh)						13.5									2.8	
Approach LOS						B										

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Unnamed access		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Unnamed Access Road		
Analysis Year	2022			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour Existing			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 4 Existing Baseline						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Movement																		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	1	0		0	1	2	0		0	1	2	0
Configuration			LTR				LTR			L	T	TR		L	T	TR		
Volume (veh/h)		0	0	0		0	0	0		0	184	0		0	0	184	0	
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3	21			3	21			
Proportion Time Blocked																		
Percent Grade (%)	2				-2													
Right Turn Channelized																		
Median Type Storage					Left + Thru								1					

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.96	6.96	7.16		7.16	6.16	6.76		4.52				4.52		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.41				2.41		

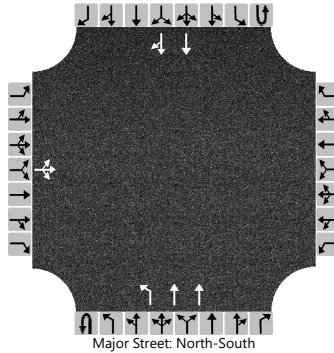
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			0				0			0				0		
Capacity, c (veh/h)										1242				1242		
v/c Ratio										0.00				0.00		
95% Queue Length, Q ₉₅ (veh)										0.0				0.0		
Control Delay (s/veh)										7.9				7.9		
Level of Service (LOS)										A				A		
Approach Delay (s/veh)									0.0				0.0			
Approach LOS																

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Unnamed access		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Unnamed Access Road		
Analysis Year	2023			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 4 Construction						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LTR							L	T				T	TR
Volume (veh/h)		5	0	5					0	0	184				184	147
Percent Heavy Vehicles (%)		15	15	15					0	15						
Proportion Time Blocked																
Percent Grade (%)		2														
Right Turn Channelized																
Median Type Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9						4.1						
Critical Headway (sec)		8.20	7.20	7.40						4.40						
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2						
Follow-Up Headway (sec)		3.65	4.15	3.45						2.35						

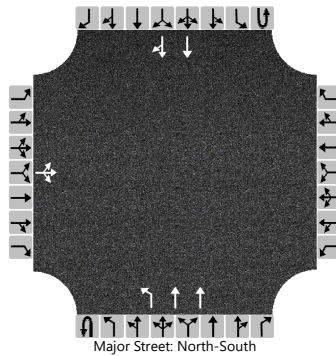
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			11							0						
Capacity, c (veh/h)			647							1107						
v/c Ratio			0.02							0.00						
95% Queue Length, Q ₉₅ (veh)			0.1							0.0						
Control Delay (s/veh)			10.7							8.3						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		10.7								0.0						
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Unnamed access		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Unnamed Access Road		
Analysis Year	2057			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 4 Decommissioning						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	0	0	0	1	2	0	0	0	2	0		
Configuration			LTR							L	T				T	TR		
Volume (veh/h)		5	2	2					0	15	322				322	147		
Percent Heavy Vehicles (%)		15	15	15					15	15								
Proportion Time Blocked																		
Percent Grade (%)		2																
Right Turn Channelized																		
Median Type Storage		Left + Thru									1							

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9						4.1						
Critical Headway (sec)		8.20	7.20	7.40						4.40						
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2						
Follow-Up Headway (sec)		3.65	4.15	3.45						2.35						

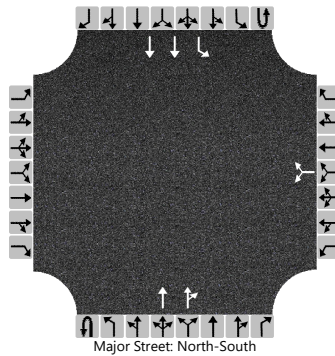
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			10							16								
Capacity, c (veh/h)			435							966								
v/c Ratio			0.02							0.02								
95% Queue Length, Q ₉₅ (veh)			0.1							0.1								
Control Delay (s/veh)			13.5							8.8								
Level of Service (LOS)			B							A								
Approach Delay (s/veh)		13.5									0.4							
Approach LOS		B																

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Pumpkin Vine		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Pumpkin Vine Road		
Analysis Year	2022			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 5 Existing Baseline						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	1	2	0	
Configuration							LR				T	TR		L	T		
Volume (veh/h)						1		1			184	2	0	1	184		
Percent Heavy Vehicles (%)						3		3					3	21			
Proportion Time Blocked																	
Percent Grade (%)						-3											
Right Turn Channelized																	
Median Type Storage						Left + Thru								1			

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9							4.1	
Critical Headway (sec)						6.26		6.66							4.52	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.53		3.33							2.41	

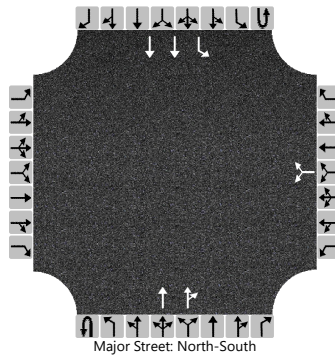
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2									1		
Capacity, c (veh/h)						812									1239		
v/c Ratio						0.00									0.00		
95% Queue Length, Q ₉₅ (veh)						0.0									0.0		
Control Delay (s/veh)						9.4									7.9		
Level of Service (LOS)						A									A		
Approach Delay (s/veh)						9.4								0.0			
Approach LOS						A											

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Pumpkin Vine		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Pumpkin Vine Road		
Analysis Year	2023			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 5 Construction						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	1	2	0	
Configuration							LR				T	TR		L	T		
Volume (veh/h)						2		3			179	15	0	147	179		
Percent Heavy Vehicles (%)						15		15					3	15			
Proportion Time Blocked																	
Percent Grade (%)						-3											
Right Turn Channelized																	
Median Type Storage						Left + Thru								1			

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9							4.1	
Critical Headway (sec)						6.50		6.90							4.40	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.65		3.45							2.35	

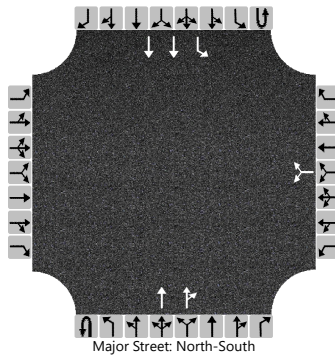
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						5									160		
Capacity, c (veh/h)						651									1267		
v/c Ratio						0.01									0.13		
95% Queue Length, Q ₉₅ (veh)						0.0									0.4		
Control Delay (s/veh)						10.6									8.3		
Level of Service (LOS)						B									A		
Approach Delay (s/veh)						10.6								3.7			
Approach LOS						B											

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ENM			Intersection	U.S. 287 @ Pumpkin Vine		
Agency/Co.				Jurisdiction	WYDOT		
Date Performed				East/West Street	Pumpkin Vine Road		
Analysis Year	2057			North/South Street	U.S. 287		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Rail Tie Wind Project Int. 5 Decomissioing						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	1	2	0	
Configuration							LR				T	TR		L	T		
Volume (veh/h)						2		6			322	15	0	165	322		
Percent Heavy Vehicles (%)						15		15					3	15			
Proportion Time Blocked																	
Percent Grade (%)							-3										
Right Turn Channelized																	
Median Type Storage						Left + Thru								1			

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9							4.1	
Critical Headway (sec)						6.50		6.90							4.40	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.65		3.45							2.35	

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						9									179		
Capacity, c (veh/h)						615									1101		
v/c Ratio						0.01									0.16		
95% Queue Length, Q ₉₅ (veh)						0.0									0.6		
Control Delay (s/veh)						10.9									8.9		
Level of Service (LOS)						B									A		
Approach Delay (s/veh)						10.9								3.0			
Approach LOS						B											