



North/West Passage Oversize/ Overweight Movement Assessment

Prepared for:

North/West Passage Freight Task Force

Prepared by:



North/West Passage

The North/West Passage (NWP) is a multi-state operations-focused partnership initiated in 2002 between the Departments of Transportation (DOTs) of Idaho, Minnesota, Montana, North Dakota, South Dakota, Washington, and Wyoming. With I-90 and 94 serving as their major passenger and commercial vehicle corridors, these states share similar operational challenges due in part to extreme weather conditions.

OS/OW Movement Assessment

The objective of the NWP Oversize/Overweight (OS/OW) Movement Assessment is to document the current state of OS/OW requirements, as well as identify needs and consider how to streamline operational issues faced by cross-state OS/OW movements, with a focus on Minnesota, North Dakota, South Dakota, and Wyoming.

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Opinions and limitations

Unless otherwise indicated, the opinions herein are those of the authors and do not necessarily reflect the views of the North/West Passage.

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Table of Contents

Table of Contents	iii
List of Figures	iv
Acronyms / Abbreviations	vii
1 Introduction	1
1.1 Oversize/Overweight Vehicles.....	1
1.2 Purpose of this Assessment.....	2
1.3 Methodology.....	2
2 OS/OW Regulations and Permitting Processes	4
2.1 Introduction.....	4
2.2 Classifying OS/OW Vehicles.....	4
2.3 Permitting OS/OW Vehicles.....	5
2.4 Additional Requirements.....	8
3 NWP OS/OW Regulations and Permitting Processes	9
3.1 Introduction.....	9
3.2 Classifying OS/OW Vehicles.....	9
3.3 Permitting OS/OW Vehicles.....	14
4 OS/OW Case Studies in the NWP	27
4.1 Introduction.....	27
4.2 I-90.....	29
4.3 I-94.....	32
4.4 US 2.....	34
4.5 US 12.....	36
4.6 US 85.....	40
5 Needs, Issues, and Opportunities	43
5.1 Introduction.....	43
5.2 Needs, Issues, and Opportunities.....	44
6 Future of Cross-Border OS/OW Movements in the NWP	50
Appendix A Freight-Reliant Industries	A-1
Appendix B OS/OW Requirements Across the NWP	B-1
Appendix C AASHTO Harmonization Recommendations	C-1

List of Figures

Figure 1: OS/OW Vehicle Classification and Permitting Process4

Figure 2: Vehicle Characteristics4

Figure 3: OS/OW Permitting Inputs and System Considerations Graphic.....7

Figure 4: Legal Limits (Interstates)9

Figure 5: Legal Limits (NWP Focus States).....10

Figure 6: Western Association of State Highway Transportation Officials (WASHTO) 2022 Non-Divisible Definition Survey (NWP Focus States)11

Figure 7: Superload Definition and Permitting Process (NWP Focus States)12

Figure 8: Million-Pound Superload.....12

Figure 9: Minnesota OS/OW Superload Corridors.....13

Figure 10: OS/OW Permitting Systems (NWP Focus States).....14

Figure 11: Wyoming Application to Move an OS/OW Load15

Figure 12: North Dakota E-Permitting System.....16

Figure 13: Sample North Dakota Permit Application17

Figure 14: Impedance Values for Vehicles on North Dakota State Highways18

Figure 15: South Dakota E-Permitting System19

Figure 16: Sample South Dakota Permit Application.....20

Figure 17: Minnesota E-Permitting System21

Figure 18: Sample Minnesota Permit Application22

Figure 19: Single Trip Permit Duration of Validity and Fee (NWP Focus States)23

Figure 20: Time of Travel OS/OW Restrictions (NWP Focus States)23

Figure 21: Seasonal Winter Increase (NWP Focus States).....24

Figure 22: Special Commodity Allowances (NWP Focus States).....24

Figure 23: Escort Requirements (NWP Focus States)25

Figure 24: NWP OS/OW Case Study Routes27

Figure 25: Agriculture Industry Employment.....28

Figure 26: Construction Industry Employment.....28

Figure 27: Manufacturing Industry Employment28

Figure 28: Mining Industry Employment28

Figure 29: Logistics Industry Employment28

Figure 30: OS/OW Case Studies29

Figure 31: Rocket Rings OS/OW Overall Dimensions and Weight.....29

Figure 32: Rocket Rings OS/OW Load Along I-90 WB (Minnesota Permitting System).....30

Figure 33: Rocket Rings OS/OW Load Along I-90 WB (South Dakota Permitting System)31

Figure 34: Dredge Boat OS/OW Overall Dimensions and Weight.....32

Figure 35: Dredge Boat OS/OW Axle Dimensions and Weight32

Figure 36: Dredge Boat OS/OW Load Along I-94 EB (North Dakota Permitting System)33

Figure 37: Dredge Boat OS/OW Load Along I-94 EB (Minnesota Permitting System).....33

Figure 38: Wind Blade OS/OW Overall Dimensions and Weight.....34

Figure 39: Wind Blade OS/OW Axle Dimensions and Weight34

Figure 40: Wind Blade OS/OW Load Along US 2 WB (Minnesota Permitting System)35

Figure 41: Wind Blade OS/OW Load Along US 2 WB (North Dakota Permitting System)36

Figure 42: Wind Base Section OS/OW Overall Dimensions and Weight.....36

Figure 43: Wind Base Section OS/OW Axle Dimensions and Weight37

Figure 44: Wind Base Section OS/OW Load Along US 12 WB (Minnesota Permitting System)38

Figure 45: Wind Base Section OS/OW Load Along US 12 WB (South Dakota Permitting System).....39

Figure 46: Wind Base Section OS/OW Load Along US 12 WB (North Dakota Permitting System)39

Figure 47: Coil Tubing Unit OS/OW Overall Dimensions and Weight40

Figure 48: Coil Tubing Unit OS/OW Axle Dimensions and Weight.....40

Figure 49: Coil Tubing Unit OS/OW Load Along US 85 NB (South Dakota Permitting System)42

Figure 50: Coil Tubing Unit OS/OW Load Along US 85 NB (North Dakota)42

Figure 51: NWP OS/OW Needs and Issues43

Figure 52: UPT 2021 Auto-Issue Across States45

Figure 53: Car Transporter Carries Electric Vehicles50

Figure 54: Wind Turbine Locations and Wind Speeds in the US.....51

Figure 55: Agriculture Industry Density A-1

Figure 56: Construction Industry Density A-2

Figure 57: Manufacturing Industry Density A-3

Figure 58: Mining Industry Density A-4

Figure 59: Transportation & Warehousing Industry Density A-5

Figure 60: OS/OW Legal Limits B-1

Figure 61: WASHTO 2022 Non-Divisible Definition Survey..... B-2

Figure 62: Superload Definition and Permitting Process B-2

Figure 63: Single Trip Permit Duration of Validity and Fee..... B-3

Figure 64: Time of Travel OS/OW Restrictions..... B-3

Figure 65: Seasonal Winter Increase..... B-5

Figure 66: Special Commodity Allowances..... B-6

Figure 67: Escort Requirements B-7
Figure 68: AASHTO OS/OW Harmonization State Checklist C-1

Acronyms / Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
API	Application Programming Interface
ATA	American Trucking Association
ATRI	American Transportation Research Institute
BIL	Bipartisan Infrastructure Law
CFR	Code of Federal Regulations
CMV	Commercial Motor Vehicle
CVSA	Commercial Vehicle Safety Alliance
DOT	Department of Transportation
EB	Eastbound
EDL	Emergency Divisible Load
EV	Electric Vehicle
FAC	Freight Advisory Committee
FHWA	Federal Highway Administration
FTF	Freight Task Force
GVW	Gross Vehicle Weight
GW	Gigawatt
HB	House Bill
ICE	Internal Combustion Engine
ID	Idaho
IT	Information Technology
ITD	Idaho Transportation Department
MAASTO	Mid America Association of State Transportation Officials
MDT	Montana Department of Transportation
MN	Minnesota
MnDOT	Minnesota Department of Transportation
MT	Montana
MUTCD	Manual of Uniform Traffic Control Devices
NB	Northbound
ND	North Dakota
NDDOT	North Dakota Department of Transportation
NDHP	North Dakota Highway Patrol
NWP	North/West Passage
OS/OW	Oversize/Overweight
PEPS	Port of Entry Permitting System

POE	Port of Entry
SC&RA	Specialized Carriers and Rigging Association
SCOHT	Subcommittee on Highway Transport
SD	South Dakota
SDDOT	South Dakota Department of Transportation
UPT	Uniform Permit Transport
US	United States
WA	Washington State
WASHTO	Western Association of State Highway Transportation Officials
WB	Westbound
WSDOT	Washington State Department of Transportation
WY	Wyoming
WYDOT	Wyoming Department of Transportation

1 Introduction

1.1 Oversize/Overweight Vehicles

An oversize/overweight (OS/OW) load refers to a commercial motor vehicle, or truck, with dimensions (i.e., size – height, width, or length) and/or weight that exceed legal limits. These OS/OW loads move a range of goods, including cement, wind turbine blades, boats, agricultural commodities, and oil field equipment. OS/OW movements face infrastructure and regulatory restrictions and must undergo permitting processes in order to legally and safely travel.

The regulation and permitting of OS/OW vehicles differ across states, posing challenges for cross-state movements.

The legal limits that define OS/OW loads vary, with federal regulations defining legal limits on Interstates,² state regulations defining legal limits on state roadways, and local regulations introducing additional regulations along local roadways at times.

Why do OS/OW vehicles require increased regulation?

- **OS/OW vehicles must be able to physically travel along their proposed travel route.** The vehicle must pass bridge and tunnel clearance limits, posted loads on bridges and roads with limited weight capacity, road dimensions and turning geometries, and other restrictions.
- **OS/OW vehicles strain infrastructure, with heavy loads contributing to pavement stress.** Through permitted routes, states can direct OS/OW loads onto roads best suited to handle these loads. Additionally, the purchase of permits provides a means for carriers to compensate the states they travel through for this increased strain.¹
- **OS/OW loads pose increased safety risks** due to their increased height, length, and width, compared to other passenger and commercial vehicles. By permitting OS/OW loads along designated routes, states have oversight and visibility into when and where these larger and heavier loads can move within the state.

OS/OW vehicles must obtain approval from relevant governing agencies to move along their travel route. State Departments of Transportation (DOTs) oversee the permitting of OS/OW vehicles for Interstates within the state, as well as for state-maintained routes. Local agencies may oversee permitting along locally maintained roadways. Agencies consider several factors – including the vehicle’s size and weight, load configuration, commodity carried, time of travel, and travel route – as part of the permitting process. Differences in how these factors are regulated, restricted, and permitted across jurisdictions challenge the efficient movement of OS/OW loads across states. Inefficient cross-state OS/OW movements result in increased time and costs for carriers and shippers, as well as negative impacts on safety, efficiency, and infrastructure condition.³

¹ FHWA, *Exploring Vehicle Size and Weight Solutions*, 2009. <https://highways.dot.gov/public-roads/mayjun-2009/exploring-vehicle-size-and-weight-solutions>

² Note that depending on the dimension, federal regulations may apply to only Interstates or all national highways. Federally defined legal commercial vehicle weights apply only to Interstates. Because federal weight regulations have outsized importance for OS/OW travel, we will simplify the discussion of federal regulations to Interstates. However, it is important to know that some federal regulations apply more broadly to all national highways.

³ National Academies of Sciences, Engineering, and Medicine 2016. *Multi-State, Multimodal, Oversize/Overweight Transportation*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/23607>.

Once an OS/OW vehicle has obtained an approved permit for travel within a jurisdiction, the vehicle must adhere to the approved route and follow additional state-specific permit requirements. This may include escort regulations, the display of signs and banners, and the use of warning lights, among others.⁴

1.2 Purpose of this Assessment

The North/West Passage (NWP) Freight Task Force (FTF) *Oversize/Overweight Movement Assessment* summarizes the current state of OS/OW regulations and requirements in the NWP, specific to federal- and state-maintained highways. **The Assessment primarily focuses on four NWP states: Minnesota, North Dakota, South Dakota, and Wyoming.**

Carriers and shippers face challenges moving OS/OW loads across states due to the differing regulations, restrictions, and permitting processes across jurisdictions.

This assessment seeks to document OS/OW regulations among NWP states and identify opportunities to streamline multi-state movements.

Using a combination of data requests, consultations, and desk research, select information was collected for all seven member states.⁵ This includes legal size and weight limits, escort requirements, hours of travel regulations, superload definitions, special permits, permitting practices, and specific route restrictions. The assessment also developed real-world case studies along five regionally important corridors crossing through the four focus states to demonstrate the required permitting processes and restrictions large OS/OW vehicles face when moving through multiple states. A synthesis of this information, combined with state agency and industry input, informed the identification of challenges and potential opportunities for improved coordination across state borders in the NWP.

1.3 Methodology

The project team undertook the following activities to document OS/OW requirements and regulations, as well as to identify needs and opportunities for cross-state OS/OW movements.

- **Desk Research:** The research team conducted desk research to identify OS/OW regulations and requirements, including general rules, weight, and dimension limitations, permitting and travel requirements, and other factors affecting OS/OW movement.
- **Information Requests:** The research team requested a variety of information from each NWP state's DOT⁶ and enforcement personnel, including OS/OW regulations and requirements, examples of OS/OW loads and commodities moving in the state, and key OS/OW corridors and characteristics.
- **Review of E-Permitting Systems:** The research team reviewed the focus states' online permitting systems, as available,⁷ to understand the process carriers must undertake to obtain a permit necessary for moving an OS/OW vehicle in each state. This enabled the research team to investigate differences in permitting systems and protocols across NWP states. Additionally, the e-permitting systems were used to visualize and review OS/OW restrictions along case study routes.
- **Stakeholder Consultations:** The research team held individual consultations with each focus state's DOT to inform an understanding of each state's OS/OW regulations, requirements, and permitting processes, as well as to discuss needs and potential opportunities related to cross-state

⁴ National Academies of Sciences, Engineering, and Medicine 2016. Multi-State, Multimodal, Oversize/Overweight Transportation. Washington, DC: The National Academies Press. <https://doi.org/10.17226/23607>.

⁵ Includes Idaho, Montana, and Washington, in addition to the focus states of Minnesota, North Dakota, South Dakota, and Wyoming.

⁶ Includes Washington DOT (WSDOT), Idaho Transportation Department (ITD), Montana Department of Transportation (MDT), Wyoming DOT (WYDOT), North Dakota DOT (NDDOT), South Dakota DOT (SDDOT), and Minnesota DOT (MnDOT)

⁷ Minnesota, North Dakota, and South Dakota currently have online OS/OW permitting systems. Wyoming currently does not have an online OS/OW permitting system.

OS/OW movements. A consultation with the Specialized Carriers and Rigging Association (SC&RA) and a Minnesota-based trucking company, as well as written input from the South Dakota Trucking Association, also provided industry insight into the conditions, needs, and opportunities for cross-state OS/OW movements.

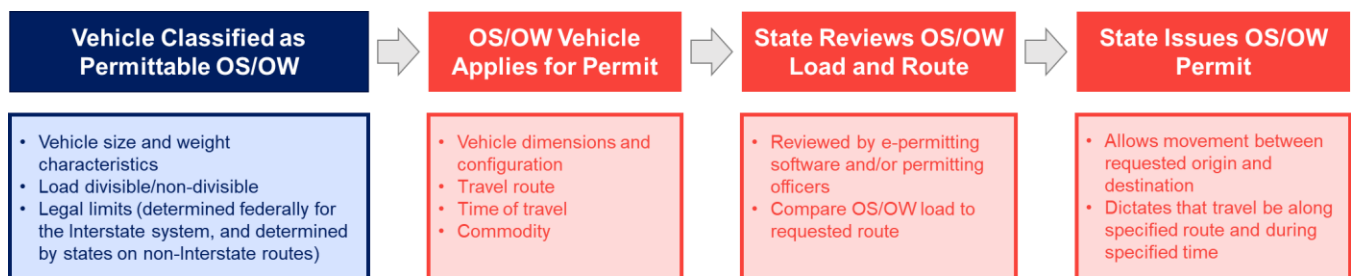
- **Focus State Roundtables:** A total of two roundtables were held with focus state DOT and/or enforcement personnel. The first roundtable (August 2022) was held to introduce the project, identify key cross-state OS/OW corridors, and discuss OS/OW needs. The second roundtable (January 2023) involved reporting on initial findings, as well as a discussion of needs and opportunities for cross-state OS/OW movements in the NWP.

2 OS/OW Regulations and Permitting Processes

2.1 Introduction

An OS/OW vehicle is defined as one that exceeds legal size and weight limits. Vehicles classified as OS/OW must obtain a permit from each state it plans to travel through in order to legally operate. Figure 1 provides a high-level overview of the information considered and processes involved in classifying and permitting an OS/OW vehicle, which is further detailed in the following sections.

Figure 1: OS/OW Vehicle Classification and Permitting Process



Source: CPCS

2.2 Classifying OS/OW Vehicles

A vehicle is determined to be OS/OW if its size and/or weight exceeds the given jurisdiction’s definition of legal limits. Legal thresholds may consider the vehicle characteristics identified in Figure 2. If one or more of these thresholds is exceeded, the vehicle may be considered OS/OW.

Figure 2: Vehicle Characteristics

Vehicle Size	Vehicle Weight
<ul style="list-style-type: none"> • Height: How tall the vehicle is • Width: How wide the vehicle and/or trailer is • Length: How long the vehicle and/or trailer is • Overhang: How far beyond the wheelbase the load extends to the front or rear. Or how far beyond the sides of the vehicle the load extends. 	<ul style="list-style-type: none"> • Gross Vehicle Weight (GVW): Total weight of the vehicle • Axle Weight: Weight on a single axle group

On national highways, including Interstates, federal regulations often determine the size and weight thresholds that define an OS/OW vehicle. On non-Interstate routes, state regulations determine these OS/OW size, weight, and configuration thresholds.

If a vehicle is classified as a non-divisible load,⁸ and further defined as an OS/OW load according to federal or state thresholds, then it is eligible to, and must, obtain a permit from the state(s) along its route to legally travel.

⁸ OS/OW permits are typically limited to non-divisible loads. As a result, this assessment will focus on regulations and permitting for non-divisible OS/OW vehicles.

Divisible Versus Non-Divisible Loads

Being defined as OS/OW is not enough on its own to be eligible for an OS/OW permit. One of the most important conditions that dictates whether an OS/OW load can be permitted is whether it is defined as divisible or non-divisible.

- **Divisible loads** can be easily separated into smaller loads or vehicles. Therefore, divisible OS/OW loads are not permitted on Interstates and are usually restricted on state routes. Divisible OS/OW loads may only obtain permits in special circumstances.
- **Non-divisible loads** cannot be easily broken down. Typically, only non-divisible OS/OW loads can obtain a permit for travel.

According to federal code,⁹ a non-divisible load refers to “any load or vehicle exceeding applicable length or weight limits which, if separated into smaller loads or vehicles, would:

- (i) Compromise the intended use of the vehicle, i.e., make it unable to perform the function for which it was intended;
- (ii) Destroy the value of the load or vehicle, i.e., make it unusable for its intended purpose; or
- (iii) Require more than 8 workhours to dismantle using appropriate equipment. The applicant for a non-divisible load permit has the burden of proof as to the number of workhours required to dismantle the load.”

However, states may vary in their interpretation of this federal definition of a non-divisible load. This has led to discrepancies in the classification of divisible versus non-divisible loads. See Section 3.2.2 for more information on how this varies across NWP focus states.

Additionally, there are exceptions whereby divisible loads may obtain OS/OW permits. Some states offer permits for divisible loads carrying certain commodities or in special circumstances, such as during emergencies.¹⁰

Many states also classify the largest classes of OS/OW vehicles, with extreme heights, lengths, and/or weights, as “superloads” or even bigger “megaloads.” Superloads tend to have stricter and lengthier permitting processes that require significant coordination and additional analysis due to their increased size and/or weight. However, states define and permit superloads differently.

2.3 Permitting OS/OW Vehicles

States issue a vast array of permits, which vary based on the OS/OW exception needed. Some permits allow vehicles to travel overweight, while others allow vehicles to travel oversize. Still, others allow weight or dimension exceptions for the movement of certain commodities. The price of permits varies by type and state.

Permits also vary in the length of time they are valid. States may issue permits that enable OS/OW movements annually or seasonally, for multiple trips, or a single trip. This assessment will primarily focus on the requirements and processes to obtain single-trip permits, as these are available for and can be compared across all states. Further, single-trip permits are used for the largest and most complicated OS/OW movements.

Even when two states issue a similar permit type, there are often differences in the processes and cost to obtain the permit, as well as the particular exceptions granted by the permit, further complicating the permitting process for OS/OW vehicles crossing state borders.

⁹ 23 CFR § 658.15: Truck Size and Weight, Route Designations – Length, Width and Weight Limitations, accessed via Cornell Law School Legal Information Institute, <https://www.law.cornell.edu/cfr/text/23/part-658>.

¹⁰ State of Florida, Office of the Governor Executive Order Number 22-218, September 23, 2022, <https://www.flgov.com/wp-content/uploads/2022/09/EO-22-218-1.pdf>.

Multi-Trip Permits

Multi-trip permits allow vehicles to obtain one permit that covers more than one trip, and they often include annual or seasonal allowances. These permits are appropriate for carriers repeatedly moving between two locations or frequently moving one commodity type. Vehicles must often meet stricter requirements in order to obtain a multi-trip permit, compared to a single-trip permit. For instance, annual permits may only be available to vehicles that are oversize in a single dimension. Select multi-trip permits may be offered exclusively for the movement of certain commodities. The increased size allowance of these permits may also be capped, above which single-trip permits must be obtained.

The availability of and requirements for multi-trip permits also vary by state. For example, North Dakota offers an annual overlength permit for OS/OW loads up to 120 feet in length, but does not offer an annual overweight permit. Meanwhile, Minnesota's annual permits are exclusively offered for the movement of specific commodities.

As with single-trip permits, multi-trip permits are issued through the state's e-permitting system, if available, or else by contacting the permitting office. The information requested may include a combination of dimension, commodity, and route information.

Each state establishes its own OS/OW regulations and enforces these regulations through its own permitting process. States operate their own permitting systems, request specific information from carriers, conduct a review and routing process, and issue permits independently of one another. As a result, carriers must go through the process of applying for and obtaining a permit for each state it wishes to legally move an OS/OW vehicle through. The permitting process may take minutes to hours, or days to weeks, depending on the state's permitting system and process, as well as the vehicle characteristics and complexity of the movement. Despite these differences, the permitting process in each state follows three steps, which are further described in the following sections.

- **Step 1:** Carrier provides information to apply for a state permit.
- **Step 2:** State reviews the OS/OW load and route.
- **Step 3:** State issues OS/OW permit.

Automated Permitting Systems

Most states offer automated permitting systems, which allow carriers to electronically submit permit applications for review through an online permitting system, also referred to as e-permitting. When e-permitting systems are not available, applicants may be required to call or visit DOT permitting offices. Applicants may also be required to contact DOT permitting offices directly when a load is uniquely large, even if the state does offer an e-permitting system.

Step 1: Carrier Provides Information to Apply for State Permit

Carriers must provide a range of information about the OS/OW vehicle to each state it plans to travel through in order to receive a permit. Although the information required varies by state, carriers are typically required at a minimum to provide the following information:

- **Vehicle dimensions and configuration:** This includes weight, height, length, width, axle spacing, overhang, number of tires, tire size, etc.
- **Travel Route:** This includes the origin and destination between which the vehicle is seeking to travel. Carriers may also be able to specify a preferred route by specifying midway, or "via," points.
- **Time of Travel:** This includes the date(s) of requested travel, as states may restrict OS/OW movements during certain days or seasons of the year.

- **Commodity:** This includes a description of the load being carried, as this factors into classifying the load as divisible or non-divisible. Moreover, some permits are offered exclusively for the movement of select commodities.

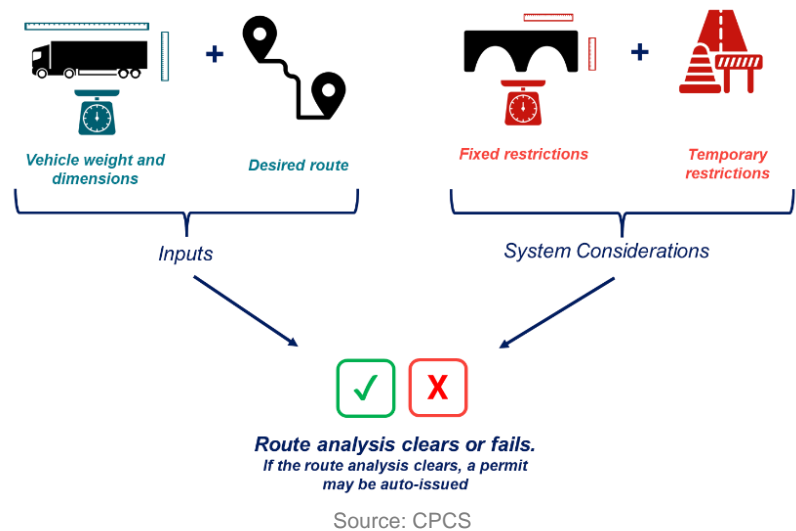
The length of time between the request for and the issuance of a permit varies based on the state’s permitting process, the characteristics of the OS/OW load, and the travel route, among other factors.

Step 2: State Reviews OS/OW Load and Route

E-permitting software and/or permitting officers, depending on the state’s unique permitting system and the nature of the load seeking a permit, evaluate the permit application. Information on vehicle size and weight and the proposed route are tested against route restrictions, both fixed and temporary, along the route (Figure 3) to ensure that:

- Vehicle height falls below all bridge, sign, and utility clearances. States typically set required buffers between vehicle height and infrastructure clearances.
- Vehicle width is narrower than all horizontal clearances, including lane width and the width between underpass columns.
- Vehicle weight adheres to all posted weights on bridges set by states. This may require careful bridge analysis to be conducted.
- The roadway geometry accommodates the vehicle along the proposed route. This may include consideration of turning radii and roundabouts.

Figure 3: OS/OW Permitting Inputs and System Considerations Graphic



Auto-Issued Permits

Many states have taken advantage of new technologies to auto-issue permits using online e-permitting software. When OS/OW vehicles fall within certain thresholds along select routes, carriers can input information into a state’s e-permitting system and automatically receive a permit, once approved by the system. While auto-issued permits are issued through an automated, or e-permitting system, not all automated permitting systems offer the option for auto-issued permits.

Auto-issue permitting can speed up the permitting process and allow permitting officers to focus their time on more challenging OS/OW movements that involve larger vehicles or routing challenges. However, there is variation in whether states offer auto-issue permits or not, and if they do, within what specific thresholds and conditions.

Depending on the state and the size of the load seeking a permit, applicants face different review processes and timelines. OS/OW loads that fall within select size and weight thresholds may be eligible for auto-issued permits, which are issued instantaneously online after a carrier fills out a permit application through an online e-permitting system. However, if the OS/OW load exceeds the threshold for auto-issued permits or cannot move along its selected route or a nearby bypass route, the permit application is forwarded to the state’s permitting office for further review. This may involve an iterative process between carriers and the state to route the OS/OW load from the requested origin to the requested destination. In some cases, permits can be turned around in minutes or hours, while in other

cases, the combination of the OS/OW load and requested route requires more careful review and bridge analysis, which may take days or weeks to review, route, and permit, and further depends on staffing capacity.

Some states do not offer auto-issued permits. In these cases, each OS/OW permit application must be reviewed and approved by the permit office.

Step 3: State Issues OS/OW Permit

The state DOT will issue a permit to the applicant if the OS/OW load is able to move along the requested route, or between its requested origin and destination with bypass routes as needed. Once permitted, OS/OW vehicles adhere to the approved route and in some cases, follow additional state-specific OS/OW requirements. These additional requirements are detailed in the following section.

If a new restriction (e.g., new construction, sudden road closure) that impacts the original routing arises between the time of permit issuance and the time of travel, many e-permitting systems will notify the permit holder to provide an alternative route or direct the permit holder to contact the relevant permit office. Often, this is triggered by an addition made to the state's 511 and/or e-permitting system. More advanced e-permitting systems may even be able to notify permit holders of weather-related travel restrictions. With or without these notifications, carriers are subject to travel restrictions and can find information about travel updates in real-time through state 511 systems.

2.4 Additional Requirements

Depending on state requirements, route traveled, and vehicle characteristics, OS/OW vehicles may have to adhere to additional requirements, as stipulated by the permit. These may include, but are not limited to, the following:

- **Escort requirements:** OS/OW vehicles may need to be accompanied by front or rear escorts, or both.
- **Warning lights:** States may require vehicles to travel with warning lights of a certain brightness or color.
- **Signs/banners/flags:** States may require vehicles to travel with specific signs using a certain font or with flags of a certain color.
- **Lane of travel:** Vehicles may be directed to travel in a certain lane or part of the roadway.
- **Speed of travel:** Vehicles may be directed to limit their travel speed along certain segments of their route.
- **County or city permits:** To travel on county or local roads, vehicles may need to acquire additional permits from the relevant county or city.

3 NWP OS/OW Regulations and Permitting Processes

3.1 Introduction

OS/OW regulations and permitting processes vary by state. The following section details differences in the classification and permitting of OS/OW vehicles among the four NWP states that are the focus of this Assessment: Wyoming, North Dakota, South Dakota, and Minnesota. States provided input on OS/OW regulations and permitting process through email and consultations.¹¹ Related to the classification of OS/OW vehicles, each state has its own definition of OS/OW legal limit thresholds on non-Interstates, interpretation of the federal definition of non-divisible loads, and definition of a superload. The patchwork of state processes extends into the permitting process, with permitting systems and specifications varying across states.

3.2 Classifying OS/OW Vehicles

3.2.1 Legal Limits

Legal limits refer to an important threshold that distinguishes non-OS/OW vehicles, which are legally allowed to travel unpermitted, from OS/OW vehicles, which are legally required to obtain an OS/OW permit to travel. In other words, legal limits define the dimension and weight ceilings below which a vehicle is not classified as OS/OW and is therefore free to travel unpermitted. Conversely, legal limits define the dimension and weight floors above which a vehicle is classified as OS/OW, and as a result, is required to obtain a permit for travel. On Interstates, legal limits (detailed in Figure 4) are established by federal regulations.¹² Elsewhere, these thresholds are established by state law.

Figure 4: Legal Limits (Interstates)

Dimension	Federal (Interstates)
Height	No maximum
Width	8'6"
Length (single)	Principally minimums that states must allow; generally, 48 ft for a single trailer and 28 feet for each combination trailer.
Length (combination)	
Gross vehicle weight	80,000 lbs.
Single axle weight	20,000 lbs.

Source: Federal Highway Administration (FHWA), Federal Size Regulations for Commercial Motor Vehicles, last modified October 2019, https://ops.fhwa.dot.gov/freight/publications/size_regs_final_rpt/; 23 CFR § 658.15: Truck Size and Weight, Route Designations – Length, Width, and Weight Limitations, accessed via Cornell Law School Legal Information Institute, <https://www.law.cornell.edu/cfr/text/23/part-658>.

Although the federal gross vehicle weight limit for Interstates is set at 80,000 pounds, a few relevant exceptions exist, both nationally and within NWP states:¹³

¹¹ MnDOT, Phone Consultation, December 2, 2022; NDDOT, Phone Consultation, December 5, 2022; WYDOT, Phone Consultation, December 12, 2022; SDDOT and South Dakota Highway Patrol, Phone Consultation, December 20, 2022; e-permitting systems for ND, SD, and MN.

¹² Height, width, and length regulations also apply to all national highways. Weight regulations apply only to Interstates and have outsized importance for OS/OW travel.

¹³ 23 US Code § 127 – Vehicle weight limitations–Interstate System, accessed via Cornell Law School Legal Information Institute, <https://www.law.cornell.edu/uscode/text/23/127#:~:text=effective%20June%2030%2C%202016%2C%20a%20combination%20of%20truck-tractor,axle%2C%20is%2028%20feet%20or%20more.%20%2811%29%20%28A%29>.

- Covered logging vehicles in Minnesota may operate on Interstates up to 99,000 pounds and with at least 6 axles.
- Vehicles otherwise prohibited to travel on the Interstate may operate in North Dakota and Idaho if they comply with applicable State laws and with requirements other than gross weight and have a gross weight of 129,000 pounds or less.
- Nationally, trucks fueled with natural gas or powered by an electric battery may exceed the weight limit on the power unit by 2,000 pounds, for a gross weight of up to 82,000 pounds.

As shown in Figure 5, legal limits defining an OS/OW load vary among NWP states. When OS/OW loads exceed these thresholds, they must obtain a permit. Some thresholds are uniform across the four states, including width and single axle weight. Other regulations, including height, length, and GVW, vary across states. For GVW, Minnesota uses a defined threshold, but in Wyoming, North Dakota, and South Dakota legal weight limits are progressive, dependent on the state’s bridge weight formula (see call-out box below) and the vehicle’s precise configuration.

Figure 5: Legal Limits (NWP Focus States)

Dimension	WY	ND	SD	MN
Height	14’0”	14’0”	14’0”	13’6”
Width	8’6”	8’6”	8’6”	8’6”
Length (single)	60’0”	50’0”	45’0”	45’0”
Length (combination)	Ranges from 60’0” to 85’0” ¹⁴	75’0” (95’-110’ on certain highways)	80’0”	75’0”
Gross vehicle weight	Bridge weight formula (Up to 117,000 lbs.)	Bridge weight formula (Up to 105,500 lbs.)	Bridge weight formula (Up to 153,500 lbs.)	80,000 lbs.
Single axle weight	20,000 lbs.	20,000 lbs.	20,000 lbs.	20,000 lbs. ¹⁵

Source: Wyoming Highway Patrol, Legal Size and Weight Limits, <https://whp.dot.state.wy.us/home/commercial-carrier/size-and-weight-information/legal-sizes-and-weights.html>; North Dakota State Patrol, North Dakota Vehicle Legal Size and Weight Guide, July 2016, https://www.nd.gov/ndhp/sites/www/files/documents/MC/Legal.size_weight.Guide.pdf; South Dakota Truck Info, Chapter 5: Size & Weight Regulations, <https://sdtruckinfo.sd.gov/rules-regulations/motor-carrier-handbook/chapter-5/>; SDDOT and South Dakota Highway Patrol, Phone Consultation, December 20, 2022; Minnesota State Patrol, Vehicle Size and Weight; <https://dps.mn.gov/divisions/msp/commercial-vehicles/Pages/vehicle-size-weight.aspx>.

¹⁴ (A) 60’ for single units or semi-trailers in a truck-tractor and semi trailer combination. (B) 81’ for a semi-trailer, trailer, or double semi-trailer combined length in a truck-tractor and semi-trailer, trailer, or double semi-trailer combination including the connecting mechanism (48’ maximum for a semi trailer – first trailer. 40’ maximum for a trailer or second semi-trailer, not including the connecting mechanism – second trailer.) (C) For consecutive towed vehicles, if the weight difference between the vehicles exceeds 5,000 pounds, the heavier towed vehicle shall be directly behind the truck-tractor, and the lighter towed vehicle shall be last. (D) 85 feet for any combination of vehicles vehicle combination other than those listed in (A) and (B).

¹⁵ Only on paved roads; 18,000 lbs maximum on unpaved roads

Bridge Weight Formula

The bridge weight formula is an equation originally established by the Federal Highway Administration to protect bridges.¹⁶

$$W = 500 \left[\frac{LN}{N - 1} + 12N + 36 \right]$$

where *W* = gross vehicle weight, *L* = distance between outer axles, and *N* = number of axles

Under the formula, permissible weight increases as the number of axles and the distance between axles increases, since this spreads weight across axles or over a greater distance and is less likely to strain bridge infrastructure. Wyoming, North Dakota, and South Dakota adopt this formula to set legal weight thresholds. Tables are available that identify legal weights according to the number of axles and total axle spacing of the vehicle.

3.2.2 Interpretation of Non-Divisible Loads

A survey from the Commercial Vehicle Safety Alliance (CVSA) sought to better understand state interpretations of the federal definition of a non-divisible load. As shown in Figure 6, although all states adhere to the same federal definition, states interpret and apply this definition differently. As a result, a vehicle may be considered non-divisible and eligible for a permit in one state but considered divisible and ineligible for a permit in another. Among NWP states, Wyoming classifies more load types as divisible, while Idaho, Minnesota, Montana, and Washington tend to classify fewer load types as divisible.

Figure 6: Western Association of State Highway Transportation Officials (WASHTO) 2022 Non-Divisible Definition Survey (NWP Focus States)

Load description	WY	ND	SD	MN
Tractor with duals	Divisible	Non-Divisible*	Non-divisible	Non-Divisible
Trailer Jeep & booster decked	Divisible	Non-Divisible*	Unclear	Non-divisible
Dozer with blade and roll protection	Divisible	Non-Divisible*	Unclear	Non-divisible
Coiled tubing unit sidewalls, stairs, doghouse	Divisible	Non-divisible	Non-divisible	Divisible
Transformer with fluids	Non-divisible	Non-divisible	Non-divisible	Non-divisible
Push trucks	Non-divisible	Non-divisible	Non-divisible	Non-divisible
Cranes with counterweights	Divisible	Non-divisible	Non-divisible	Non-divisible
Paint truck: paint and glass beads	Divisible	Divisible	Divisible	Non-divisible
Cement truck with powder, sand, water	Divisible	Divisible	Divisible	Divisible

Source: Presentation to WASHTO, Non-divisible Load Survey from CVSA, October 2022. Note: * represents change from presentation based on state feedback. North Dakota changes went into effect on December 30, 2022.

Discrepancies in interpreting the federal definition of a non-divisible load may also occur between different agencies or departments within a state. For instance, in Minnesota, the State Patrol – which is housed under the Department of Public Safety – and the DOT have interpreted the federal definition of a non-divisible load differently. As a result, a situation may arise where the State Patrol pulls over what it considers a divisible load despite the DOT having issued the vehicle a permit, considering it a non-divisible load. This discrepancy does not occur in cases where the State Patrol is housed under the DOT (e.g., Wyoming) or where the State Patrol oversees the issuing and enforcement of permits (e.g., North Dakota, South Dakota).

¹⁶ FHWA Freight Management and Operations, Bridge Formula Weights, last modified March 2020, https://ops.fhwa.dot.gov/freight/publications/brdg_frm_wghts/.

3.2.3 Defining Superloads

Many NWP states use the term “superload” or “megaload” to refer to the largest classes of OS/OW vehicles. These superloads or megaloads tend to have stricter and lengthier permitting processes that require significant coordination and additional analysis, due to their increased size and/or weight. However, states define this term differently, as shown in Figure 7.

Figure 7: Superload Definition and Permitting Process (NWP Focus States)

	WY	ND	SD	MN
Definition	Exceeds 17’ H, 18’ W, 120’ L, 160k GVW	Exceeds 250k GVW	Does not define	Exceeds 16’ H, 16’ W, 150’ L, 250k GVW
Permitting Process	Must contact Overweight Loads Office	Superload permits cannot be auto issued	No permitting process specific to superload	Superload permits cannot be auto issued

Source: NDDOT, SDDOT, MNDOT, Wyoming Highway Patrol, Super Loads / Overweight Loads Office, <https://www.whp.dot.state.wy.us/home/commercial-carrier/super-loads--overweight-loads-of.html>.

MnDOT has also identified OS/OW superload corridors, identifying a trunk highway network with the most current and best routes for superload movements within the state (Figure 9).

Million-Pound Load Traverses the NWP

At times, OS/OW loads far exceed typical thresholds. In November 2022, a million-pound, 25-foot wide, 36-axle vehicle, carrying a wind turbine traveled north along US 85 in North Dakota before turning west on US 2 towards Montana.¹⁷ Permitting this load took many months of work. Most superloads are not of such an extreme size but often require significant coordination and analysis to permit.

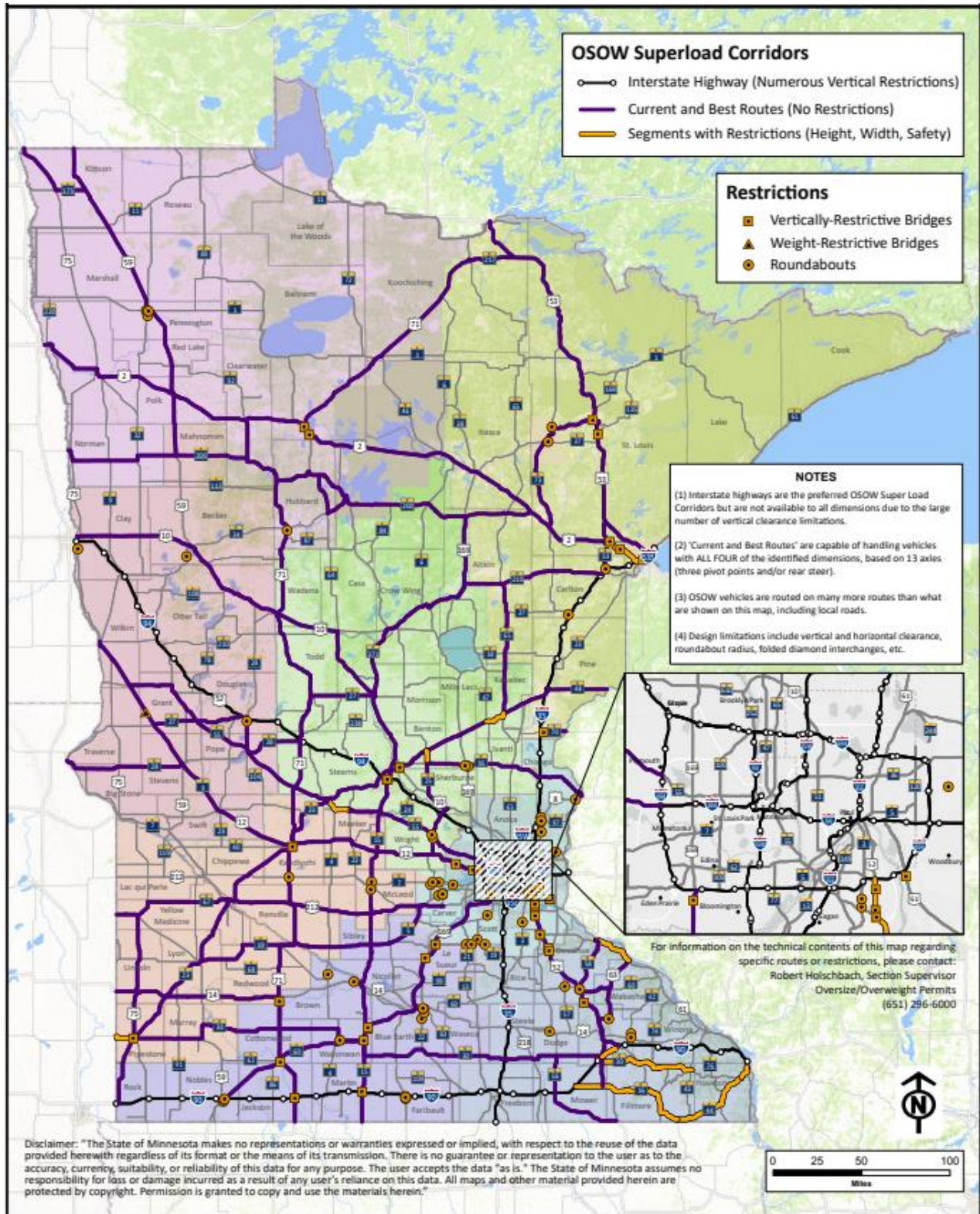
Figure 8: Million-Pound Superload



Source: CDL Life, “One million pound oversized load traveling through western North Dakota on Wednesday,” November 2022, <https://cdllife.com/2022/one-million-pound-oversized-load-traveling-through-western-north-dakota-on-wednesday/>.

¹⁷ CDL Life, “One million pound oversized load traveling through western North Dakota on Wednesday,” November 2022, <https://cdllife.com/2022/one-million-pound-oversized-load-traveling-through-western-north-dakota-on-wednesday/>.

Figure 9: Minnesota OS/OW Superload Corridors



MnDOT, Minnesota OSOW Superload Corridors, <https://www.dot.state.mn.us/ofrw/PDF/superloadcorridors.pdf>

3.3 Permitting OS/OW Vehicles

Wyoming, North Dakota, South Dakota, and Minnesota each issue their own OS/OW permits. This results in permitting processes and regulations, including requested information, e-permitting systems, processing time, and travel requirements, which vary significantly across states.

3.3.1 State Permitting Systems

Among NWP focus states, North Dakota, South Dakota, and Minnesota each operate e-permitting systems. Wyoming currently runs a manual permitting system but is planning to transition to an e-permitting system in 2023 (Figure 10). Upon the launch of Wyoming’s e-permitting system, two of the focus NWP states will have an e-permitting system operated by ProMiles, with the other two operated by Bentley Systems.

Each state also applies its own buffer between the official physical clearance of the infrastructure and the permissible vehicle dimension. For example, Minnesota imposes a 6-inch buffer, meaning a truck taller than 15 feet 6 inches would not be cleared to travel under a bridge with a 16-foot clearance.

In all four states, the permitting system is either currently integrated (North Dakota, Minnesota) or planned to be integrated (South Dakota, Wyoming) with the state’s 511 system. This integration makes it possible for North Dakota and Minnesota to formally notify permit holders of permit changes resulting from new restrictions, road closures, and other adjustments. South Dakota and Wyoming currently do not have this ability.

Figure 10: OS/OW Permitting Systems (NWP Focus States)

	WY	ND	SD	MN
System Type	Manual	Automated, with auto-issue permits available for select OS/OW movements	Automated, with auto-issue permits available for select OS/OW movements	Automated, with auto-issue permits available for select OS/OW movements
Provider	None (PEPS)	Combination system run by ProMiles and state IT	Bentley Systems	Bentley Systems
Planned Updates	Automated ProMiles system launching in 2023	Considering for system to be fully run by vendor; a request for vendor proposals is anticipated in 2024	None	None
Buffer	3-4 inches	4 inches	3 inches	6 inches
Direct Connection to 511 System	Updated system will be integrated with 511	Yes – temporary restrictions such as construction and road closures pulled every 15 minutes	Work underway to integrate system with 511	Yes – temporary restrictions pulled every hour
Notify Permit Holders of Changes	Updated system will notify permit holders via email	Yes – via email	Permit holders notified via email of restrictions entered into permitting system’s restriction manager. ¹⁸	Yes

Source: MnDOT, Phone Consultation, December 2, 2022; NDDOT, Phone Consultation, December 5, 2022; WYDOT, Phone Consultation, December 12, 2022; SDDOT and South Dakota Highway Patrol, Phone Consultation, December 20, 2022; E-permitting systems for ND, SD, and MN.

¹⁸ To date, this has been almost exclusively fixed restrictions. South Dakota is currently working on a project to incorporate temporary restrictions.

Wyoming

Wyoming currently operates an entirely manual process to permit OS/OW vehicle movements in the state, called the Port of Entry Permitting System (PEPS). The Wyoming Highway Patrol, which is housed under WYDOT, oversees the permitting and enforcement of OS/OW vehicles in the state.

Applicants must apply for a clearance permit by contacting a Port of Entry (POE) directly to submit a verbal, online, or email request before traveling into, within, or across the state. Applicants must submit information about vehicle dimensions, vehicle identifying information, and intended entry/exit locations (Figure 11). Once this information and the route are verified, a clearance number is issued for the carrier to make the move from the Wyoming border to the closest POE. At the POE, permitting officers weigh and measure the vehicle for proper permitting. Officers also reference 511 and other restriction information to determine whether to issue a permit for the remainder of the OS/OW vehicle’s trip.

On occasion, a vehicle’s route is not located within five miles of a POE. In these cases – referred to as “Load Not See” cases – the Wyoming permit office conducts a review of information provided by the applicant and may permit the OS/OW load to travel through the state without the need to stop at a POE.

OS/OW loads classified as superloads in Wyoming must contact the Overweight Loads Office and submit a written application for authorization. The carrier will then travel to a POE for permitting.

Figure 11: Wyoming Application to Move an OS/OW Load

Application for Permission to Move an Oversize/Weight Load

This is only an application for PERMISSION to move a vehicle to a port of entry to obtain an oversize and or overweight permit. Vehicles that proceed beyond the selected location without a permit are in violation.

After selecting Submit, if you see this page again (not a Thank You page) there has been an error on your request, usually this is because you did not Select a Port of Entry.

BE SURE YOU UNDERSTAND THE FOLLOWING BEFORE COMPLETING THE APPLICATION BELOW:

This application may ONLY be submitted for a vehicle or load that meets the definition of [non-divisible](#) and are within the permit limits.

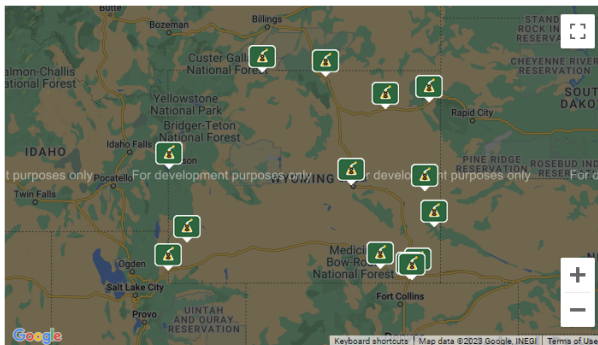
All size and weight entries on the application must be accurate. Providing incorrect entries or failure to comply with Wyoming statutes and rules governing the move may result in a citation and additional fees as provided for in Wyoming statute and the load being required to meet these requirements before proceeding.

For a brief overview of these go to:

- Quick reference for permit limits, legal size & weight: [Quick Reference Page](#)
- Rules covering safety requirements, legal size & weight, and permits [Size & Weight Rules](#)
- Wyoming statutes covering legal size & weight and permits: [Size & Weight Statutes](#)

To save time, be sure to check for size or weight restrictions that will prevent the vehicle from using the route you request on the application.

- Size and weight restrictions can be found at: [Restrictions](#)



* Required Fields

Port of Entry:

Company Name:

USDOT#:

Wyoming Docket#:

Submitted By:

Phone Number:

Email Address:

Unit Number: If you do not have unit number, please enter 0.*

Description of Load:

From:

To:

Highways:

Date of Movement:

If over any maximum go to the [Super Loads web page](#)

Width: ft in (Max 18')*

Height: ft in (Max 17')*

Overall Length: ft in (Max 120')*

Single Vehicle Length: ft in (Max 120')*

Number of Axle:

Gross Weight: lbs (Max 160000 lbs and ALL weights must be within permit limits)*

Additional Information:

YOU MUST RECEIVE AN AUTHORIZATION NUMBER FROM THE PORT OF ENTRY YOU SELECTED ABOVE FOR THIS REQUESTED MOVE BEFORE THE VEHICLE OPERATES IN WYOMING.

Source: WYDOT, Application for Permission to Move an Oversize/Weight Load, January 2023, https://iweb.dot.state.wy.us/oversize_weight_application/

Wyoming intends to transition its permitting system online using the ProMiles online permitting service by July 2023. As part of this effort, Wyoming expects to auto-issue Class B permits, which are available for OS/OW loads of up to 17’ H, 18’ W, 120’ L, or 160k GVW. When this occurs, Wyoming would exceed SC&RA’s recommended minimum auto-issue thresholds. WYDOT notes that the transition to e-permitting will improve the efficiency of OS/OW permitting in the state.¹⁹

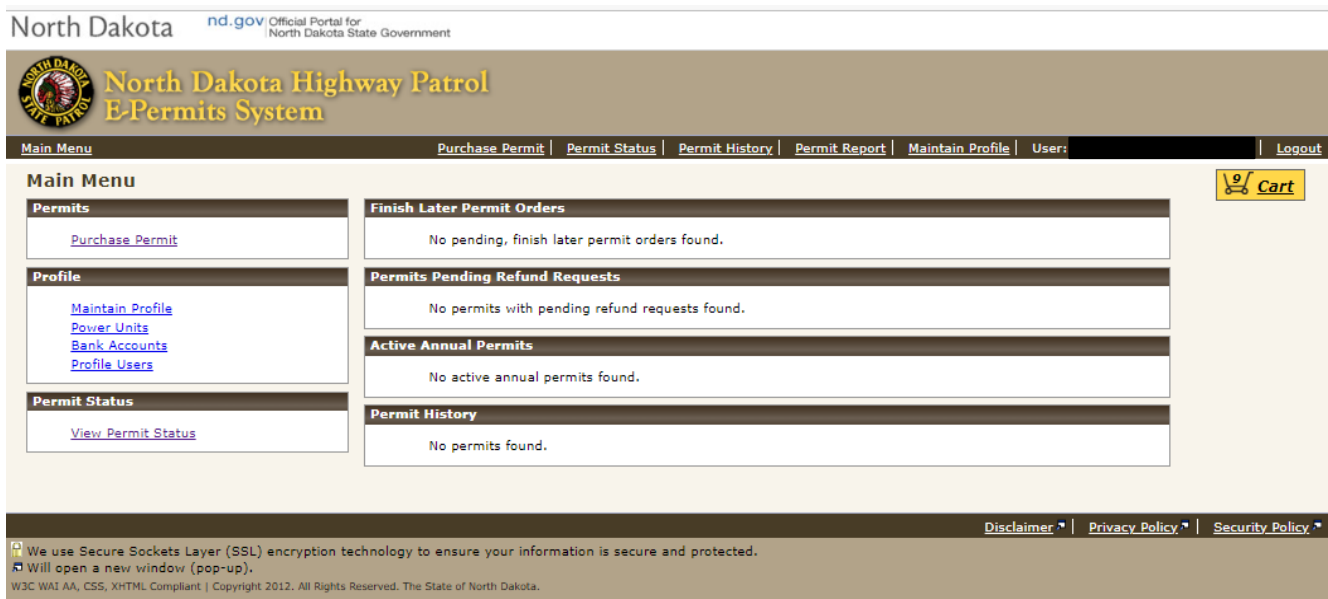
¹⁹ WYDOT, Phone Consultation, December 12, 2022.

North Dakota

North Dakota offers an e-permitting system managed cooperatively between the North Dakota Information Technology (IT) team and ProMiles. The e-permitting system is written by the IT team, while routing is handled by ProMiles. The North Dakota Highway Patrol (NDHP) oversees the permitting and enforcement of OS/OW vehicles in the state.

To obtain an OS/OW permit in North Dakota, applicants can log into the state’s e-permitting system and input information about the load they hope to move through the state (Figure 12). Information required varies by load, with axle information required for overweight vehicles, but not over-dimensional loads (Figure 13).

Figure 12: North Dakota E-Permitting System



Source: North Dakota Highway Patrol e-permitting system, 2023, <https://apps.nd.gov/ndhp/epermits/login.htm>.

Figure 13: Sample North Dakota Permit Application

Permit Types:
Oversize - SFN 3507
Service Fee

Owner:
Company/Name: [REDACTED]

Vehicle:
Year & Make: 2018 BMW
License: 1
State: ND
VIN: 12345678
RGW: 10000
[Change Vehicle](#)

Trailer:
Unit: 1
Name:
Nickname: Test

Number of Axles: 10

Axles Tab Data:

	(Front) Axle 1	Axle 2	Axle 3	Axle 4	Axle 5	Axle 6	Axle 7
Weight (lbs)							
Number of Tires							
Tire Width							
Unit of Measure (Tire Width)	<input checked="" type="radio"/> Inches <input type="radio"/> Millimeters	<input checked="" type="radio"/> Inches <input type="radio"/> Millimeters	<input checked="" type="radio"/> Inches <input type="radio"/> Millimeters	<input checked="" type="radio"/> Inches <input type="radio"/> Millimeters	<input checked="" type="radio"/> Inches <input type="radio"/> Millimeters	<input checked="" type="radio"/> Inches <input type="radio"/> Millimeters	<input checked="" type="radio"/> Inches <input type="radio"/> Millimeters
Track/Axle Width	ft in	ft in	ft in	ft in	ft in	ft in	ft in
Measure between axle center to axle center	5 ft 0 in	ft in	32 ft 0 in	5 ft 0 in	32 ft 0 in	5 ft 0 in	32 ft 0 in

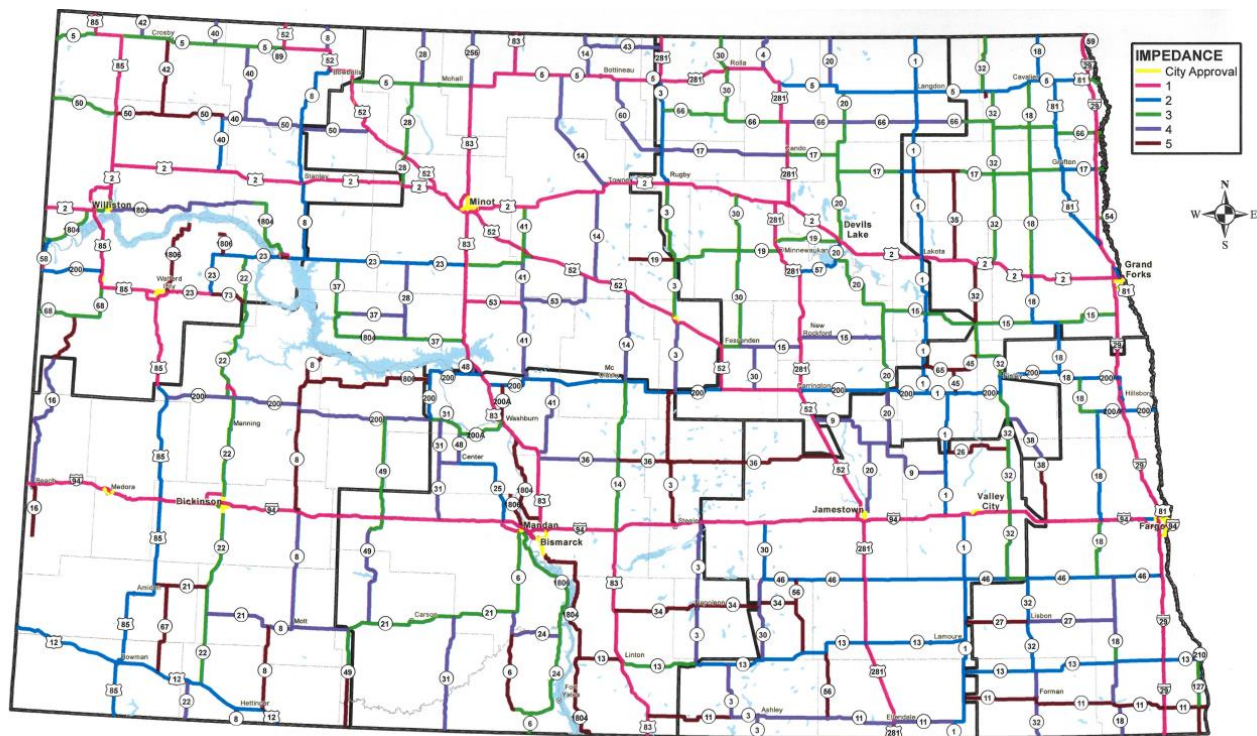
	Axle 8	Axle 9	Axle 10
Weight (lbs)			
Number of Tires			
Tire Width			
Unit of Measure (Tire Width)	<input checked="" type="radio"/> Inches <input type="radio"/> Millimeters	<input checked="" type="radio"/> Inches <input type="radio"/> Millimeters	<input checked="" type="radio"/> Inches <input type="radio"/> Millimeters
Track/Axle Width	ft in	ft in	8 ft 6 in
Measure between axle center to axle center	ft in	ft in	

Source: North Dakota Highway Patrol e-permitting system, 2023, <https://apps.nd.gov/ndhp/epermits/login.htm>.

Once carriers input information, the e-permitting system evaluates the OS/OW load and route against fixed and temporary restrictions along the requested route. For fixed restrictions, this includes an automated bridge analysis for every bridge along the route for the given OS/OW load. Most temporary restrictions, such as construction restrictions or road closures due to accidents, are pulled into the e-permitting system every 15 minutes through the state’s 511 system. While the e-permitting system does not pull in information for weather, NDHP will input this information directly into the system as needed. If a new temporary restriction affects an active permit, say by requiring a route change, NDHP will issue an email to permitted customers within 15 minutes of the restriction appearing on the map.

North Dakota also considers a state-defined impedance map in permitting decisions (Figure 14). State engineers assign a value between 1 and 5 to each of the state’s routes, with 1 assigned to preferred routes (often the national network) and 5 assigned to routes on which vehicles are discouraged from traveling. To assign these values, engineers consider factors related to asset conditions and characteristics. OS/OW loads are typically routed on routes with lower impedance scores (1 or 2), unless the pick-up or drop-off location is along a route with a higher impedance score or if construction pushes the OS/OW vehicles onto a route with a higher score.

Figure 14: Impedance Values for Vehicles on North Dakota State Highways



Source: NDDOT, Revised April 9, 2021.

Nearly all OS/OW permits issued in North Dakota are auto-issued.²⁰ The state allows for the auto-issue of OS/OW vehicles up to 18 feet wide, 200 feet long, and/or with a GWV of 250,000 pounds, if the permitted weight by axle is within legal limits, along most key routes. Permit applicants also have the option to request mid-way “via” points along their route, though NDDOT’s system does not currently allow these specific routing requests to auto-issue unless each leg of the journey is split and submitted as an individual trip.

If the OS/OW vehicle exceeds the auto-issue thresholds, the permit application automatically goes to the state for further review by the permitting office. In some cases, including when the OS/OW vehicle fails a bridge, has over 8 tires per axle, or is over 300,000 GVW, the application must go to the Bridge Division for further review. The state has a seven-day timeline policy for permit applications that require engineer approval. However, this may take more or less time based on staffing availability and the complexity of the requested trip.²¹

South Dakota

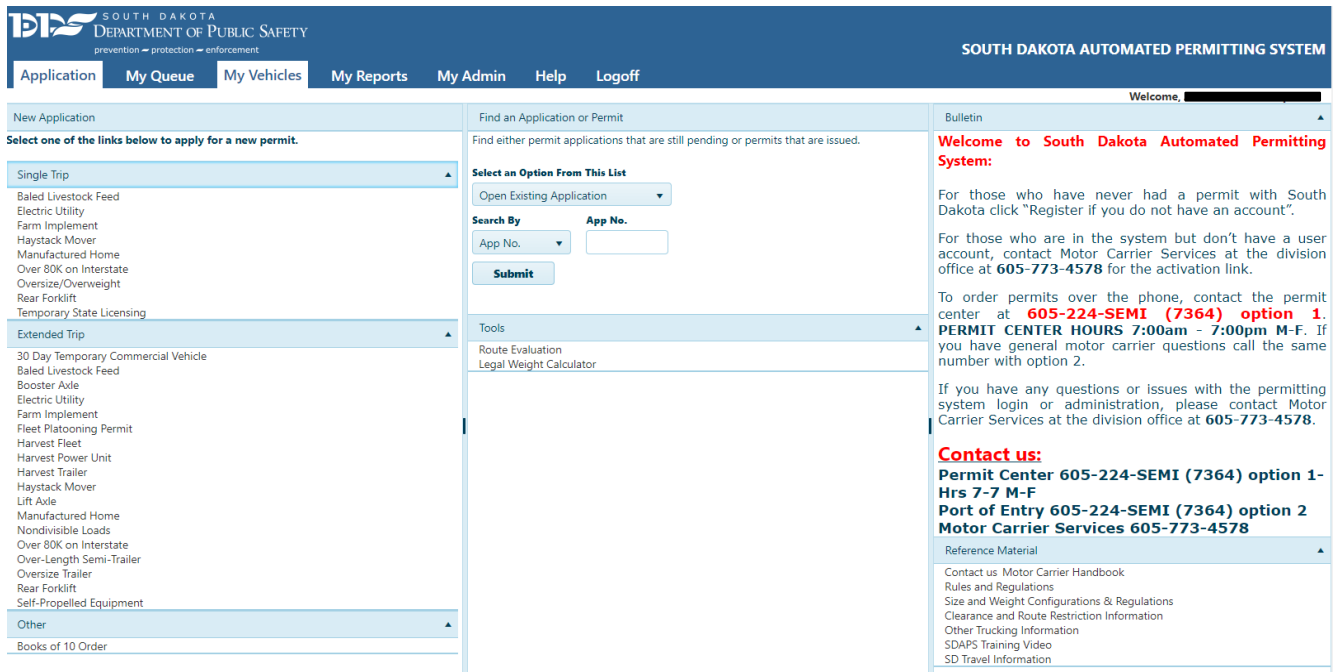
South Dakota offers an e-permitting system operated by Bentley Systems. While SDDOT manages the e-permitting system, the South Dakota Highway Patrol, which is housed under the South Dakota Department of Public Safety, oversees the permitting and enforcement of OS/OW vehicles.

Applicants can apply for an OS/OW permit in South Dakota by providing information to the permitting office through the state’s online e-permitting system (Figure 15) or by calling in. Required inputs include vehicle, load, and route information (Figure 16).

²⁰ NDDOT, Phone Consultation, December 5, 2022

²¹ NDDOT, Phone Consultation, December 5, 2022

Figure 15: South Dakota E-Permitting System



Source: South Dakota Department of Public Safety e-permitting system, 2023, <https://sdaps.sd.gov/sdaps#!>.

Upon submission of an application, the e-permitting system compares the OS/OW load against fixed and temporary restrictions along the requested route. Bridge management and traffic operations offices provide information on fixed restrictions. If restrictions change on a segment of a permitted trip after the permit is issued, the permitting system notifies the permit holder by email. This is done on a nightly basis. Currently, this applies to any restriction that gets entered into the permitting system’s restriction manager, which, to date, has been almost exclusively fixed restrictions. Temporary restrictions related to construction are input by DOT project managers. Temporary restrictions related to weather are not integrated into the state’s e-permitting system. The permitting office will monitor the weather, 511, and road conditions, and will highlight weather restrictions if they do arise; however, they are unable to directly reach out to drivers if new restrictions affect an active permit. In the case of extreme weather events, the state will not issue any permits for travel.

South Dakota offers auto-issued permits for select OS/OW vehicles under certain thresholds. If the OS/OW vehicle exceeds the auto-issue thresholds, the permit application goes to the state for further review by the permitting office. The time for this process ranges based on staffing availability and the complexity of the requested trip. In some cases, the application must go to the Bridge Division for further review. While South Dakota does not define superloads, they typically use this term to refer to those vehicles whose permits must be reviewed by the Bridge Division.

Figure 16: Sample South Dakota Permit Application

Source: South Dakota Department of Public Safety e-permitting system, 2023, <https://sdaps.sd.gov/sdaps#!>.

South Dakota is considering the following upgrades to its e-permitting system:²²

- **Connecting 511 and permitting systems:** South Dakota is initiating work with their 511-traveler information (Iteris, Inc.) provider and permitting system provider (Bentley System) to establish a linkage of information between the two. This would allow inputs in the 511 system to automatically be factored into the permitting system. The state aims to implement this in 2023.
- **Turn-by-turn Instructions:** South Dakota is interested in including turn-by-turn route instructions on permits, with integration in an audio application. The state may begin this effort in 2023.
- **Permit service Application Programming Interface (API):** South Dakota is interested in creating an API that would enable a permitting service to request a batch of permits without interacting with the permitting system’s user interface. The state may begin this effort in 2023.

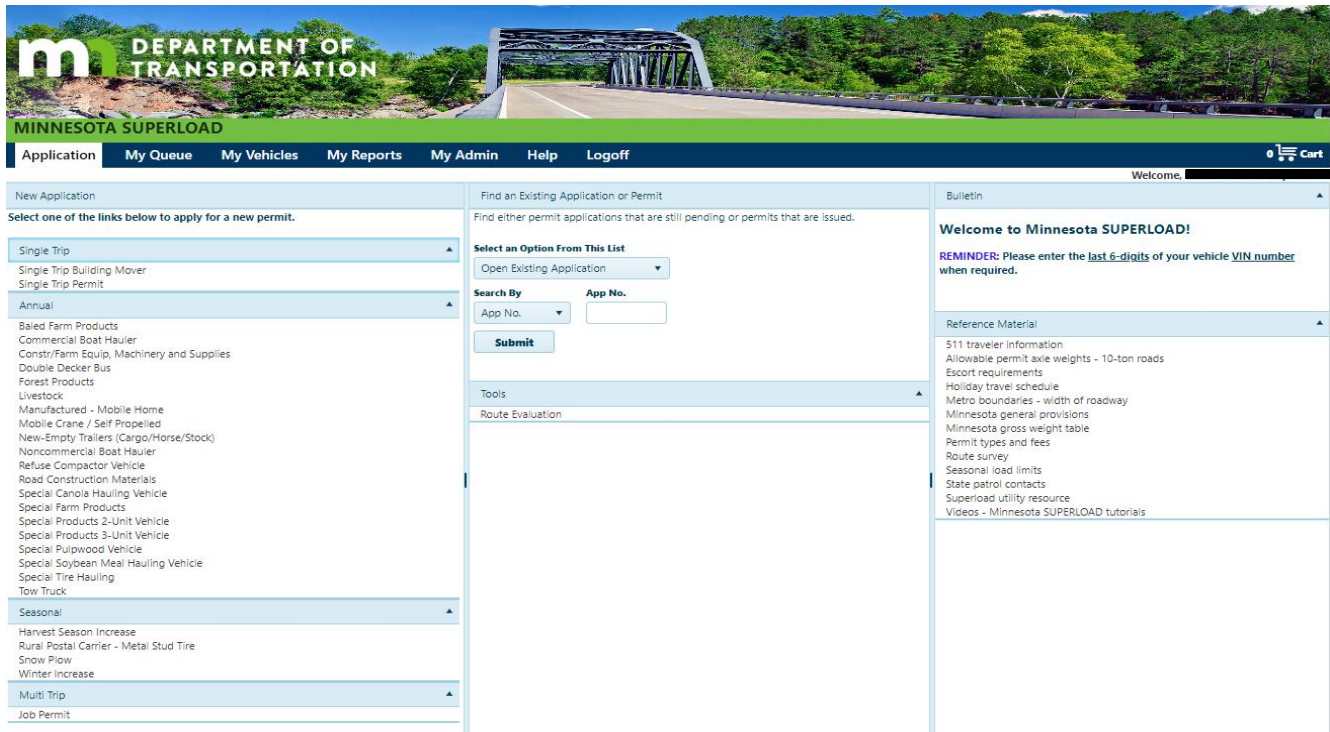
²² SDDOT and South Dakota Highway Patrol, Phone Consultation, December 20, 2022

Minnesota

Minnesota offers an e-permitting system operated by Bentley Systems, which was most recently updated in March 2022. In Minnesota, the state oversees the permitting of OS/OW vehicles, while the Minnesota State Patrol, which is housed under the Minnesota Department of Public Safety, enforces OS/OW regulations.

The state allows applicants to apply for permits by providing information on the vehicle, load, and requested route of movement through an e-permitting system (Figure 17).

Figure 17: Minnesota E-Permitting System



Source: MnDOT e-permitting system, 2023. <https://mn.gotpermits.com/mnpermits/Home/Index#!>.

When an OS/OW permit application is submitted, the e-permitting system evaluates the OS/OW vehicle and requested route against fixed and temporary restrictions. Data related to fixed restrictions, including highway infrastructure and bridge information, is updated in the system on a six-month basis. Meanwhile, data related to temporary restrictions is updated every hour through a direct connection to the state’s 511 system. When issuing a permit, the e-permitting system considers all available data at the time. The permitting system also updates three times a day, and if there is a new restriction that affects an existing issued permit, the system will notify the permit holder about the route change, and the state will either provide a route change or direct the permit holder to contact the permit office.

Figure 18: Sample Minnesota Permit Application

Source: MnDOT e-permitting system, 2023, <https://mn.gotpermits.com/mnpermits/Home/Index#!>.

If an OS/OW vehicle falls within defined dimensions, Minnesota will auto-issue a permit. Most OS/OW permits in Minnesota are auto-issued. However, if the OS/OW vehicle exceeds 16 feet in height, 16 feet in width, 150 feet in length, or 250,000 GCW,²³ it is considered a superload in Minnesota, and automatically goes to the state permit office for review. This review involves checking size and weight against route restrictions, checking axle weight limits, and examining other pertinent information. In some cases, such as if the axle weight limit's thresholds are exceeded, the application is further directed to the bridge office for a more careful bridge analysis. In these cases, the state permit office will also send the OS/OW application to district partners, allowing for local review and input on time limitations or other concerns. The state also has a superload advisory group to engage key districts and other stakeholders on the movement of superloads through the region. Minnesota has a two- to five-business day timeline policy for superload permitting, but larger superloads can take longer, especially in cases where road or other improvements are required to enable travel. Permitting large superloads often involves long discussions with stakeholders to review, plan, and route the vehicle.

²³ 250,000 GCW is the official limit for auto-issued permits in Minnesota, but the permitting system will auto-issue for up to 261,000 GCW in certain instances if the axles are in legal range and the vehicle passes the bridge rating analysis on select routes.

3.3.2 Single-Trip Permit Validity and Cost

Single trip permits vary between NWP states in the number of days they are valid and in price (Figure 19).

Figure 19: Single Trip Permit Duration of Validity and Fee (NWP Focus States)

	WY	ND	SD	MN
Duration of Validity	4 days (96 hours)	Typically 3 days, but depends on permit type	3 days	7 days
Fee	Varies, but base is \$25 for typical OS/OW and \$40 for superload permits	\$20 plus \$10 service fee for oversize vehicles under 150,000 lbs.	\$25	\$15 plus Damage Assessment Fee when overweight

Source: WYDOT, NDDOT, SDDOT, MNDOT

3.3.3 Time of Travel Restrictions

States may regulate OS/OW movements during certain times of the year or at certain hours of the day. Figure 20 identifies the time of travel restrictions for OS/OW movements in focus NWP states.

Figure 20: Time of Travel OS/OW Restrictions (NWP Focus States)

	WY	ND	SD	MN
Holidays	Loads requiring escorts not allowed half hour after sunset of prior day to half hour before sunrise on the following day.	Over width permits exceeding 16' wide for movement on holidays (12 pm day prior, until sunrise after the holiday).	N/A	No travel 2 pm on the day prior to 2 am on the day after when exceeding 12'6" wide or 110' long.
Weekend Summer	N/A	Over width permits exceeding 16' wide for movement on Saturday after 12 pm, all day Sunday.	N/A	No travel from 4 pm to 8 pm Fridays and Sundays when exceeding 12'6" wide or 110' long.
Rush Hour	Loads exceeding 18' in width shall not be allowed to travel on any primary or secondary highway during hours of local school bus traffic or heavy commuter traffic.	Limited restrictions in cities when several loads are moving at once example wind blades.	N/A	No travel on weekdays from 6 am to 8:30 am or 3:30 pm to 6 pm in Twin Cities and Duluth metros when exceeding 14'6" wide or 110' long.
Night Travel	Movements made only during daylight hours unless it meets certain exceptions.	Allowed for any load that does not exceed 10' wide or 120' long. If these limits are exceeded or if load is over 14' high, travel is only allowed from half hour before sunrise to half hour after sunset. ²⁴	No farm machinery, vehicles exceeding 8'6" wide, or slow-moving vehicles may operate on Interstate or State highways between half hour after sunset and half hour before sunrise.	Travel restricted from 12 am to 5 am in Twin Cities metro Monday through Friday when exceeding 16' wide.

²⁴ House Bill (HB) 1181 has been introduced to the Sixty-Eighth Legislative Assembly of North Dakota, which proposes that permits issued for over dimensional movements of vehicles not exceeding 12' in total width, including load, be valid for travel during the day and night with proper lighting. Permits issued for over dimensional movements of vehicles not exceeding 120' in total length, including load, valid for travel during the day and night with proper lighting. North Dakota Legislative Branch, 68th Legislative Assembly (2023-25), HB 1181, <https://www.ndlegis.gov/assembly/68-2023/regular/bill-overview/bo1181.html?search=1181>

	WY	ND	SD	MN
Frost/ Spring/ Thaw Restriction	N/A	During spring break up season, reductions in axle weights may be specified. Axle weights may also be reduced by bridge load limitations map.	From February 15 to April 30, certain highways are subject to spring load limits. When spring load limits are in effect, limited overweight permits are issued. Spring load restrictions may mean weight restrictions to 6 to 7 tons per axle, or speed limit restrictions.	During spring season, weight restrictions on unpaved routes. Paved routes remain at 10-ton limits, unless axle weigh restriction signs are posted. Dates determined by Commissioner of Transportation for each of frost zones.

Source: WYDOT, NDDOT, SDDOT, MNDOT.

3.3.4 Special Seasonal and Commodity Allowances

Seasonal winter increases allow trucks to travel with additional weight during colder months. As shown in Figure 21, North Dakota and Minnesota offer winter seasonal increases.

Figure 21: Seasonal Winter Increase (NWP Focus States)

	WY	ND	SD	MN
Available	No	Yes	No	Yes
Dates	N/A	December 1 – March 7	N/A	Vary based on freezing index
Details	N/A	Allows 10% weight increase (on axles only) when hauling a divisible load up to 105,500 GVW. Not allowed on Interstate, county, or local roads.	N/A	Allows 10% weight increase; permits only required on the Interstate.

Source: WYDOT, NDDOT, SDDOT, MNDOT.

Some states offer special permits specific to the movement of select economically important commodities. For example, agriculture is a major industry in the region, and several NWP focus states offer permits or exceptions for the movement of agricultural products and/or movement during harvest seasons (Figure 22).

Figure 22: Special Commodity Allowances (NWP Focus States)

	WY	ND	SD	MN
Seasonal Harvest Increase				
Available	No	Yes	Yes	Yes
Dates	N/A	July 15 to November 30	July 1 to November 30	Start of harvest to November 30
Details	N/A	10% more axle weight allowed when hauling harvested product between select origins and destinations, as well as for select commodities (solid waste, sugar beets, potatoes) to a point of storage. Travel is not allowed on Interstate, county, or local roads.	A 10% tolerance for farm trucks and trailers hauling farm commodities from the combine to the first unloading within 50 miles of the harvested field, allowed during harvest season. A 5% tolerance for farm commodities being hauled from the bin to the elevator, allowed year-round.	10% weight increase for the first haul from the field of harvest to first point of unloading. Permit valid for U.S. and State highways.

	WY	ND	SD	MN
Construction/Farm Equipment Permit				
Available	Yes	No	Yes	Yes
Details	Varies by commodity and highway	N/A	Non-divisible annual permit for construction and farm equipment for loads up to 14'6" wide and 85' long. Annual farm implement permit for farm implement dealers and manufacturers that allows loads up to 20' wide, 100' long, and 18' high. For both annual permits, if maximum dimensions exceeded, carrier must purchase single trip permit.	Up to 15' H, 16' W, 110' L, and 155k GVW.

Source: WYDOT, NDDOT, SDDOT, MNDOT.

3.3.5 Escort Requirements

For safety reasons, states often require that one or more vehicles escort OS/OW loads when they exceed certain dimensions. States set their own weight and dimension thresholds for escorts, with regulations varying between states. Escorts may be required in front of and/or behind the OS/OW vehicle, depending on the circumstance. States may also require that escorts be public law enforcement, but often private escorts are allowed. Due to staffing shortages in public law enforcement, the use of private escorts is often necessary to meet escort demand. Nationwide, only eleven states require private escorts to be certified and there is typically no certification reciprocity across states.²⁵

Figure 23: Escort Requirements (NWP Focus States)

	WY	ND	SD	MN
Civilian Escort Certification Required	No	No	No	Yes (MN offers reciprocity with other states ²⁶)
Threshold for Escort				
Weight	Overweight with special restrictions imposed by Bridge Department	Policy allows bridge or district engineers to request	N/A	N/A
Rear Overhang	Over 25 feet	N/A	N/A	N/A
Escort requirements on multi-lane divided roadways				
Width	15' (Interstate and divided highways) (rear)	Over 16' (one escort follow)	16' (Interstate Highways) (behind on divided highways)	Over 15' at bottom or 16' at top
Length	Discretion of Wyoming Highway Patrol (rear)	Over 120' (one escort follow)	N/A	Over 110' (one escort), over 150' (two escorts)
Height	17' (front and rear)	Over 18' (one escort precede)	N/A	N/A

²⁵ SC&RA, Phone Consultation, November 16, 2022.

²⁶ Colorado, Florida, North Carolina, Oklahoma, Utah, Virginia, Washington

	WY	ND	SD	MN
Escort requirements on undivided roadways (two-lane)				
Width	Above 14', escorts are required to the front and rear: 14'-18' requires two escorts; 18'-22' requires 3 escorts; 22'-26' requires 4 escorts; 26'+ requires five escorts	Over 14'6" (one escort precede OR lighted rotating or flashing lights); over 16' (two escorts)	20' (State Highways) (in front on undivided highways)	Over 15' at bottom or 16' at top. Lead licensed officer required in addition when vehicle/load extends beyond left of centerline
Length	110' (front and rear)	Over 120' (one escort follow)	N/A	Over 110'
Height	17' (front and rear)	Over 18' (one escort precede)	N/A	N/A

Source: WYDOT, NDDOT, SDDOT, MNDOT.

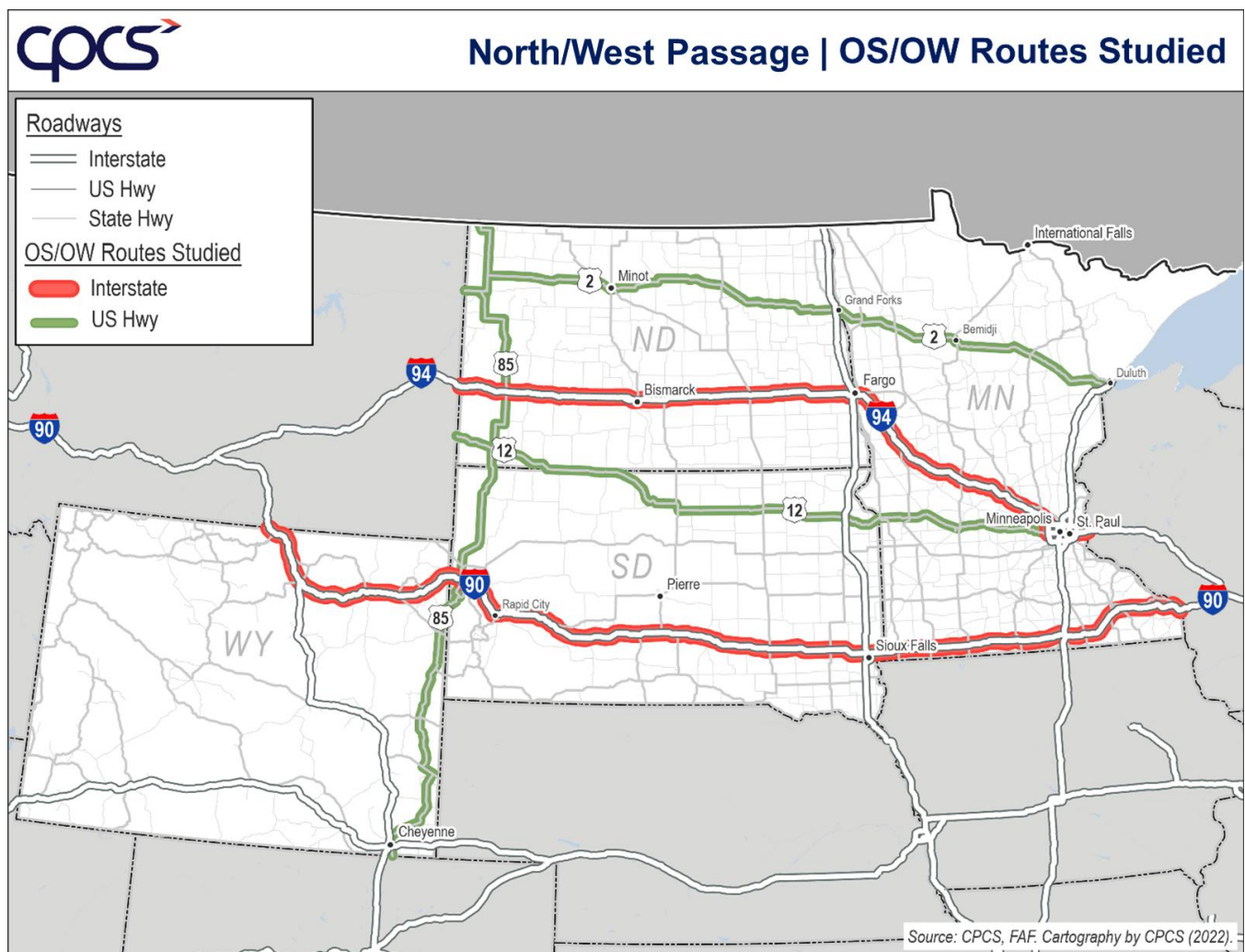
4 OS/OW Case Studies in the NWP

4.1 Introduction

Case studies help demonstrate how OS/OW loads are able to and/or restricted from moving across states in the NWP, along key cross-state routes in the region.

Five key cross-border routes were identified for the case studies: I-90, I-94, US 2, US 12, and US 85 (Figure 24). Each of these corridors runs through at least two of the four NWP focus states. Stakeholders representing the four NWP focus states selected these routes through group discussions, informed by an evaluation of general and OS/OW volumes along these corridors. Geographical diversity was also considered.

Figure 24: NWP OS/OW Case Study Routes



Freight-Reliant Industries in NWP Focus States

The following maps highlight the concentration of freight-reliant industry employment in the NWP focus states. Industry employment is typically densest near major population centers such as the Twin Cities, Fargo, Sioux Falls, and Rapid City. Beyond urban centers, additional patterns emerge, providing insight into the importance of the case study corridors to key freight-reliant industries in the region, each of which generates OS/OW travel demand.

- **Agriculture** employment is located primarily in eastern North and South Dakota and southern Minnesota.
- **Mining** employment is focused in western North Dakota and eastern Wyoming.
- **Transportation and warehousing, construction, and manufacturing** are clustered in the Twin Cities orbit.

See 6Appendix A for a full-sized version of each industry map

Figure 26: Construction Industry Employment

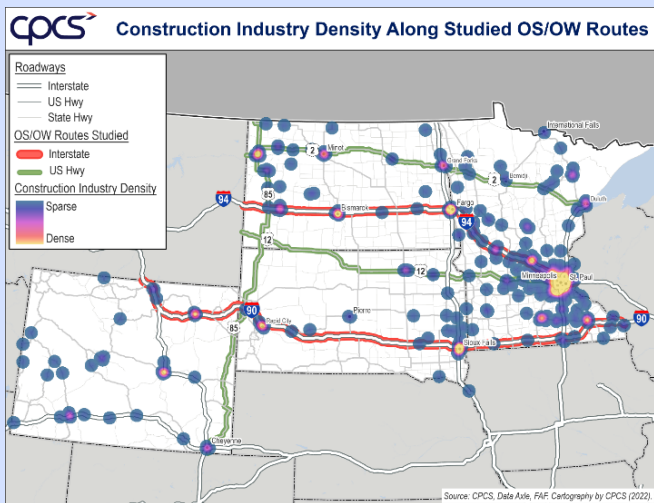


Figure 28: Mining Industry Employment

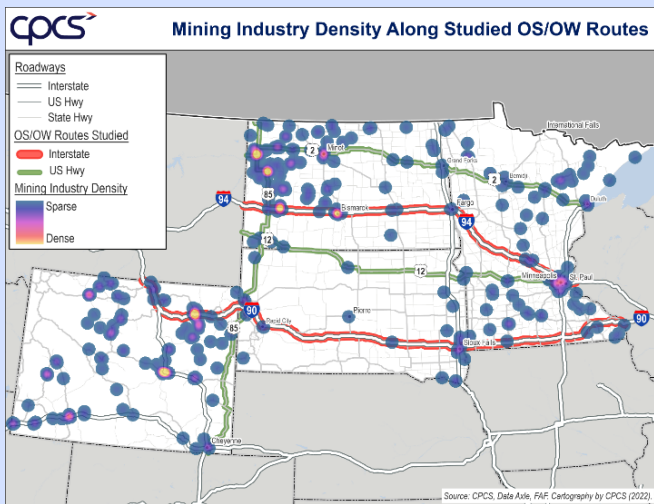


Figure 25: Agriculture Industry Employment

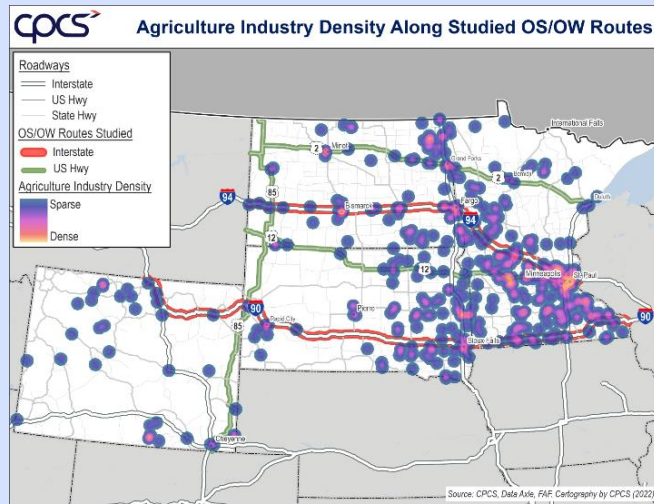


Figure 27: Manufacturing Industry Employment

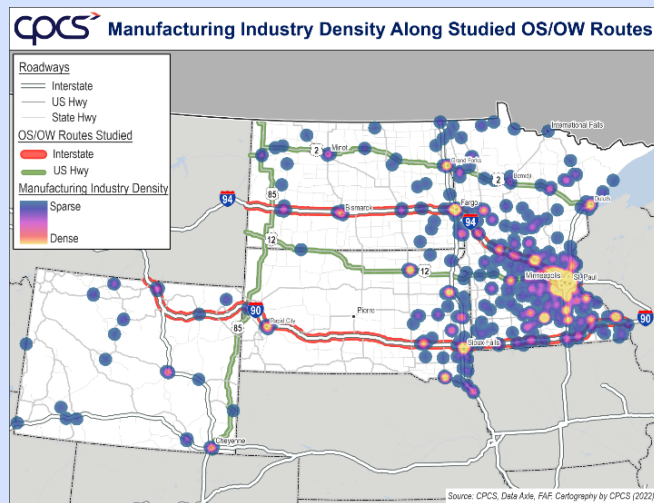
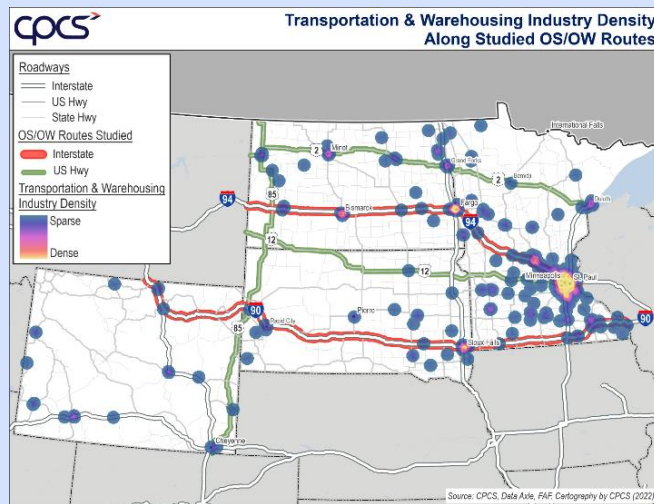


Figure 29: Logistics Industry Employment



Note: Only mining businesses with 5+ employees shown; only agriculture businesses with 10+ employees shown; and only construction, manufacturing, and logistics industry businesses with 50+ employees shown.

Figure 30 provides a summary of each case study, including the direction of travel along each corridor and the type of commodity moved. The OS/OW loads selected for the case studies would be classified as a superload by most NWP focus states. Due to their increased size and/or weight, superloads often face increased restrictions within states, making it more difficult to travel along cross-state routes.

Figure 30: OS/OW Case Studies

Corridor	Corridor Description	OS/OW Vehicle Description
I-90	This Interstate is one of the NWP’s major corridors, running east-west to connect Montana, North Dakota, and Minnesota.	Rocket rings moving west through Minnesota, South Dakota, and Wyoming.
I-94	This Interstate is one of the NWP’s major corridors, connecting to I-90 in Montana, and running east-west through Wyoming, South Dakota, and Minnesota.	Dredge boat load moving east toward the Great Lakes.
US 2	This east-west route runs through the focus states of North Dakota and Minnesota.	Wind blade load moving west from the Port of Duluth.
US 12	This east-west route runs through the focus states of North Dakota, South Dakota, and Minnesota.	Wind base section moving west through Minnesota, South Dakota, and North Dakota.
US 85	This north-south route runs through North Dakota, South Dakota, and Wyoming.	Coil tubing unit load moving north toward North Dakota oilfields.

The following sections examine examples of these OS/OW superloads moving along the selected case study corridors.

4.2 I-90

4.2.1 Route Details



Within the NWP focus states, I-90 runs nearly 900 miles from the Minnesota-Wisconsin border near La Crosse, WI to the Wyoming-Montana border just past Sheridan, WY. The corridor carries significant OS/OW volumes. Along its route, I-90 traverses oil fields and other mining industries in Wyoming and western South Dakota, passes along a significant rural stretch in central South Dakota between Rapid City and Sioux falls, and goes through wide swaths of agricultural land in eastern South Dakota and Minnesota. It also traverses other freight-dependent industries, including construction, transportation, and warehousing, especially in eastern South Dakota and Minnesota, with clusters in Rapid City, SD, Sioux Falls, SD, and Rochester, MN.

4.2.2 Example Superload

A superload carrying rocket rings might move westbound along I-90 through Minnesota, South Dakota, and Wyoming.²⁷ Figure 31 details a real-world OS/OW load carrying rocket rings – which is oversize due to width, but not overweight – that has moved along I-90.

Figure 31: Rocket Rings OS/OW Overall Dimensions and Weight

Overall Vehicle Dimensions	
Length	75'
Width	18'8"
Height	13'6"

Source: SDDOT, 2023.

4.2.3 Permitting Process

An OS/OW load looking to travel west from the Minnesota-Wisconsin border to the Wyoming-Montana along I-90 must obtain a permit to travel in Minnesota, South Dakota, and Wyoming.

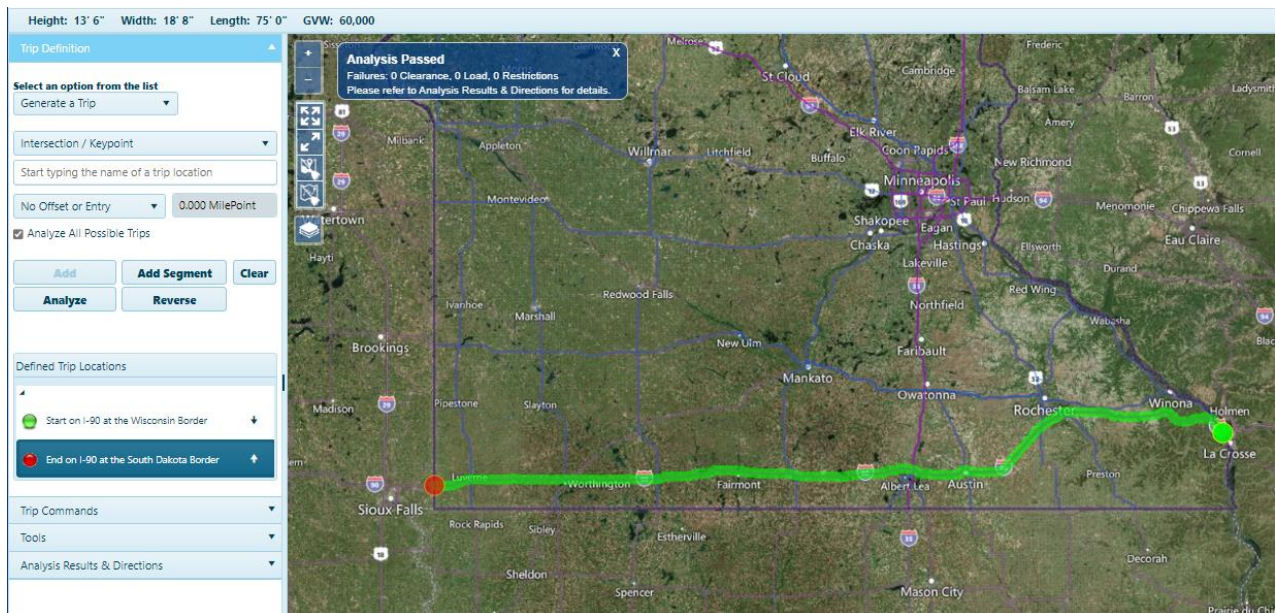
²⁷ Identified by MnDOT.

The example superload, carrying rocket rings, can be permitted to travel westbound along I-90 in Minnesota and South Dakota, but due to the size, would require review by the permitting offices in both states. For Wyoming, the applicant must contact the permitting office to submit an OS/OW permit application for review, as the state currently does not have an e-permitting system.

Minnesota

In Minnesota, the rocket rings load might originate on I-90 at the Wisconsin border, destined for I-90 at the South Dakota border. A carrier would apply for an oversize-only permit on Minnesota’s e-permitting site, which requires information on the vehicle’s registration information, the commodity being carried, overall weight, and overall vehicle dimensions. The system then prompts the carrier to input the desired route origin and destination, which it uses to conduct a route analysis. As shown in Figure 32, the rocket rings load route analysis passes. However, because the rocket ring exceeds auto-issue thresholds for width in Minnesota, the permit would need to be reviewed by the state permitting office before being issued.

Figure 32: Rocket Rings OS/OW Load Along I-90 WB (Minnesota Permitting System)



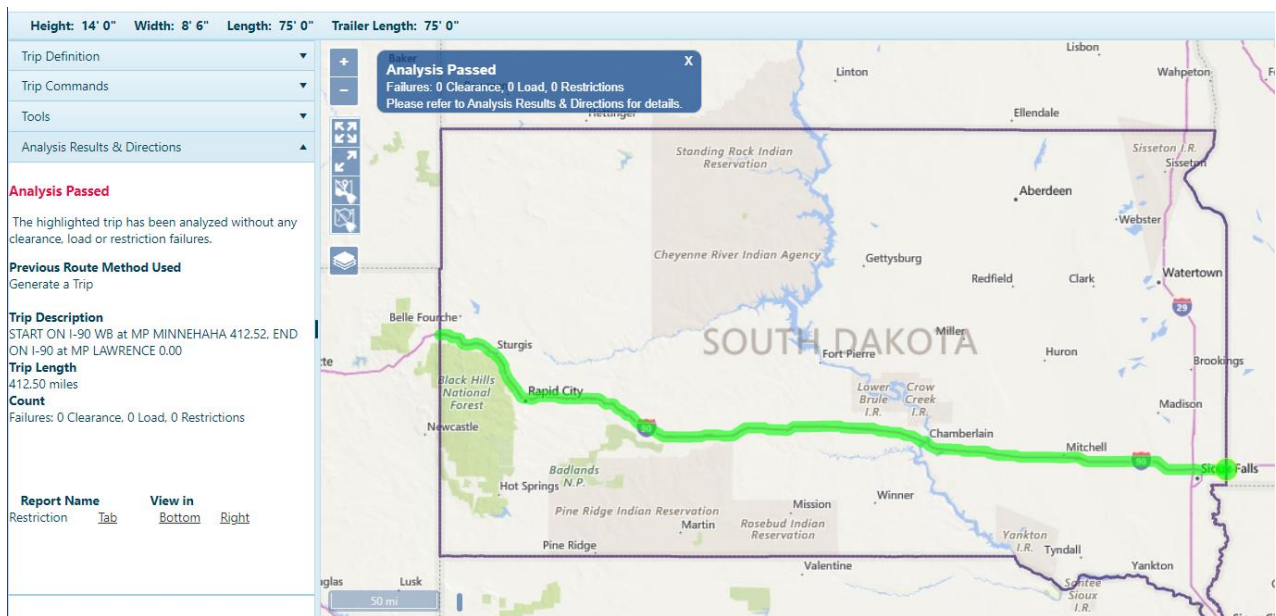
Source: MnDOT e-permitting system, 2023, <https://mn.gotpermits.com/mnpermits/Home/Index#!>.

South Dakota

In South Dakota, the load would pick up where it left off at the South Dakota-Minnesota border and continue west to the South Dakota-Wyoming border. A carrier would apply for an oversize-only permit on South Dakota’s e-permitting site, which requires information on the vehicle’s registration information, the commodity being carried, and overall vehicle dimensions (not including weight). The system then prompts the carrier to input the desired route origin and destination, which it uses to conduct a route analysis. As shown in Figure 33, the rocket rings load route analysis passes. However, due to the size of the rocket ring load, the permit would need to be reviewed by the state permitting office before being issued.

South Dakota permitting officials note that when there are no construction restrictions, as is currently the case, this OS/OW vehicle would be able to travel without issue on I-90 with a rear escort. The escort is required due to the width of the load exceeding 16’.

Figure 33: Rocket Rings OS/OW Load Along I-90 WB (South Dakota Permitting System)



Source: SDDOT e-permitting system, 2023, <https://sdaps.sd.gov/sdaps#!>.

Wyoming

Because Wyoming does not currently offer an e-permitting system, to travel in this state, the carrier must contact the permitting office in order to travel. This rocket rings load is considered a superload in Wyoming, meaning a written permit application is required. The permitting office will issue an initial clearance to a nearby permitting location, where a more thorough review of the vehicle and a route analysis are performed before issuing a final permit to travel through the rest of the state.

4.3 I-94

4.3.1 Route Details



Within the NWP focus states, I-94 extends just over 600 miles between the North Dakota-Montana border and the Minnesota-Wisconsin border due east of St. Paul. I-94 runs primarily through rural areas, although it does traverse some major urban areas, including Minneapolis-St Paul, MN, Fargo, ND, and Bismarck, ND. I-94 is a top route for general OS/OW traffic but is particularly important for energy, construction, manufacturing, and agriculture. The western portion of I-94 in North Dakota runs through a region with significant employment in the oil production industry. In North Dakota, I-94 also travels through counties with substantial agriculture-related industries.

4.3.2 Example Superload

A superload carrying a dredge boat might move eastbound towards the Great Lakes.²⁸ Figure 34 and Figure 35 detail a real-world OS/OW load that has moved along I-94 carrying a dredge boat.

Figure 34: Dredge Boat OS/OW Overall Dimensions and Weight

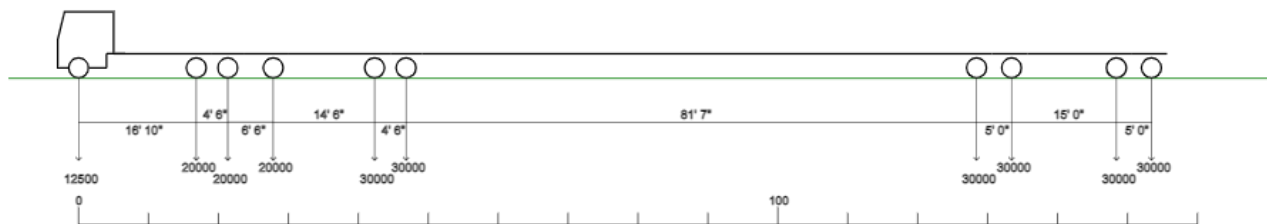
Overall Vehicle Dimensions	
Length	165'
Width	18'6"
Height	14'5"
Gross Weight	252,500
Number of Axles	10

Source: MnDOT, 2022.

Figure 35: Dredge Boat OS/OW Axle Dimensions and Weight

Axle Number	1	2	3	4	5	6	7	8	9	10
Axle weight	12,500	20,000	20,000	20,000	30,000	30,000	30,000	30,000	30,000	30,000
Number of tires	2	4	4	4	8	8	8	8	8	8
Tire size	11"	11"	11"	11"	10.8" (275 mm)	10.8" (275 mm)	10.8" (275 mm)	10.8" (275 mm)	10.8" (275 mm)	10.8" (275 mm)
Axle width	8'6"	8'6"	8'6"	8'6"	11'	11'	11'	11'	11'	11'
Axle spacing		16'10"	4'6"	6'6"	14'6"	4'6"	81'7"	5'0"	15'0"	5'0"

Source: MnDOT, 2022.



Source: MnDOT e-permitting system, 2022, <https://mn.gotpermits.com/mnpermits/Home/Index#!>.

²⁸ Identified by MnDOT.

4.3.3 Permitting Process

An OS/OW load looking to travel east from the North Dakota-Montana border to the Minnesota-Wisconsin border must obtain a permit to travel in both Minnesota and North Dakota.

This example superload, carrying a dredge boat, cannot be permitted to travel eastbound along I-94 in North Dakota through the e-permitting system, as the permit application exceeds limits for the online system; the applicant must contact the North Dakota permitting office for review and routing. However, in Minnesota, the route analysis passes, with the e-permitting system routing the load to bypass I-94 around the Twin Cities, due to various bridge and height restrictions on I-94.

North Dakota

In North Dakota, the OS/OW dredge boat load might originate on I-94 at the Montana border, destined for I-94 at the Minnesota border. A carrier would input the vehicle’s size and weight information into North Dakota’s online permitting system. The system first checks whether the proposed load is eligible for auto-issue. As shown in Figure 36, the OS/OW dredge boat load exceeds the 250,000-pound auto-issue threshold on North Dakota’s online permitting system. As a result, the carrier must contact the state permitting office in order to have the application reviewed by the permitting office. North Dakota permitting officials note that the load may also face restrictions on I-94, as the load is wider than 18 feet. Upon submission of the application, the state will assess existing restrictions and work with the carrier to route the OS/OW load from its requested origin to its requested destination.

Figure 36: Dredge Boat OS/OW Load Along I-94 EB (North Dakota Permitting System)

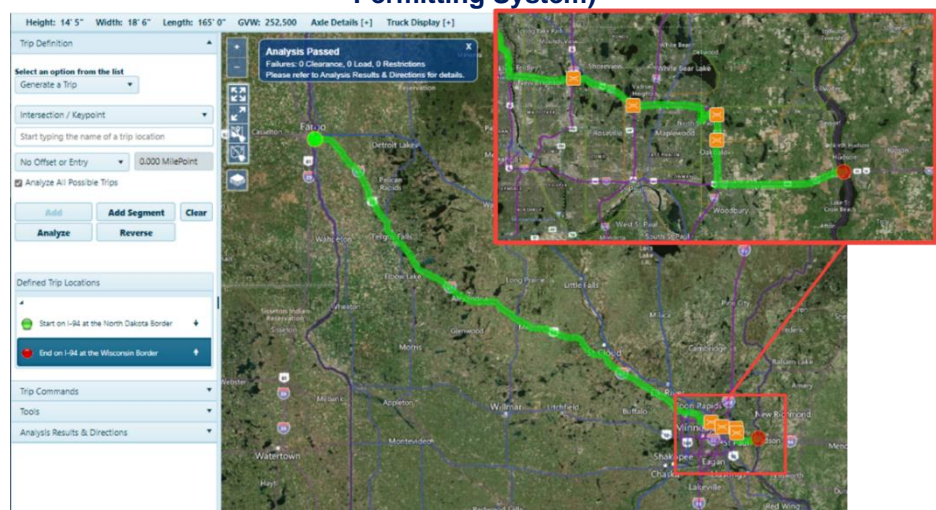
You must correct the following error(s) before proceeding:
 • Your permit application exceeds limits for the on-line system. Please verify your axle information for accuracy. If you still get this error, please call the permit office for assistance at 701-328-2621.

Source: NDDOT e-permitting system, 2022. <https://apps.nd.gov/ndhp/epermits/login.htm>.

Minnesota

In Minnesota, the OS/OW dredge boat load might originate on I-94 at the North Dakota border, destined for I-94 at the Wisconsin border. A carrier would input the vehicle’s size and weight information, as well as this route information, into Minnesota’s online permitting system to see if the route clears. As shown in Figure 37, the route analysis passes, with the permitting system routing the load to bypass I-94 around the Twin Cities on I-694 and state routes due to various bridge and height restrictions that limit the travel of this superload along a section of I-94. The only restrictions specify the need to occupy center lanes on four bridges near the Twin Cities.

Figure 37: Dredge Boat OS/OW Load Along I-94 EB (Minnesota Permitting System)



Source: MnDOT e-permitting system, 2023, <https://mn.gotpermits.com/mnpermits/Home/Index#!>.

4.4 US 2

4.4.1 Route Details



Within the NWP focus states, US 2 runs almost 620 miles east-west between the North Dakota-Montana border and the Minnesota-Wisconsin border, connecting Grand Forks and Duluth, while passing through oil fields and agriculture. The Port of Duluth receives significant quantities of wind turbine and tower parts that travel west on US 2 towards Montana. There is also a windmill manufacturer located in Grand Forks, North Dakota. Wind components can be very large, and typically require OS/OW permits to travel.

4.4.2 Example Superload

A superload carrying a wind blade might travel westbound on US 2 from Duluth through North Dakota.²⁹ Figure 38 and Figure 39 detail a real-world OS/OW load that has moved along US 2 carrying a wind blade.

Figure 38: Wind Blade OS/OW Overall Dimensions and Weight

Overall Vehicle Dimensions	
Length	302'
Width	13'7"
Height	16'4"
Gross Weight	169,500
Number of Axles	10

Source: MnDOT, 2022.

Figure 39: Wind Blade OS/OW Axle

Dimensions and Weight

Axle Number	1	2	3	4	5	6	7	8	9	10
Axle weight	16,500	17,000	17,000	17,000	16,000	16,000	16,000	18,000	18,000	18,000
Number of tires	2	4	4	4	4	4	4	4	4	4
Tire size	15"	11"	11"	11"	11"	11"	11"	11"	11"	11"
Axle width	8'	8'	8'	8'	8'6"	8'6"	8'6"	8'6"	8'6"	8'6"
Axle spacing		17'7"	4'7"	4'7"	15'9"	4'7"	4'7"	158'1"	6'0"	6'0"

Source: MnDOT, 2022.



Source: MnDOT e-permitting system, 2022, <https://mn.gotpermits.com/mnpermits/Home/Index#!>.

²⁹ Identified by MnDOT.

4.4.3 Permitting Process

An OS/OW load looking to travel west from the Port of Duluth to the North Dakota-Montana border must obtain a permit to travel in both Minnesota and North Dakota.

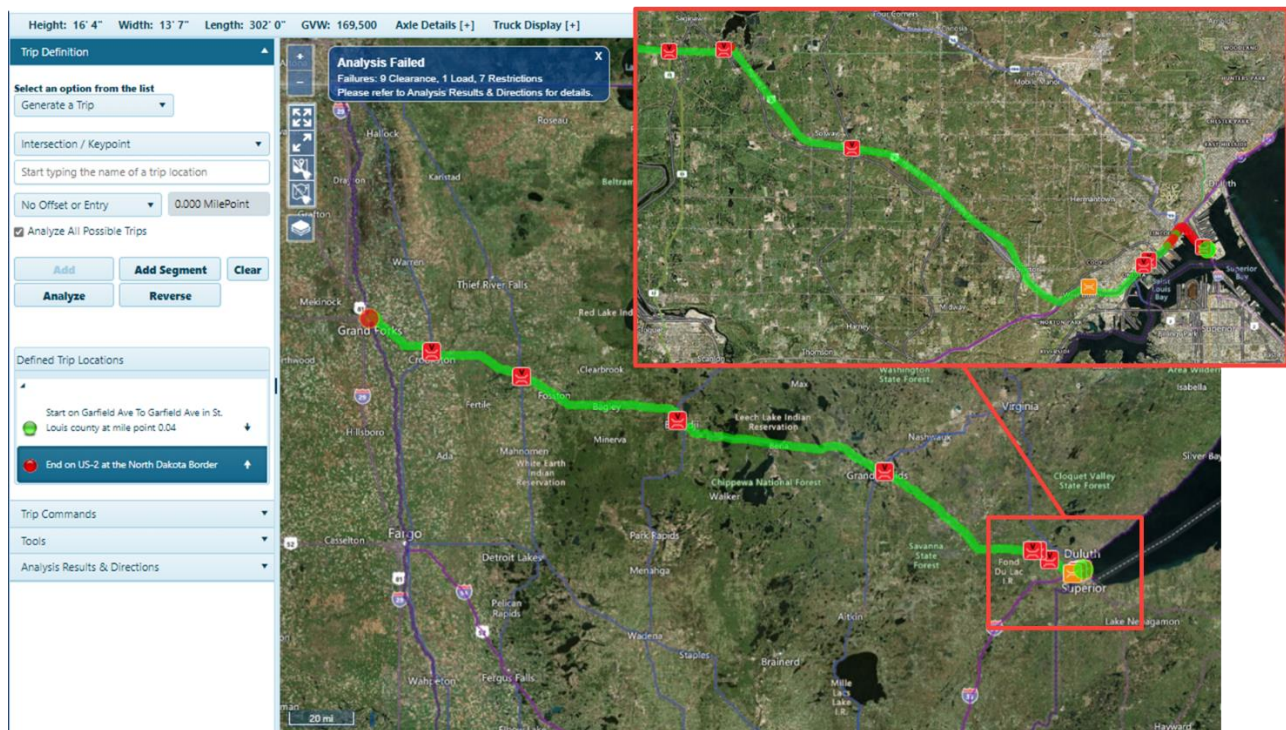
This example superload, carrying a wind blade, faces many restrictions along US 2 westbound, through Minnesota and North Dakota. Notably, this load is uniquely tall, and as a result, it faces numerous height restrictions. In both states, the carrier must submit a permit application to the Minnesota and North Dakota state permitting offices for further assistance to route the superload.

Minnesota

In Minnesota, the OS/OW wind blade might originate at the Port of Duluth (200 Port Terminal Road, Duluth, MN), headed toward the North Dakota border along US 2. A carrier would input the vehicle’s size and weight information, as well as this route information, into Minnesota’s online e-permitting system. The system will perform a route analysis to check if the route clears. As shown in Figure 40, the route analysis fails due to nine clearance failures, one load restriction failure, and six additional restrictions. The permitting system did not automatically identify an alternative route between the identified origin and destination points. As a result, the carrier must either adjust the load, choose alternative start and end points, or submit the permit application to the Minnesota permitting office for further assistance to route and permit the load.

Minnesota permitting officials note that US 2 serves permit loads well up to 16’ H, but taller loads – such as this OS/OW wind blade load – require the use of alternative or secondary roadways, such as State Route 200.

Figure 40: Wind Blade OS/OW Load Along US 2 WB (Minnesota Permitting System)



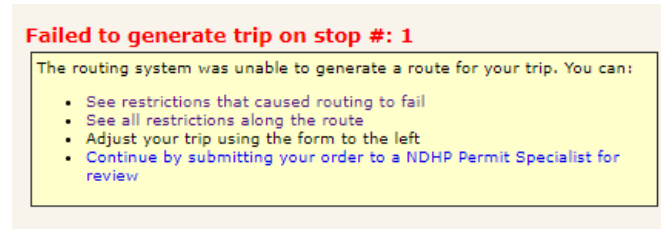
Source: MnDOT e-permitting system, 2023, <https://mn.gotpermits.com/mnpermits/Home/Index#!>.

North Dakota

In North Dakota, the OS/OW wind blade load might originate on US 2 at the Minnesota border, destined for US 2 at the Montana border. A carrier would input the vehicle’s size and weight information, as well as this route information, into North Dakota’s online permitting system for a route analysis. Generally, North Dakota permitting officials note that US 2 serves as a top highway for OS/OW vehicles entering the state from or leaving for Minnesota and Montana, and the corridor is a key route in the state traveled by superloads.

However, as shown in Figure 41, the OS/OW wind blade load failed the route analysis. North Dakota state permitting officials offer insight on the restrictions along US 2 that factor into this. First, the length of the load is 302’, exceeding the maximum length on US 2 of 200’ long. Secondly, the height of the load is 16’4”, and as a result, it faces maximum height restrictions at the intersection of I-29 in Grand Forks (height limit is 16’2” because the bridge is not rampable) and at 16th Street in Minot (height limit is 16’ due to not being rampable). Finally, the vehicle’s GVW exceeds the 250,000-pound auto-issue threshold on North Dakota’s online permitting system.

Figure 41: Wind Blade OS/OW Load Along US 2 WB (North Dakota Permitting System)



Source: NDDOT e-permitting system, 2022, <https://apps.nd.gov/ndhp/epermits/login.htm>.

As a result, the carrier must submit the permit application to the state permitting office for further routing, review, and approval. From there, the state will assess existing restrictions and work with the carrier to route the OS/OW load from its requested origin to its requested destination.

4.5 US 12

4.5.1 Route Details



Within the NWP focus states, US 12 runs almost 600 miles east-west between the North Dakota-Montana border and the Minnesota-Wisconsin border, passing through South Dakota on its way. The route traverses large swaths of agriculture in South Dakota and Minnesota, as well as major construction and manufacturing clusters in the Twin Cities and Aberdeen, South Dakota.

4.5.2 Example Superload

A superload carrying a wind base section might travel westbound on US 12 from the Wisconsin border with Minnesota to the Montana border with North Dakota. Figure 42 and Figure 43 detail a real-world OS/OW load that has moved along US 12 carrying a wind base section.

Figure 42: Wind Base Section OS/OW Overall Dimensions and Weight

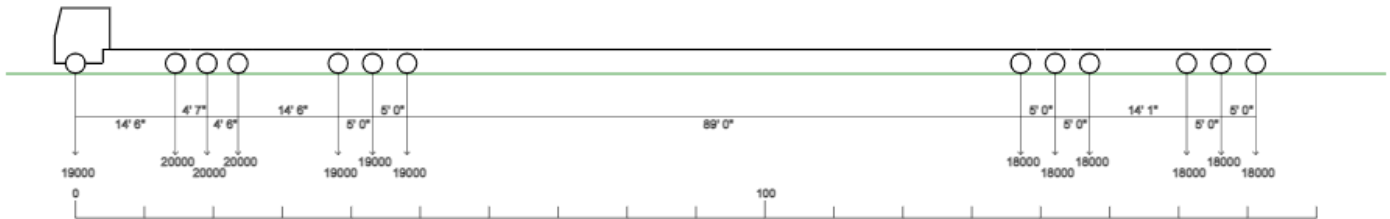
Overall Vehicle Dimensions	
Length	199'
Width	15'0"
Height	15'8"
Gross Weight	244,000
Number of Axles	13

Source: MnDOT, 2023.

Figure 43: Wind Base Section OS/OW Axle Dimensions and Weight

Axle Number	1	2	3	4	5	6	7	8	9	10	11	12	13
Axle weight	19,000	20,000	20,000	20,000	19,000	19,000	19,000	18,000	18,000	18,000	18,000	18,000	18,000
Number of tires	2	4	4	4	4	4	4	4	4	4	4	4	4
Tire size	16"	11"	11"	11"	11"	11"	11"	11"	11"	11"	11"	11"	11"
Axle width	8'6"	8'6"	8'6"	8'6"	8'6"	8'6"	8'6"	10'0"	10'0"	10'0"	10'0"	10'0"	10'0"
Axle spacing		14'6"	4'7"	4'6"	14'6"	5'0"	5'0"	89'0"	5'0"	5'0"	14'1"	5'0"	5'0"

Source: MnDOT, 2023.



Source: MnDOT e-permitting system, 2023. <https://mn.gotpermits.com/mnpermits/Home/Index#!>.

4.5.3 Permitting Process

An OS/OW load looking to travel westbound from the Minnesota-Wisconsin to the North Dakota-Montana border must obtain a permit to travel in Minnesota, South Dakota, and North Dakota.

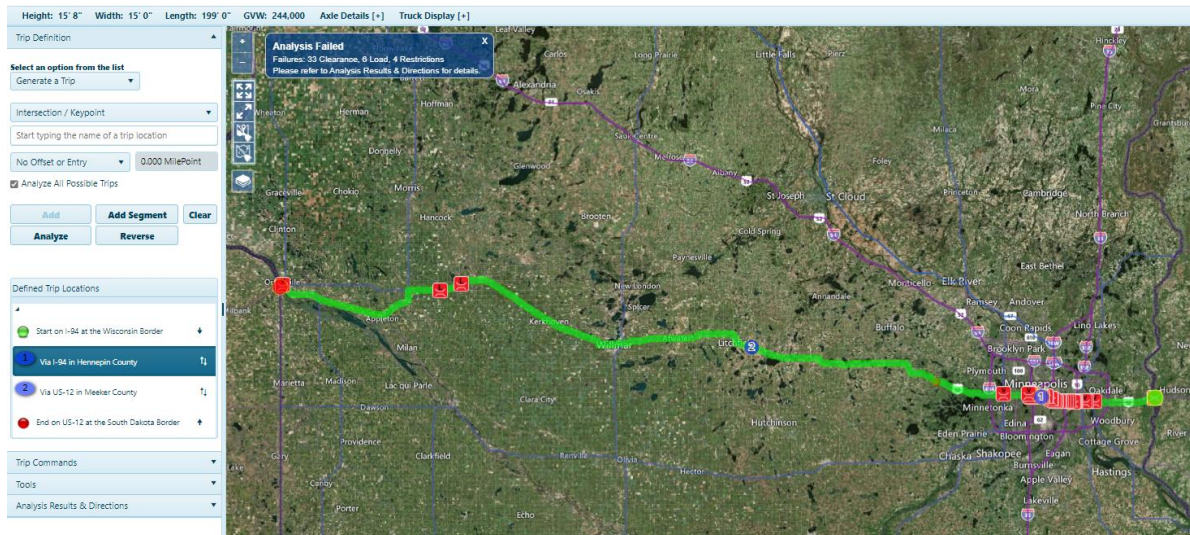
This example superload, carrying a wind base section, fails the routing analysis for a westbound movement along US 12 through Minnesota, South Dakota, and North Dakota. For all three states, the permit application would need to be reviewed by the permitting office for assistance with routing. Although a variety of routing restrictions are present in all three states, a vertical restriction in Minnesota near the South Dakota border poses a notable restriction to routing the superload along US 12 on the entirety of its trip.

Minnesota

In Minnesota, the OS/OW wind base section might originate on US 12 at the Wisconsin border, destined for US 12 at the South Dakota border. A carrier would input the vehicle’s size and weight information, as well as this route information, into Minnesota’s online permitting system to see if the route clears. As shown in Figure 44, when routed entirely along US 12, the route analysis fails. The primary challenge facing the movement of a superload on US 12 is the westernmost vertical restriction in Ortonville near the South Dakota border. The 14’7” vertical clearance limit restricts permissible vehicle heights to just 14’1” (assuming a permitting buffer of 6 inches). A carrier wishing to move this wind base section load would need to send the permit application to the MnDOT permitting office for further routing and permit review.

While sections of US 12 are designated as superload corridors in Minnesota, state permitting officials emphasize that the 14'7" vertical clearance limit on US 12 near the South Dakota border is a major fixed vertical challenge for OS/OW vehicles along the corridor. As a result, alternative roadways, such as US 212 and US 14, must be used by most OS/OW vehicles moving into or out of Minnesota's southwest quadrant.

Figure 44: Wind Base Section OS/OW Load Along US 12 WB (Minnesota Permitting System)



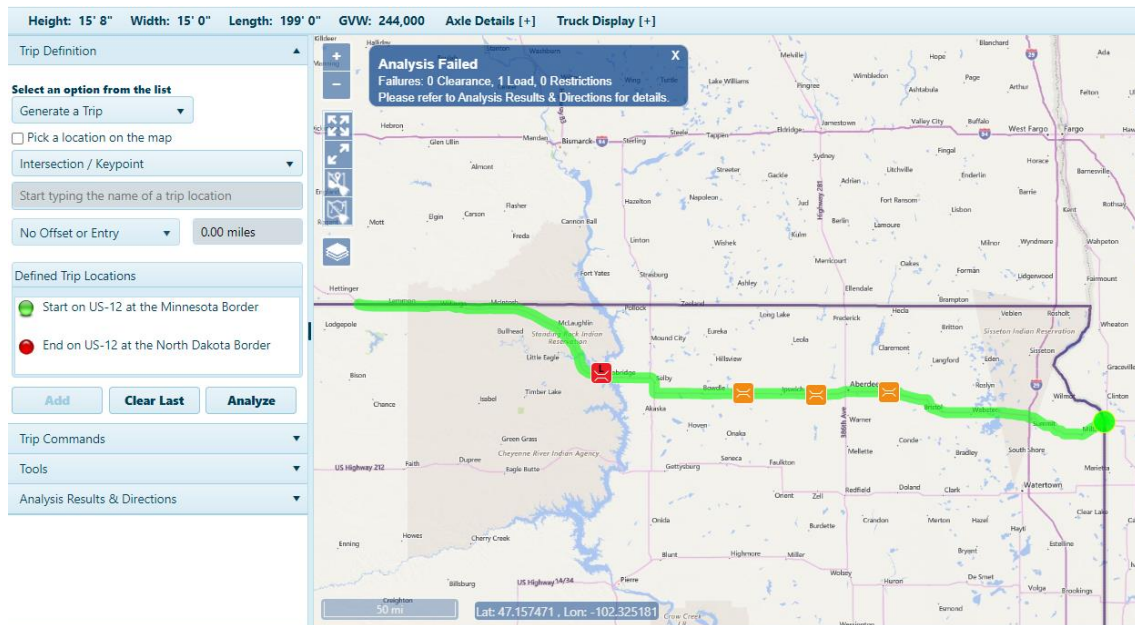
Source: MnDOT e-permitting system, 2023, <https://mn.gotpermits.com/mnpermits/Home/Index#!>.

South Dakota

In South Dakota, the OS/OW vehicle would pick up where it left off at the Minnesota border and continue west to the North Dakota border. A carrier would input the vehicle's size and weight information, as well as this route information, into South Dakota's online e-permitting system. Using this information, the e-permitting system performs a route analysis to check if the route clears. As shown in Figure 45, the route analysis fails due to four restrictions. As a result, the carrier must either adjust the load, choose alternative start and end points, or submit the permit application to the South Dakota permitting office for further assistance.

South Dakota permitting officials note that the load failure over Lake Oahe (shown on the map in red) would require additional review by the South Dakota Office of Bridge Design. If permitted, the vehicle would also have to reduce its travel speed to 5 mph and travel down the centerline over three additional bridges (shown on the map in orange). Additionally, the superload would need front and rear escorts along the entire route due to the vehicle's length.

Figure 45: Wind Base Section OS/OW Load Along US 12 WB (South Dakota Permitting System)



Source: SDDOT e-permitting system, 2023, <https://sdaps.sd.gov/sdaps#!>.

North Dakota

In North Dakota, the OS/OW wind base section might originate on US 12 at the South Dakota border, destined for US 12 at the Montana border. A carrier would input the vehicle’s size and weight information, as well as this route information, into North Dakota’s online permitting system for a route analysis.

North Dakota permitting officials note that vehicles of up to 200k GVW are approved to travel on US 12. However, as shown in Figure 46, the OS/OW wind base section load exceeds this weight limit and fails the route analysis. As a result, the carrier must submit the permit application to the state permitting office for further routing, review, and approval. From there, the state will assess existing restrictions and work with the carrier to route the OS/OW load from its requested origin to its requested destination.

Figure 46: Wind Base Section OS/OW Load Along US 12 WB (North Dakota Permitting System)



Source: NDDOT e-permitting system, 2022, <https://apps.nd.gov/ndhp/epermits/login.htm>.

4.6 US 85

4.6.1 Route Details



Within the NWP focus states, US 85 runs almost 670 miles north-south from the North Dakota-Saskatchewan border to the Wyoming-Colorado border, passing through South Dakota on its way. The route travels through major oil fields, Black Hills National Forest, and connects Williston, ND, and Cheyenne, WY. US 85 is also used for wind blade moves.

4.6.2 Example Superload

A superload carrying a coil tubing unit for use in the oil fields of northwest North Dakota might travel north on US 85 from Wyoming, through South Dakota, and into North Dakota.³⁰ Figure 47 and Figure 48 detail a real-world OS/OW load that has moved along US 85 carrying a coil tubing unit.

Figure 47: Coil Tubing Unit OS/OW Overall Dimensions and Weight

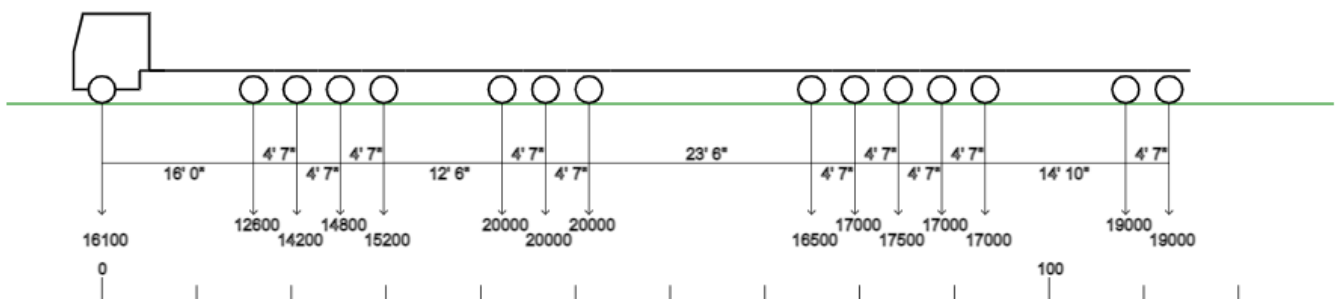
Overall Vehicle Dimensions	
Length	120'0"
Width	11'6"
Height	15'4"
Gross Weight	255,900
Number of Axles	15

Source: NDDOT, 2022.

Figure 48: Coil Tubing Unit OS/OW Axle Dimensions and Weight

Axle Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Axle weight	16,100	12,600	14,200	14,800	15,200	20,000	20,000	20,000	16,500	17,000	17,500	17,000	17,000	19,000	19,000
Number of tires	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Tire size	18"	13"	11"	11"	11"	11"	11"	11"	11"	11"	11"	11"	11"	11"	11"
Axle width	8'6"	8'6"	8'6"	8'6"	8'6"	11'0"	11'0"	11'0"	11'0"	11'0"	11'0"	11'0"	11'0"	11'0"	11'0"
Axle spacing		16'0"	4'7"	4'7"	4'7"	12'6"	4'7"	4'7"	23'6"	4'7"	4'7"	4'7"	4'7"	14'10"	4'7"

Source: NDDOT, 2022.



Source: MnDOT e-permitting system, 2022, <https://mn.gotpermits.com/mnpermits/Home/Index#!>.

³⁰ Identified by NDDOT.

4.6.3 Permitting Process

An OS/OW load looking to travel north from Wyoming to North Dakota must obtain a permit to travel in Wyoming, South Dakota, and North Dakota.

This example superload, carrying a coil tubing unit, faces many restrictions along US 85 northbound, through South Dakota and North Dakota. In both states, the carrier must submit a permit application to the South Dakota and North Dakota state permitting offices for further assistance to route the superload. Restrictions on OS/OW travel in South Dakota's Black Hills area near the Wyoming border prevent routing the superload on US 85 from Wyoming into South Dakota. For Wyoming, the applicant must contact the permitting office to submit an OS/OW permit application for review, as the state currently does not have an e-permitting system.

Wyoming

Because Wyoming does not currently offer an e-permitting system, to travel in this state, the carrier must contact the permitting office in order to travel. This coil tubing unit load is considered a superload in Wyoming, meaning a written permit application is required. The permitting office will issue an initial clearance to a nearby permitting location, where a more thorough review of the vehicle and a route analysis are performed before issuing a final permit to travel through the rest of the state.

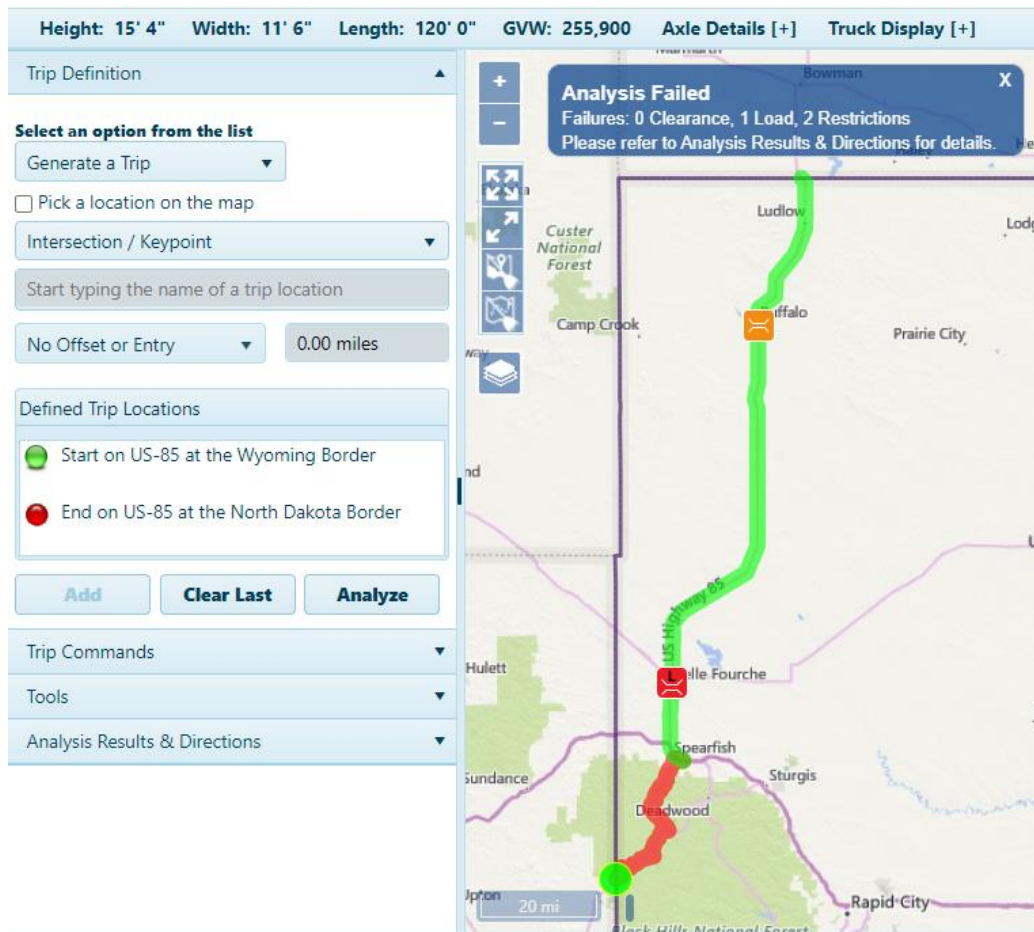
South Dakota

In South Dakota, the coil tubing unit load would originate on US 85 at the border with Wyoming and head for the border with North Dakota. A carrier would input the vehicle's size and weight information, as well as this route information, into South Dakota's online e-permitting system. The system uses this information to perform a route analysis to check if the route clears. As shown in Figure 49, the route analysis fails due to three restrictions. As a result, the carrier must either adjust the load, choose alternative start and end points, or submit the permit application to the South Dakota permitting office for further assistance.

South Dakota permitting officials note that OS/OW vehicles are not allowed to travel on roads within the Black Hills area (located south of I-90, west of State Route 79, and north of US 18), unless it is for a drop-off within the area. Since there is a section of US 85 in this area, the superload would need to be routed around this area to travel north. To bypass this area, an OS/OW load traveling from Wyoming to US 85 in North Dakota would typically use I-90 to enter South Dakota, and then connect to US 85 in Spearfish.

Additionally, a load failure across the Belle Fourche River Bridge (shown on the map in red) would require review by the South Dakota Office of Bridge Design. If permitted to travel on US 85 north of I-90, the vehicle would also have to reduce its travel speed to 5 mph and travel down the centerline over an additional two bridges (shown on the map in orange). Further, the superload would need front and rear escorts along the entire route due to the vehicle's length.

Figure 49: Coil Tubing Unit OS/OW Load Along US 85 NB (South Dakota Permitting System)



Source: SDDOT e-permitting system, 2022, <https://sdaps.sd.gov/sdaps#!>.

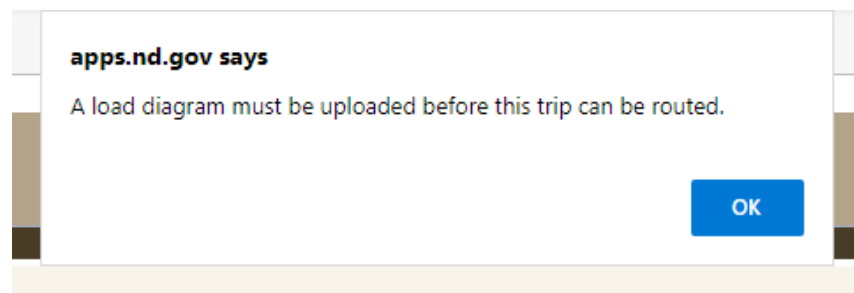
North Dakota

In North Dakota, the OS/OW coil tubing unit might originate on US 85 at the South Dakota border and travel north on US 85 toward the Canadian border. A carrier would input the vehicle's size and weight information into North Dakota's online permitting system.

North Dakota permitting officials note that US 12 is suited for heavier loads, with approval for vehicles of up to 250k GVW. However, the OS/OW coil tubing unit load exceeds this. As a result, a permit for the load cannot be auto-issued, and the applicant must submit a load diagram (as shown in Figure 50), that will inform a more detailed bridge analysis.

Upon submission of the application to the North Dakota permitting office for further review, the state will assess existing restrictions and work with the carrier to route the OS/OW load from its requested origin to its requested destination.

Figure 50: Coil Tubing Unit OS/OW Load Along US 85 NB (North Dakota)



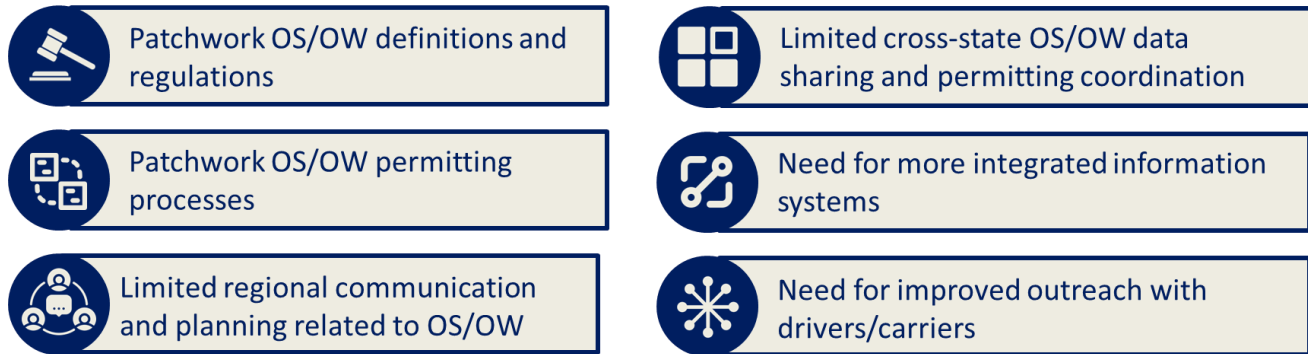
Source: NDDOT e-permitting system, 2022, <https://apps.nd.gov/ndhp/epermits/login.htm>.

5 Needs, Issues, and Opportunities

5.1 Introduction

A review of NWP focus state OS/OW regulations and permitting processes, in addition to consultations with public and private stakeholders, informed the identification of the top OS/OW needs and issues contributing to inefficiencies in cross-state movements across the NWP region (Figure 51).

Figure 51: NWP OS/OW Needs and Issues



By understanding and addressing cross-border OS/OW needs and issues, state DOTs can further promote economic efficiency, mobility, safety, and asset preservation within states and across the region. Advancing the identified opportunities can also enable states to better allocate available financial and staffing resources.

More harmonized and efficient permitting processes make it easier for businesses to do work in the region. It also reduces cases where OS/OW loads approach a location where they cannot travel due to restrictions, which can pose safety risks to OS/OW loads, surrounding traffic, and infrastructure. There is also the potential to reduce the need for trucks to stop and park, and either adjust their load or amend their permit in order to continue travel into another state. With more harmonized regulations and processes, as well as a reduction in issue cases at state borders, states can focus their resources on routing the largest and most complex movements.

Meanwhile, improved coordination can enable states to appropriately route OS/OW movements within their state by directing OS/OW movements along corridors better suited to handle these larger and heavier vehicles. Sharing information can also provide states with improved visibility into where OS/OW loads originate and where they are destined.

The following section further details the needs and issues, along with associated opportunities, related to OS/OW movements in the NWP. These were informed by input from state DOTs, enforcement, and industry, and further supported by a best practices literature review.

5.2 Needs, Issues, and Opportunities

1. Patchwork OS/OW definitions and regulations



The patchwork of OS/OW definitions and regulations among NWP states forces industry to understand and abide by varying sets of definitions and regulations in order to legally move OS/OW loads across state borders. As detailed in Section 3.2, this includes differences in legal limits on non-Interstates and the definition of superloads. Industry identifies differences in laws from state to state as one of the top challenges for cross-state OS/OW movements.

At times, vehicles may take detours to avoid “barrier states” with more restrictive regulations, increasing the cost and time of a trip. A cost analysis study led by the American Transportation Research Institute (ATRI) and the Specialized Carriers and Rigging Foundation revealed a 45 to 82 percent increase in transportation costs, per move, to move OS/OW permitted loads through and/or around barrier states.³¹ This patchwork creates challenges not only for industry trying to navigate varying regulations but also for different agencies both across states (e.g., when a shared infrastructure asset has different requirements) and across agencies within the same state (e.g., varied interpretation of the divisible/non-divisible load definition for permitting and enforcement).

Opportunities

NWP states may consider the following opportunities to better harmonize OS/OW definitions and regulations across the region.

- Establish regional standards for the interpretation of the federal divisible/non-divisible distinction.
- Develop regional superload definition and map.
- Develop an NWP OS/OW resources webpage to serve as a one-stop shop for regional OS/OW definitions and regulations.
- Engage in discussions with neighbor states related to state asset management approaches.
- Consider opportunities to modify OS/OW regulations to align with neighboring states, beginning with adopting the most conservative restrictions for shared, cross-border infrastructure (e.g., Red River Bridge on US 2 between Minnesota and North Dakota).

2. Patchwork OS/OW permitting processes



There also exists a patchwork of permitting processes among NWP states, as discussed in Section 3.3. These include differences in permitting systems, auto-issue thresholds, length of permit validity, cost, legal time of travel, and special permits. Other requirements (e.g., banners, flags, warning lights, etc.) associated with the legal movement of OS/OW movements also vary across states. Similar to the patchwork of OS/OW definitions, the differences in OS/OW permitting processes across states create challenges for carriers, which must interface with different types of permitting systems and compile a range of information to complete permit applications in each state. The variation in timelines between application and permit, as well as differences in the duration of a permit’s validity, also makes it challenging for industry to plan cross-state OS/OW movements and may lead to cases of a permit expiring in one state while still waiting to obtain a permit in another state.

³¹ SC&RA, UPT 2021, OS/OW Permit Harmonization Initiative, https://www.scranet.org/SCRADocs/2020_Documents/UPT2021-STS-12-11-19.pdf

Opportunities

NWP states may consider the following opportunities to better harmonize OS/OW permitting processes across the region.

- Adopt standard auto-issue thresholds across the region, such as those recommended by **SC&RA’s Permit Harmonization Initiative (UPT 2021)**.³²
- Standardize permit requirements in line with **AASHTO SCOHT Phase I and Phase II permit harmonization recommendations**.
- Standardize the appearance and design of physical permit documents, as recommended in AASHTO’s 2020 Permit Data Harmonization: Best Practices report.³³
- Develop an NWP OS/OW permitting resources webpage to serve as a one-stop shop with links to and instructions for all NWP state permitting systems.
- Standardize the availability of and regulations associated with the most common special permits.
- Coordinate with other states and industry to assess the opportunity to develop a program that integrates all state permitting systems into one system.

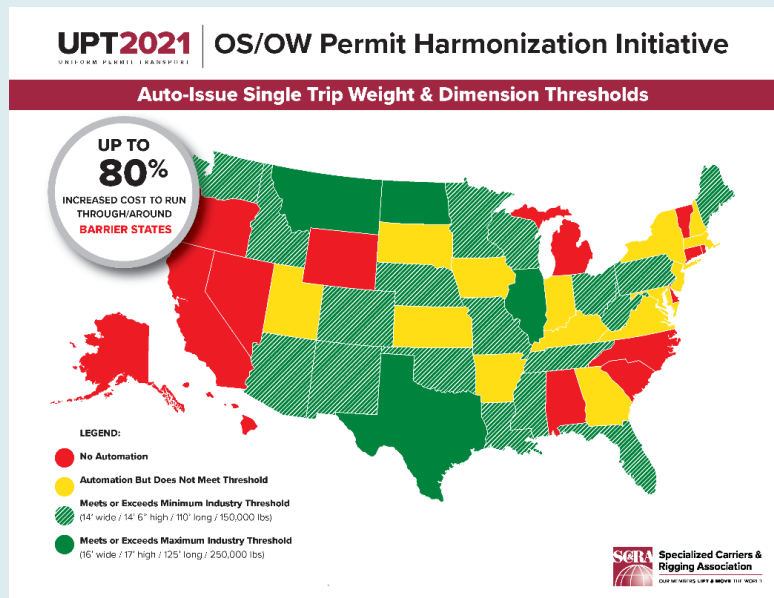
SC&RA OS/OW Permit Harmonization Initiative

SC&RA has recommended standard auto-issue thresholds in an effort to harmonize national permitting processes, improve the efficiency of freight movement, and reduce unnecessary costs and hassle for carriers. The association recently launched its Uniform Permit Transport 2021 (UPT 2021) initiative, which advocated for minimum auto-issue thresholds.

As shown in Figure 52, when UPT 2021 launched, fewer than half of states nationwide met the recommended minimum auto-issue thresholds. Among NWP states, five (Washington, Idaho, Montana, North Dakota, and Minnesota) meet or exceed minimum industry thresholds. South Dakota provides automation but does not meet the SC&RA recommended minimum threshold. Meanwhile, Wyoming does not provide automation for permitting.

However, as part of its transition to an automated permitting system, the state expects to auto-issue loads that would exceed SC&RA’s recommended minimum auto-issue thresholds.

Figure 52: UPT 2021 Auto-Issue Across States



Source: SC&RA, 2018, https://permit.scranet.org/SCRADocs/2020_Documents/UPT2021-STS-12-11-19.pdf

³² SC&RA, 2018, https://permit.scranet.org/SCRADocs/2020_Documents/UPT2021-STS-12-11-19.pdf

³³ AASHTO Committee for Transportation Systems Management and Operations (CTSTO) Freight Operations Working Group, “Permit Data Harmonization: Best Practices,” 2020, <https://systemoperations.transportation.org/wp-content/uploads/sites/22/2020/11/Permit-Data-Harmonization-Report-FINAL.pdf>.

AASHTO Permit Harmonization Effort

The American Association of State Highway Transport Officials (AASHTO) recognizes that patchwork OS/OW regulations and permitting affect the efficiency of freight. Through its Subcommittee on Highway Transport (SCOHT), AASHTO undertook an OS/OW permit harmonization effort, which began with Phase I recommendations targeting standards for the simplest and least controversial permit requirements like escorts, warning lights, and banners. Phase II focused on advancing more complex regulations, including the duration of permit validity, permit amendments, holiday restrictions, and the type and size of escort vehicles.³⁴ The third phase is ongoing and proposes minimum thresholds for auto-issued permits, permit coordination, nighttime permit travel, and multi-state OS/OW corridors.³⁵

Despite these efforts, an evaluation conducted by the Specialized Carriers & Rigging Association (SC&RA) reports that only about half of states have adopted Phase I and Phase II recommendations.³⁶ **Appendix C** outlines the recommended Phase I and Phase II harmonization policies for Phases I and II and presents a checklist on which NWP states have adopted these recommendations, based on a 2021 evaluation.

At the time of the evaluation, among participating NWP states, only Montana had adhered to all Phase I and Phase II recommendations. Wyoming was in alignment with only two of the six Phase I recommendations. Across all recommendations, all participating NWP states meet AASHTO’s recommended days and hours of operation (daylight hours Monday through Saturday), permit amendments (extensions allowed for weather and breakdowns), holiday restrictions (restriction begins at noon the day before a holiday and runs until sunrise the day after the holiday, for select holidays), and height escorts (front escort with a pole if height exceeds 14’6”).

3. Limited regional communication and planning related to OS/OW.



Currently, there exists minimal OS/OW communication and planning among NWP states. Communication related to OS/OW movements typically occurs on a case-by-case basis between neighboring states, rather than on a regular schedule or at a regional level. This is a missed opportunity for NWP states to enhance the efficiency of cross-state OS/OW movements both regionally and within each state.

Opportunities

NWP states may consider the following opportunities to improve regional OS/OW communication and planning.

- Maintain an online resource with **contact information** for each NWP state’s primary permitting contact.
- Establish a forum of communication for state permitting offices, such as regular meetings, which enable states to share information and updates related to OS/OW movements (e.g., new restrictions, system updates, and changes in regulations).
- Develop a **regional emergency plan or agreement** for special OS/OW allowances in preparation for emergency incidents.
- Develop regional performance measures (e.g., number of permits issued, average turnaround time, revenue generated, volume by route, commodity carried, etc.) to evaluate OS/OW permitting processes.
- Use regional OS/OW routing data to identify and plan for regional OS/OW corridors.

³⁴ AASHTO, Oversize/Overweight Permit Harmonization, accessed 2023, <https://systemoperations.transportation.org/oversize-overweight-permit-harmonization/>

³⁵ Specialized Carriers & Rigging Association (SC&RA), AASHTO Harmonization – Oversize Permit Movement, accessed 2023, https://www.scranet.org/SCRADocs/2020_Documents/AASHTO%20Harmonization%20Resources.pdf

³⁶ SC&RA, Phone Consultation, November 16, 2022.

In the NWP: Permitting Contact Information

Sometimes even very simple information can make a large difference in facilitating safe and efficient OS/OW travel across state borders. NWP focus states emphasized the importance of maintaining up-to-date contact information for the permitting offices of nearby states. This enables permitting officials to contact their peers in other states, facilitating interstate collaboration and information sharing. For instance, contact information for permitting officials in Minnesota, North Dakota, South Dakota, and Wyoming was shared as part of this assessment's first roundtable meeting. By the second roundtable meeting, the states noted they had already made use of this information.

Regional Emergency Agreement: MAASTO EDL Strategy

In the case of disruptions or disasters, it is critical to move emergency supplies in a quick and coordinated fashion. In response to the coronavirus pandemic in 2020, FHWA provided states with the authority to adjust truck weight permitting, although Congress has not yet provided this authority to states on the Interstate system during national emergencies or major disasters.³⁷ In 2022, the Mid America Association of State Transportation Officials (MAASTO) announced the first regional strategy in the US focused on facilitating the movement of goods after a major disaster.³⁸ The MAASTO Emergency Divisible Load (EDL) Strategy, adopted by Illinois, Indiana, Iowa, Kansas, Minnesota, Michigan, Missouri, Ohio, and Wisconsin, increases legal emergency interstate truck weights from 80,000 pounds to 88,000 pounds after the declaration of a major disaster, including a maximum 10 percent increase per axle. This increased legal weight during emergencies serves as a regional minimum, with individual states able to allow heavier loads.³⁹

4. Limited cross-state OS/OW data sharing and permitting coordination.



Permit coordination between states is currently driven by ad hoc communication between state permitting agencies on a case-by-case basis. For instance, a permitting agency might communicate a new OS/OW restriction near the border with the associated neighboring state. However, there is no formal mechanism for cross-state information sharing in these cases, and this communication often does not occur until after an issue arises (e.g., when a

OS/OW vehicle is not able to cross into a neighboring state due to a newfound restriction).

In addition, the data that feeds into states' e-permitting systems is often limited to restrictions within state borders. In other words, the system is blind to restrictions just outside the state border unless a manual change is made by the state's permitting office if and when it is informed by the neighboring state's permitting office. On occasion, permitting requirements on shared infrastructure may differ across two states; this has been known to occur on bridges spanning North Dakota and Minnesota over the Red River. Additionally, some states do not have an easily accessible geocoded database of restriction information. Often, this information may be suited only for the state's e-permitting system or else in a PDF or other static format. This can make it difficult for states to share and integrate restriction information on a system-wide basis.

When states are unaware of conditions or restrictions across the border, OS/OW vehicles may be permitted to travel along a corridor in one state but face restrictions that make it unable to cross into another state along the same corridor. This often occurs when new restrictions arise due to construction or roadway incidents that states have not properly identified or communicated with their neighbors. As a result, OS/OW vehicles may be forced to stop and park to adjust their load or route, and/or amend their

³⁷ AASHTO Journal, FHWA Grants States Broad Emergency Truck Weight Permitting, 2020, <https://aashtojournal.org/2020/04/10/fhwa-grants-states-broad-emergency-truck-weight-permitting/>

³⁸ Iowa DOT, MAASTO expands truck weights to speed disaster relief, 2022, <https://www.news.iowadot.gov/newsandinfo/2022/01/maasto-expands-truck-weights-to-speed-disaster-relief-iowa-proactively-agrees-to-regional-emergency-.html>

³⁹ AASHTO Journal, MAASTO Members Craft Emergency Truck Weight Rules, 2022, <https://aashtojournal.org/2022/01/28/maasto-members-craft-emergency-truck-weight-rules/>

permit to legally reach their destination. This creates additional work for state permitting offices and enforcement. The occurrence of OS/OW loads approaching locations where they cannot travel may also pose increased safety risks for the load, surrounding traffic, and infrastructure.

Opportunities

NWP states may consider the following opportunities to improve cross-state OS/OW data sharing and permitting coordination.

- **Notify neighboring states** about OS/OW restrictions.
- Work with GIS personnel and e-permitting partners to develop an easily accessible geocoded database of OS/OW restrictions. Ideally, this database should be updated regularly.
- Consider multi-state data sharing agreements to share data on major fixed restrictions and temporary travel restrictions with neighbors.
- Incorporate data on major fixed restrictions and temporary travel restrictions in neighboring states, into state permitting systems and decisions – this may include developing a buffer around the state that displays this information for permitting system users as well.

In the NWP: Notifying Neighboring States of OS/OW Restrictions

Several NWP states are in the practice of notifying their counterparts in neighboring states about OS/OW restrictions, notably for new restrictions near the state border. During roundtable meetings and consultations held as part of this assessment, permitting officials in North Dakota and Minnesota noted that they frequently communicate with one another to not only provide information about temporary restrictions near the border but also to convey information about select routes that may be better or worse suited for OS/OW vehicles and to inform OS/OW routing for vehicles entering or leaving the state. South Dakota permitting officials also shared an example of this coordination when the state was working to re-pave I-29 near the state's northern border with North Dakota. The states worked together, with South Dakota providing notifications about the construction and associated restrictions, and North Dakota making sure not to issue permits that directed vehicles on I-29 to the South Dakota border.

5. Need for more integrated information systems.



Many NWP states recognize the benefits of integrated information systems, with permitting systems either currently integrated (North Dakota, Minnesota) or planned to be integrated (South Dakota, Wyoming) with the state's traveler information, or 511, system. More integrated 511 and e-permitting systems within states are critical building blocks for states to share this type of information regionally.

When relevant 511 information is not automatically integrated into e-permitting systems, it is challenging for states to update OS/OW permitting restrictions and notify carriers of new changes or routing. While information about construction and road closures is often updated in e-permitting systems, information about more dynamic incidents, such as weather, is more difficult to maintain and update. However, integrating the full range of information that could impact OS/OW movements is important to enhance the safety and efficiency of this travel.

Opportunities

NWP states may consider the following opportunities to better integrate commercial motor vehicle traveler information with OS/OW permitting systems.

- Integrate 511 system with permitting system so that information input into 511 directly updates in the permitting system.

- Push relevant updates to permit holders automatically when they impact routing for upcoming OS/OW movements.

NWP Commercial Motor Vehicle Traveler Information Assessment

The NWP Freight Task Force completed a Commercial Motor Vehicle (CMV) Traveler Information Assessment in 2021 to identify freight-related information needs and issues, as well as to propose opportunities for improved information sharing across borders. As documented in the assessment, every state in the NWP incorporates weather, road conditions, road incidents, and road construction into their 511 systems. Opportunities identified for state consideration include the implementation of multi-state coordination approaches, such as sharing temporary permit restrictions and emergency size and weight permissions with neighbors.⁴⁰ The integration of existing 511 system information into state permitting systems, not only within states but across the region, could serve as an opportunity to improve general truck movements across the region, as well as OS/OW movements.

6. Need for improved outreach with drivers and carriers.



Continued outreach with the private sector is critical, as drivers and carriers offer valuable insight to help states understand how best to serve OS/OW vehicles moving through the region. Drivers and carriers can provide insight into the evolving needs and issues for cross-state OS/OW movements, as well as the most effective regional opportunities for state agencies to explore further.

MnDOT noted a desire for more carrier feedback regarding OS/OW needs and issues. While some discussions related to OS/OW may be happening through other forums, such as through state Freight Advisory Committees (FACs), MnDOT felt more information sharing was needed, especially between relevant permitting offices and industry.

Agencies and industry both voiced that communication and collaboration occurs when issues arise. However, there may be an opportunity for more proactive communication to improve cross-state OS/OW movements *before* issues arise, likely through ongoing engagement with drivers and carriers.

Opportunities

NWP states may consider the following opportunities to improve outreach with drivers and carriers.

- Provide a forum for communication, such as through regular meetings, for drivers/carriers to share industry needs and provide suggestions related to cross-state OS/OW improvements.
- Maintain an online resource with contact information for each NWP state's primary permitting contact.
- Conduct industry outreach to assess interest in OS/OW training.

⁴⁰ North/West Passage, North/West Passage Commercial Motor Vehicle Traveler Information Assessment, 2021, <https://www.nwpassage.info/projects/downloads/15-4-cmv-traveler-information-assessment.pdf>.

6 Future of Cross-Border OS/OW Movements in the NWP

This assessment documents the range of OS/OW regulations and permitting processes that exists between NWP member states and identifies key needs to improve the efficiency of OS/OW movements across the region. In addition to improving the efficiency of goods movement for industry, addressing issues related to cross-border OS/OW movements offers states the potential to improve economic competitiveness, safety, infrastructure and asset management, and resource allocation.

Currently, OS/OW vehicles support a variety of key freight-reliant industries in the NWP. Several industry trends – such as those related to wind energy and vehicle electrification – have the potential to increase the demand for OS/OW travel moving forward. OS/OW travel demand to support the construction industry might also increase due to factors such as expanded funding for transportation and infrastructure projects under the Bipartisan Infrastructure Law (BIL) and growing demand for manufactured homes. This highlights the growing importance of efficient cross-state OS/OW movements.

Vehicle Electrification

The weight of electric vehicle (EV) batteries creates challenges for goods movement. Due to the heavy weight of EV batteries, EVs weigh much more than the equivalent internal combustion engine (ICE) vehicle. For example, the electric Ford F-150 Lightning weighs 1,600 pounds more than the equivalent ICE F-150. This impacts two types of movements: (1) carriers moving passenger EVs; and (2) potential medium- and heavy-duty EVs.

Carriers moving cars are encouraging the federal government to permit higher weight limits on US highways so that EVs can be moved by commercial trucks in the same numbers as ICE vehicles. The American Trucking Association (ATA) has called for a 10 percent increase in the federal legal weight limit, from 80,000 to 88,000 pounds. The result of this debate will have implications for the economic efficiency of car hauling operations, the safety of roadways, and the condition of pavement across the country.

However, the debate also hints at another issue coming down the pipeline – the increase in tractor weights, if hybrid-electric or fully electric trucks are adopted in growing numbers. Given current battery technologies, the weight of medium- and heavy-duty EVs will be quite heavy. This reduces the payloads of trucks meeting current legal size and weight requirements. Currently, federal regulations offer a 2,000-pound exception for electric trucks, meaning their legal weight limit is increased from the standard 80,000 pounds to 82,000. However, existing battery weights for passenger vehicles near and exceed 2,000 – the F-150 Lightning’s battery weighs 1,800 pounds, and the Hummer EV’s battery clocks in at over 2,900 pounds.⁴¹ Electric tractor-trailer batteries weigh even more, sometimes exceeding 10,000 pounds.⁴² Even hydrogen fuel cell trucks would likely weigh more than diesel trucks.⁴³

Figure 53: Car Transporter Carries Electric Vehicles



Source: iStock

⁴¹ Reuters via Yahoo News, As EV sales grow, battle over U.S. road weight limits heats up, 2022, <https://news.yahoo.com/ev-sales-grow-battle-over-132133878.html>; CNN Business, Why electric cars are so much heavier than regular cars, 2021, <https://www.cnn.com/2021/06/07/business/electric-vehicles-weight/index.html>; The Verge, The Hummer EV’s battery weighs more than a Honda Civic, 2022, <https://www.theverge.com/2022/2/16/22937491/hummer-ev-electric-truck-battery-weight-truck-bloat>.

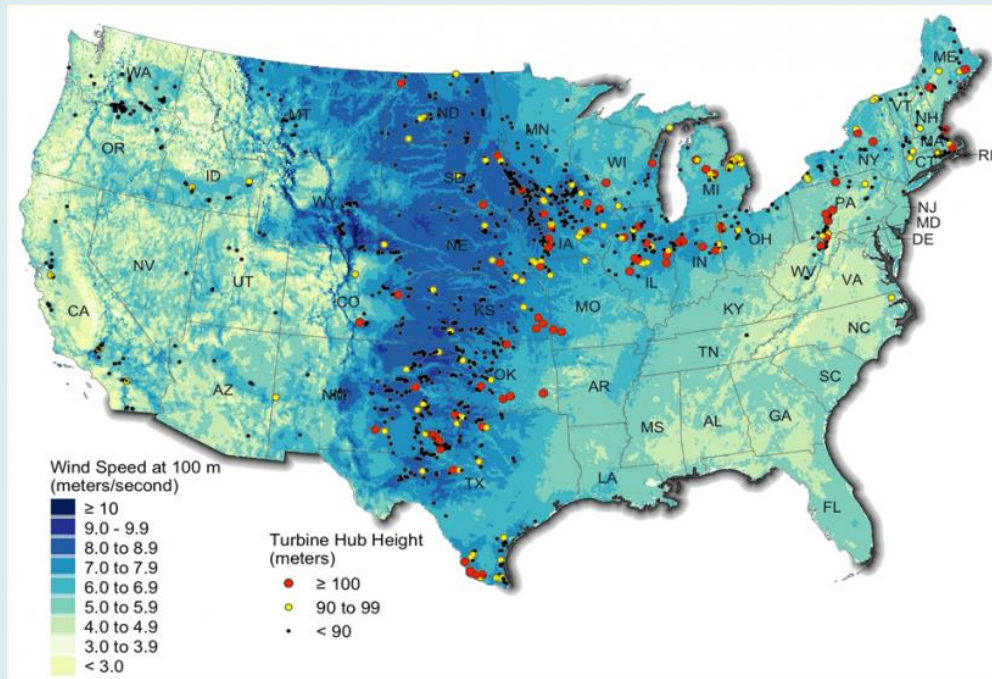
⁴² HDT TruckingInfo, What Fleets Need to Know About Electric-Truck Batteries, 2022, <https://www.truckinginfo.com/10166691/what-fleets-need-to-know-about-electric-truck-batteries>.

⁴³ HDT TruckingInfo, Hydrogen Fuel Cell Trucks: 'It's Complicated', 2020, <https://www.truckinginfo.com/10132960/hydrogen-fuel-cell-trucks-its-complicated>.

OS/OW Movements for Wind Energy

In 2020, new annual wind capacity exceeded 15 Gigawatt (GW) nationally, the highest on record, while representing a sharp increase from close to none in the early 2000s.⁴⁴ Annual capacity additions are expected to remain high. Additionally, due to the economic benefit of installing larger wind towers (larger rotors generate more electricity), the size of wind components has continued to grow in the past decades. In 2006, the average rotor diameter was under 80 meters. Today, it is almost 130 meters.⁴⁵ This growing demand for the movement of ever-larger wind components suggests continued growth in demand for OS/OW permits to move these goods. Moreover, significant swaths of land in the NWP experience above-average wind speeds (Figure 54) that remain untapped, suggesting that wind components will continue to travel throughout the region.⁴⁶

Figure 54: Wind Turbine Locations and Wind Speeds in the US



Source: US Department of Energy, Office of Energy Efficiency & Renewable Energy, Wind Turbines: the Bigger, the Better, 2022, <https://www.energy.gov/eere/articles/wind-turbines-bigger-better>.

Additionally, an increased public agency focus on resiliency and response to disruptions such as public health emergencies, extreme weather events, or cybersecurity incidents, aligns with the need for more efficient and coordinated OS/OW movements. OS/OW loads often carry crucial supplies for emergency response.

This assessment offers a range of opportunities that NWP states can consider to address existing and future needs and issues related to cross-state OS/OW movements. As the NWP and its member states move forward, state DOTs, enforcement agencies, and industry members should work together to assess the value and feasibility of each opportunity identified by this assessment and to advance those efforts with the greatest potential to streamline cross-state OS/OW movements and support the region’s safe and efficient transition into the economy of the future.

⁴⁴ U.S. Department of Energy, Land-Based Wind Market Report: 2021 Edition, 2021, https://www.energy.gov/sites/default/files/2021-08/Land-Based%20Wind%20Market%20Report%202021%20Edition_Full%20Report_FINAL.pdf.

⁴⁵ U.S. Department of Energy, Wind Turbines: The Bigger, the Better, 2022, <https://www.energy.gov/eere/articles/wind-turbines-bigger-better>.

⁴⁶ U.S. Department of Energy, Wind Turbines: The Bigger, the Better, 2022, <https://www.energy.gov/eere/articles/wind-turbines-bigger-better>.

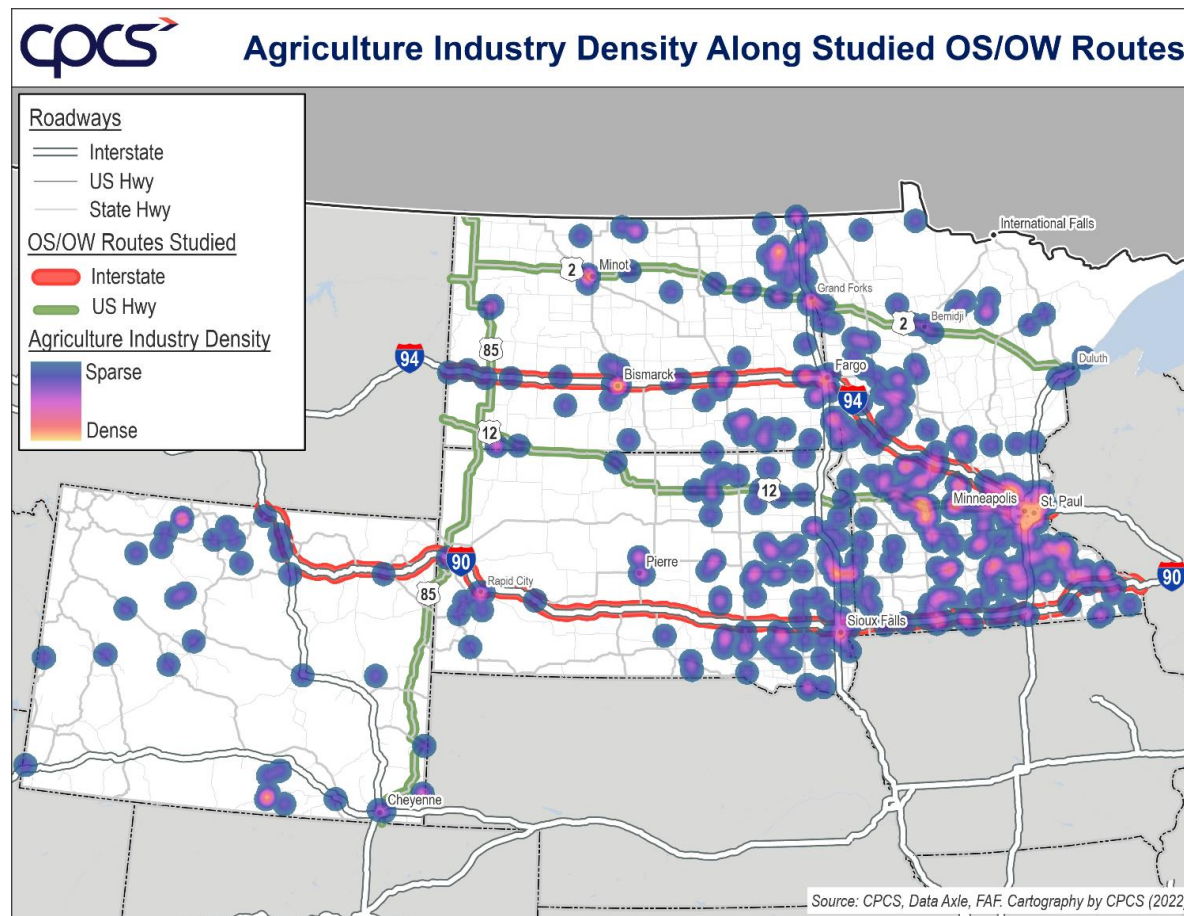
Appendix A Freight-Reliant Industries

This Appendix provides full-size maps that display where freight-reliant industries are concentrated in the study areas.

Agriculture

As shown in Figure 55, agriculture industries are concentrated in the southeastern portion of the study area, especially in eastern South Dakota and Southern Minnesota. Agriculture industries are also clustered along the North Dakota-Minnesota and along I-94 in North Dakota.

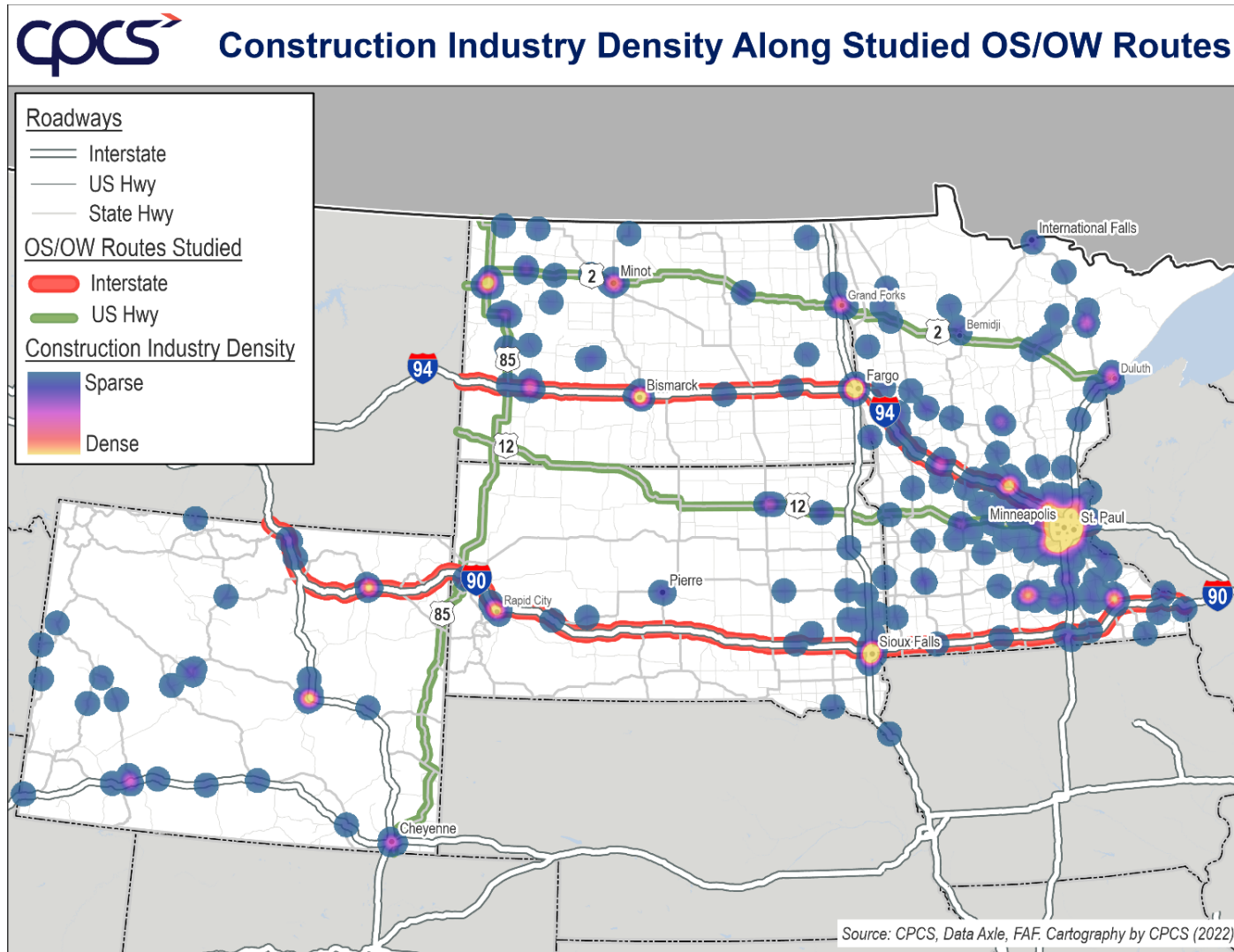
Figure 55: Agriculture Industry Density



Construction

Figure 56 shows the construction industry is concentrated in and around major urban areas, including the Twin Cities, Sioux Falls, Fargo, and Bismarck. There is also a defined cluster in northwest North Dakota.

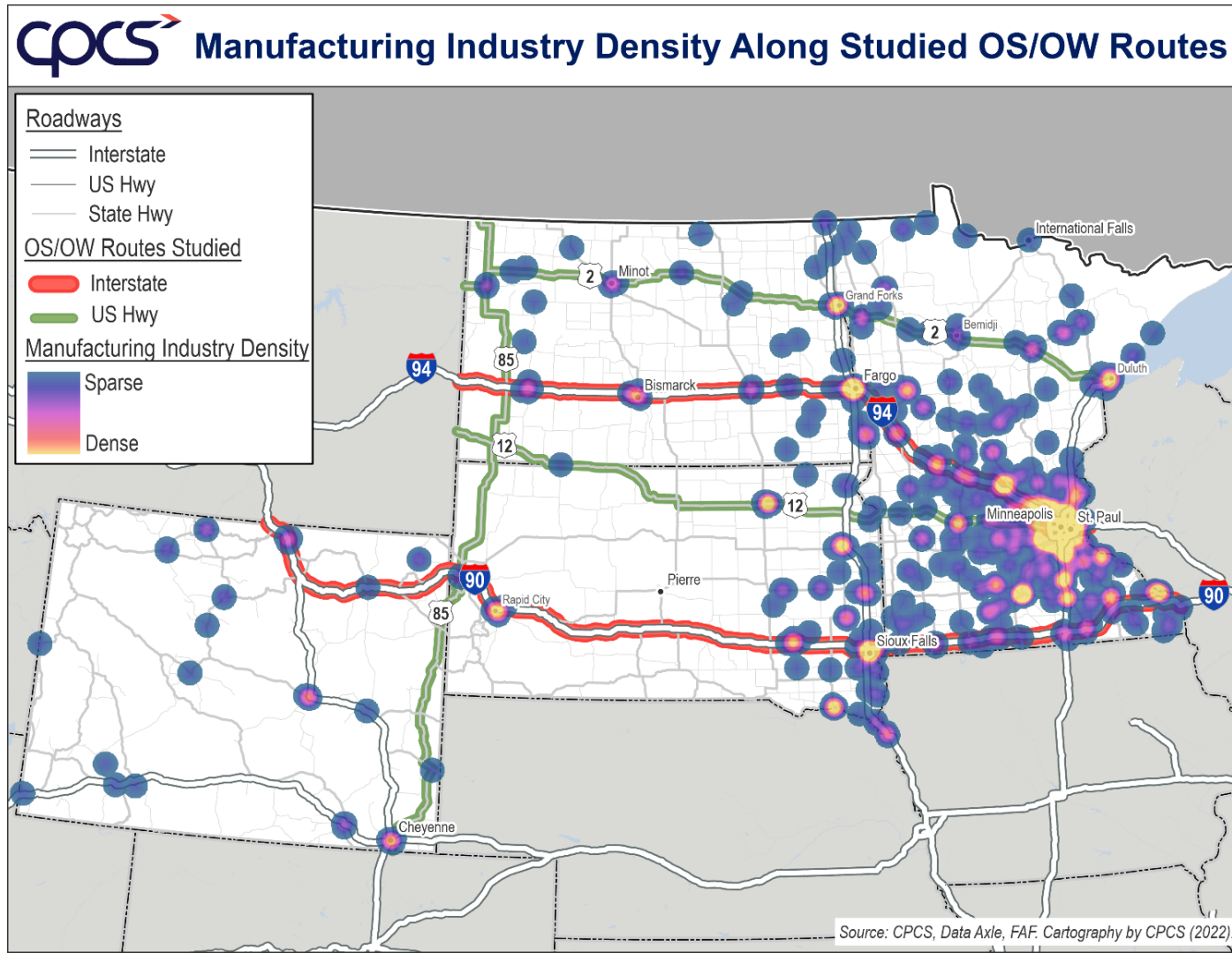
Figure 56: Construction Industry Density



Manufacturing

As shown in Figure 57, the manufacturing industry is focused within the southeastern portion of the focus state area, especially around the Twin Cities. Moving west, the manufacturing industry tends to be concentrated around population centers.

Figure 57: Manufacturing Industry Density

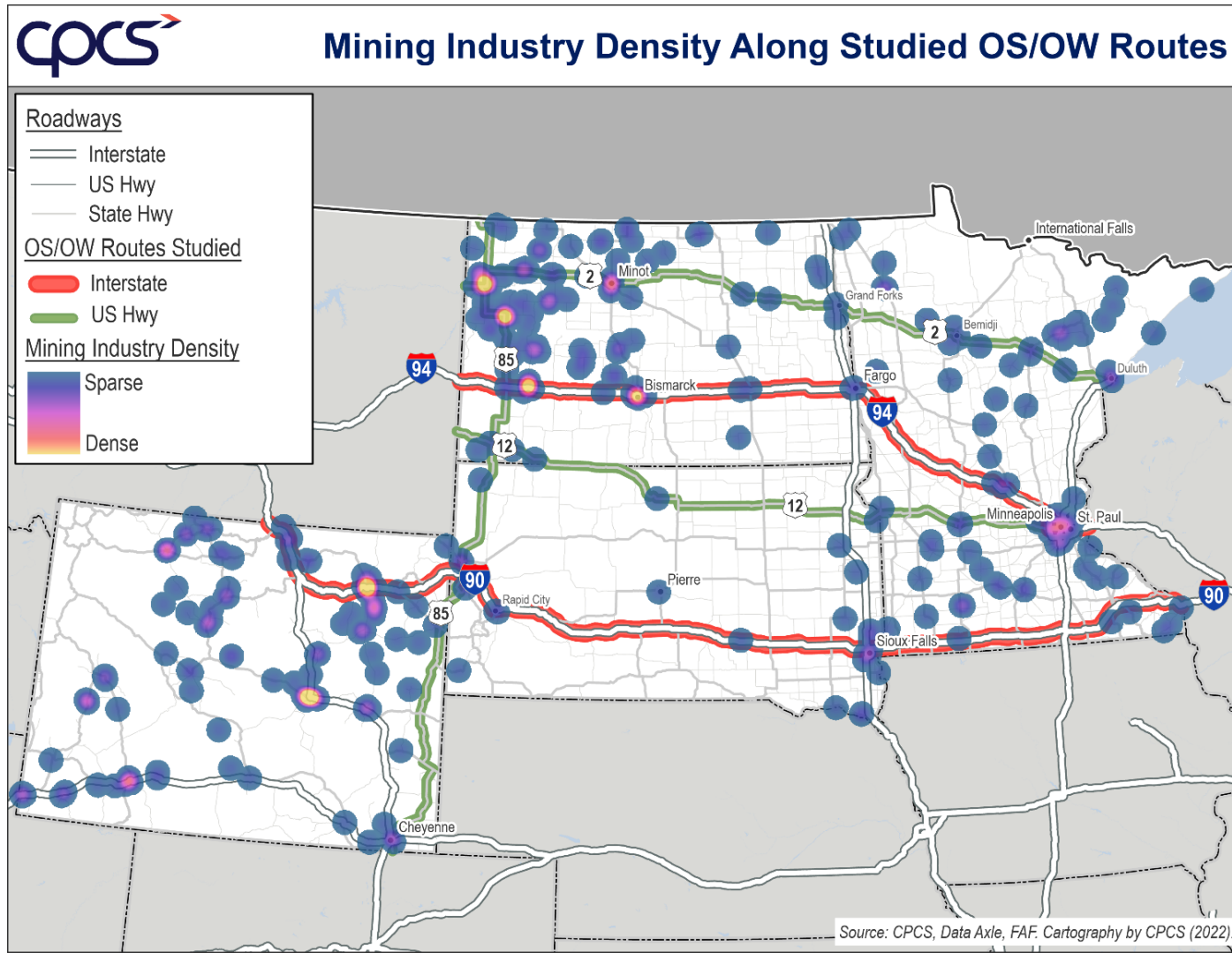


Note: Only manufacturing businesses with 50+ employees shown.

Mining

Figure 58 reveals that the mining industry, which includes oil and gas extraction, is focused in northwest North Dakota and northeast Wyoming, with a pronounced lack of such businesses in South Dakota.

Figure 58: Mining Industry Density

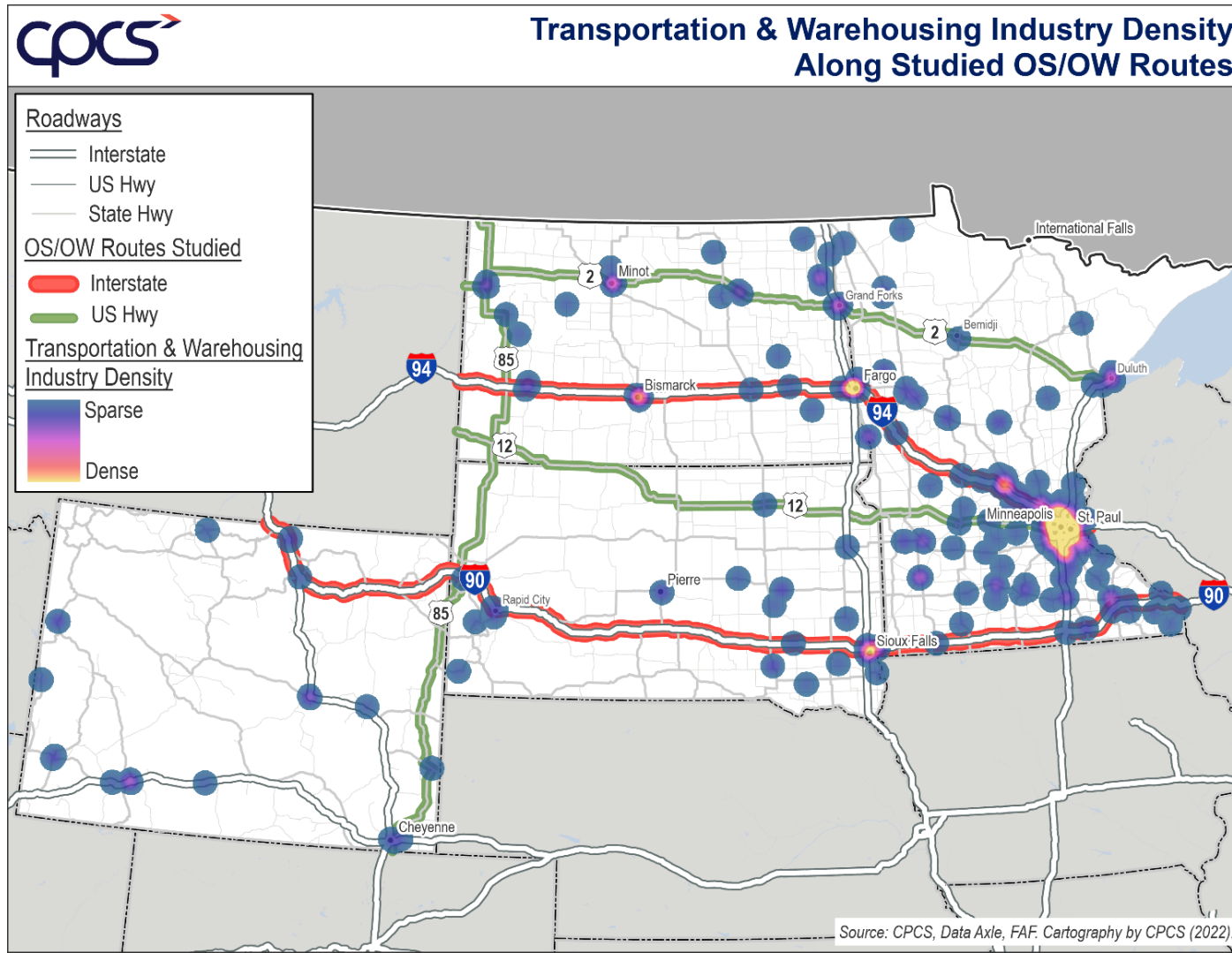


Note: Only mining businesses with 5+ employees shown.

Transportation & Warehousing

Figure 59 shows that transportation and warehousing industries are concentrated in southern Minnesota and are primarily located around population centers, especially in the Twin Cities and Fargo.

Figure 59: Transportation & Warehousing Industry Density



Note: Only transportation & warehousing businesses with 50+ employees shown.

Appendix B OS/OW Requirements Across the NWP

This Appendix provides details about OS/OW classification and permitting regulations for all NWP states. This includes the four focus states (Minnesota, North Dakota, South Dakota, Wyoming) of this Assessment, as well as the three western states (Idaho, Montana, Washington) that make up the remainder of the pooled fund.⁴⁷

B.1 Classifying OS/OW Vehicles

Legal Limits

Figure 60: OS/OW Legal Limits

Dimension	WA	ID	MT	WY	ND	SD	MN
Height	14'0"	14'0"	14'0"	14'0"	14'0"	14'0"	13'6"
Width	8'6"	8'6"	8'6"	8'6"	8'6"	8'6"	8'6"
Length (single)	40'0"	45'0"	55'0"	60'0"	50'0"	45'0"	45'0"
Length (combination)	53'0" (single trailer length)	75'0"	75'0"	Ranges from 60'0" to 85'0" ⁴⁸	75'0" (95'-110' on certain highways)	80'0"	75'0"
Gross vehicle weight	Bridge weight formula (Up to 105,500 lbs.)	Bridge weight formula (Up to 129,000 lbs.)	Bridge weight formula (Up to 131,060 lbs.)	Bridge weight formula (Up to 117,000 lbs.)	Bridge weight formula (Up to 105,500 lbs.)	Bridge weight formula (Up to 153,500 lbs.)	80,000 lbs.
Single axle weight	20,000 lbs.	20,000 lbs.	20,000 lbs.	20,000 lbs.	20,000 lbs.	20,000 lbs.	20,000 lbs. ⁴⁹

Source: Washington State Department of Transportation, Commercial Vehicle Permits, <https://wsdot.wa.gov/travel/commercial-vehicles/commercial-vehicle-permits>; Idaho Transportation Department Vision of Motor Vehicles, Permits, <https://itd.idaho.gov/itddmv/?target=ports-of-entry#special-permit-information>; Montana Code 61-10, Part 1. Standards, Permits, and Fees, https://leg.mt.gov/bills/mca/title_0610/chapter_0100/part_0010/sections_index.html; Wyoming Highway Patrol, Legal Size and Weight Limits, <https://whp.dot.state.wy.us/home/commercial-carrier/size-and-weight-information/legal-sizes-and-weights.html>; North Dakota State Patrol, North Dakota Vehicle Legal Size and Weight Guide, July 2016, https://www.nd.gov/ndhp/sites/www/files/documents/MC/Legal.size_weight.Guide_.pdf; South Dakota Truck Info, Chapter 5: Size & Weight Regulations, <https://sdtruckinfo.sd.gov/rules-regulations/motor-carrier-handbook/chapter-5/>; SDDOT and South Dakota Highway Patrol, Phone Consultation, December 20, 2022; Minnesota State Patrol, Vehicle Size and Weight, <https://dps.mn.gov/divisions/msp/commercial-vehicles/Pages/vehicle-size-weight.aspx>.

⁴⁷ Information for Idaho, Montana, and Washington obtained from state DOTs.

⁴⁸ (A) 60' for single units or semi-trailers in a truck-tractor and semi trailer combination. (B) 81' for a semi-trailer, trailer, or double semi-trailer combined length in a truck-tractor and semi-trailer, trailer, or double semi-trailer combination including the connecting mechanism (48' maximum for a semi trailer – first trailer. 40' maximum for a trailer or second semi-trailer, not including the connecting mechanism – second trailer.) (C) For consecutive towed vehicles, if the weight difference between the vehicles exceeds 5,000 pounds, the heavier towed vehicle shall be directly behind the truck-tractor, and the lighter towed vehicle shall be last. (D) 85 feet for any combination of vehicles vehicle combination other than those listed in (A) and (B).

⁴⁹ Only on paved roads; 18,000 lbs maximum on unpaved roads

Interpretation of Non-Divisible Loads

Figure 61: WASHTO 2022 Non-Divisible Definition Survey

Load description	WA	ID	MT	WY	ND	SD	MN
Tractor with duals	Non-divisible*	Non-Divisible	Non-Divisible	Divisible	Non-Divisible*	Non-divisible	Non-Divisible
Trailer Jeep & booster decked	Non-divisible	Non-divisible	Non-divisible	Divisible	Non-Divisible*	Unclear	Non-divisible
Dozer with blade and roll protection	Non-divisible	Non-divisible	Non-divisible	Divisible	Non-Divisible*	Unclear	Non-divisible
Coiled tubing unit sidewalls, stairs, doghouse	Non-divisible	Non-divisible	Non-divisible	Divisible	Non-divisible	Non-divisible	Divisible
Transformer with fluids	Non-divisible	Non-divisible	Non-divisible	Non-divisible	Non-divisible	Non-divisible	Non-divisible
Push trucks	Non-divisible	Non-divisible	Non-divisible	Non-divisible	Non-divisible	Non-divisible	Non-divisible
Cranes with counterweights	Non-divisible	Non-divisible	Non-divisible	Divisible	Non-divisible	Non-divisible	Non-divisible
Paint truck: paint and glass beads	Divisible*	Divisible	Divisible	Divisible	Divisible	Divisible	Non-divisible
Cement truck with powder, sand, water	Divisible	Divisible	Divisible	Divisible	Divisible	Divisible	Divisible

Source: Presentation to WASHTO, Non-divisible Load Survey from CVSA, October 2022. Note: * represents change from presentation based on state feedback. North Dakota changes went into effect on December 30, 2022.

Defining Superloads

Figure 62: Superload Definition and Permitting Process

	WA	ID	MT	WY	ND	SD	MN
Definition	Exceeds 16' H, 16' W, 125' L, 200k GVW	Does not define	17' H, 18' W, 150' L, 250k GVW (Interstate) or 175k GVW (Non-interstate)	Exceeds 17' H, 18' W, 120' L, 160k GVW	Exceeds 250k GVW	Does not define	Exceeds 16' H, 16' W, 150' L, 250k GVW
Permitting Process	Superload permits cannot be self-issued	N/A	Superloads must apply for a Superload permit and are ineligible for auto-issue	Must contact Overweight Loads Office	Superload permits cannot be auto issued	No permitting process specific to superload	Superload permits cannot be auto issued

Source: WSDOT, Commercial vehicle permits, <https://wsdot.wa.gov/travel/commercial-vehicles/commercial-vehicle-permits>; MDT, Superload Application Instructions and Information, <https://www.mdt.mt.gov/other/webdata/external/mcs/Superload-Instructions.pdf>; NDDOT, SDDOT, MNDOT, Wyoming Highway Patrol, Super Loads / Overweight Loads Office, <https://www.whp.dot.state.wy.us/home/commercial-carrier/super-loads--overweight-loads-of.html>.

B.2 Permitting OS/OW Vehicles

Single-Trip Permit Validity and Cost

Figure 63: Single Trip Permit Duration of Validity and Fee

	WA	ID	MT	WY	ND	SD	MN
Duration of Validity	3 days (Extended at no cost)	5 days	Length of time needed for movement	4 days (96 hours)	Typically 3 days, but depends on permit type	3 days	7 days
Fee	Minimum is \$10 non-weight and \$14 including weight. Varies by excess weight and miles traveled	Minimum \$30 for oversize only or \$33 if overweight.	\$10 for oversize, varies for overweight	Varies, but base is \$25 for typical OS/OW and \$40 for superload permits	\$20 plus \$10 service fee for oversize vehicles under 150,000 lbs.	\$25	\$15 plus Damage Assessment Fee when overweight

Source: WSDOT, ITD, MDT, WYDOT, NDDOT, SDDOT, MNDOT; ITD Permit Condition Manual, 2019, <https://permits4idaho.com/PDFGate.aspx?LoginNoticeID=19>.

Time of Travel Restrictions

Figure 64: Time of Travel OS/OW Restrictions

	WA	ID	MT	WY	ND	SD	MN
Holidays	No travel on holidays. Restrictions begin at noon the day before the listed holiday.	Depends on route. If allowed, limited to vehicle width of 10' or under. Start time of holiday restrictions depends on route.	On interstate highways: allowed 24 hours per day, 7 days per week, up to 18 feet wide. On non-interstate highways: allowed 24 hours per day, 7 days per week for loads up to 10 feet wide and/or 15 feet 6 inches high. Up to 12 feet 6 inches wide and/or 15 feet 6 inches high may travel during daylight hours only.	Loads requiring escorts not allowed half hour after sunset of prior day to half hour before sunrise on following day.	Over width permits exceeding 16' wide for movement on holidays (12 pm day prior, until sunrise after the holiday).	N/A	No travel 2 pm day prior to 2 am the day after when exceeding 12'6" wide or 110' long.
Weekend Summer	N/A	Weekend travel is restricted on certain routes	N/A	N/A	Over width permits exceeding 16' wide for movement on Saturday after 12 pm, all day Sunday.	N/A	No travel from 4 pm to 8 pm Fridays and Sundays when exceeding 12'6" wide or 110' long.

FINAL REPORT ➤ North/West Passage Oversize/Overweight Movement Assessment

	WA	ID	MT	WY	ND	SD	MN
Rush Hour	In selected metropolitan commuter areas.	N/A	N/A	Loads exceeding 18' in width shall not be allowed to travel on any primary or secondary highway during hours of local school bus traffic or heavy commuter traffic.	Limited restrictions in cities when several loads are moving at once example wind blades.	N/A	No travel weekdays 6am-8:30am or 3:30pm-6pm in Twin Cities and Duluth metros when exceeding 14'6" wide or 110' long.
Night Travel	Night travel allowed up to 12 ft. wide, 14 ft. 6 in. high, 105 ft. of length, beyond those dimensions carriers can request nighttime travel in advance of the move (24 hr. advanced request)	On certain routes, loads over 10' wide, 100' or 120' long (depending on route), and 15' high may only travel during daylight hours	18' interstate / 10' non-Interstate width 150' length non-Interstate 15'6" height non-Interstate In general, anything exceeding these dimensions can request night travel. Superloads are case by case, or in some cases of specific superloads, be required night movement.	Movements made only during daylight hours unless it meets certain exceptions.	Allowed for any load that does not exceed 10' wide or 120' long. If these limits are exceeded or if load is over 14' high, travel is only allowed from half hour before sunrise to half hour after sunset. ⁵⁰	No farm machinery, vehicles exceeding 8'6" wide, or slow-moving vehicles may operate on Interstate or State highways between half hour after sunset and half hour before sunrise.	Travel restricted from 12 am to 5 am in Twin Cities metro Monday through Friday when exceeding 16' wide.

⁵⁰ House Bill (HB) 1181 has been introduced to the Sixty-Eighth Legislative Assembly of North Dakota, which proposes that permits issued for over dimensional movements of vehicles not exceeding 12' in total width, including load, be valid for travel during the day and night with proper lighting. Permits issued for over dimensional movements of vehicles not exceeding 120' in total length, including load, would continue to be valid for travel during the day and night with proper lighting. North Dakota Legislative Branch, 68th Legislative Assembly (2023-25), HB 1181, <https://www.ndlegis.gov/assembly/68-2023/regular/bill-overview/bo1181.html?search=1181>

	WA	ID	MT	WY	ND	SD	MN
Frost/ Spring/ Thaw Restriction	On occasion but not typically	Spring breakup weight restrictions focused on limiting axle weights rather than GVW. Restrictions vary.	Yes - roadway specific as determined by maintenance or local highway officials	N/A	During spring break up season, reductions in axle weights may be specified. Axle weights may also be reduced by bridge load limitations map.	From February 15 to April 30, certain highways subject to spring load limits. When spring load limits are in effect, limited overweight permits are issued. Spring load restrictions may mean weight restrictions to 6 to 7 tons per axle, or speed limit restrictions.	During spring season, weight restrictions on unpaved routes. Paved routes remain at 10-ton limits, unless axle weight restriction signs posted. Dates determined by Commissioner of Transportation for each of frost zones.

Source: WSDOT, ITD, MDT, WYDOT, NDDOT, SDDOT, MNDOT; ITD Idaho Admin Code 39.03.03 – Rules Governing Special Permits, <https://www.law.cornell.edu/regulations/idaho/Idaho-Admin-Code-r-39.03.03> and <https://permits4idaho.com/PDFGate.aspx?LoginNoticeID=22>.

Special Seasonal and Commodity Allowances

Figure 65: Seasonal Winter Increase

	WA	ID	MT	WY	ND	SD	MN
Available	No	No	Yes	No	Yes	No	Yes
Dates	N/A	N/A	December 1 – March 7 for non-Interstate travel only	N/A	December 1 – March 7	N/A	Vary based on freezing index
Details	N/A	N/A	Allows 10% weight increase. \$50 for 30-day permit or \$150 for seasonal permit.	N/A	Allows 10% weight increase (on axles only) when hauling a divisible load up to 105,500 GVW. Not allowed on Interstate, county, or local roads.	N/A	Allows 10% weight increase; permits only required on the Interstate.

Source: WSDOT, ITD, MDT, WYDOT, NDDOT, SDDOT, MNDOT.

Figure 66: Special Commodity Allowances

	WA	ID	MT	WY	ND	SD	MN
Seasonal Harvest Increase							
Available	No	No	Yes	No	Yes	Yes	Yes
Dates	N/A	N/A	Yearlong	N/A	July 15 to November 30	July 1 to November 30	Start of harvest to November 30
Details	N/A	N/A	10% 30 days at \$50 or seasonal \$150 ⁵¹	N/A	10% more axle weight allowed when hauling harvested product between select origins and destinations, as well as for select commodities (solid waste, sugar beets, potatoes) to a point of storage. Travel is not allowed on Interstate, county, or local roads.	A 10% tolerance for farm trucks and trailers hauling farm commodities from the combine to the first unloading within 50 miles of the harvested field, allowed during harvest season. A 5% tolerance for farm commodities being hauled from the bin to the elevator, allowed year-round	10% weight increase for first haul from the field of harvest to first point of unloading. Permit valid for U.S. and State highways.
Construction/Farm Equipment Permit							
Available	Yes	Yes	No dedicated permit	Yes	No	Yes	Yes
Details	Farm Implement Permit: Up to 19'11" wide and not exceeding 65k lbs.	Over width permits for implements of husbandry	Same as any other permit - farm moves have exemption for width and height under certain conditions	Varies by commodity and highway	N/A	Non-divisible annual permit for construction and farm equipment for loads up to 14'6" wide and 85' long. Annual farm implement permit for farm implement dealers and manufacturers that allows loads up to 20' wide, 100' long, and 18' high. For both annual permits, if maximum dimensions exceeded, carrier must purchase single trip permit.	Up to 15' H, 16' W, 110' L, and 155k GVW

Source: WSDOT, ITD, MDT, WYDOT, NDDOT, SDDOT, MNDOT.

⁵¹ ARM 18.8.605

Figure 67: Escort Requirements

	WA	ID	MT	WY	ND	SD	MN
Civilian Escort certification required	Yes	No	No	No	No	No	Yes (MN offers reciprocity with other states ⁵²)
Threshold for Escort							
Weight	Yes, can be added if carrier is unable to maintain the posted speed limit for trucks.	If reduced speeds are needed to cross a bridge	If bridge engineer analysis requires centerlining	Overweight with special restrictions imposed by Bridge Department	Policy allows bridge or district engineers to request	N/A	N/A
Rear Overhang	Over 1/3 of load length is overhanging on combination; over 20' overhang on a single unit vehicle	Depends on overall length, not overhang	N/A	Over 25 feet	N/A	N/A	N/A
Escort requirements on multi-lane divided roadways							
Width	Over 14'; over 12' if they are required to have a front pilot with a height pole	Over 15'	Over 16'6"	15' (Interstate and divided highways) (rear)	Over 16' (one escort follow)	16' (Interstate Highways) (behind on divided highways)	Over 15' at bottom or 16' at top
Length	Over 125'	N/A	When required by superload restriction	Discretion of Wyoming Highway Patrol (rear)	Over 120' (one escort follow)	N/A	Over 110' (one escort), over 150' (two escorts)
Height	Over 14'6"; over 15' for manufactured housing	N/A	Over 17'	17' (front and rear)	Over 18' (one escort precede)	N/A	N/A

⁵² Colorado, Florida, North Carolina, Oklahoma, Utah, Virginia, Washington

FINAL REPORT ➤ North/West Passage Oversize/Overweight Movement Assessment

	WA	ID	MT	WY	ND	SD	MN
<i>Escort requirements on undivided roadways (two-lane)</i>							
Width	Over 11'	Over 12'	Over 12'6"	Above 14', escorts are required to the front and rear: 14'-18' requires two escorts; 18'-22' requires 3 escorts; 22'-26' requires 4 escorts; 26'+ requires five escorts	Over 14'6" (one escort precede OR lighted rotating or flashing lights); over 16' (two escorts)	20' (State Highways) (in front on undivided highways)	Over 15' at bottom or 16' at top. Lead licensed officer required in addition when vehicle/load extends beyond left of centerline
Length	Over 105'	Over 100'	Over 150' on non-Interstate	110' (front and rear)	Over 120' (one escort follow)	N/A	Over 110'
Height	Over 14'6"	N/A	Over 17'	17' (front and rear)	Over 18' (one escort precede)	N/A	N/A

Source: WSDOT, ITD, MDT, WYDOT, NDDOT, SDDOT, MNDOT; ITD Pilot/Escort Vehicle Travel Requirements and Vertical Clearance of Structures, 2019, <https://itd.idaho.gov/wp-content/uploads/2016/07/vert.pdf>.

Appendix C AASHTO Harmonization Recommendations

This Appendix summarizes the Phase I and Phase II recommendations identified by the AASHTO SCOHT to harmonize OS/OW permitting across states, as well as whether select NWP states have adopted these OS/OW harmonization recommendations or not (Figure 68). Note that this evaluation was completed in 2021 and may not reflect changes in state regulations and requirements implemented since the evaluation. Results have been edited where requested by states.

Figure 68: AASHTO OS/OW Harmonization State Checklist

OS/OW Harmonization Recommendation		WA	MT	WY	ND	SD	MN		
Phase I	Width Escort	<u>2-lane highway:</u> • 12' to 14' - 1 front escort • >14' - 1 front & 1 rear escort	<u>Multi-lane highway:</u> • 12' to 14' - 1 rear escort • >14' - 1 front & 1 rear escort	✗	✓	✗	✓	✓	✓
	Height / Length Escort	<u>Height:</u> >14'	<u>Length:</u> >90'	✗	✓	✗	✓	✓	✓
	Flags	<u>Size:</u> 18"x18" max <u>Color:</u> Fluorescent red or orange or Manual of Uniform Traffic Control Devices (MUTCD) standard	<u>Transport location:</u> 4 corners of load or extremities <u>Escort location:</u> No requirements	✓	✓	✓*	✓	✓	✗
	Days / Hours Operation	<u>Monday through Saturday:</u> Daylight hours	<u>Sunday:</u> States make determination	✓	✓	✓	✓	✓	✓
	Signs / Banners	<u>Message:</u> Oversize Load <u>Color:</u> Black letters, yellow background <u>Size:</u> 18"x7" <u>Letters:</u> 10"x1.4"-1.5"	<u>Location:</u> • Front & rear of transport vehicle where license plate is not blocked • Front & rear of escort OR above roofline where it is visible from front & rear	✓	✓	✗	✓	✗	✓
	Transport / Escort Warning	<u>Transport warning lights:</u> Flashing OR strobe amber lights; visibility of lights from 1000', 360 degrees	<u>Escort warning lights:</u> Flashing OR strobe amber lights; visibility of lights from 500', 360 degrees	✓	✓	✗	✓	✗	✗
Phase II	Number of Valid Days	5 days	✗	✓	✗	✗	✗	✓	
	Permit Amendment	Extensions allowed for weather and breakdowns	✓	✓	✓	✓	✓	✓	
	Holiday Restrictions	Restriction begins at noon the day before holiday until sunrise the day after holiday (New Year's, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas). States may establish separate restrictions for unique travel situations on a case-by-case basis.	✓	✓	✓	✓	✓	✓	
	Type / Size Escort	• Legal size Class I, II, or III passenger vehicles • Must have 360-degree visibility	• Are not towing a trailer or other vehicle	✓	✓	✓	✓	✗	✓
	Height Escort	Front escort with a pole if height exceeds 14'6"		✓	✓	✓	✓	✓	✓

Source: SC&RA, 2022. Note: Idaho did not respond and is therefore not included in the evaluation. Note: * represents change in evaluation based on state feedback.