

SECTION 1: EARLY PLANNING

1.1 Planning Projects

The Statewide Policy & Planning Section provides long-term direction for the planning and management of the integrated statewide transportation plan.

Regions may share proposed plans during the Program Development Stage with the Mobility Advisory Committee to seek early stakeholder input on design and potential alternatives. These include proposed work zone safety strategies, proposed actions on Reduction Review Routes subject to ORS 366.215, proposed intersection improvements, permanent reductions in vertical and horizontal clearance, alternative design and construction methods, and alternative contracting methods.

Refer to [Section 5: MAC Engagement](#) for information, requirements and resources related to sharing proposed plans with the MAC.

1.2 Work Zone Safety

All stages of the project delivery lifecycle are subject to ODOT's *Work Zone Guiding Principle*.⁴ Under this directive, all projects are required to use the *Work Zone Decision Tree* and *Transportation Management Plan* (TMP) to record the recommendations and decisions intended to improve work zone safety. [Refer to [2.3 Required Documents for Temporary Impacts](#)]

The *Work Zone Guiding Principle* applies to all projects on ODOT facilities, including local agency projects that are on the state highway system. The Guiding Principle requires a full range of options be considered; while recognizing that some options for increasing work zone separation could impact mobility, schedules, budgets and other project factors.

The *Work Zone Guiding Principle* and *Work Zone Decision Tree* is used at the following project phases:

- **Scoping Documentation** (scoping leader/project sponsor) – The initial identification and cost planning for a project significantly shapes the range of available traffic management strategies. An initial *Work Zone Decision Tree* is required at the scoping stage to promote the full evaluation of traffic management strategies.
- **Design Acceptance** (transportation project manager/area manager) – Consideration of the *Work Zone Guiding Principle* is part of refining the project scope/estimate/schedule and finalizing impacts into a specific construction strategy.

⁴ Oregon Department of Transportation, *Highway Directive TRA 10-16, Guiding Principle for Work Zone Safety*, 11/08/16: https://www.oregon.gov/ODOT/Engineering/Doc_TechnicalGuidance/TRA10-16d.pdf

- **Mobility Coordination** (transportation project manager/region mobility liaison/resident engineer/area manager) – The policies defined in this manual and *Operational Notice PD-16* require coordination with the Mobility Services Team and the Mobility Advisory Committee (as per the committee charter). This includes reviewing temporary mobility impacts such as traffic delays and size and weight restrictions throughout project development and for any proposed changes to the TCP during construction.
- **Final Plans Specifications and Estimates (PS&E)** (transportation project manager/TCP designer) – The TMP is to be included as an eBids document that informs the bidders of the options evaluated, identified impacts, recommendations and decisions made regarding work zone strategies and maintenance of traffic.
- **Construction:** Award through project completion (resident engineer) - Use the TMP and *Work Zone Decision Tree* to document coordination with stakeholders as they evaluate changes to TCPs.
- **Process Review and Lessons Learned** (TCP group) – the Federal Highway Administration requires a biannual process review for work zone traffic control.

Work zones that are set up properly are essential to worker and driver safety. Make sure you are familiar with state and federal requirements for setting up your work zone before construction begins.

- **Work Zone Traffic Control Guidance:** Visit the [Work Zone Traffic Control web page](#) for the most up-to-date manuals, advisories and handbooks.
- **Device Quality Standards:** Use the American Traffic Safety Services Association's [Quality Guidelines for Temporary Traffic Control Devices and Features](#) handbook to assess the quality of devices.
- **Traffic Analysis:** Refer to the ODOT *Web-Based Work Zone Traffic Analysis Tool* (available on the [Work Zone Traffic Control web page](#)) to optimize lane closures and minimize delays.
- **Worker Safety:** Check the Oregon Occupational Safety and Health (Oregon OSHA) [Traffic Control website](#) for the latest safety guidelines.
- **Highway Restriction Notice (form 734-2357):** Required to be submitted by contractors for all highway construction work zones that will close all or a portion of a state highway, an interchange ramp; or, restrict the width, length, height or weight of freight. [Refer to [Chapter 3.2: Restriction Notification Requirements](#)]

1.3 Oregon Revised Statute 366.215

1.3.1 Overview

[Oregon Revised Statute 366.215](#) identifies the Oregon Transportation Commission's authority to build and modify state highways. The statute states that the Commission may not permanently reduce the "vehicle-carrying capacity" of an identified freight route (aka Reduction Review Route) unless safety or access considerations require the reduction, or a local government requests an exemption and the Commission determines it is in the best interest of the state and freight movement is not unreasonably impeded. Examples of permanent features that could reduce the vehicle-carrying capacity of a highway include, but are not limited to, traffic signals, signposts, stationary bollards, curbs, trees, raised or depressed medians, roundabouts, streetlights, and overhead wiring. Street markings such as bike lane striping or on street parking are not considered a reduction of vehicle-carrying capacity.

[Oregon Administrative Rule \(OAR\) Chapter 731, Division 12](#) defines the terms related to the statute, identifies a review process, and facilitates communication and development of consensus during the review process. Although not in rule, the term "hole-in-the-air" describes the area needed to accommodate legal and permitted over-dimension loads. The hole-in-the-air refers to the entire roadway, not just the load on the road at any moment.

1.3.2 Guidance Document & Review Process

An [ORS 366.215 Implementation Guidance](#) manual is available for meeting the requirements of the statute and rule, which applies to all projects in planning, project development, development review and maintenance. The document includes a flow chart that summarizes the review process. Not all the process information pertaining to the administrative rule is in the flow chart, so refer to the guidance document or the rule for additional information.

All projects proposing permanent reductions in vehicle-carrying capacity on Reduction Review Routes are required to go through a Stakeholder Forum review process, which takes place during Mobility Advisory Committee (MAC) meetings. (Reduction Review Routes can be [viewed as a layer](#) on ODOT's TransGIS site.) The [MAC Charter](#) provides project review criteria in Appendix C which determine how these reductions are shared:

- **Low impact reductions** are shared via an ORS 366.215 Consent Calendar [form](#) that contains required information about the project and proposed reduction. Projects on the Consent Calendar are then taken up at the beginning of the Stakeholder Forum portion of the MAC meeting.
- **Moderate/High impact reductions** are shared via a formal presentation using a required [presentation template](#).

Note: If there are any design changes in the project that result in additional or greater reductions in vehicle-carrying capacity, the project must go through the Stakeholder Forum review process again to seek support for the updated proposed actions.

Refer to the following documents for further guidance on this process:

- [*ORS 366.215 Implementation Guidance*](#): Describes the Stakeholder Forum review process in detail.
- [*MAC Charter Appendix C*](#) (Project Review Criteria): These criteria describe how projects are shared with the committee, including projects with proposed permanent reductions in vehicle-carrying capacity subject to ORS 366.215.
- [*MAC Charter Appendix D*](#) (Meeting Guidelines): These guidelines describe protocols for preparing for and participating in MAC meetings.
- [*Section 5: MAC Engagement*](#): Section 5 of this manual describes requirements and resources for engaging with the Mobility Advisory Committee and the Stakeholder Forum for proposed permanent reductions in vehicle-carrying capacity.

1.4 Permanent Clearance & Restrictions

1.4.1 Permanent Vertical Clearance

a) Policy Considerations

Maintaining an appropriate vertical clearance (VC) is instrumental to successfully transporting freight within the State of Oregon. The movement of mobile homes, construction materials, construction equipment, and many other types of freight critical to Oregon's economy are restricted due to insufficient VC on many routes. The commitment by ODOT to maintain and improve VC on the system will provide significant benefits to Oregon's economy.

VC shall be measured from the top of the pavement to the bottom of the structure and includes the entire roadway width (including the usable shoulder width).

The following design manuals and other resources provide guidance and requirements for permanent vertical clearance (refer to ODOT's [Directory of manuals](#) for current manual links):

- *ODOT Highway Design Manual*
- *ODOT Traffic Structures Design Manual*
- *ODOT Sign Design Manual*
- *ODOT Traffic Signal Design Manual*
- *ODOT Technical Services Bulletin [RD17-02\(B\)](#)*: overhead structures and update to vertical clearance standards and guidance
- *ODOT Directive [TRA 07-15](#): Vertical Clearance*

An [Oregon Vertical Clearance Standards map](#) is also available showing designated high routes, NHS routes and other routes.

b) Standards for New Structures

To ensure adequate VC on the state highway system for over-height loads, minimum VC standards apply to all new construction. ODOT and freight industry stakeholders established high routes indicating the most important routes for moving high loads. Consultation with the Mobility Services Team is required for any new structure proposed over the state highway system where none existed before (such as new overcrossings, pedestrian overpasses and sign/signal/luminaire structures).

If a proposed structure is located on a [Reduction Review Route](#) subject to ORS 366.215, the project will need to go through a Stakeholder Forum Review process, even if the proposed vertical clearance meets or exceeds the minimum standard. There may be times when the implementation of the ORS 366.215 Reduction Review Process results in a greater vertical clearance than the established standard. [Refer to [Chapter 1.3: Oregon Revised Statute 366.215](#)]

Table 2: Minimum Bridge Vertical Clearance Standards⁵

-	*Interstates & High Routes	*NHS Non-High Routes	*Non-NHS and Non- High Routes
Minimum Clearance	17'-4"	17'-0"	16'-0"

*These routes can be viewed on the [Oregon Vertical Clearance Standards map](#).

Table 3: Vertical Clearance Standard for New Overhead Structures (truss sign bridge, VMS sign bridge, monotube cantilever, signal mast arm, and signal strain poles)⁶

Standard vs Non-Standard	Vertical Clearance
Standard	18' -0" to *19'-0"
Non-Standard (requires Design Exception for approval)	Greater than 19'-0"

***Note:** 19'-0" is considered a maximum height for these structures as visibility and effectiveness decreases when they are raised higher than this standard. This is why placing them higher than the standard requires a design exception.

⁵ Oregon Department of Transportation, *Highway Design Manual*, January 2025, Section 317 (Vertical Clearance): https://www.oregon.gov/odot/Engineering/Documents_RoadwayEng/HDM-0300.pdf

⁶ Oregon Department of Transportation, *Traffic Structures Design Manual*, July 2021, Section 2.16 (Overhead Structures Vertical Clearance Standards and Guidance): https://www.oregon.gov/ODOT/Engineering/Documents_TrafficStandards/Traffic-Structures-Design-Manual.pdf

c) Existing Structures

Existing structures (on any route) shall not be reduced below minimum VC standards and shall not be further reduced if the existing VC is substandard. Any proposed decrease in VC that is below minimum standards requires consultation with the Mobility Services Team. The Mobility Services Team will work with the region mobility liaison and project team leader/manager to evaluate user impacts and design options and seek input from the Mobility Advisory Committee.

d) Improving Vertical Clearance

Any project involving a structure identified as having substandard VC must be evaluated during scoping for opportunities to increase the vertical clearance. Options include replacing the structure, raising the structure or reconstructing the roadway under the structure to lower the grade. Structures that are no longer in use, such as abandoned railroad structures, should be removed whenever possible.

In rare cases, the cost of increasing vertical clearance will be very high with little or no benefit to freight using the route. This may occur when there are several unrestricted routes near the route in question. In these cases, the ODOT Commerce and Compliance Division's Over-Dimension Permits Unit (working through the Mobility Services Team) contacts the Mobility Advisory Committee and performs an informal cost-benefit assessment to determine if the load routing will be impaired if the substandard vertical clearance is not addressed. [Refer to [Appendix AP5: Design Exception Cost-Benefit Assessment](#)]

The project can be reviewed for a design exception if the CCD Over-Dimension Permits Unit and the Mobility Services Team determines that the load routing will not be impaired and the Mobility Advisory Committee are engaged as necessary.

e) Pavement Replacement/Overlays

Whenever pavement replacement or overlay activities are planned under an existing structure, efforts should be made to preserve the existing vertical clearance under the structure. For overlay activities, this may include grinding out the existing pavement and replacing it to the previous thickness so as not to decrease the vertical clearance.

1.4.2 Permanent Horizontal Clearance

Existing capacity for freight mobility should appropriately be considered as comparable as a strategic asset which should be conserved whenever possible. Horizontal clearance is such a resource that once lost, will likely never be regained.

A permanent decrease in horizontal clearance will adversely affect the movement of freight which is properly considered the lifeblood of the economic engine of Oregon. It is also true that an increase in horizontal clearance at a point of constriction may open up an entire freight route to the passage of freight movement, therefore it is never wise to build to match an existing

constriction; rather build with the hope that other existing pinch points will be removed in the future.

Types of freight movement dependent upon sufficient horizontal clearance consist of manufactured housing, windmill components, farm implements, construction materials/equipment, machinery, and military equipment among others.

Any permanent decrease of existing horizontal clearance on a Reduction Review Route will likely be considered a reduction in vehicle-carrying capacity. [Refer to [Chapter 1.3: Oregon Revised Statute 366.215](#)]

1.4.3 Permanent Length Restrictions

Length restricted routes in Oregon are identified on route maps available on the CCD Over-Dimension Operations [website](#). Highway length restrictions are commonly caused by roadway curvature. Any project directly involving the location of a length restriction should evaluate removing the restriction, whenever possible.

1.4.4 Permanent Weight Restrictions

The movement of heavy loads such as bridge girders, construction equipment, and other special types of freight are greatly restricted due to the problems ODOT has with deterioration of infrastructure. Weight restrictions on many key freight corridors have limited movement and place more stress on the routes that are open.

Whenever load rating factors show insufficient load capacity for unrestricted use by permitted over-dimension vehicles, [ODOT's Size and Weight Restrictions Policy PMT-06-01](#) will be followed.

The *Guide for Condition Evaluation and Load and Resistance Factor Rating* (LRFR), published by the American Association of State Highway and Transportation Officials (AASHTO), is used to determine potential load rating factors. See ODOT's Bridge Engineering Section [website](#) for information on load ratings.

1.5 Roundabouts

ODOT's "Roundabouts on the State Highway System" Directive ([Highway Directive DES 02](#)) establishes the expectation and processes concerning freight mobility to be followed whenever a roundabout is proposed to be installed on the state highway system.

The Directive states:

"When considering a roundabout on the state highway system, follow ODOT procedures that consider the needs and concerns of all stakeholders, including assuring that the roundabout can accommodate the freight movement on the highway. Determining if the roundabout can accommodate freight movement requires

*conversations with the trucking industry, through the ODOT Mobility Program.⁷
Regardless of when roundabouts are being considered; during planning, during
project development, or during development review, conversation with the trucking
industry is required.”*

In addition to DES 02, another resource available for informing roundabout design is the [Truck Access into Roundabouts](#) study, conducted by Oregon State University on behalf of ODOT and the Oregon Trucking Association. This study evaluated the operational efficiency and ability for heavy trucks to enter and traverse congested roundabouts.

Proposed roundabouts located on [Reduction Review Routes](#) are also subject to a Stakeholder Forum review under Oregon Revised Statute 366.215. The Stakeholder Forum review process is defined in rule ([OAR Chapter 731, Division 12](#)), and is required when a Proposed Action on a Reduction Review Route will result in a reduction in vehicle-carrying capacity of a highway section. [Refer to [Chapter 1.3: Oregon Revised Statute 366.215](#)]

Intersection improvement projects that potentially include a roundabout should be shared early with the Mobility Advisory Committee; *before* a decision has been reached as to which traffic control feature will be implemented. This provides an opportunity for the committee members to provide early feedback to the Region on the different alternative concepts being considered before a final design has been reached. Once a decision is made to install a roundabout, the proposed roundabout design must be shared with the MAC to meet the requirements of [Highway Directive DES 02](#) (and ORS 366.215 if located on a Reduction Review Route).

Additional engagement guidance for roundabouts is available in the following manual: [Mobility Engagement Guidance for Intersection Improvements and Roundabouts](#).

1.6 Design & Contract Considerations

1.6.1 Alternative Design Considerations

During the development of projects, special consideration to alternative design practices should be made to eliminate or minimize impacts on traffic. Whenever practical, design options should be used which will minimize delays and the overall duration of the project. Alternative construction materials, construction methods, and contracting methods should be used to reduce construction time and minimize impacts whenever possible.

⁷ The original text in the Oregon Department of Transportation Highway Directive DES 02, *Roundabouts on the State Highway System*, refers to the ODOT Motor Carrier Transportation Division, but has been replaced in this quote with the ODOT Mobility Program (which is current practice). DES 02 has not yet been updated to reflect the agency’s current organizational structure.

Contacts with industry stakeholders, other states, and national construction organizations should be established to keep up with new technology and new methods that can be utilized for construction projects.

There are very few truly unique problems in transportation. Most issues that arise during the development of a project have surfaced before in other locations. If a problem arises which ODOT has not faced before, the project team should identify others who have faced a similar problem, evaluate how they addressed the problem, and review the lessons learned. This will increase options to help make better decisions and may offer protection from repeating the mistakes of others.

a) Design Materials

When selecting design materials, it is important to evaluate the impacts these will have on construction time. Whenever possible, prefabricated materials or other construction materials that reduce construction time should be considered. If the use of refabricated materials can shorten the duration or completely eliminate a freight restriction, this should be considered.

Designs which use materials which will impose restrictions on freight traffic should be carefully evaluated for acceptable alternatives. If traffic will not be able to travel over a structure while half of the bridge deck is curing, then consideration should be given to selecting different materials which can avoid this restriction.

b) Construction Methods

When selecting design methods, it is important to evaluate what others have done and how these methodologies impacted traffic mobility. Whenever possible, methods which reduce construction time and delays should be used. Methods which allow significant portions of the work to be completed without affecting traffic should be used. If a method can eliminate or ease a freight restriction, this should be considered.

1.6.2 Special Contract Provisions

ODOT special contract provisions allow for requirements that 1) incentivize contractors to find innovative ways to accelerate construction, minimize construction impacts to users, encourage innovation in work sequencing and maintaining specified contract times or limits; or 2) disincentivize contractors from completing specified contract work after specified contract times or limits.

Examples of effective optional contract provisions includes:⁸

- **“Incentive/Disincentive (I/D)”** – ODOT uses incentive/disincentive (I/D) contract special provisions to maintain construction completion dates, encourage innovation in

⁸ Oregon Department of Transportation, *Traffic Control Plans Design Manual*, January, 2024, Chapter 3.5.2: Contracting Provisions and Alternative Methods:

https://www.oregon.gov/ODOT/Engineering/Docs_TrafficEng/TCP-Design-Manual.pdf

work sequencing, and accelerate project delivery. ODOT pays the contractor a contract specified incentive amount for completing specified contract work earlier than the time specified in the contract. Contractor pays ODOT, not as a penalty a contract specified disincentive amount, in-addition to liquidated damages for completing specified contract work later than the time specified in the contract. Refer to Operational Notice PD-17 for guidance and clarification on the use of I/D contract provisions.⁹

- **“Lane Closures Liquidated Damages”** – ODOT uses lane closures liquidated damages contract special provisions to encourage contractors to finish specified contract work within the contractual time limits by requiring the contractor to pay ODOT, not as a penalty, but as liquidated damages for any lane closure that goes beyond the contractual limits. Refer to the [ODOT Standard Specifications for Construction Boilerplate Special Provisions](#).

For information on whether your project is a good fit for use of optional contract provisions contact the [Project Controls Office \(PCO\) Specifications Unit](#).

1.6.3 Alternative Contracting Methods

Alternative contracting methods provide additional options for unique, complex, or schedule critical projects, and can be an effective means to reduce construction duration and user impacts. When considering alternative contracting for a project, the selection of the right method can be critical to the success of the project.

Examples of Alternative Contracting methods include:

- **Price + Methods or A+B; A+C+D** - These types of contracting methods are similar to Design-Bid-Build, but they have a few extra steps in the bidding phase to select the contractor.
 - **“A+B” Contracting Method** – Where, “A” = Price; “B” = contractor’s proposed number of calendar days to construct the project.
 - **“A+C+D” Contracting Method** – Where, “A” = Price; “C” = Value of Contractor’s pre-qualifications, and “D” = Value of contractor’s approach.

Alternative contracting methods that get the contractor involved in the design phase:

- **“Construction Manager/General Contractor” Contracting Method** – In the CM/GC method, ODOT uses a multi-discipline team. The team finds and develops solutions to help deliver the project. More information about this method can be found on ODOT’s [CM/GC web page](#).

⁹ Oregon Department of Transportation, *Highway Division Project Delivery Leadership Team Operational Notice PD-17 – Incentive/Disincentive Contracting Provisions*:
https://www.oregon.gov/odot/Engineering/Doc_TechnicalGuidance/pd17.pdf

- **“Design-Build” Contracting Method** – A delivery method in which ODOT contracts with a single entity who handles both design and construction. More information about this method can be found on ODOT’s [Design-Build web page](#).

For information on whether your project work type is a preferred or viable option for an Alternative Contracting Method contact Alternative Delivery Services (ADS) at email: alternativecontracting@odot.oregon.gov. Additional information is available on the [ADS website](#).

1.7 Jurisdictional Transfers

As a matter of Department policy, in order to maintain viable freight routes, ODOT has determined that jurisdictional transfers of sections of state highways that have historically accommodated permitted over-dimensional freight movement must contain provisions in the transfer agreement which require the local jurisdiction to continue to allow movement of the same permitted loads, with existing pilot vehicle requirements, that have previously used the route when under state control.

If an exception to this requirement is desired on any particular transferred segment, consultation with the mobility program manager about alternate routing availability and with the freight industry to ascertain if they concur with the exemption request should occur before the exception is granted. If the Department and the freight industry end up in substantial disagreement, the Director of ODOT will make the decision. The intent here is that the movement of freight will not be unreasonably restricted beyond the limits set by the state prior to the jurisdictional transfer. In addition, transfers of sections of highway that have previously been designated as part of the National Network Highway System must retain the Reasonable Access to terminals as defined in Federal regulation Title 23 Part 658.19, without restriction.¹⁰

¹⁰ Office of the Federal Register, Code of Federal Regulations, [CFR 23 Part 658.19, Reasonable Access](#)