Identifying & Minimizing Temporary Mobility Impacts

ODOT Statewide Mobility Program
Agenda

1. Mobility: What is it & why it matters
2. Over-Dimension Permitting Basics
3. Identifying Temporary Restrictions
4. Planning & Coordinating to Minimize Impacts
5. Restriction Notification Requirements
6. Resources
1. Mobility: What is it? Why does it matter to Oregon?

Refer to Mobility Procedures Manual:

- Chapter 1, Introduction
Mobility Procedures Manual:

Mobility can be defined as the ease with which people & goods move throughout their community, state & the world.
Mobility... is a balance with Work Zone Safety.
Mobility... protects our infrastructure.
Mobility... is vital to Oregon’s economy.
2. Over-Dimension Permitting Basics

Refer to *Mobility Procedures Manual*:
- Chapter 3, Freight Permitting Overview
Over-dimension permitting basics

• **Annual** — A continuous trip permit that allows for exceeding legal dimensions or weights. Valid for approved routes, dimensions, & weights.

• **Single Trip** — Primarily issued to exceed annual permit dimensions/weights or to authorize routes that are not covered by the annual permit. Also includes “Superload" permits.
## Legal Size vs. Oversize in Oregon

<table>
<thead>
<tr>
<th>Legal Size</th>
<th>Oversize (Requiring a permit)*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Width:</strong> Up to 8.5 feet</td>
<td><strong>Width:</strong></td>
</tr>
</tbody>
</table>
| **Height:** Up to 14 feet | • Daytime: Up to 12 or 14 feet (depending on the route)  
• Nighttime: Up to 10 or 12 feet (depending on the load & route)  
**Height:** Up to 14½ feet |
| **Length:** Up to those allowed on Group Map 1 | **Width:** 14 – 22 feet wide (and sometimes wider)  
STPs over 12 feet can travel at night on any route, case-by-case with DM approval  
**Height:** Up to 17 feet (and sometimes higher)  
**Length:** Up to 199 feet (and sometimes longer) |

*These are general dimensions for each permit. There are exceptions & route-specific requirements.*
In 2019, the Commerce and Compliance Division’s Over-Dimension Permit Unit issued:

• **61,022 Annual Permits** (allows for unlimited trips)

• **67,358 Single-Trip Permits** (includes superloads)
5. Identifying Temporary Restrictions

Refer to Mobility Procedures Manual:
• Chapter 4, Temporary Conditions
For Projects, the Mobility Considerations Checklist is used for documenting restriction impacts.

Mobility Checklist Project Reviews
- Mobility Considerations Checklist
- Work Zone Decision Tree
- TMP/TCP
- MAC review (if needed)
Any proposed temporary reduction in VC requires notification/coordination with the Mobility Team.

Examples include temporary bridge falsework, temporary traffic signals, & diverting traffic into lanes with less VC.
Width Restrictions & Industry Impact

Overwidth loads up to 16 feet wide are commonly transported throughout the state.

Oregon issues annual permits for loads up to 14 feet wide for many two-lane highways throughout Oregon.
Horizontal Clearance Standards

Standards for daytime hours* to meet commitments to the freight industry
(*1/2 hour before sunrise until 1/2 hour after sunset)

Interstate/Multilane Highways:
• Maintain 28 for two lanes of one-way traffic.
• Maintain 19 feet for one lane of one-way traffic.*

Other Two-Lane Routes on NHS:
• Maintain 28 feet for two lanes of one-way traffic (single lane each direction).
• Maintain 16 feet for one lane of one-way traffic.*

*NOTE: These widths still require notification/coordination with the Mobility Team

A “sunrise/sunset” exception can be requested for longer hours (between April & August)
Temporary Horizontal Restrictions

Horizontal clearance refers to the paved unobstructed width between barriers (soft or hard barrier, or equipment) including any usable shoulder.
Horizontal Clearance & Load Restrictions

The Mobility Team applies a buffer to the available horizontal width to determine the load restriction through the work zone:

The buffer space depends on if the work zone is on a tangent and/or curve.
Temporary Weight Restrictions

Example: Some bridges require heavy loads to straddle the center line. If bridge work requires a lane closure and heavy loads cannot straddle the center, a temporary weight restriction may be needed until the lane is reopened.
Full road closures and ramp closures require notification and coordination with the Mobility Team.

Closures impact the full spectrum of vehicles that use the route.
High loads may have specific lane usage required in their permits as bridges often have varying vertical clearances above different lanes or shoulders.
Curves In Excess of 5-Degrees Can Result in a Length Restriction

• Engage the Mobility Team **EARLY** if you believe your project will require a length restriction.

• There are many different vehicle configurations to consider, when planning for a temporary length restriction..
3. Planning & Coordinating to Minimize Impacts

Refer to *Mobility Procedures Manual*:
- Chapter 4, Temporary Conditions

Motorists sent on 41-mile detour to avoid 165 feet of roadworks

By Rory Sullivan, CNN
Updated 12:36 PM ET, Thu October 24, 2019

A map showing the 41-mile detour caused by roadworks on a 50 meter stretch of road in Dorset, England.
Mobility Factors to Consider

- Are there options to eliminate the restriction?
- Are there options to minimize the restriction?
- Are there options to shorten the duration?
- Will emergency services be impacted?
- Will hazardous material loads be impacted?
- How will restricted traffic be detoured?
- Will trucks be required to start/stop on a steep grade?
- Are there critical route pair conflicts?
- How will the restriction affect oversize/overweight loads?
Work Zone Safety
Factors to Consider

- Increased lateral buffer space
- Crossover / on-site diversion
- Staged construction with temporary widening
- Radar speed trailers
- Construction speed zone reductions
- Temporary Transverse Rumble Strips
- Public information campaigns
- Automated Flagger Assistance Devices
- Smart Work Zone System / Work Zone ITS
- Work at night
- Law enforcement overtime
- Staged construction with temporary widening
Critical Route Pairs

Avoid concurrent restrictions on critical route pairs:
If a route identified on the list of critical route pairs needs to be temporarily restricted, ODOT will take steps to make sure the paired critical route on the list is not restricted.

<table>
<thead>
<tr>
<th>Highway</th>
<th>Paired With</th>
<th>Area</th>
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<tbody>
<tr>
<td>I-5</td>
<td>OR 212, US 26, US 97</td>
<td>Washington – California</td>
</tr>
<tr>
<td>US 30</td>
<td>US 26</td>
<td>Portland – Coast</td>
</tr>
<tr>
<td>22 &amp; OR 18</td>
<td>US 20</td>
<td>Willamette Valley – Coast</td>
</tr>
<tr>
<td>126</td>
<td>OR 38</td>
<td>Willamette Valley – Coast</td>
</tr>
<tr>
<td>38</td>
<td>OR 42</td>
<td>I-5 – Coast</td>
</tr>
</tbody>
</table>
Evaluating Staging Options

Consider all traffic that uses the route, including freight, over-dimension units, emergency services & hazardous material loads.

When practical, options with the least impact to mobility while maintaining worker safety should be used.
Managing Delay

- Work zone delay is defined as the additional average travel time experienced per vehicle per hour.
- Construction projects are evaluated for delay impacts to mobility and staging.
- A delay estimate must be prepared for projects on routes with delay thresholds.
Corridor Delay Thresholds

- Corridor delay thresholds are established for:
  - US 26/97/20
  - I-5 North/OR 58
  - I-5 South
  - I-84
  - Coastal Network

- Coordinate construction in corridors to ensure delay thresholds and statewide mobility goals are met.

- An exception may be developed if higher delays are unavoidable.
Detour planning: Take into account & provide for all traffic that is allowed to use the route, including freight and over-dimension units.
Detour Impacts

Detours need to be checked for:

- Size & weight restrictions.
- Overhead obstructions
- Safe turning movements & off tracking.
- Emergency services response times.
- Can vehicles transporting hazardous materials use the route?
- Are there other projects along the proposed detour that will restrict traffic?
- Are other projects using the existing route as a detour?
Other Mitigation Tools

Alternative Tools & Methods to Minimize Impacts

- Innovative Contracting Tools
- Alternative Design Materials
- Construction Methods
6. Restriction Notification Requirements

Refer to Mobility Procedures Manual:
• Chapter 5, Notification Requirements
How Much Notification is Required?

- **Non ODOT staff** (e.g. contractors, special event coordinators): At least **35 days**.
- **ODOT staff** (who review restrictions submitted by contractors, or submit them directly): At least **14 or 28 days**.
How Restriction Notice Forms are Processed

Every Restriction Notice Goes Through a Review Process

- Submitted by ODOT PM, 14-28 days prior
- Submitted by non-ODOT project staff, at least 35 days prior
- Reviewed by ODOT Project Mgr.
  (if submitted by non-ODOT project staff)
- More info requested by MCTD
- Submitter adds or clarifies information on the form
- Reviewed by ODOT MCTD
  (if submitted by non-ODOT project staff)
- Restriction Notice is added into the system
- Submitter lifts restriction notice
- Project work related to restriction ends
- Restriction Notice is removed from the system
How Restriction Information is Published

1. Road Restrictions List
2. Over-Dimension Permit Analysts
3. TripCheck Commercial Vehicle Information Advisories
4. Letters to Annual Permit holders
5. GovDelivery advisories
6. Commerce and Compliance Division Web site
Construction Projects - Notification is required for any of these temporary conditions:

- Any time width is reduced to less than
  - 28 feet for two lanes of one-way traffic,
  - 28 feet for two lanes of 2-way traffic (single lane each way)
  - 22 feet for one lane of one-way traffic.

- Any time a state facility is fully closed or traffic is detoured for any period of time (regardless of whether or not a detour is available).

- Any time a ramp is closed for any period of time (regardless of whether or not a detour is available).

- Any time vertical clearance is reduced.

- Any time weight or length restrictions are imposed.
Construction Project Work - Notification Exceptions

Notification is not required if all of the following can be met for accommodating all unannounced loads:

1. Able to wave through unannounced wide loads & provide at least 22-feet of clear distance by moving cones/equipment out of the way with a slight delay.
2. No vertical clearance restrictions, including no lane shifts/lane closures beneath structures.
3. No ramp closures.
4. No weight restrictions.
5. No length restrictions.

*Check with the Mobility Team for accommodating on mainline interstate hwys.*
Notify the Mobility Team **before** making changes that affect restrictions or stakeholder agreements.

This is required by the Mobility Procedures Manual, Operational Notice PD-16, Work Zone Guiding Principle, and the Mobility Considerations Checklist:

Before making changes during construction that have the potential to adversely affect mobility (i.e. additional restrictions) or run counter to previous mobility agreements made during preliminary design, you must discuss proposed restriction revisions with the Contractor, Region Mobility Liaison, and any relevant region resources to determine if the change is warranted and supported by the Region. *If supported by Region, Resident Engineers must:*

- Engage the ODOT Statewide Mobility Team to discuss and obtain concurrence with the potential changes before any agreements are made with the contractor.
- Document the Mobility Program and Mobility Advisory Committee support of any potential new restrictions and provide a copy of the documentation to the Region Mobility Liaison.
Notification is not required if all of the following can be met:

1. For interstates & multilane divided hwys: If minimum available horizontal clear distance, after moving equipment/barriers, is 22 feet.
2. For two lane highways or other highways: If minimum available horizontal clear distance, after moving equipment/barriers, is 19 feet.
3. Able to accommodate all unannounced loads by moving barrier & equipment to provide the clear distance with a slight delay.
4. No lane shifts or lane closures beneath structures.
5. No ramp closures.
6. No weight restrictions.

Refer to the “Maintenance Mobility Requirements” document at:
Emergency Declarations

Notification requirements are waived during emergency events declared by the governor, the state maintenance & operations manager, or a district manager.

District managers or their representatives must notify the Mobility Team of restrictions and/or closures caused by the emergency.
Update Restrictions if there are Changes

- Notify the Mobility Team if a change is needed, (e.g. extending the anticipated work completion date.)
- Any new restrictions should be submitted separately, and not added to an existing notice that has already been approved.

**US30 EB off-ramp to I-405 SB (Portland) -- UPDATE --**

Effective **October 25, 2019**, the US30 eastbound off-ramp to I-405 southbound will be closed Fridays at 8 PM through Mondays at 5 AM. The estimated completion date for this project is **November 4, 2019.**
When the work related to the restriction is over, don’t forget to **lift** the restriction.

### Lifting Restrictions

If not lifted, a restriction will remain published.

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**ROAD RESTRICTIONS**

**Interstate Routes**

**I-5 SB MP 29 to MP 28 (Medford)**

Effective October 27, 2019, this section of I-5 southbound will be restricted to 10 feet 00 inches in width Sunday through Thursday nights between the hours of 8 PM & 6 AM. Loads over 10 feet 00 inches in width may be accommodated on a case-by-case basis. Contact the Over Dimension Permit Unit for information. Estimated date of completion date is November 8, 2019.

**I-5 NB MP 213.63 to MP 214.63 (Halsey)**

Effective November 17, 2019, this section of I-5 northbound will be intermittently restricted to 12 feet 00 inches in width Sunday through Thursday nights between the hours of 9 PM & 5 AM. Loads wider than 12 feet 00 inches in width may be accommodated on a case-by-case basis. Contact the Over-Dimension Permit Unit for information. The estimated completion date for this project is November 22, 2019.

**I-5 NB MP 214.53 to MP 214.56 (Halsey)**

Effective November 17, 2019, this section of I-5 northbound will be intermittently restricted to 17 feet 1 inch in height Sunday through Thursday nights between the hours of 9 PM & 5 AM. Loads higher than 12 feet 00 inches in height may be accommodated on a case-by-case basis. Contact the Over-Dimension Permit Unit for information. The estimated completion date for this project is November 22, 2019.

**I-5 NB MP 221.50 to MP 222.00 (Tangent) -- UPDATE --**

Effective October 14, 2019, this section of I-5 northbound will be restricted to 17 feet 00 inches in width Monday through Thursday nights between the hours of 9 PM & 5:30 AM. Loads wider than 17 feet 00 inches in width may be accommodated on a case-by-case basis. Contact the Over-Dimension Permit Unit for information. The estimated completion date for this project is November 1, 2019.
7. Resources
The MPM is the accepted authority for mobility policy for the Agency

The MPM is available at:

Resources

Internal SharePoint Site

Includes links to manuals, guidance, training and contact information.

Also includes a form for uploading presentation materials for upcoming Mobility Meetings.

SharePoint link:
http://transact.odot.state.or.us/mc/Mobility/SitePages/Home.aspx
A Statewide Traffic Mobility web page on Oregon.gov also includes manuals, forms, contact information. This site also includes agendas and minutes for Mobility Advisory Committee Meetings.

Website link:
https://www.oregon.gov/ODOT/MCT/Pages/StatewideTrafficMobility.aspx
The Mobility Considerations Checklist is initiated by a transportation project manager and completed by project teams.

The form is used to identify potential impacts to freight and traffic mobility in the development phase of a project, and should be reviewed during pre-construction.

Checklist Form Link: https://www.oregon.gov/ODOT/Forms/Motcarr/9983fill.pdf
Highway Restriction Notice Form

An online web form (#734-2357) is used for submitting temporary Highway Restriction Notices to the Mobility Team. The form also includes a User Guide and Tutorial Videos.

Restriction Notice Form link:

https://www.oregontruckingonline.com/cf/MCAD/pubMetaEntry/restriction/
Resources

Useful Links:

• Mobility Considerations Checklist (Form 9983)
  https://www.oregon.gov/ODOT/Forms/Motcarr/9983fill.pdf

• Work Zone Decision Tree (Form 734-5042)
  https://www.oregon.gov/ODOT/Forms/2ODOT/7345042.pdf

• Mobility Meeting Guidelines:

• Mobility Meeting PowerPoint Presentation Template
  https://www.oregon.gov/ODOT/MCT/Documents/MAC_PowerPoint_Template.PPTX

• Work Zone Traffic Analysis Mapping Tool:
THANK YOU!

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Please provide us your feedback about this training:
https://www.surveymonkey.com/r/MobilityTrainingFeedback