An introduction to Work Zone Safety & Mobility Policies & Procedures

ODOT Mobility Unit
Course Objectives

• Demonstrate an understanding of the Mobility Procedures Manual.
• Explain your roles & responsibilities in keeping state highways open for travel & business.
• Explain ODOT’s Guiding Principle for Work Zone Safety.
• Identify mobility impacts, impediments & resources to assist in maintaining mobility within your projects.
• Recognize the significance of freight restrictions, delay thresholds, notification requirements and coordination expectations.
Agenda

1. Introduction
2. Mobility: What is it & why it matters to Oregon
3. Over-Dimension Permitting Basics
4. Work zone safety
5. Communication & coordination/Roles & responsibilities
6. Identifying mobility impacts & options for addressing them:
   • Permanent restrictions
   • Roundabouts
   • Temporary restrictions & critical route pairs
   • Staging, delay and detour routes
   • Contract & design considerations.
7. Resources
8. Conclusion
2. Mobility:
What is it? Why does it matter to Oregon?

Refer to *Mobility Procedures Manual*, chapters:
- FOR-1: Purpose & Rationale
- AP-2: Mobility Program Background
Mobility Procedures Manual:

Mobility can be defined as the ease with which people & goods move throughout their community, state & the world.
Mobility... balances with **Work Zone Safety.**

**ODOT Mission:** We provide a safe and reliable multimodal transportation system that connects people and helps Oregon’s communities and economy thrive.
Mobility... protects our infrastructure.
Mobility... is vital to Oregon’s economy.
Oregon’s Economy Depends on Mobility

• **Annual Weight Mile Taxes, Registration & Fees:** Approximately $361 million, or about 29% of the State Highway Fund (Source: 2019-21 ODOT Ways & Means presentation)

• In 2016, roughly **240 million tons of freight** valued at $270 billion moved within, to, and from Oregon via truck, rail, air, pipeline, and marine modes. (Source: ODOT 2018 State of the System report)
Oregon’s Economy Depends on Mobility

Vehicle miles traveled on Oregon Hwys (ODOT, 2017)
21.4 Billion

Passenger vehicles registered in Oregon (DMV, 2018)
3.5 million

Trucks operating in Oregon (MCTD, 2018)
366,907
2. Over-Dimension Permitting Basics

Refer to Mobility Procedures Manual:
• Appendix AP-4: Freight Permitting Overview
Over-dimension permitting basics

- **Annual** — A continuous trip permit that allows for exceeding legal dimensions or weights — overwidth, overlength, overheight, overweight. 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. These also include “Superload" permits.
## Legal size vs. oversize in Oregon

<table>
<thead>
<tr>
<th></th>
<th><strong>Legal Size</strong></th>
<th><strong>Oversize (Requiring a permit)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Width:</strong></td>
<td>Up to 8.5 feet</td>
<td><strong>Width:</strong></td>
</tr>
<tr>
<td><strong>Height:</strong></td>
<td>Up to 14 feet</td>
<td>• Daytime: Up to 12 or 14 feet</td>
</tr>
<tr>
<td><strong>Length:</strong></td>
<td>Up to those allowed on Group Map 1</td>
<td>(depending on the route)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Nighttime: Up to 10 or 12 feet (depending on the load &amp; route)</td>
</tr>
<tr>
<td><strong>Height:</strong></td>
<td>Up to 14½ feet</td>
<td><strong>Height:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Up to 17 feet (and sometimes higher)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Length:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Up to 199 feet (and sometimes longer)</td>
</tr>
</tbody>
</table>

*These are general dimensions for each permit. There are exceptions & route-specific requirements.*
In 2018, MCTD’s Over-Dimension Permit Unit issued:

- 60,231 Annual Permits (allows for unlimited trips)
- 66,541 Single-Trip Permits (includes superloads)
Freight mobility relies on primary routes with sufficient clearance limits.
Secondary route clearance limits are equally important

- Farms move wide implements on secondary routes (and they’re not required to obtain an over-dimension permit.)
- When a community suddenly needs a heavy hauler to bring in an emergency transformer, the routes needed are mostly secondary.
3. Work Zone Safety

Refer to Mobility Procedures Manual, chapter:
1-4: Work Zone Safety
Work Zone Safety in Oregon

• 2011 – 2015, Oregon averaged 488 work zone related crashes per year; averaging 13 serious injury & 5 fatal crashes.

• On average, a work zone crash occurs in Oregon every 18 hours.

• On average, more than one person is hurt every day in a work zone crash in Oregon.

• Road workers are 6X more likely to be injured or killed on the job compared to other professions.

Source: ODOT Work Zone Safety Fact Sheet
Guiding Principle

Mission: ODOT’s mission is to provide a safe, efficient transportation system that supports economic opportunity and livable communities.

Goal: Our work zone safety goal is zero fatalities and injuries, including ODOT employees, contractors, public safety professionals and the traveling public while efficiently moving people and goods.

Guiding Principle: The best work zone design and management plan will maintain safety and mobility, a balance that shall be analyzed continuously throughout the lifecycle of the facility.

Directive/Strategy: To accomplish this goal, project design teams shall consider the full range of options including but not limited to separation of the traveling public from workers and work areas, speed reductions, law enforcement, enhanced traffic control devices and signage, and overall roadway and work zone design. Effective communication with travelers is essential to establish reasonable expectations and minimize unsafe driver behavior. While there is no single solution that is appropriate for all roadway designs and work zones, whenever practicable workers should be separated from traffic.
Work Zone Safety

• All stages of project delivery are subject to the Guiding Principle.

• Project Delivery Process requires use the Work Zone Decision Tree (WZDT) & Transportation Management Plan (TMP).

• Consideration of options required for:
  • Construction staging;
  • Traffic control;
  • Separation strategies;
  • Public/stakeholder involvement, and;
  • Communications that occur during the entire project
Work Zone Decision Tree Form

The WZDT is a “living document” used to record:

- Work zone safety options considered.
- The resulting impacts of those options.
- Stakeholder input (including during construction)
- Recommendations and decisions made.

As the form is filled out, the entrees become part of a project’s TMP.
Work Zone Decision Tree Form

TMP/WZDT shared with the Mobility Team:

• Both are provided to the Mobility Team who makes them available to the Mobility Advisory Committee when necessary.

• Examples can be found on the Mobility Records web page (posted with meeting agendas)
  https://www.oregon.gov/ODOT/MCT/Pages/MobilityRecords.aspx
5. Communication & coordination/
Roles & responsibilities

Refer to Mobility Procedures Manual:
Chapter FOR-4: Roles & Responsibilities /
Issue Resolution
Communication & Coordination

Keys to successful mobility communication and coordination throughout Project Delivery:

1. Identify mobility issues early.
2. Engage the public, industry and stakeholders.
3. Resolve issues as they arise.
Stakeholder engagement is essential for resolving issues & providing input

- Reduction in vehicle-carrying capacity impacts (ORS 366.215)
- Work zone safety for workers and the traveling public
- Road or lane closures & detours
- On-ramp or off-ramp closures
- Vertical or horizontal clearance limits
- Weight restrictions
- Sunrise/sunset exceptions to allow longer work windows
- Critical route pair conflicts
- Roundabouts on the state highway system

**ODOT’s Mobility Team is the primary contact to engage mobility stakeholders.**
During Planning & Project Development

Project Delivery Teams communicate mobility impacts with the Mobility Team through:

**Early Planning & Stakeholder Engagement. Examples:**
- 366.215 Reduction Reviews
- Roundabout proposals
- Permanent Weight Restrictions
- Permanent vertical/horizontal clearance reductions.
- Critical Route Pair conflicts

**Project Development Traffic Control Planning:**
- Mobility Considerations Checklist
- Transportation Management Plan
- Work Zone Decision Tree
During Construction & Maintenance Work

- The Online Highway Restriction Notice Form is used to send restriction information to the Mobility Team before work begins.
- Submitting Highway Restriction Notices allows ODOT to ensure work zone safety and help motor carriers hauling oversize loads plan their trips.
Providing Notice for Highway Restrictions

Use the Online Highway Restriction Notice Form to send restriction information to the Mobility Team:

- **28 day notification** required for restrictions affecting annual permit holders.
- **14 day notification** required for restrictions affecting single trip permits.

The Mobility Team spreads the news about restrictions:

1. OTL Road Restrictions List
2. Over-Dimension Permit Analysts
3. TripCheck Commercial Vehicle Information Advisories
4. Letters to Annual Permit holders
5. GovDelivery advisories
6. Motor Carrier Division Web site
Road and bridge restrictions are added to the Trucking Online list of restrictions on state routes. This list is closely monitored by many trucking companies.
Road and bridge restrictions are added to the Electronic Routing Manual System that’s critical to Over-Dimension Permit Analysts’ work.
Trucking-related restrictions appear on TripCheck maps with a 🛢️ icon. Click on the icon and up pops the details.
DATE: May 13, 2011

TO: ALL HOLDERS OF ANNUAL OVER-DIMENSION PERMITS

FROM: Christy Jordan, Manager
Over-Dimension Permit Unit

SUBJECT: FULL CLOSURE OF I-5 SOUTHBOUND MP 303.41 TO MP 300.00, PORTLAND
Effective June 17, 2011, I-5 southbound will be closed in Downtown Portland between the hours of 10 PM & 5 AM, to facilitate work on the Marquam Bridge. In addition, the ramp from Greeley Ave to I-5 southbound will be closed the nights of June 17 and 18. Estimated date of completion is June 20, 2011.

Detour Route:
Traffic on I-5 southbound from North Portland will be detoured to I-405 southbound. The ramp from I-405 northbound to I-5 southbound will remain open at all times, as will the ramp from Weidler Ave (Rose Quarter) to I-5 southbound. Remaining traffic will be detoured to I-84 eastbound.

When a restriction affects Annual Permit holders, the Motor Carrier Division mails a special notice to them.
When a restriction affects Annual Permit holders or the trucking industry in general, the Motor Carrier Division uses GovDelivery to send an e-mail notice to them.
The Motor Carrier Division’s Web site includes links to restriction lists and notices.
Mobility Roles & Responsibilities
# MobilityRoles & Responsibilities

<table>
<thead>
<tr>
<th>Statewide</th>
<th>Region</th>
<th>District</th>
</tr>
</thead>
</table>
| • Mobility Advisory Committee  
• MCTD Mobility Team  
• ODOT Technical Services Branch  
• State Bridge Engineer | • Region Manager  
• Region Mobility Liaison  
• Project Development Teams  
• Construction Management Teams | • District Manager (or designees) |
Statewide Roles

Mobility Advisory Committee

• Collaborates among diverse stakeholders to resolve mobility issues or concerns.

• Advises and provides input on potential reduction of vehicle-carrying capacity impacts (Oregon Revised Statute 366.215), permanent weight restrictions, critical route pair conflicts, roundabouts on the state highway system, work zone safety issues, and impacts from temporary restrictions.
Statewide Roles

MCTD Mobility Team

- Initiates all mobility stakeholder contacts and facilitates mobility meetings.
- Tracks ODOT projects for mobility impacts, and provides work zone and restriction information to mobility stakeholders.
- Recommends industry stakeholders for high-impact projects as needed.
- Works with project teams to identify and share issues for early stakeholder input. Works with project teams and stakeholders to develop options and solutions.
- Provides vehicle size, weight and routing info to project teams.
- Reviews Highway Restriction Notices (form 734-2357) submitted by ODOT staff and contractors to ensure information is consistent with mobility policies and stakeholder agreements.
- Notifies the trucking industry of planned restrictions.
- Provides training on the Department’s mobility policies and procedures.
- Maintains and updates the Department’s mobility forms and manuals.
- Maintains the program Oregon.gov website and SharePoint intranet site.
Statewide Roles

ODOT Technical Services Branch

- Provides input regarding traffic control plans, traffic management plans, reductions in capacity, and design exceptions.

- Evaluates physical requirements for moving freight through temporary work zones and permanent changes to the highway system.
Statewide Roles

State Bridge Engineer

- Notifies district managers, the MCTD administrator, the communications division and the director regarding the need for bridge load postings.
Region Roles

Region Manager

• Appoints a region mobility liaison who is the point of contact for region staff and the Highway Mobility Team.
• Participates in the Mobility Issue Resolution Process as appropriate.
Region Mobility Liaisons

- Collects mobility information for all projects occurring in the region and neighboring/bordering jurisdictions.
- Identifies and develops resolution strategies for schedule and delay threshold conflicts that affect corridor mobility.
- Collects data on existing or proposed detour routes.
- Work with project team leaders/managers to develop delay exception requests and seek input from stakeholders.
- Work with the Mobility Team, the Mobility Advisory Committee, region staff, local governments, and others to resolve issues.
- Work with the ODOT Rail Division to review proposed detour routes and rail project operations that may affect mobility.
- Work with the region planning unit to vet potential reduction in vehicle-carrying capacity issues.
- Act as a conduit for communicating updates or best practices to the region management team/project leaders.
- Track all special community events, major agriculture activities, and any other information that would impact traffic volumes or delays.
- Review designs for local programs including development reviews.
Planning Staff

- Identify and evaluate potential mobility issues (e.g. reduction in vehicle-carrying capacity) early in the development of plans (e.g. transportation system plans, corridor plans and interchange access management plans) and involve the region mobility liaison.
Region Roles

Project Development Teams
(Includes transportation project managers, local agency liaisons, resident engineers and resident engineers – consultant projects)

• Work with the region mobility liaison and the Mobility Team to identify potential reduction in capacity (ORS 366.215) design conflicts early.
• Develop project specific TMPs, TCPs, and Work Zone Decision Trees.
• Involve the Mobility Team early in the project development process when mobility issues are identified, including planned restrictions and potential detour routes, prior to Design Acceptance.
• Provide documentation of Mobility Team and mobility stakeholder support for planned restrictions and proposed construction to the region mobility liaison.
• Identify mobility-related project risks and plan/evaluate risk responses.
• Notify the state bridge engineer regarding planned bridge load posting.
• Ensure consideration is given to alternative design practices, materials, and construction methods to minimize delays and restrictions.
• Ensure consideration is given to various contracting methods to minimize delays and restrictions (i.e. A+B, or Incentive/Disincentive provisions).
• Ensure other factors are given consideration (secondary routes, congestion impacts, emergency mobility plans, permitting requirements).
• Complete Project Mobility Considerations Checklist.
Region Roles

Construction Management Teams
(Includes resident engineers, resident engineers – consultant projects, and local agency liaisons)

- Notify the Mobility Team when work zones restrict width, length, height or weight of trucks, and of planned detours.
- Notify the Mobility Team of any changes to the Traffic Control Plan.
- Notify the Mobility Team when restrictions are lifted.
- Review and approve adequacy of information in Form #734-2357 Highway Restriction Notice as prepared by contractor and then forwarding the approved form to the Mobility Team.
- Notify region mobility liaison and Mobility Team before proposing changes during construction that have the potential to adversely affect mobility or differ from specified restrictions/agreements made during the project development process.
- Provide documentation of Mobility Team and trucking industry support for changes in restrictions and construction to Region Mobility Liaison.
Region Roles

Area Managers

• Work with the region mobility liaisons and project development and construction staff to ensure projects and activities meet mobility requirements.

• Ensure staff engage the mobility liaison early when mobility issues are identified.

• Ensure staff copy the region mobility liaison on any project items for use in notifying the trucking industry of public meetings and project plans.

• Ensure staff identify and evaluate risks associated with mobility.

• Ensure staff notify the region mobility liaison of planned restrictions, delays, or detours.

• Ensure staff evaluate alternative design practices, materials, and construction methods to minimize delays and restrictions.

• Ensure staff work with the region mobility liaison, region staff, Mobility Team, local governments, industry stakeholders and others to resolve conflicts.
District Roles

District Managers (or their designees)

- Implement mobility activities for the district and monitor maintenance activities to meet mobility requirements. Ensure projects conform to mobility guidance and policies.

- May require restrictions (e.g., emergency declarations) as necessary to protect the safety and convenience of the traveling public, to protect any highway or section from damage, to avoid conflict with highway repair projects, or to cope with other local traffic conditions.

- Notify the region mobility liaison and the MCTD Mobility Team of planned detours.

- Notify the region mobility liaison and the Mobility Team when restrictions are changed or lifted.

- Submit Form #734-2357 Highway Restriction Notice 14 or 28 days prior to any planned work zone restriction when maintenance mobility activities 2 or 3 apply.
3. Identifying Mobility Impacts

Refer to Mobility Procedures Manual, chapter: 1-4: Work Zone Safety
Types of Impacts

- **Permanent**
- **Temporary**
Permanent Impacts

Refer to Mobility Procedures Manual, chapter: 1-2: Permanent Restrictions
permanent

**Permanent Impacts**

**Oregon Revised Statute 366.215**

- Prohibits permanent reductions in vehicle-carrying capacity on an identified freight route.
- Exceptions are allowed for safety or access considerations.
- A local gov’t can apply to the OTC for an exception.
Oregon Revised Statute 366.215

Permanent Impacts

Projects on these Reduction Review Routes are subject to the statute.

Maps can be found on the Mobility website at:
https://www.oregon.gov/ODOT/MCT/Pages/StatewideTrafficMobility.aspx
Permanent Impacts

Oregon Revised Statute 366.215

Reduction of Vehicle-carrying capacity is defined in OAR Chapter 731, Division 12:

“A permanent reduction in the horizontal or vertical clearance of a highway section, by a permanent physical obstruction to motor vehicles...”
Permanent Impacts

Oregon Revised Statute 366.215

Structures subject to review include traffic signals, signposts, stationary bollards, curbs, trees, raised or depressed medians, roundabouts, streetlights & overhead wiring.

An ORS 366.216 Guidance Document is available to help with the review process:
Permanent Impacts

Permanent Vertical Clearance

Any proposed decrease in vertical clearance below minimum standards for existing or new structures requires consultation with the Mobility Team.

<table>
<thead>
<tr>
<th>Minimum Vertical Clearance Standards for New Structures</th>
<th>All Interstates &amp; High Routes</th>
<th>NHS (Not on High Routes.)</th>
<th>All other routes (Not on NHS or High Routes.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Clearance</td>
<td>17’ 04”</td>
<td>17’ 00”</td>
<td>16’ 00”</td>
</tr>
</tbody>
</table>

Standards for Existing Structures (on any route)

- Shall not be reduced below minimum vertical clearance standards;
- Shall not be reduced if the existing vertical clearance is substandard.
Permanent Impacts

Permanent Vertical Clearance

Improving Vertical Clearance
Projects involving structures with substandard vertical clearance need to be evaluated for opportunities to increase VC.

For example→
This Massachusetts bridge (aka “The Can Opener”) has 10.5’ of clearance.

That’s 5.5’ below ODOT’s lowest clearance standard for new structures.
Permanent Impacts

Permanent Horizontal Clearance

Maintaining and improving horizontal clearance can provide significant benefits to Oregon’s economy.

An increase in horizontal clearance at a “pinch point” may open up an entire freight route.
Permanent Impacts

Permanent Length Restrictions

Length restrictions are commonly caused by roadway curvature.

Projects involving the location of a length restriction should evaluate removing the restriction whenever possible.
Permanent Impacts

Permanent Weight Restrictions

Movement of heavy loads are greatly restricted due to the problems ODOT has with cracked bridges.

Whenever load rating factors show insufficient capacity for unrestricted use by permitted over-dimension vehicles, ODOT’s Size & Weight Restrictions Policy PMT-06-01 will be followed.
Permanent Impacts

Roundabouts

Highway Directive DES 02:
Establishes the expectation and processes concerning freight mobility whenever a roundabout is proposed to be installed on the state highway system.

The process includes a documented agreement memorialized with the designated statewide representatives of the trucking industry that the roundabout is properly sized.
Temporary Impacts

Refer to Mobility Procedures Manual, chapter: 2-5: Temporary Size & Weight Restrictions
Temporary Vertical Clearance Restrictions

*Any* proposed temporary reduction in VC requires notification/coordination with the Mobility Team.

Examples include temporary bridge falsework, temporary traffic signals, and diverting traffic into lanes with less VC.
Temporary Horizontal Restrictions

Temporary Impacts

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.
Temporary Horizontal Restrictions

Horizontal clearance through a work zone refers to the paved width between any barriers (soft or hard barrier, or equipment) including any usable shoulder.
Temporary Horizontal Restrictions

Horizontal Clearance 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 MCTD Mobility (see next slide).

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

Notification to the trucking industry is required during construction work when temporary horizontal width is less than:

- 28 feet for two lanes of one-way traffic.
- 28 feet for two lanes of two-way traffic.
- 22 feet for one lane of one-way traffic.

For maintenance activities, refer to the Maintenance Mobility Requirements guide for notification requirements.
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.
High loads may have specific lane usage required in their permits as bridges often have varying vertical clearances above different lanes or shoulders.
Temporary Closures

Full road closures and ramp closures require notification and coordination with the Mobility Team.
Critical Route Pair Conflicts

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>
</tr>
</thead>
<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>OR 22 &amp; OR 18</td>
<td>US 20</td>
<td>Willamette Valley – Coast</td>
</tr>
<tr>
<td>OR 126</td>
<td>OR 38</td>
<td>Willamette Valley – Coast</td>
</tr>
<tr>
<td>OR 38</td>
<td>OR 42</td>
<td>I-5 – Coast</td>
</tr>
</tbody>
</table>
When evaluating staging options, consider all traffic that uses the route, including freight and over-dimension units.

When practical, staging options with the least impact to mobility should be selected, while maintaining worker safety.
Staging Considerations

- Can expected traffic volumes be accommodated at all times?
- Can night work be used to avoid daytime impacts?
- Can continuous free-flow conditions with minimal delay and no restrictions be used?
- Can large sections of roadway work be broken into smaller segments?
- Are there freight impacts such as frequent stopping/starting, stopping at the bottom of steep grades, sending traffic through sharp corners, etc.?
- How will staging affect emergency response times?
- How will other projects be affected?
Managing Delay

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

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

- Construction activities in these corridors must be coordinated to ensure delay thresholds & mobility goals are met.

- Delay thresholds are compared against estimated delays for projects & maintenance activities on a corridor segment.

- Regions decide if delay estimates are formally prepared for less-restrictive maintenance activities.

- An exception may be requested if higher delays are unavoidable.
Detours are a staging strategy that involves shifting traffic onto a different roadway and away from the project site.

All planned detours must take into account and provide for all traffic that is legally allowed to use the route, including freight traffic and over-dimensional units.
Detours need to be checked for:

- Size & weight restrictions.
- 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?
Refer to Mobility Procedures Manual, chapter:
• 2-4: Design & Contract Considerations
Design Considerations

Alternative Construction Materials

Consider materials that can reduce traffic impacts:

- Pre-cast, pre-stressed bridge components.
- Concrete accelerators.
- Polyester polymer concrete for deck overlays.
Design Considerations

Consider Alternative Construction Methods

- Exodermic deck replacements.
- Controlled delay method (CDM).
- Trenchless technology.
- Parallel bridge construction.
- Rapid bridge replacement.
Contract Considerations

Contracting Tools

Consider contracting tools to reduce construction duration & impacts:

• Incentive/disincentive clauses.
• A+B Contracting.
• Interim completion dates/work windows.
4. Resources
The Mobility Procedures Manual (MPM) is the accepted authority for mobility policy for the Agency. The MPM is available at:

Resources

**Internal SharePoint Site**

The Mobility Program ensures that traffic delays and freight restrictions are minimized while work zone safety is emphasized at all levels of planning and implementation.

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 a tool used to identify potential impacts to freight and traffic mobility in the development phase of a project.

Checklist Form Link:
https://www.oregon.gov/ODOT/Forms/Motcarr/9983fill.pdf
An online web form (#734-2357) is available 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

Additional 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

• ORS 366.215 Reduction Review PowerPoint Presentation Template:
THANK YOU!

Bill Gross
Mobility Training Coordinator
503-934-1624
william.p.gross@odot.state.or.us

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