

What's new with PORTAL:

Data sources, user tools, and some basic visualizations of traffic trends since COVID-19 was detected in Oregon

Presenter: Tammy Lee, PhD

PORTAL team: Kristin Tufte, PhD, Basem Elazzabi, Utsav Raychaudhuri, Will Mass





What is PORTAL?

- Multimodal transportation data archive for the Portland-Vancouver-Hillsboro Metropolitan area.
- Data is used for the production of regional performance measures, research, and educational opportunities.
- Data includes:
 - Highway: speed volume, occupancy, VMT, VHT, travel time, delay
 - TOC incident data, VMS, VAS
 - Vehicle length: volume
 - Transit: quarterly ridership & on-time performance
 - Arterial: traffic signal data, bike counts, system detector counts
 - Weather: wind speed, temperature, humidity, precipitation, visibility



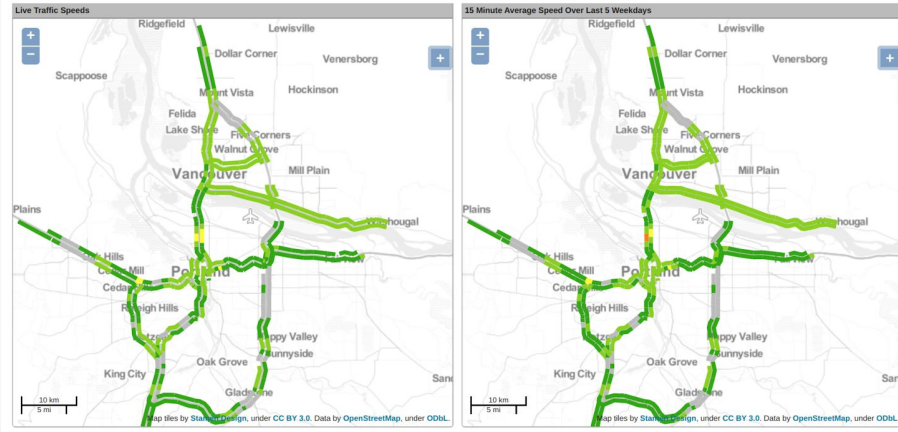
PORTAL

PORTAL is the official transportation data archive for the Portland-Vancouver Metropolitan region.

PORTAL provides a centralized, electronic database that facilitates the collection, archiving, and sharing of data and information for public agencies within the region. The data stored in Portal includes 20-second granularity loop detector data from freeways in the Portland-Vancouver metropolitan region, arterial signal data, travel time data, weather data, incident data, VAS/VMS message data, truck volumes, transit data, and arterial signal data. Many of these data feeds are received by PORTAL in real time or on a daily basis and for most, the retrieval and archiving process is fully automated.

PORTAL's multi-modal transportation data archive aims to support Metro's Regional Transportation Plan, the production of regional performance measures, support for regional transportation agencies and their consultants, and researchers at Portland State and elsewhere. Project objectives include producing tools and performance measures useful to local transportation professionals, exploring new and innovative uses of the data, and making the PORTAL data and system more accessible to agency personnel.

PORTAL is currently supported by funding from **Metro**, the **Southwest Washington Regional Transportation Council (RTC)**, and the **Transportation Research and Education Center (TREC) at Portland State**. In addition, PORTAL has received funding from the **Federal Highway Administration (FHWA)** and the **National Science Foundation (NSF)**.





Travel Time

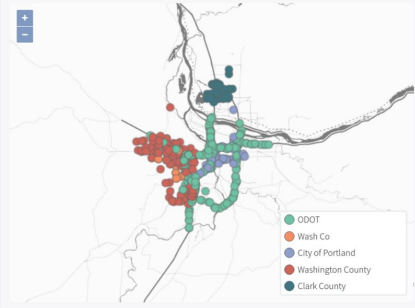
Not secure | new.portal.itp.pdx.edu:9080/traveltime/

Apps | github-pstrec | Portal | Portland State... | Week-to-week... | R | TriMet - Transl... | Apache Zope... | BikePed Portal | Apache Zope... | viz examples | Introduction t... | How to keep a... | Bicycle and Pe... | Choosing the... | Travel Time Re... | Multi-Row He... | Other bookmarks

PORTAL Home Highways Stations Travel Time Vehicle Length Downloads Arterial Arterial Signal FHWA Data Documentation & Feed

Travel Time ⓘ

Tour




Map showing travel time data points (colored dots) overlaid on a road network. The legend indicates the following categories:

- OOOT (Green)
- Wash Co (Orange)
- City of Portland (Blue)
- Washington County (Red)
- Clark County (Dark Blue)

Routes ⓘ

Start week ⓘ

Reliability weeks



Metro Oregon Department of Transportation RTD U.S. Department of Transportation Federal Highway Administration Portland State University C-TRAN TREC TRI MET

© Portals 2004-2020



Travel Time

Travel Time ⓘ Tour

The map displays a network of roads with colored markers indicating travel time data. A red circle highlights a specific segment of the route, which is further detailed in the 'Route' pop-up window.

Route

- I-84 WB @ 53rd
- ↓
- I-84 Sandy WB
- ↓
- I-84 33rd WB

Legend:

- ODOT
- Wash Co
- City of Portland
- Washington County
- Clark County

Routes ⓘ

Start week ⓘ

Reliability weeks



Travel Time

Travel Time ⓘ Tour

Route
I-84 WB @ 53rd
↓
I-84 Sandy WB
↓
I-84 33rd WB

Legend
● ODOT
● Wash Co
● City of Portland
● Washington County
● Clark County

Routes ⓘ Select a route

Start week ⓘ 2020-03-29

Reliability weeks 26

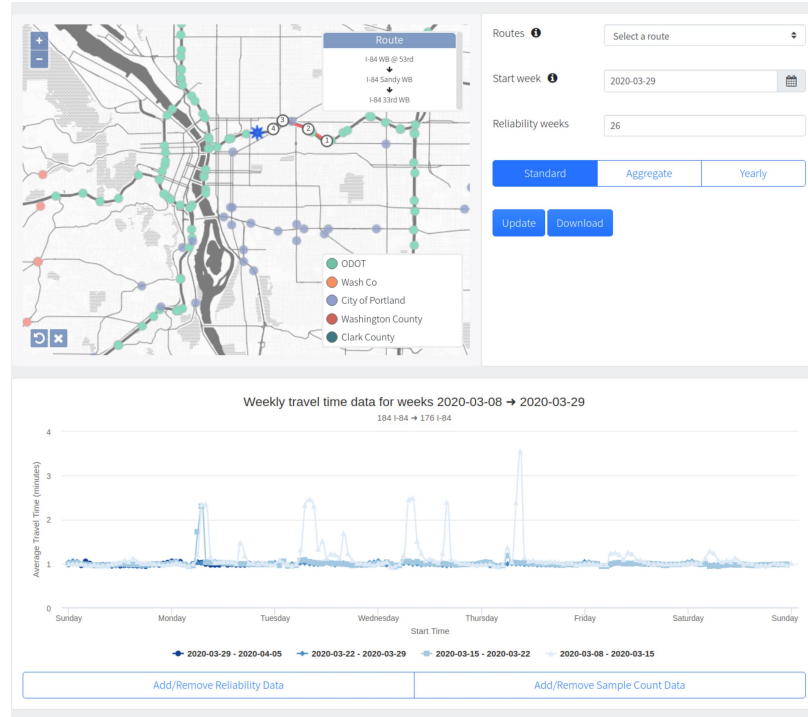
Standard Aggregate Yearly

Update Download

The interface shows a map with a highlighted route (I-84 WB @ 53rd, I-84 Sandy WB, I-84 33rd WB) and a legend for different jurisdictions. The 'Travel Time' and 'Tour' buttons are circled in red. The 'Routes' dropdown is set to 'Select a route', 'Start week' is '2020-03-29', and 'Reliability weeks' is '26'. The 'Standard' tab is selected, and 'Update' and 'Download' buttons are visible.

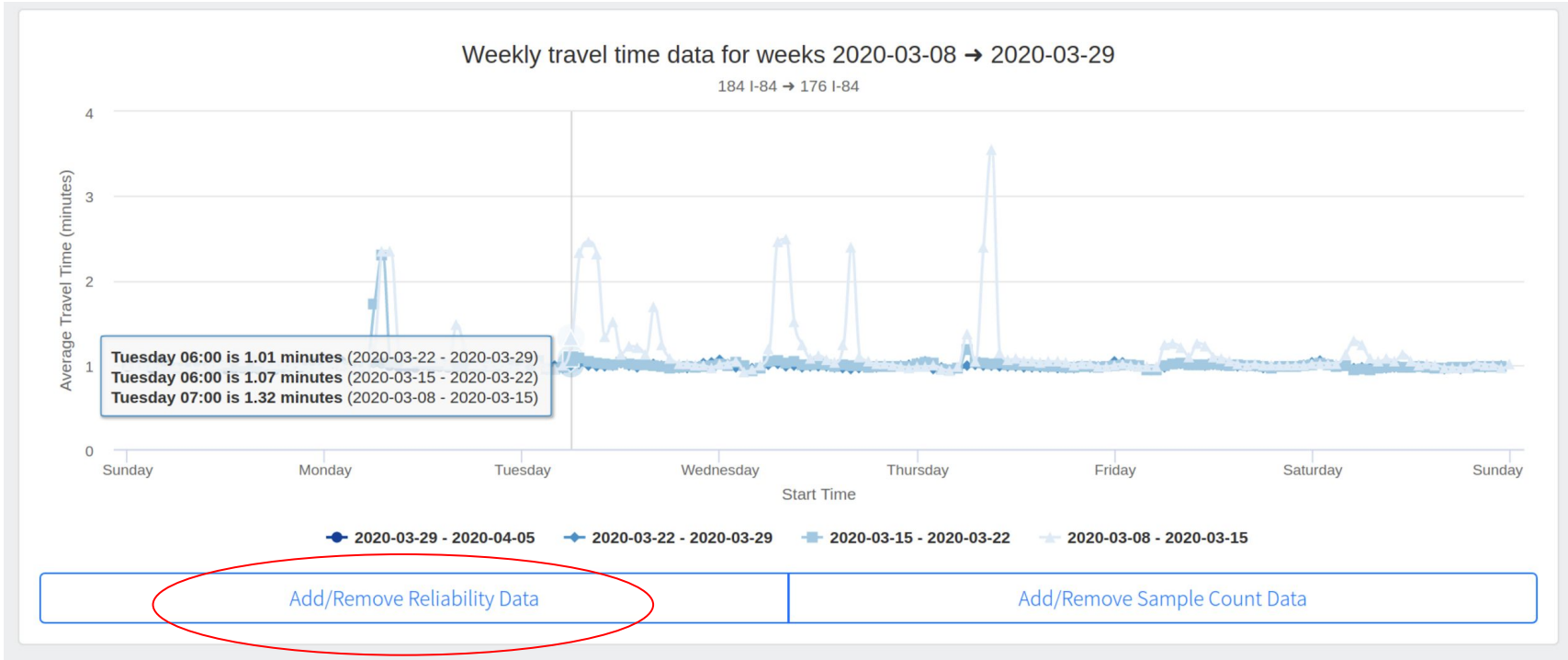


Travel Time





Travel Time

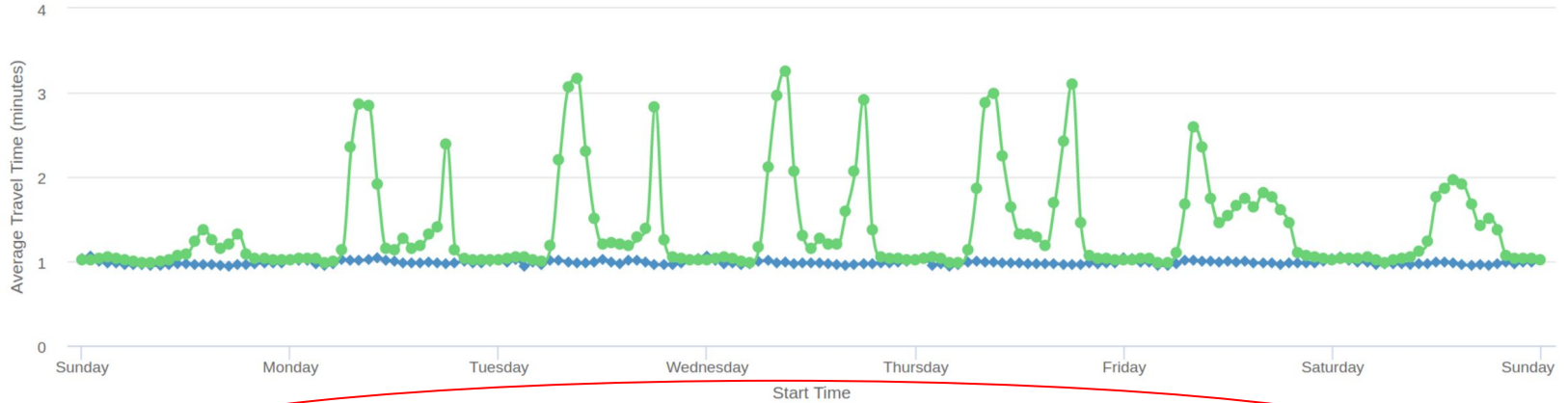




Travel Time

Weekly travel time data for weeks 2020-03-08 → 2020-03-29

184 I-84 → 176 I-84



Add/Remove Reliability Data

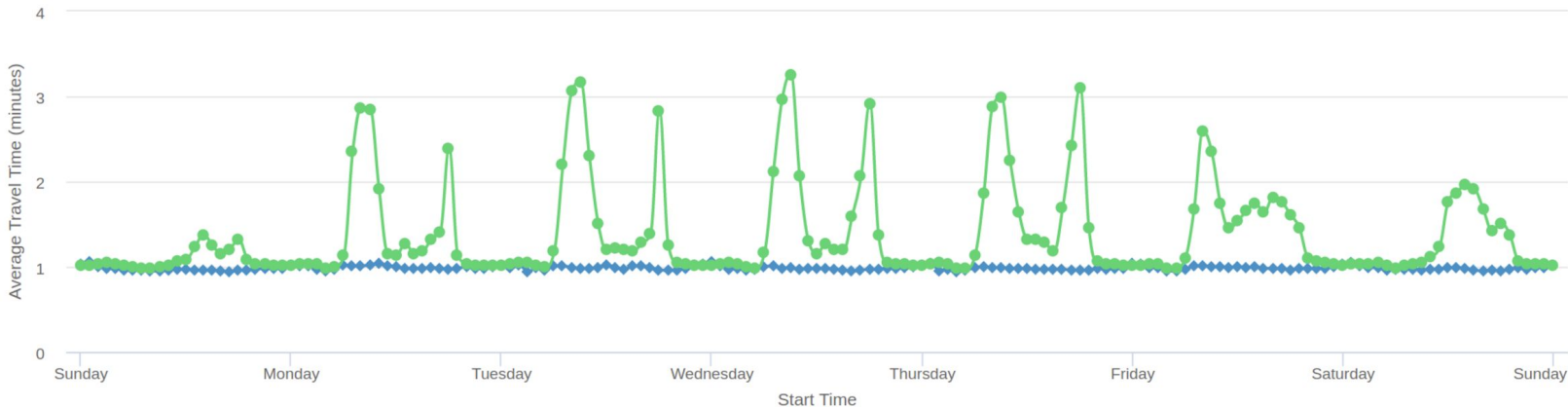
Add/Remove Sample Count Data



Travel Time

Weekly travel time data for weeks 2020-03-08 → 2020-03-29

184 I-84 → 176 I-84



- 2020-03-29 - 2020-04-05
- 2020-03-22 - 2020-03-29
- 2020-03-15 - 2020-03-22
- 2020-03-08 - 2020-03-15
- 95% travel time (26 weeks)
- 80% travel time (26 weeks)
- 20% travel time (26 weeks)
- 5% travel time (26 weeks)
- avg travel time (26 weeks)

Add/Remove Reliability Data

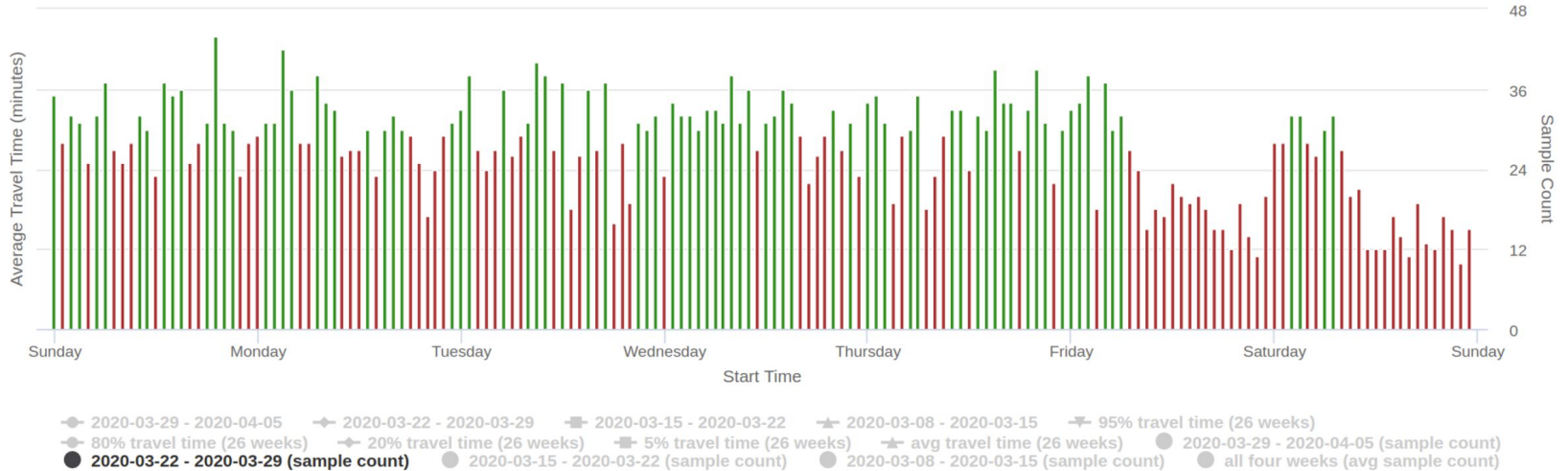
Add/Remove Sample Count Data



Travel Time

Weekly travel time data for weeks 2020-03-08 → 2020-03-29

184 I-84 → 176 I-84



Add/Remove Reliability Data

Add/Remove Sample Count Data



Vehicle Length

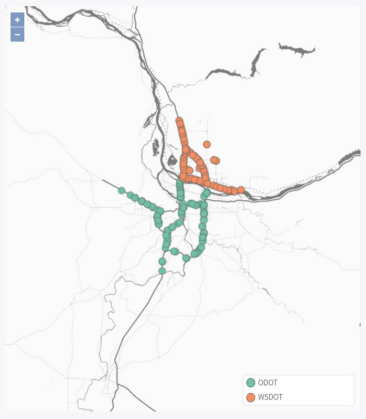
new.portal.it.s.pdx.edu/9080/vehicle/

Apps | github-psutrec | Portal | Portland State... | Week-to-week... | TriMet - Transi... | PORTAL | BikePed Portal | Apache Zeppe... | viz examples | Introduction T... | How to keep a... | Bicycle and Pe... | Choosing the... | Travel Time Re... | Multi-Row He... | Other bookmarks

PORTAL Home Highways Stations Travel Time Vehicle Length Downloads Arterial Arterial Signal FHWA Data Documentation & Feed

Vehicle Length ⓘ

Tour



The map displays a network of roads with data points. A legend in the bottom right corner identifies two data series: "ODOT" represented by green dots and "WSDOT" represented by orange dots. The map shows a dense network of roads in the central and northern parts of the region, with data points concentrated along these routes.

Station ⓘ Select a station

Start ⓘ 2020-03-30

End ⓘ 2020-03-30

Measure ⓘ Length

Resolution ⓘ 1hr

Standard Aggregate

Update Download

Metro Oregon Department of Transportation AIC Oregon Department of Transportation Federal Highway Administration Portland State University

C-TRAN C TREC TRANSPORTATION INTELLIGENCE AND DATA CENTER TRI MET

© Portals 2004-2020



Vehicle Length

The screenshot displays the 'Vehicle Length' application interface. On the left, a map shows a road segment with several green markers (ODOT) and one orange marker (WSDOT). A tooltip for the orange marker provides the following information:

- Marine Dr/99E (2R007) to NB I-5
- Milepost: 307.46
- Number of lanes: 3
- Agency Id: 171 (ODOT)

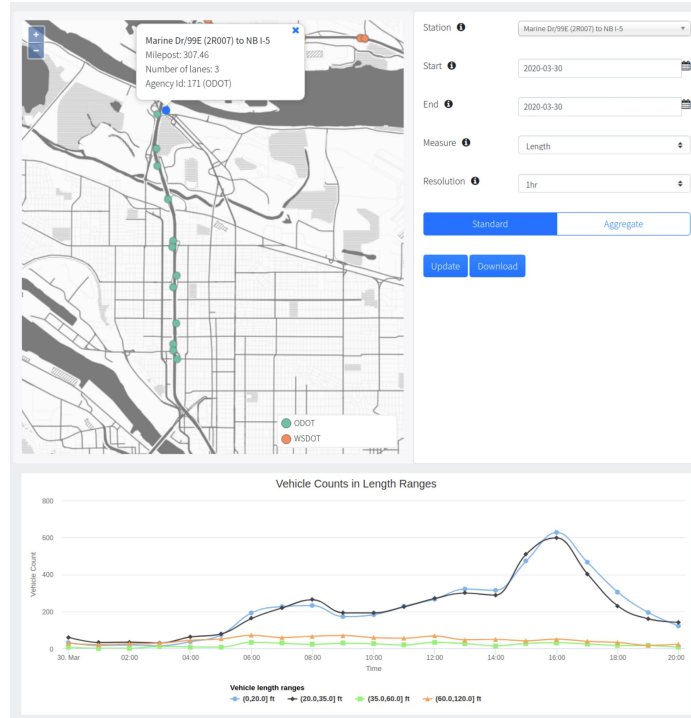
On the right, a control panel includes a 'Station' dropdown menu with a search bar and a list of stations:

- Select a station
- ODOT:Construction ZB
 - A Far Side
 - A Near Side
- ODOT:DS SB
 - OR 217/Kruse Way (2R310) to SB I-5
- ODOT:DS WB
 - Glisan (2R023) to WB I-84
- ODOT:I-205 NB
 - Stafford Rd (2R377) to NB I-205

Below the dropdown are two buttons: 'Standard' and 'Aggregate'. At the bottom of the control panel are 'Update' and 'Download' buttons. A legend at the bottom right of the map area identifies the markers: a green circle for ODOT and an orange circle for WSDOT.



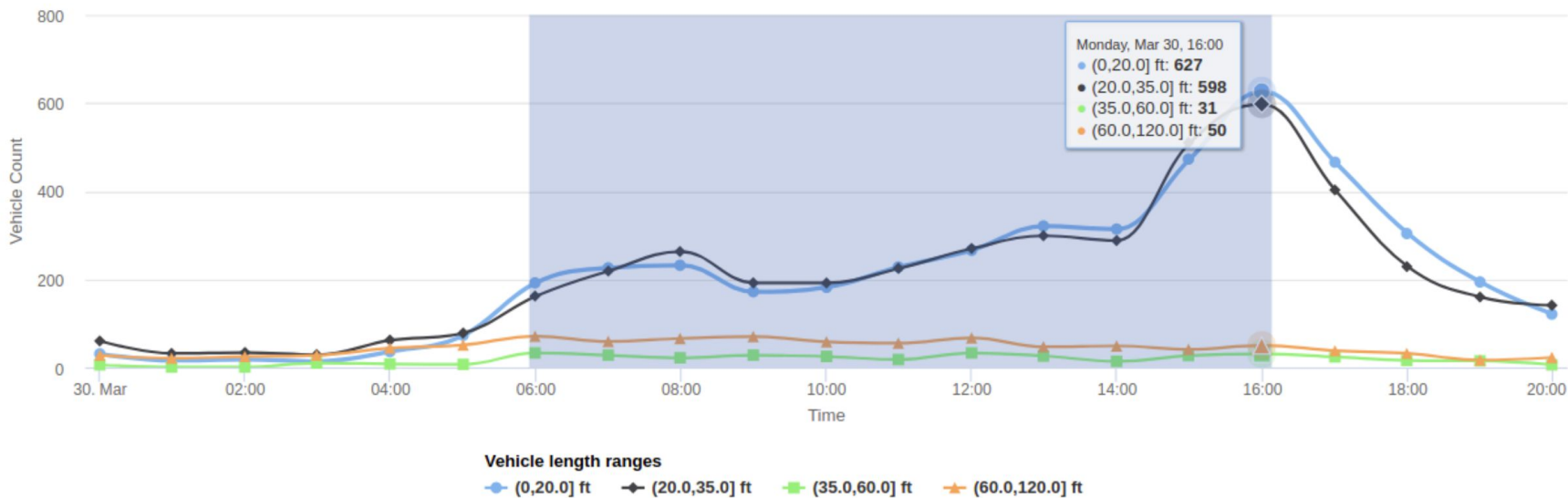
Vehicle Length





Vehicle Length

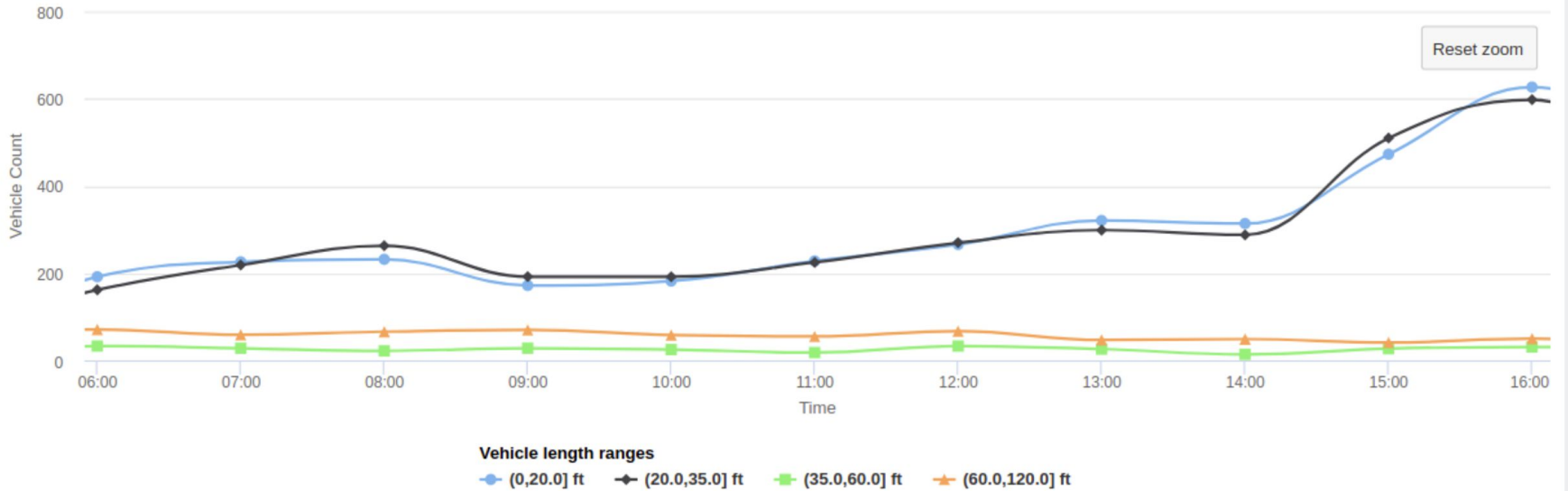
Vehicle Counts in Length Ranges





Vehicle Length

Vehicle Counts in Length Ranges





Additional features and data sources

- Downloads: Can download all data found on other pages in addition to other data (e.g. metadata, transit quarterly)
- Arterial
- Arterial Signal
- Incident data, VMS, VAS
- Documentation site
- PORTAL Users Group



Upcoming projects

- API documentation
- Travel time calculations across agencies
- BikePed Portal
- Scoping for potential new data sources (ATSPM)
- Adding new stations as they are installed
- Transit page
- Improvements to Arterial page



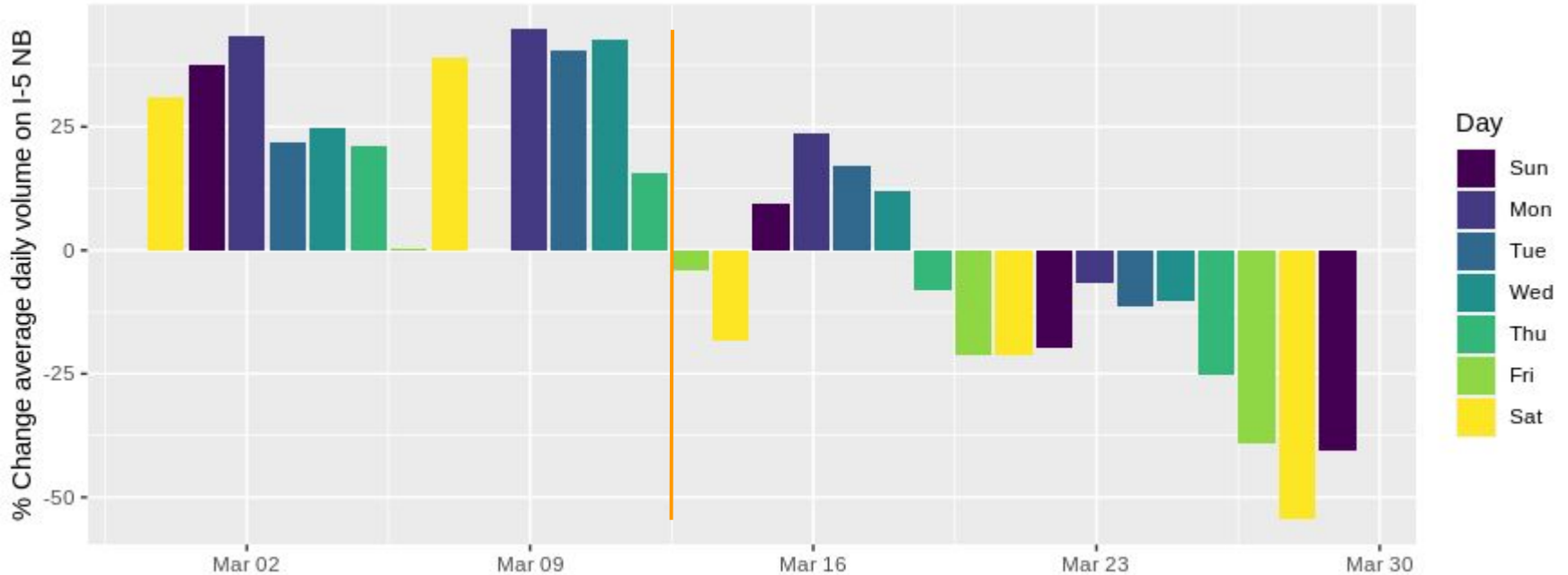
Transportation trends since the detection of COVID-19 in Oregon

A few dates to keep in mind:

- Feb 28: First positive case of COVID-19
- Mar 12: Close of all K-12 schools, moratorium on gatherings >250 people
- Mar 15: Temporary shutdown of bars, restaurants, and entertainment facilities
- Mar 16: Moratorium on gatherings >25 people
- Mar 23: “Stay-at-home”, beginning of state park closures

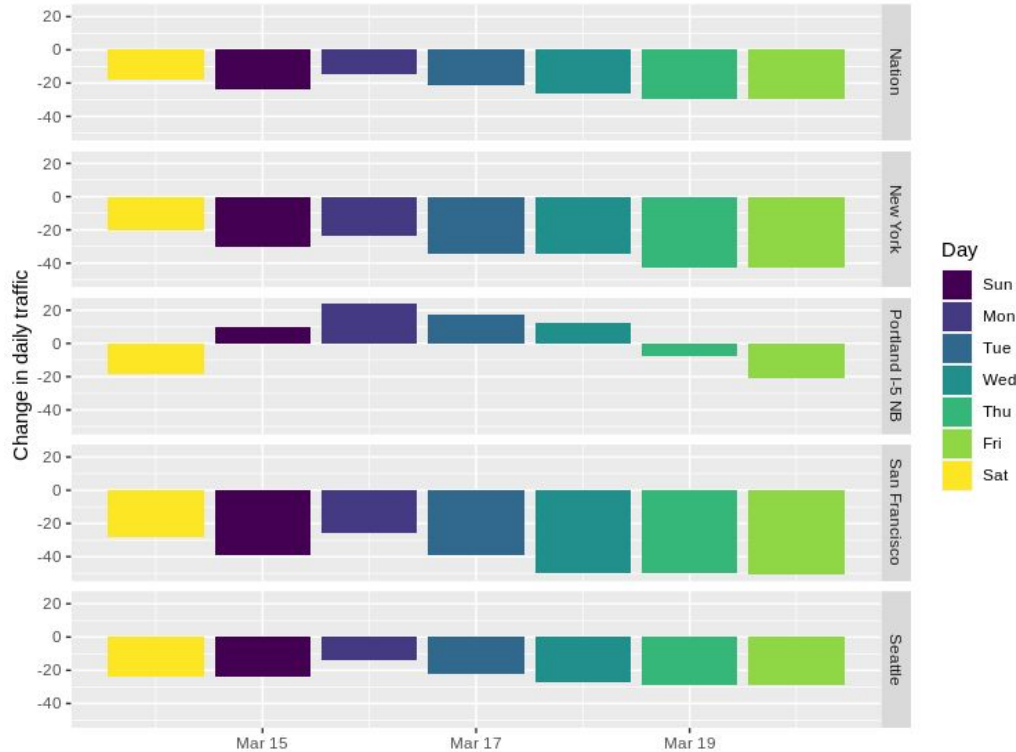


Transportation trends since the detection of COVID-19 in Oregon: I-5 NB



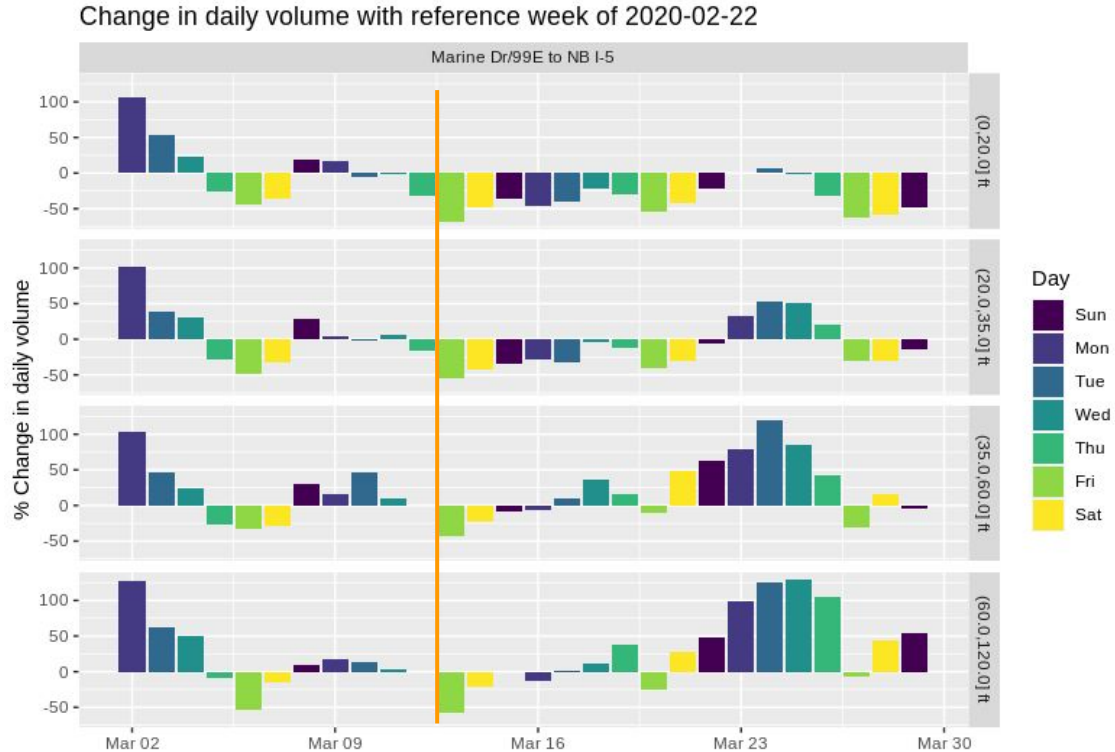


Transportation trends since the detection of COVID-19 in Oregon: I-5 NB





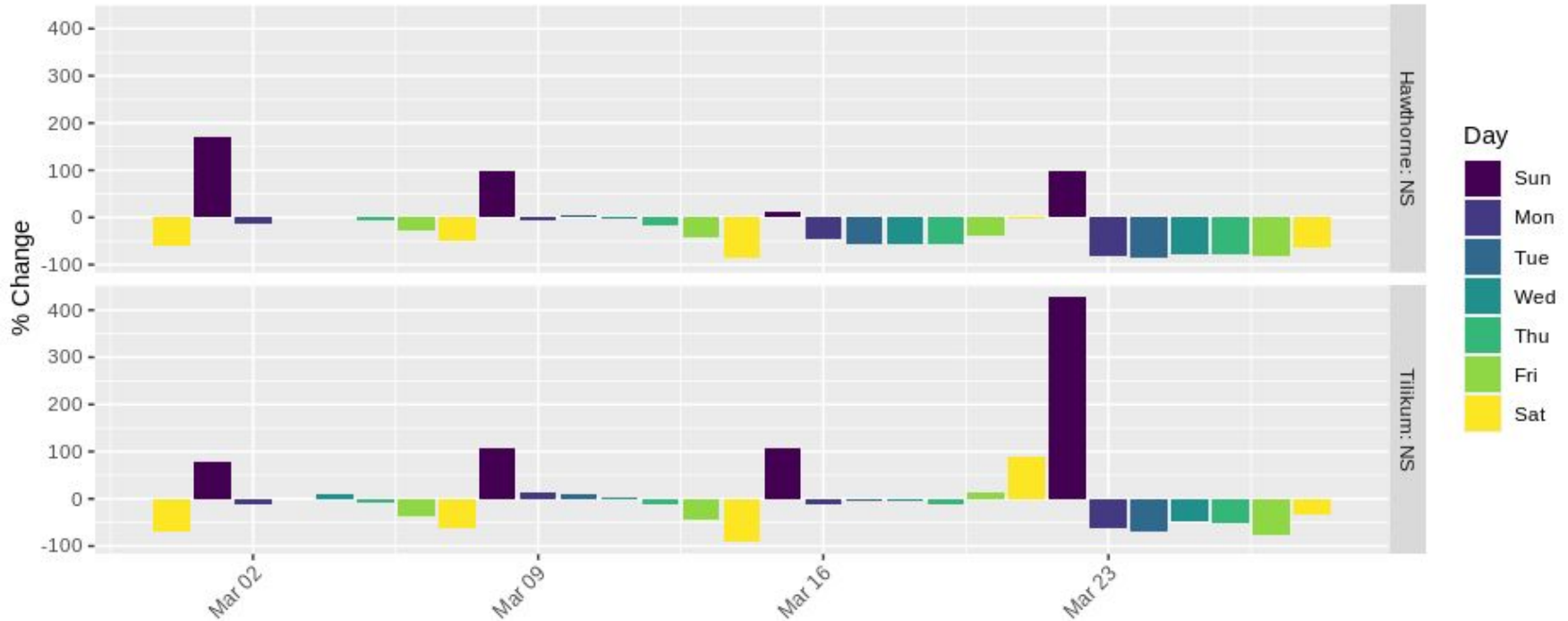
Transportation trends since the detection of COVID-19 in Oregon: Marine Dr/99 E to I-5 NB





Transportation trends since the detection of COVID-19 in Oregon: BikePed Portal

Daily change in bikeped volume compared to same day of week 2020-02-22



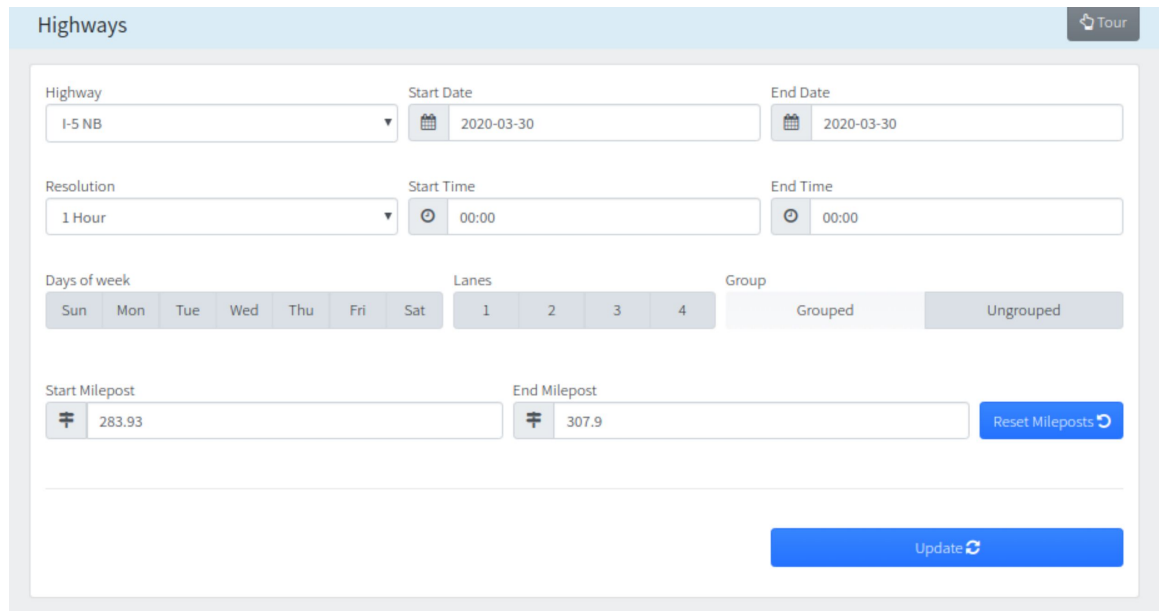
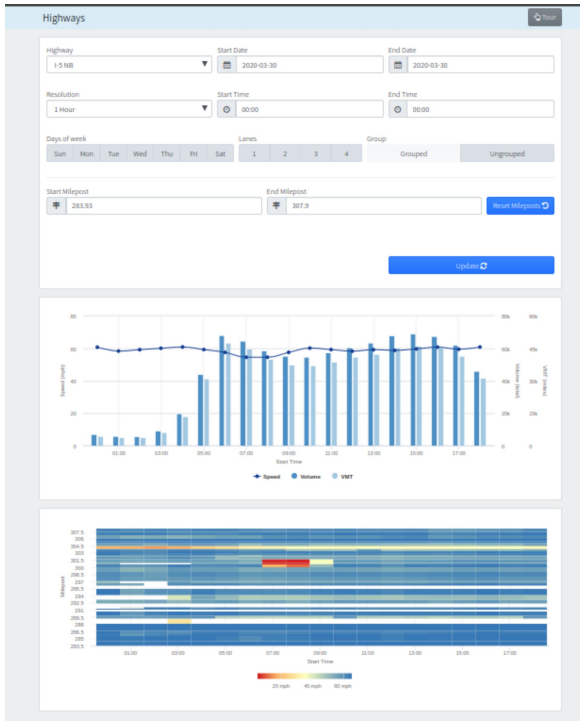


PORTAL Questions?

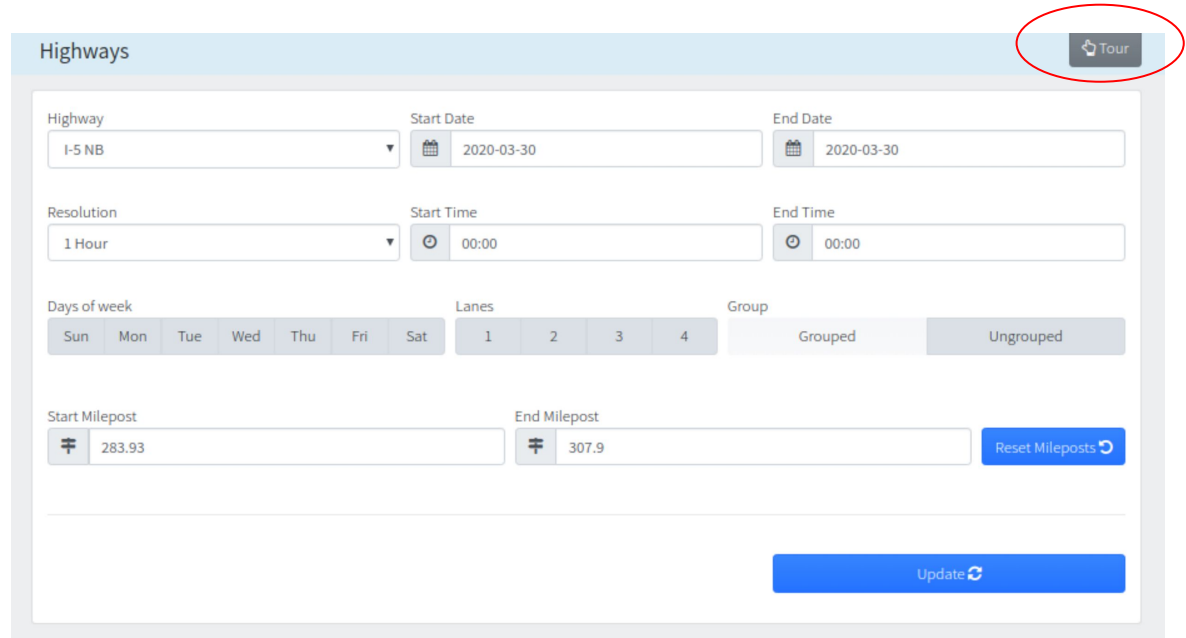
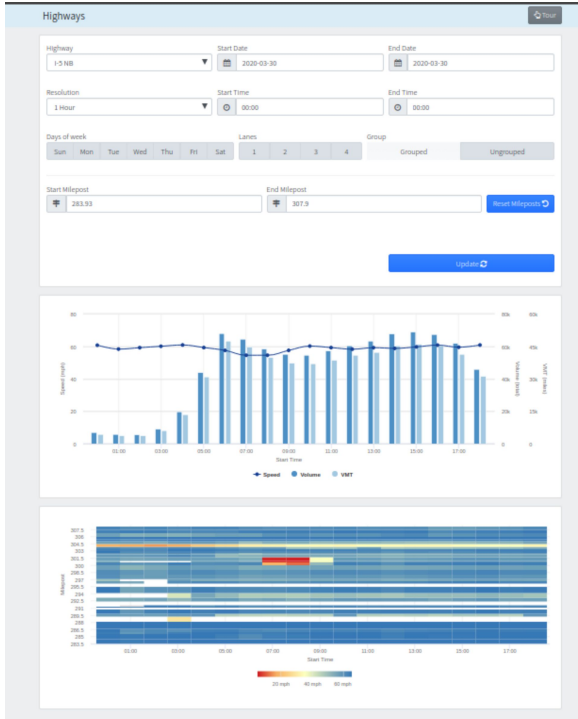
- PORTAL: portal.its.pdx.edu
- Contact info: askportal@pdx.edu
- PORTAL Documentation site: adus.github.io/portal-documentation/
- TREC: trec.pdx.edu



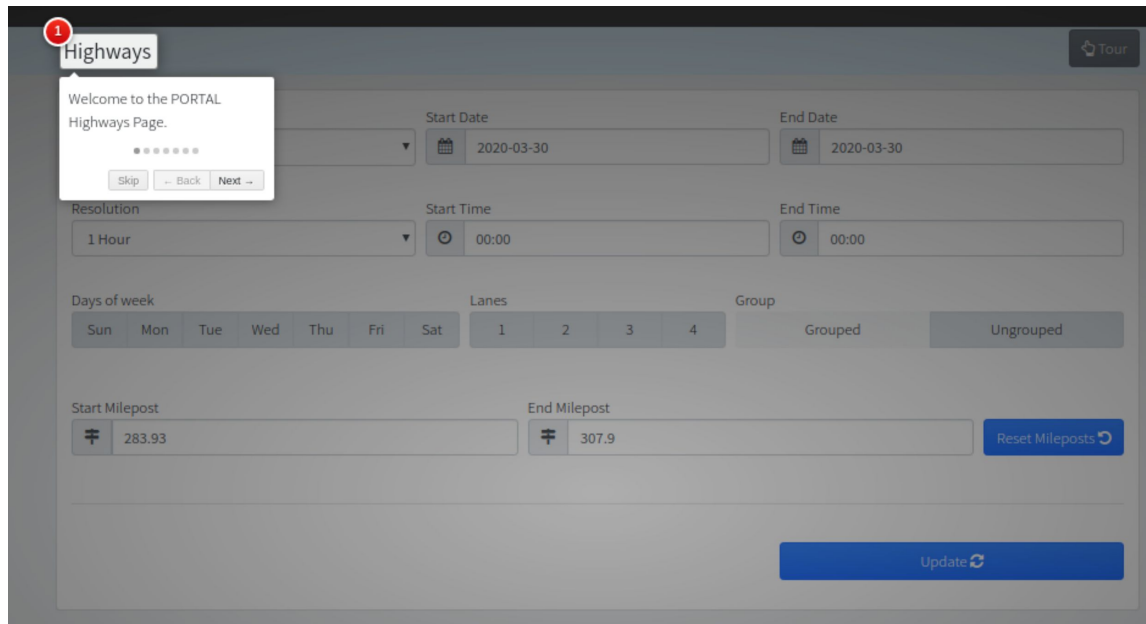
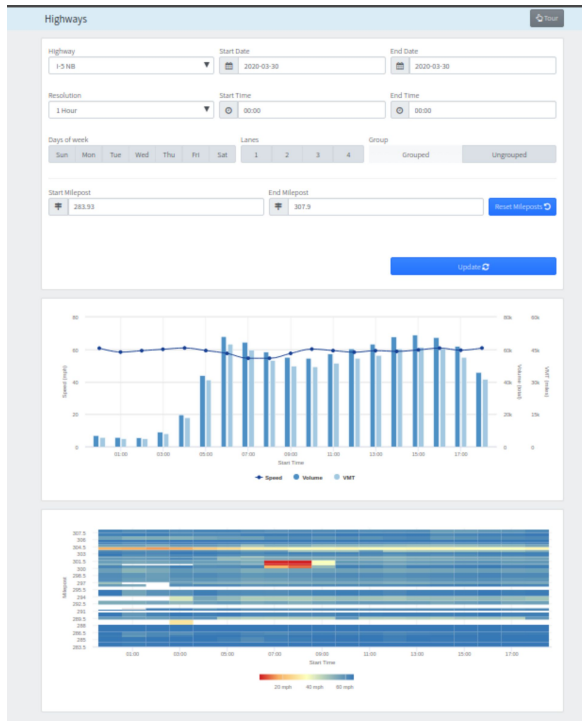
PORTAL Highways



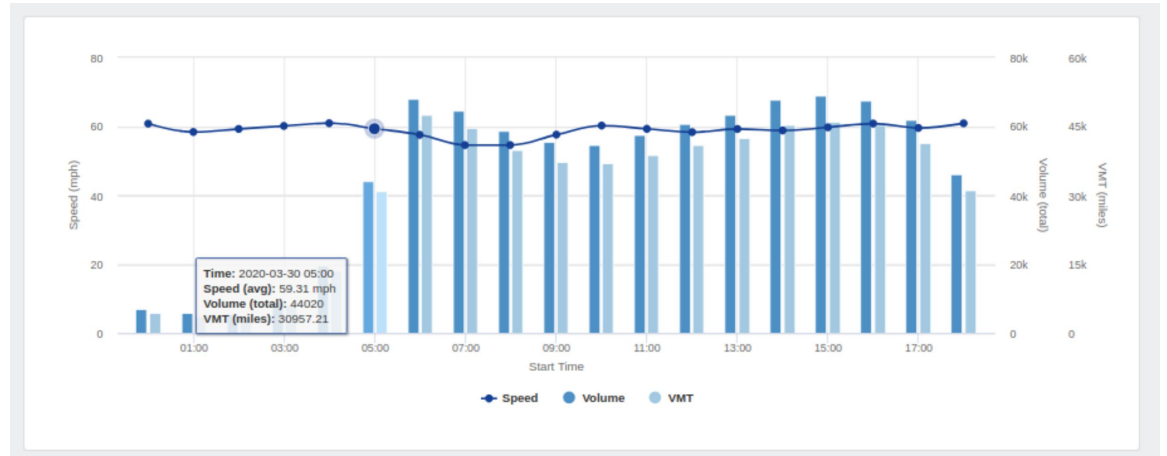
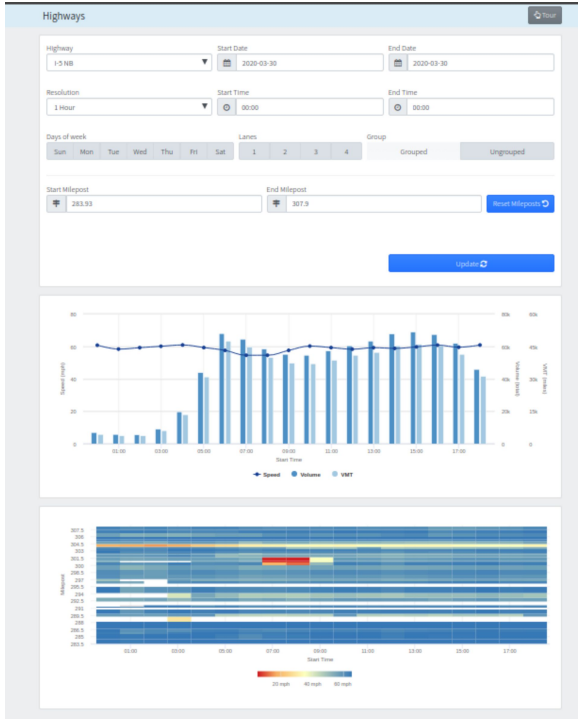
PORTAL Highways



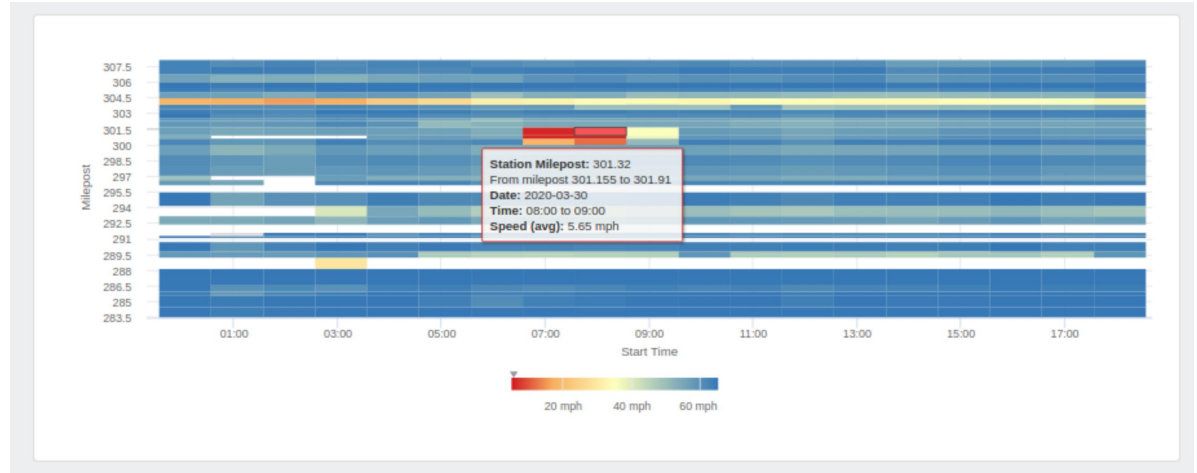
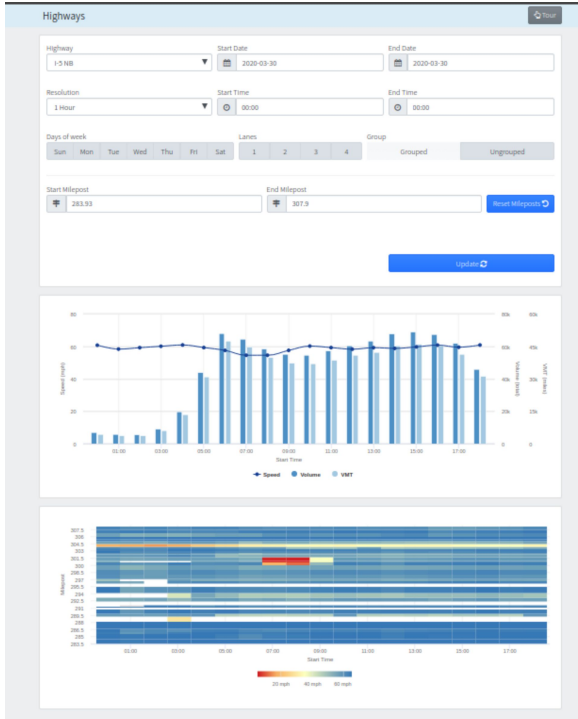
PORTAL Highways



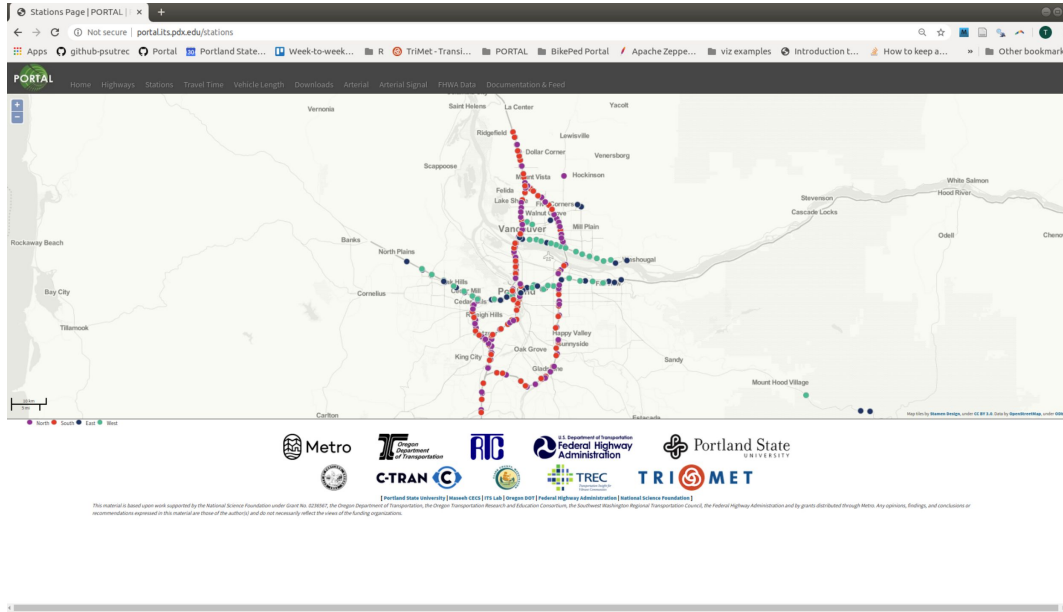
PORTAL Highways



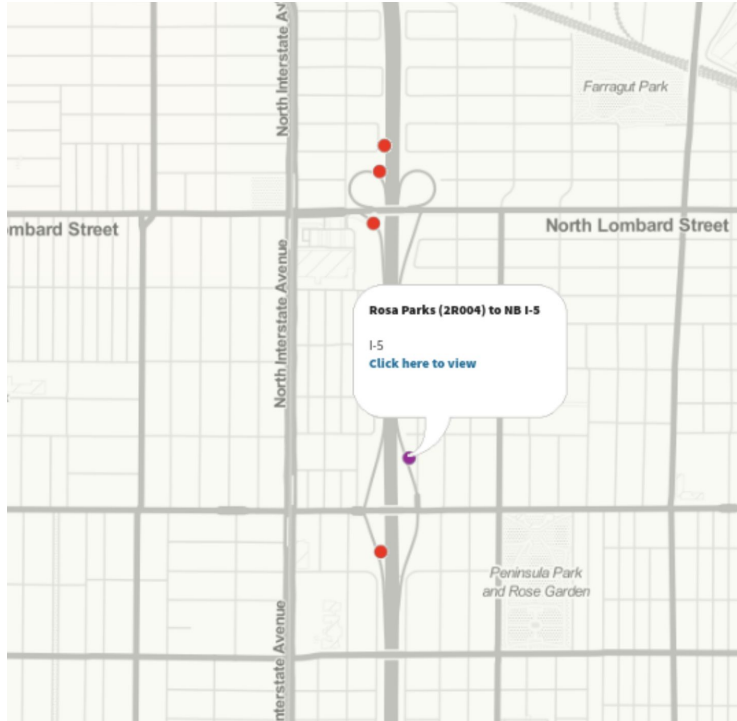
PORTAL Highways



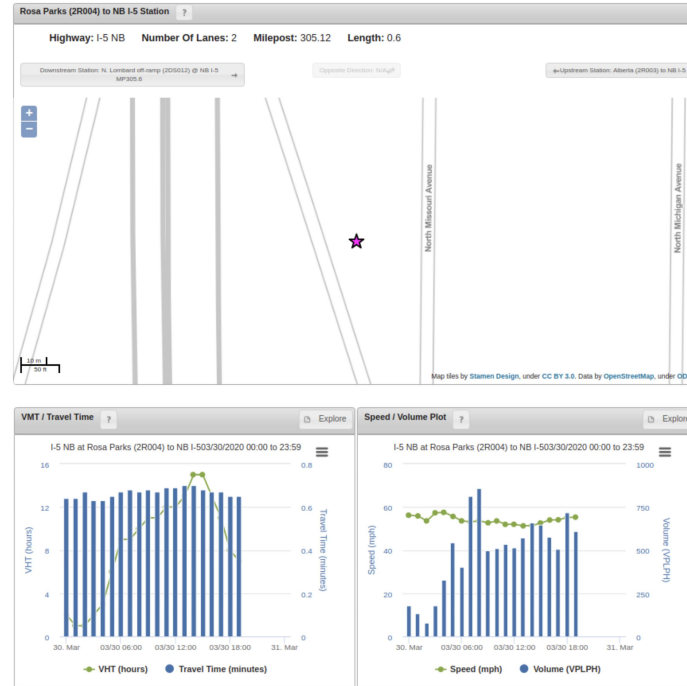
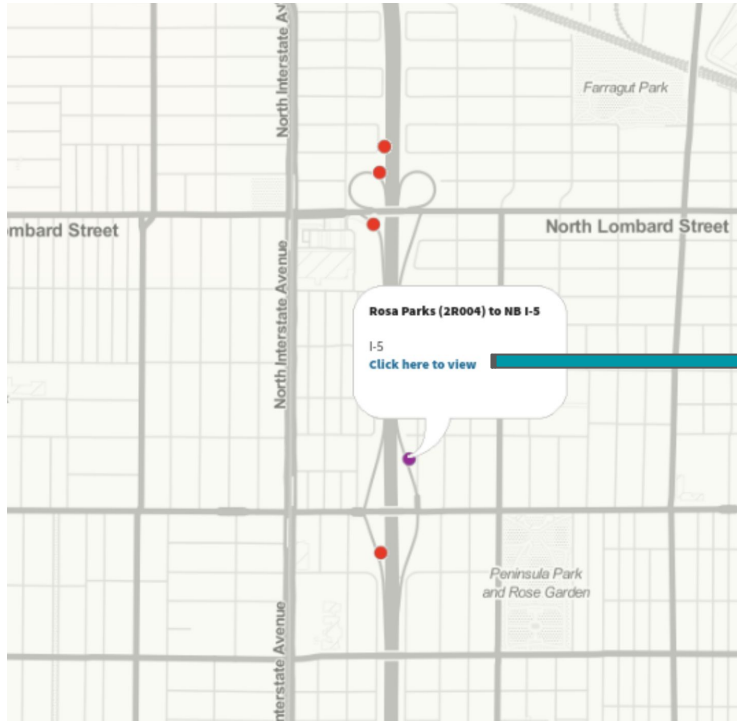
PORTAL Stations



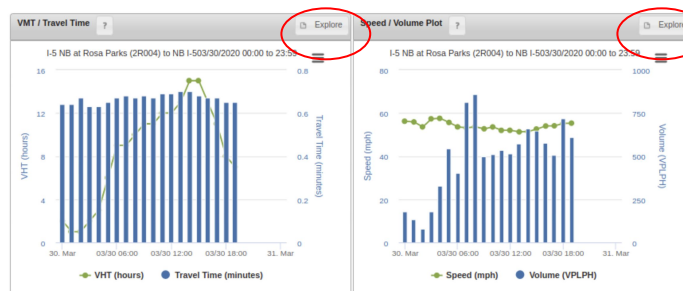
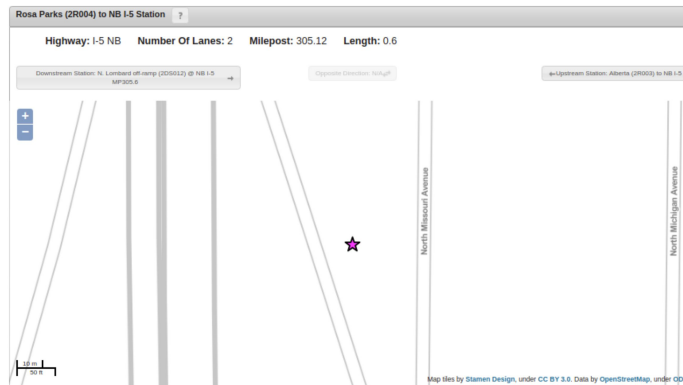
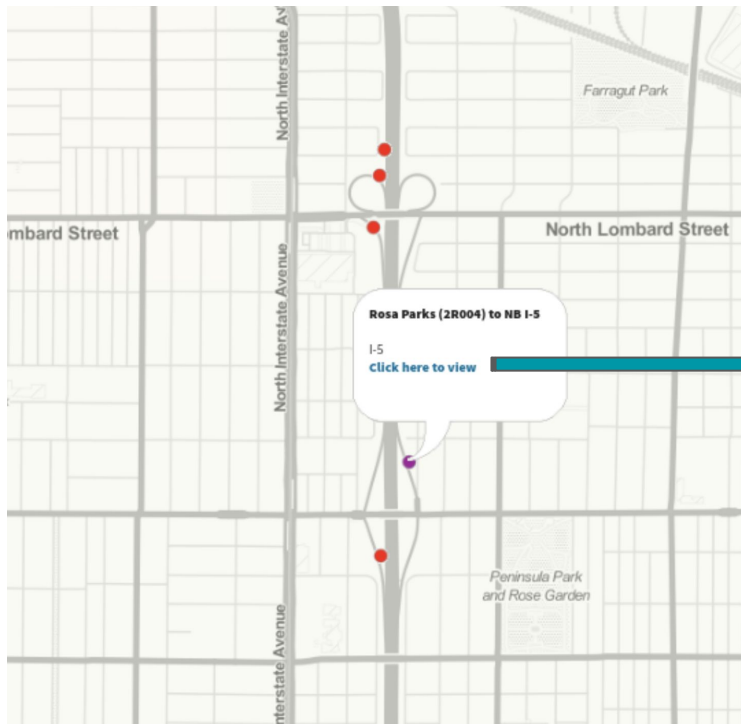
PORTAL Stations



PORTAL Stations



PORTAL Stations



PORTAL Stations

