

IBR COMMENTS FOR 3/24/2021 CAG MEETING

Joseph Cortright

3/10/21

Please enter this into the record for the March 10 meeting of the CAG.

I believe the factual material including in this presentation would be of great interest to the CAG and is germane to its deliberations.

Also: I request the opportunity to present these slides electronically during this or a future meeting. It is discriminatory for the facilitators of the CAG to not allow the public to use the same technology that it makes available to the agencies promoting this project. The effect of restricting comments to short, disembodied phone calls is to diminish the public voice in this process.

*** ADA compliant versions of the attachments can be made available upon request**

Bob Ortblad

3/22/21

Community Advisory Group,

Please accept the attached public comment for the March 24 CAG meeting.

Bob Ortblad MSCE, MBA

*** ADA compliant versions of the attachments can be made available upon request**

Joseph Cortright

3/22/21

Purpose and Need:

The purpose and need of the project should be to select an alternative that will produce the lowest amount of greenhouse gases in the project's design year.

Previous ODOT and WSDOT planning documents have asserted that the project will have lower GHG because of factors entirely external to the project (i.e. fuel economy standards or vehicle electrification), and claim that because future year GHG emissions will be lower because of these actions than base year emissions, that the project has met its "purpose and need."

February 9, 2021

This is a meaningless standard. Instead, the GHG analysis needs to be a comparison of GHG emission levels in the design year for each alternative. The preferred alternative should be one that minimizes GHG in the design year by comparison to all other alternatives.

In addition, the project should show how the proposed alternative furthers compliance with adopted state and local climate change, greenhouse gas reduction and VMT reduction goals. To the extent that Oregon and Washington are calling for an 80 percent reduction in Greenhouse gases statewide by 2050, this project should show how it reduces greenhouse gases by 80 percent from current levels. Lesser levels of reduction for this project would mean that the project is moving the two states further from their GHG goals rather than helping achieve them.

Wherever possible, the project should seek to use management practices and non-construction alternatives to manage vehicle travel and to reduce pollution. Implementing value pricing on I-5 would dramatically reduce vehicle traffic, prolong the life of existing structures, and enable the construction of smaller, less disruptive and less polluting alternatives. Congestion pricing should be evaluated as a separate alternative.

Finally, GHG analysis should be undertaken using independent, best available science, including the clearly demonstrated principle of induced demand, i.e. that increments to highway capacity produce proportionate increases in vehicle travel and pollution. An independent methodology, such as the University of California, Davis induced travel calculator should be used to produce GHG estimates for alternatives.

Joe Cortright

Interstate Bridge Replacement/ CRC 2.0 Analysis

Joe Cortright
March 2021



3 facts

- 1. Building more capacity never reduces congestion: the fundamental science of “induced demand” is proven, and not incorporated in ODOT models**
 - 2. This project won't be built without tolls; the \$3.25 peak hour toll on I-5 ODOT proposes will produce massive diversion to I-205, and squander billions**
 - 3. Oregon's economy has decoupled from freight movement; this project is irrelevant to future economic growth**
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1. You can't build your way out of congestion

The Science:

“Induced demand”

With “free” roads, more capacity simply generates more traffic



Fundamental Law of Road Congestion

American Economic Review 101 (October 2011): 2616–2652
<http://www.aeaweb.org/articles.php?doi=10.1257/aer.101.6.2616>

The Fundamental Law of Road Congestion: Evidence from US Cities[†]

By GILLES DURANTON AND MATTHEW A. TURNER*

We investigate the effect of lane kilometers of roads on vehicle-kilometers traveled (VKT) in US cities. VKT increases proportionately to roadway lane kilometers for interstate highways and probably slightly less rapidly for other types of roads. The sources for this extra VKT are increases in driving by current residents, increases in commercial traffic, and migration. Increasing lane kilometers for one type of road diverts little traffic from other types of road. We find no evidence that the provision of public transportation affects VKT. We conclude that increased provision of roads or public transit is unlikely to relieve congestion. (JEL R41, R48)



Hymel, 2019



Transport Policy
Volume 76, April 2019, Pages 57-66



If you build it, they will drive: Measuring induced demand for vehicle travel in urban areas

Kent Hymel 

- Aggregate vehicle miles traveled increase in exact proportion with lane-mileage.
- Congestion relief from capacity expansion vanishes within five years of capacity expansion.




Volker, Handy & Lee, 2020

TRR
JOURNAL OF THE TRANSPORTATION RESEARCH BOARD

Research Article

Induced Vehicle Travel in the Environmental Review Process

Jamey M. B. Volker¹, Amy E. Lee¹, and Susan Handy¹

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2020, Vol. 2674(7) 468–479
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. . . the induced travel phenomenon is often not fully accounted for in the planning process or in assessing the environmental impacts of highway capacity expansions under the National Environmental Policy Act (NEPA) As a result, agencies often overestimate the traffic congestion-reducing benefits of capacity expansion projects and underestimate the projects' environmental impacts

Fixing congestion: Katy didn't

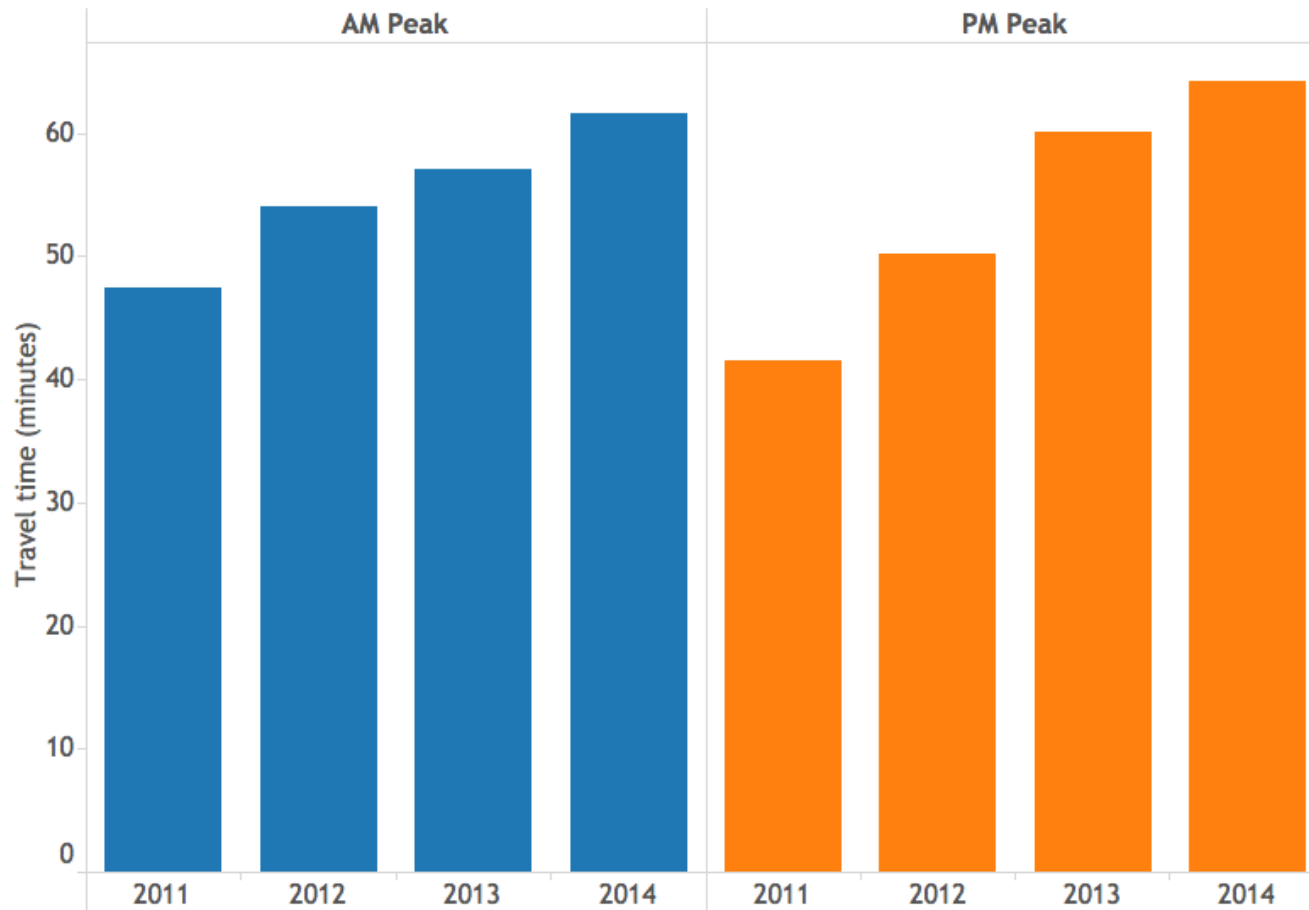
Houston's 23-lane Freeway

No More Freeway Expansions Coalition



Katy: Wider, but longer commutes

A highway "success story"
Travel times on Houston's Katy Freeway from
Pin Oak to downtown grow after widening



Source: Houston Transtar

CityObservatory



ODOT: \$3.25 peak toll

Final Environmental Impact Statement

Investment Grade Analysis

Transponder

Highest (Peak)

\$2.69

\$3.25

Lowest (Off Peak)

\$1.34

\$2.60

No Transponder

Highest (Peak)

\$4.46

\$5.02

Lowest (Off Peak)

\$3.11

\$4.37

1. A tolled mega-bridge will be a transportation & financial disaster

- This project won't be built without tolls;**
- ODOT is counting on a \$3.25 peak hour toll on I-5 which will produce massive diversion to I-205,**
- A tolled 12-lane I-5 bridge will be less used than today's bridge, squandering billions**
- Tolls will still cover less than a third of costs.**



One bridge tolling = diversion

- Tolling I-5, but not I-205:
- Will overload I-205 as soon as tolls are implemented
- Will result in the new 12-lane CRC being an underused white elephant for decades
- CRC will make the region's transportation system worse, and leave us poorer

I-205 Gridlock

- **Today, I-205 carries about 139,000 ADT**
 - **IGA predicts that tolling I-5 in 2022 will result in 50,000 more vehicles crossing I-205 than today.**
 - **And in 2030, I-5 tolls will result 55,000 more vehicles crossing I-205 than today**
 - **Meanwhile, I-5 will always carry fewer cars than today.**
-

Massive Diversion to I-205

Average Daily Traffic, I-5 & I-205, Today, 2022, and 2030

	<u>I-5</u>	<u>I-205</u>	<u>Total</u>
TODAY	124	139	263
2022	85	191	276
<i>Change from Today</i>	<i>-39</i>	<i>52</i>	<i>13</i>
2030	98	194	292
<i>Change from Today</i>	<i>-26</i>	<i>55</i>	<i>29</i>

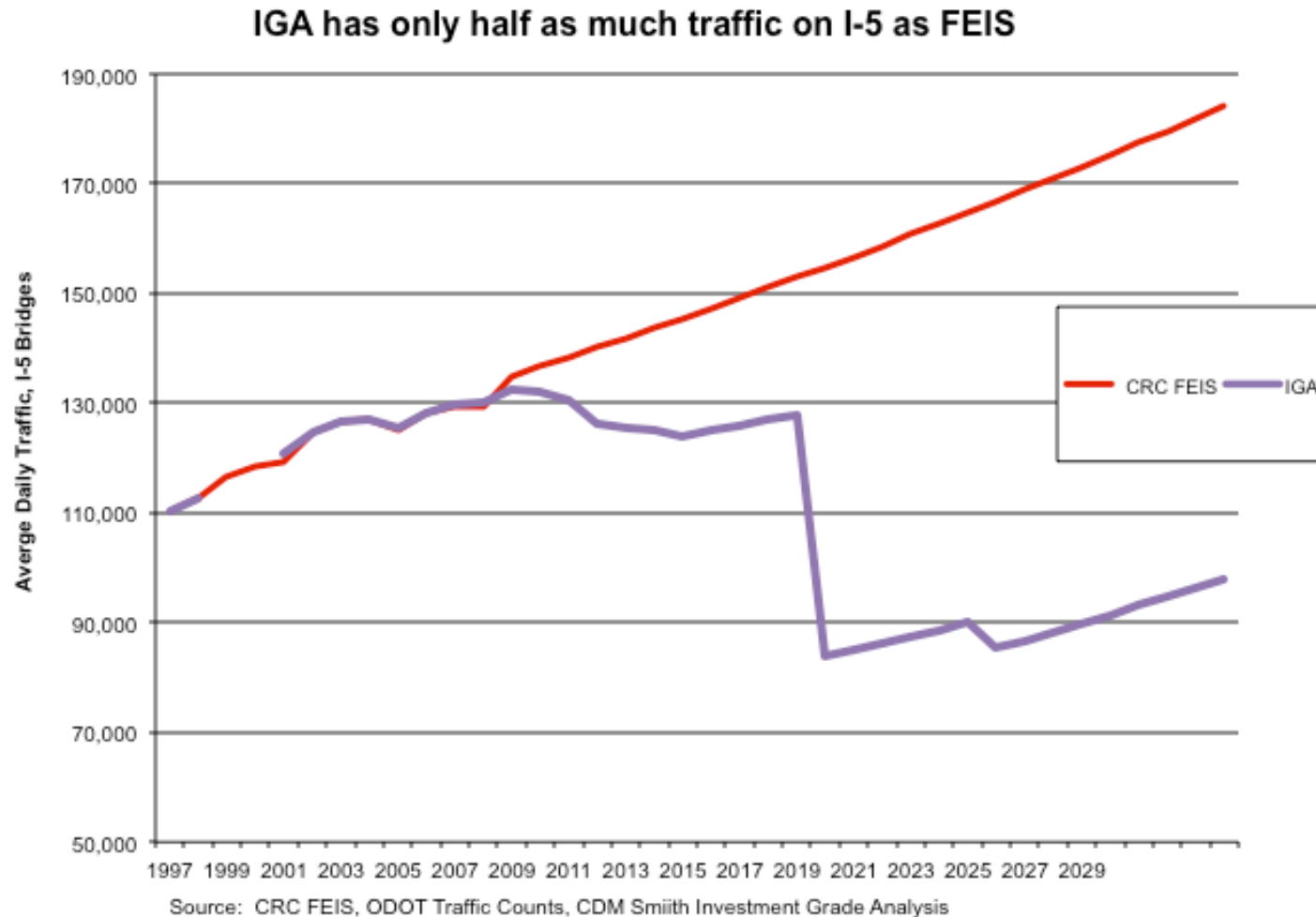
Source: Investment Grade Analysis, January 2014

ADT in thousands, 2030 data interpolated using 2022-2036 average growth rate

CRC = White Elephant

- **Today, I-5 carries about 124,000 ADT**
- **CDM Smith predicts that in 2030, I-5 will carry between 109,000 vehicles.**
- **Two decades from now, after spending \$3 billion, we will have a 12-lane bridge that is used by fewer vehicles than use the current structure**

IGA: Tolls Produce Permanently Lower Traffic on I-5



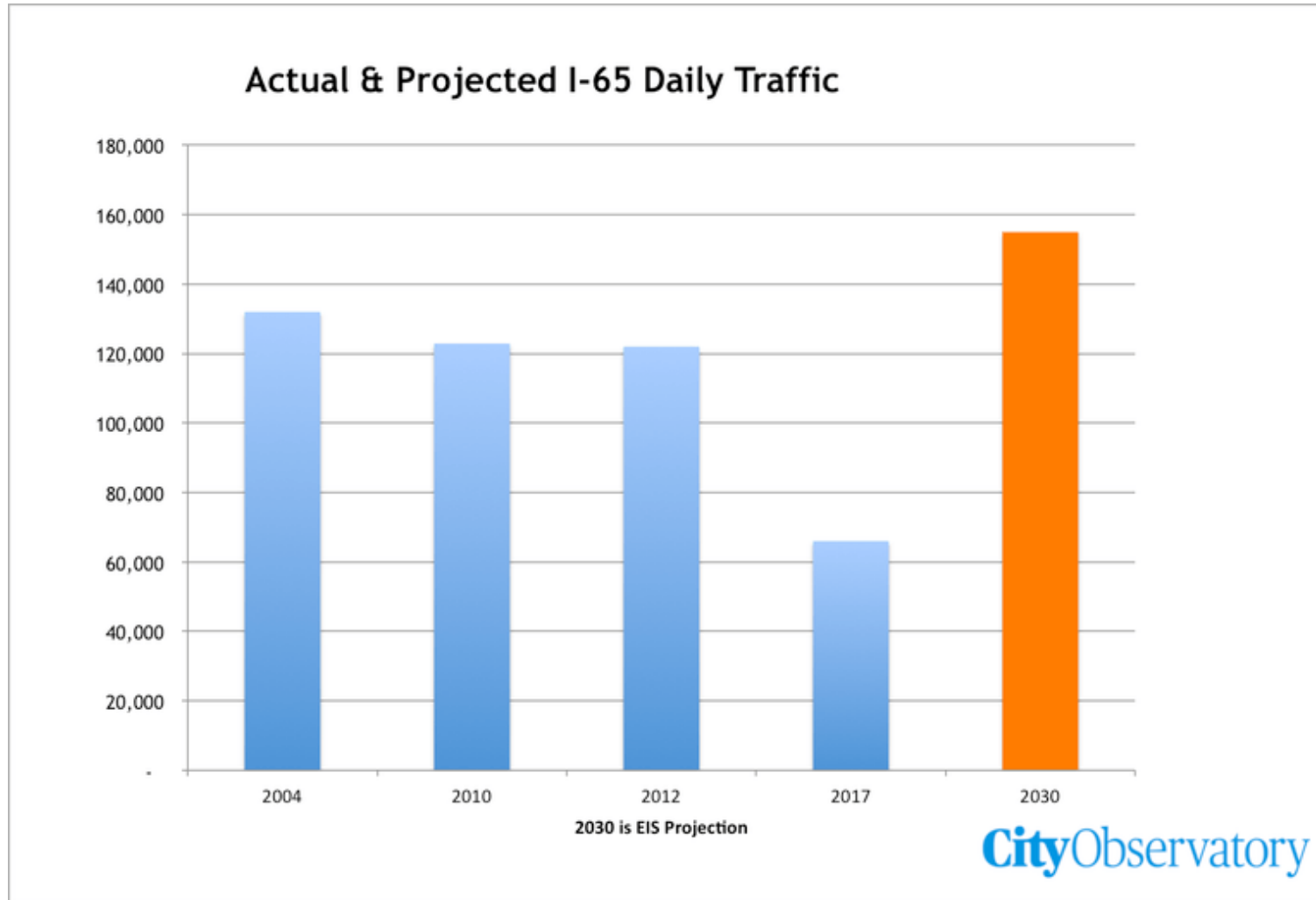
Lesson from Louisville



Spent \$1.3 billion to double I-65
Ohio River Crossing from 6-lanes to 12-lanes



They charged a \$1-2 toll— traffic dropped by 40%



They wasted \$1.3 billion



Price first, build later!

3. Freight movement no longer drives our economy

- Freight doesn't determine economic growth
 - More roads don't increase economic activity
 - US and Oregon economies are growing while moving less and less freight.
 - 500,000 fewer trucks cross the Columbia River annually on I-5 and I-205 than 15 years ago.
-

Does freight matter?

The 90% reduction in freight transportation costs in the past century, and the declining importance of the good-producing sector of the economy, means that in our view, it is better to assume that moving goods is essentially costless than to assume that moving goods is an important component of the production process.”

Ed Glaeser, Harvard, July 2003

“Cities, Regions and the Decline of Transport Costs”

Duranton, Morrow & Turner, 2014

More highways = Heavier, but less valuable exports

A 10% increase in a city's stock of highways causes about a 5% increase in the weight of exports, but does not cause a measurable change in the value of exports. . . . a 10% increase in within city highways . . . cause about a 5% decrease in the unit value of the city's exports.

. . . city highways do not increase the value of exports . . . changes in trade caused by city highways probably do not have large welfare effects. . . this suggests planners should not give much consideration to trade effects when planning a city's highway network

Duranton, Morrow & Turner, "Roads & Trade: Evidence from the US,"
Review of Economic Statistics, 2014

Marshall & Dumbaugh, 2018

Economic productivity is not significantly negatively impacted by high levels of traffic congestion. In fact, the results suggest a positive association between traffic congestion and per capita GDP as well as between traffic congestion and job growth at the MSA level. There was a statistically insignificant effect on per capita income.

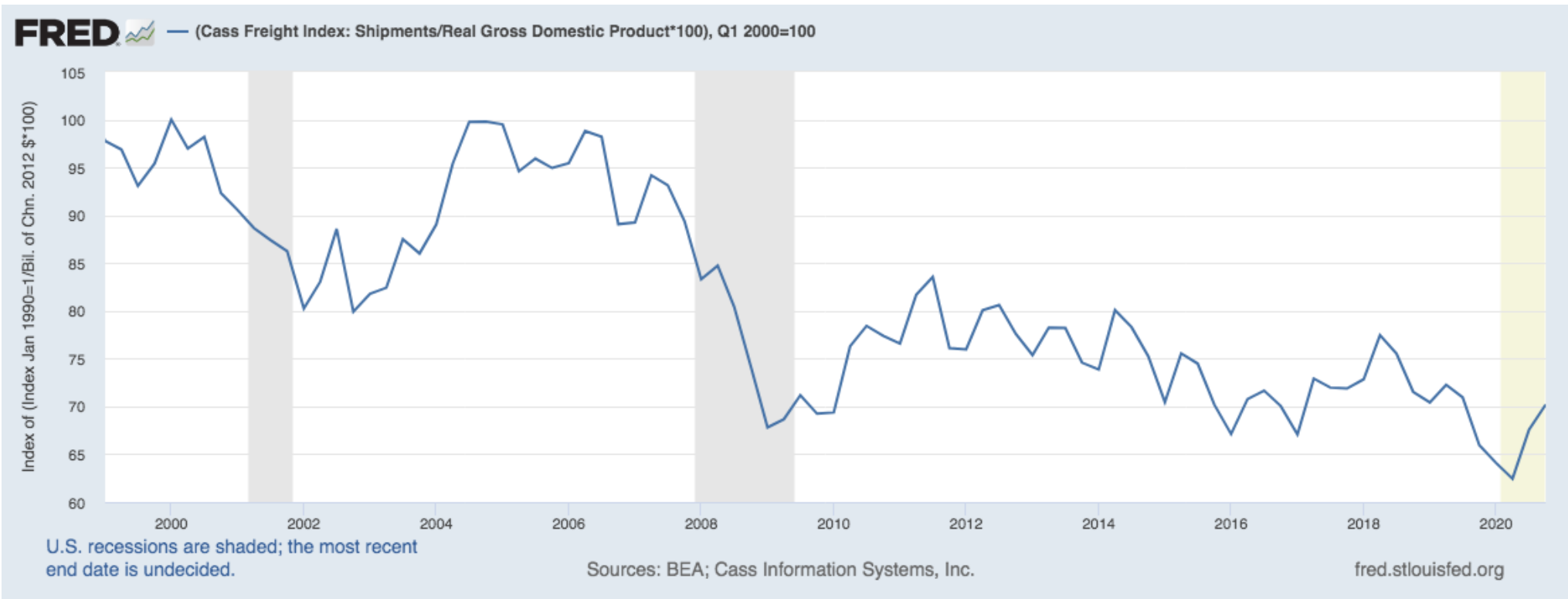
Transportation
<https://doi.org/10.1007/s11116-018-9884-5>



Revisiting the relationship between traffic congestion and the economy: a longitudinal examination of U.S. metropolitan areas

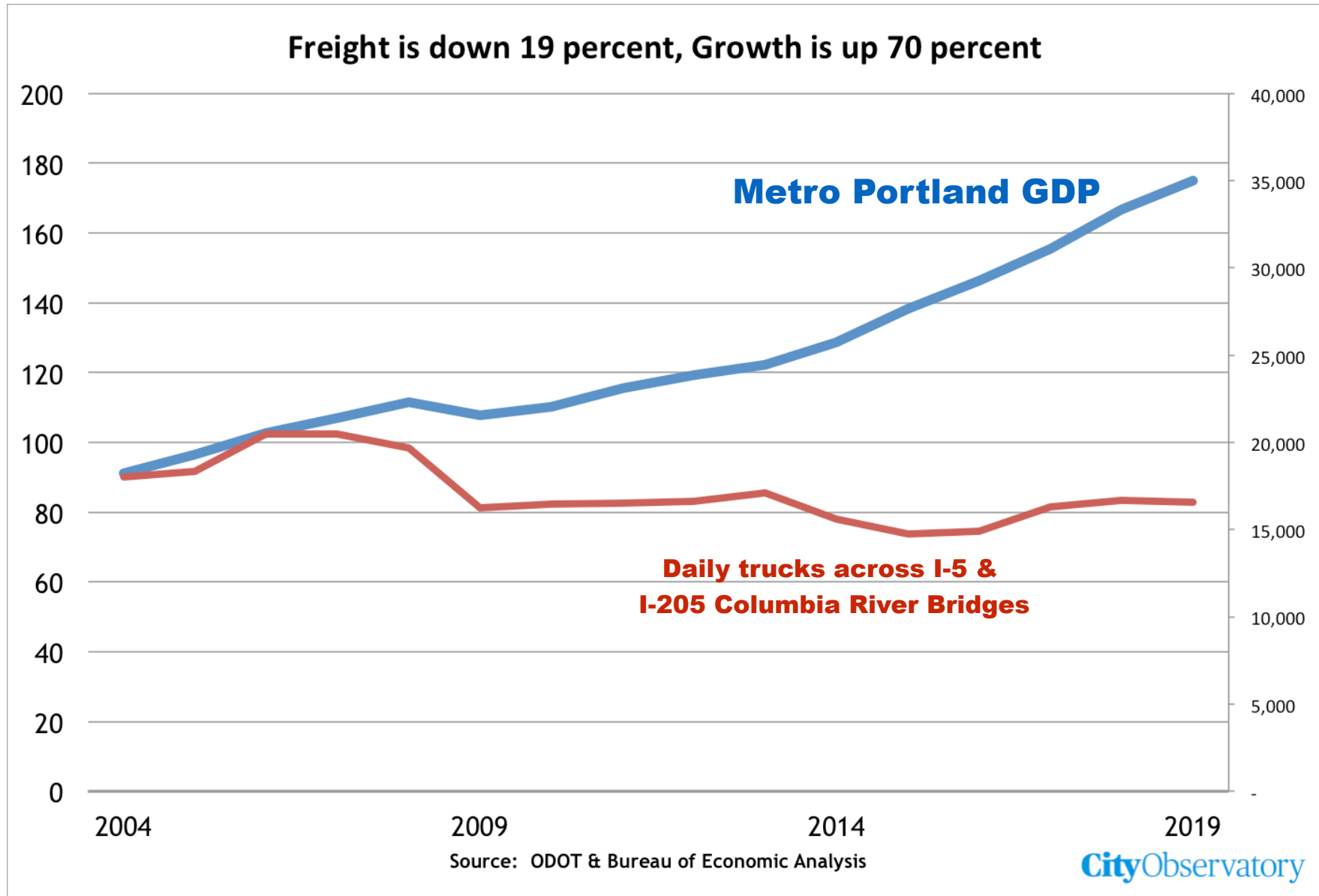
Wesley E. Marshall¹  · Eric Dumbaugh² 

Economic growth now decoupled from freight movement



Freight movement per unit of GDP is down 30 percent since 2005

Freight down, economy up



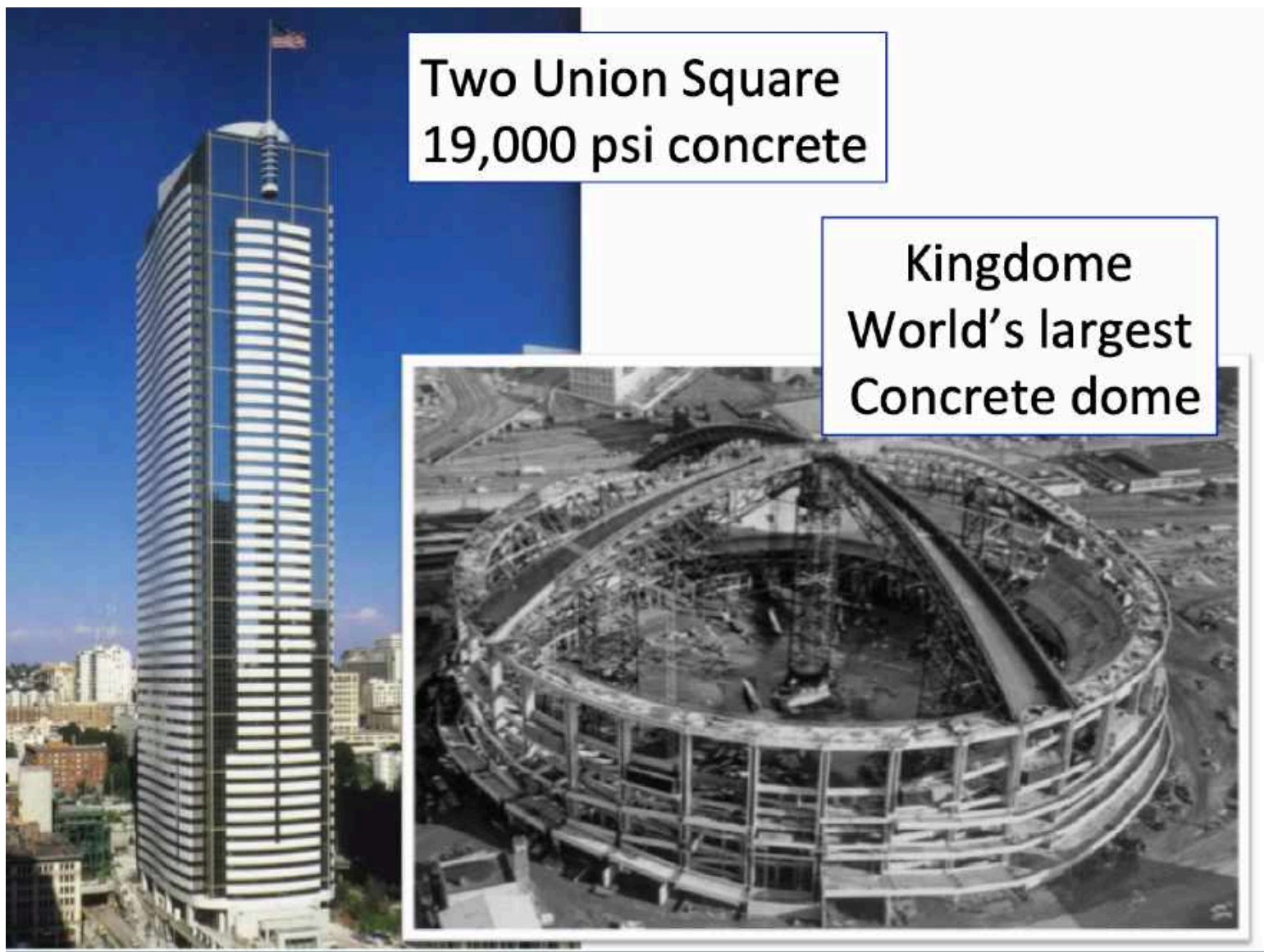
LOCAL LABOR

The construction of concrete tubes for an ITT is almost identical to the construction of the 77 pontoons for the Lake Washington 520 Bridge opened in 2016. The bridge created thousands of jobs across Washington State. Jobs were created at the bridge site, plus Aberdeen, Tacoma, and Kenmore where the pontoons and anchors were fabricated.



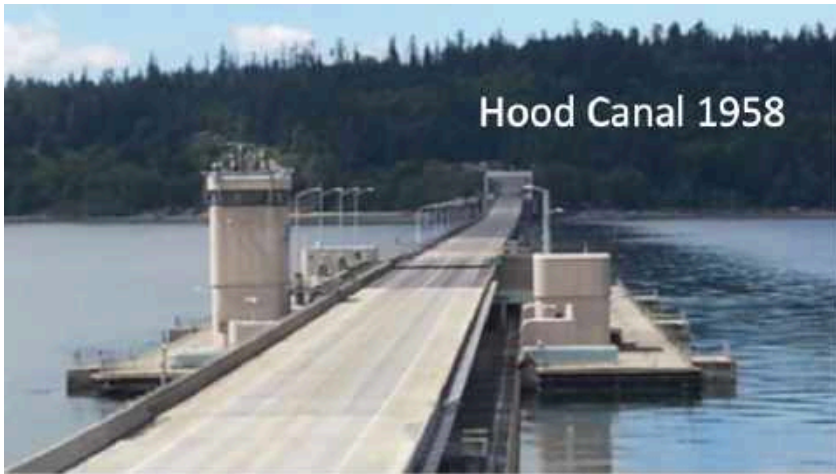
LOCAL MATERIAL

The ITT tubes will use famous high-quality NW concrete. The Kingdome had the largest concrete roof in the world. The Seattle office tower Two Union Square achieved a compressive strength of 19,000 psi, one of the highest on record.



LOCAL TECHNOLOGY

Washington State is the world's leader in building concrete pontoons. The first Lake Washington Bridge was opened in 1940. The Hood Canal Bridge opened in 1958, and the 520 Bridge in 2016. Tacoma's Concrete Technology Corporation founded in 1951 was the country's first prestressed concrete fabricator. They have built and shipped floating structures to San Diego, Alaska, and Indonesia.



LOCAL GEOGRAPHY

The Port of Vancouver has an 82-acre site 6 miles downriver of the current I-5 Bridge. This site is ideal for an ITT casting yard similar to the Aberdeen casting yard built for the 520 pontoons.



Bob Ortblad MSCE, MBA