

CLACKAMAS COUNTY BOARD OF COUNTY COMMISSIONERS

Study Session Worksheet

Presentation Date: 10/22/2013 **Approx Start Time:** 1:30 pm **Approx Length:** 30 Min.

Presentation Title: Review of issues related to the Columbia River Crossing.

Department: Administration

Presenters: Dan Chandler, Strategic Policy Administrator

Gary Schmidt, Director of Public and Government Affairs

Other Invitees: Karen Buehrig

WHAT ACTION ARE YOU REQUESTING FROM THE BOARD?

Direction and discussion regarding the Columbia River Crossing.

EXECUTIVE SUMMARY:

The Columbia River Crossing (CRC) project would replace the Interstate 5 bridge over the Columbia River with a new multi-lane bridge with light rail. The proposed funding plan consisted of \$450 million each from Washington and Oregon, along with federal funds and bridge tolls. Last year, the Washington State Legislature declined to pay Washington's \$450 million share of the project, leading some to conclude that it was dead in its current configuration.

There is now some discussion of an Oregon-funded CRC project that would construct the bridge without many of the interchange improvements planned for Washington.

A functioning Interstate 205 is critical to Clackamas County's economy. Therefore, the County has urged the state and the region to take a system-wide view of the north-south freeway system. Clackamas County has expressed concern over the past 5 years that tolling on the CRC would divert substantial amounts of traffic to Interstate 205. This raises two key issues for the County:

- The first issue is that the County needs to know how many trips will be diverted to I-205, and when. The County is currently in the process of preparing a new Transportation System Plan. The County and its businesses need to know so that we can make planning and investment decisions.
- The second issue is mitigation. Any substantial diversion to I-205 will cause the system to reach failure many years sooner than it otherwise would. The County, along with its cities, businesses and citizens may wish to advocate for mitigation to I-205 as part of any CRC package, particularly one that is paid for entirely by Oregon. As a comparison, ODOT committed over \$75 million as mitigation to

two Washington-based businesses to compensation for predicted business losses.

The regional response has generally been to state that I-205 will fail anyway, and that tolling on the CRC will only make it fail sooner.

There has recently been additional controversy regarding the level and timing of trip diversion that might be expected with tolling on the CRC. An economist retained by Plaid Pantry recently obtained trip diversion numbers from CDM Smith, which is working on the investment-grade analysis of potential CRC financing. That analysis predicts significantly higher levels of trip diversion, and lower levels of travel on I-5 than were predicted in the Final Environmental Impact Statement (FEIS) for the CRC.

ODOT has responded to Governor Kitzhaber, asserting that the CDM Smith work was "NOT designed to estimate diversion to I-205." However, the response from the CRC to Clackamas County's letter from last winter stated that the trip diversion would be "updated and refined" by the CDM Smith work.

FINANCIAL IMPLICATIONS (current year and ongoing):

In terms of the County budget, there are no direct financial implications of the CRC and CRC tolling.

LEGAL/POLICY REQUIREMENTS:

There are no directly applicable legal or policy requirements involved in expressing a Clackamas County position on the CRC. However, the discussion may touch on the following issues:

- The County is required to prepare a Transportation System Plan, which may be affected by tolling on the CRC.
- Federal law generally prohibits tolling on existing facilities like I 205. However tolls may be imposed for projects that increase capacity.

OPTIONS:

1. Take no action.
2. Adopt a resolution opposing the CRC, or tolling on the CRC.
3. Submit an additional letter to relevant agencies, and the County's legislative delegation (1) requesting a clearer answer to the amount and timing of expected trip diversion, and (2) requesting a commitment to future mitigation on I-205 in conjunction with any current state funding of the CRC.

4. Any other options or actions selected by the BCC.

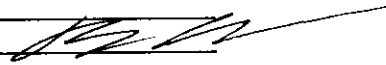
RECOMMENDATION:

Staff recommends option 3.

ATTACHMENTS:

1. PDF of information on CRC

SUBMITTED BY:

Division Director/Head Approval _____
Department Director/Head Approval 
County Administrator Approval _____

For information on this issue or copies of attachments, please contact Dan Chandler @ 503-742-5394



Columbia River Crossing faces political hurdles ahead of Oregon special session

CRCHAYDENISLAND0025_18527403.JPG

The Interstate Bridge from Hayden Island looking north to Washington. Proponents of the Columbia River Crossing say the current bridge is a bottleneck, critics of the project say the proposal to replace it would have negative environmental impacts. *(Jamie Francis/The Oregonian)*

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on October 13, 2013 at 12:00 PM, updated October 13, 2013 at 7:14 PM

Oregon lawmakers are considering reviving the once-dead Columbia River Crossing in a special session later this month.

They're looking to barrel ahead on a **\$2.7 billion Oregon-led plan** that relies heavily on tolls, cutting interchanges in Washington out after that state's lawmakers bailed on a plan this summer to kick in \$450 million.

Supporters, including business and labor groups, say building the bridge is still critical.

"The circumstances and the details might need to change, but the need to address the problems in that area hasn't changed," said **Rep. Tobias Read, D-Beaverton**.

The political landscape has changed significantly since the Oregon Legislature overwhelmingly approved \$450 million in state highway bonds for the project. That funding disappeared Sept. 30, however, because the bill required that Washington pay its share.

Supporters now must overcome three hurdles to build support for an Oregon-led project in what would be the second special session this fall. Legislators met Sept. 30 to Oct. 2 to approve a package of legislation on PERS, taxes and genetically modified agriculture.

Financial risk

Some lawmakers were always wary of the original CRC project because it relied heavily on federal funding and toll revenues.

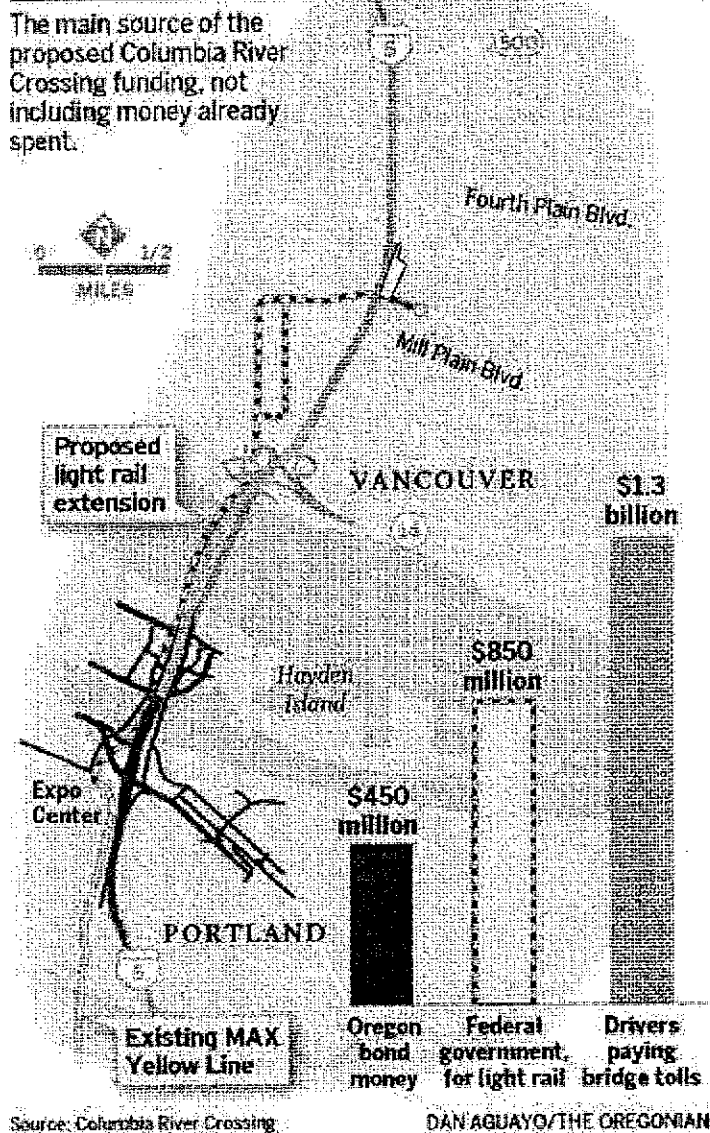
Three main sources of money would fund the revised project:

- An \$850 million grant from the Federal Transit Administration would pay to extend light rail from North Portland to Vancouver.

- Oregon would spend \$450 million in bonds backed by gas tax revenue and federal funds.
- And tolls would generate \$1.3 billion.

Who would pay for the CRC?

The main source of the proposed Columbia River Crossing funding, not including money already spent.



Source: Columbia River Crossing

DAN AGUAYO/THE OREGONIAN

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Dan Aguayo/The Oregonian

In addition, \$107.8 million already spent by Oregon and Washington count toward the financing plan. **An additional \$86.4 million pledged to three companies** to make up for the proposed bridge's shorter 116-foot clearance has yet to be funded.

According to an analysis by Oregon Treasurer Ted Wheeler's office, the project would pencil out if interest rates stayed relatively stable and if the federal government approved a \$900 million loan to Oregon providing cash as tolls rolled in over the next 35 years.

"It is all doable, but it is very much threading a needle to make it all come together," said Laura Lockwood-McCall, Wheeler's director of debt management.

If something were to go awry after the project broke ground next year, the state could have to fill the gaps with general obligation bonds or other state funds. With Washington no longer involved in funding, the financial burden would fall squarely on the Oregon Legislature.

That has already turned off some lawmakers. **Rep. Dennis Richardson, R-Central Point**, who voted for the bridge earlier this year, said in a September newsletter that without Washington's skin

in the game, the project doesn't make sense.

"The financial risk to Oregon citizens is too great," Richardson said.

Commitments from Washington state

Washington agencies, under Gov. Jay Inslee, would still play a role.

The Oregon Department of Transportation would need agreements with its Washington counterpart to oversee construction. TriMet would lead construction of the light-rail extension.

During construction, Oregon would need to collect tolls on the existing Interstate 5 bridge to help pay for the project.

Tolls are expected to range between \$1.50 and \$4.00 each way, depending on time of day. Oregon would set the rate. But Washington officials would have to enforce the tolls by punishing Washington drivers who refuse to pay.

A flurry of memos from Oregon and Washington attorneys last month argued that the plan is legally defensible. Whether it's politically palatable is another matter.

U.S. Rep. Jaime Herrera Beutler, R-Wash., said it was "alarming" that Washington would let Oregon unilaterally set tolls.

"When traffic projections fall short and the project encounters cost overruns, southwest Washington residents should not give up their seat at the table when decisions get made about how to make up the difference," Herrera Beutler said.

Washington opinion matters. Oregon Senate **President Peter Courtney, D-Salem**, has said he wants a stronger message of support from Inslee before the project moves forward.

Unbowed opposition

Conservatives who oppose light rail and environmentalists who oppose the size of the 10-lane bridge have been attacking the project for years.

"It seems to me on the Washington side of the river, Vancouver and Clark County, wants to get itself out from under the shadow of Portland and develop more autonomously," said Sy Adler, professor of urban studies and planning at Portland State University.

Environmental groups, led by 1000 Friends of Oregon, sent a letter to Gov. John Kitzhaber calling the project "irresponsible." And a lawsuit against the project led by the Coalition for a Livable Future, a sustainability non-profit, is wending its way through federal court.

Joe Cortright, a consultant for project opponent Plaid Pantries, said data from a study by CRC contractor CDM Smith shows that thousands of drivers would avoid I-5 tolls by crossing the Columbia on I-205 instead.

That would leave 78,400 daily trips across the I-5 bridge -- far fewer than the 123,900 average that the Oregon Transportation Department recorded in 2011 and well below estimates from the project's federal environmental impact statement, Cortright said.

"CRC has never corrected the factual errors in the (impact statement), never added any post-2005 traffic data, and never has updated its projections to reflect actual conditions," Cortright said in an email.


Mandy Putney, a CRC spokeswoman, said the data Cortright used was gathered to show that the bridge would collect enough tolls to pay for the project, not to estimate traffic.

"We know right now that we have a corridor that's very congested, especially at peak hours," Putney said. "We know we have all of these problems today and they will continue to get worse if nothing is done."

--Christian Gaston

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ODOT welcomes Columbia River Crossing critics

Created on Wednesday, 09 October 2013 01:00 | Written by [Matthew Garrett](#) | 

 [3 Comments](#)

I am writing to provide more complete information and provide a better context for an informed discussion about toll revenue projections for the I-5 replacement bridge project than some recent media accounts of selective data points.

First, let me provide some background on the experts providing us our detailed analysis. CDM Smith is a leader in the field of toll revenue forecasting. The firm was hired through a competitive request for proposal process in 2012 by a team that included the chief financial officer of ODOT and staff from the Oregon State Treasurer's office. The firm has a strong reputation and track record in developing reliable forecasts for toll facilities and decades of experience with toll bond underwriters and rating agencies.

CDM Smith has completed multiple TIFIA financings through the Federal Highway Administration. Since 2009, its portfolio includes a dozen bond issuances totaling more than \$8.6 billion. In recent years, its forecasts have exhibited a significant degree of accuracy: Six projects have shown actual revenues at least 6 percent above their estimates; nine projects have come within 5 percent of their forecasts, and three projects have come in with revenues more than 6 percent below their estimates.

Most recent toll revenue analysis

It is important to note that the study being discussed was to determine if there were enough vehicles crossing the Columbia River on I-5 to generate sufficient toll revenue to pay the debt service on the toll-funded portion of CRC financing plan.

Even using prudently conservative assumptions, CDM Smith's findings to date confirm that the project can be financed with toll revenues. The scenarios CDM Smith analyzed use reasonable assumptions about economic and job growth, regional population growth and other factors, based on long-term population and economic trends.

Scenario B, for example, is designed to provide a lower bound of gross toll revenue, and uses the ECONW Low Forecast of economic activity and no increases in toll rates after the bridge opens in 2022. Even using these prudently conservative assumptions, CDM Smith's report from Sept. 2 and analysis by additional financial consultants estimates that at current interest rates the project will generate over \$1.3 billion total revenue from tolls.

I-205 diversion review

CDM Smith's work has been focused on estimating revenue from tolling I-5. Their work is NOT designed to estimate diversion to I-205. This work is fundamentally different than the traffic analysis completed for the Final Environmental Impact Statement, and with very different goals in mind. The purpose of the investment grade analysis and modeling is to assess revenue potential, including prudent assumptions that will not overstate revenue.

For the NEPA environmental studies, the project team must make assumptions that will not understate traffic and its impact on the environment. Traffic volumes in supporting the investment grade analysis are solely intended for the purposes of developing appropriate revenue forecasts for project financing purposes. Because of this goal, traffic forecasts in this toll revenue evaluation are lower than those used for the CRC NEPA process and for operational planning purposes.

Project analysis has confirmed since 2008 that I-205 has limited capacity and will reach capacity by 2030 due to normal regional growth regardless of whether the I-5 replacement bridge project is built. Tolling I-5 may move this date forward, but it will not by itself cause I-205 to reach capacity. Modeling assumes route choices are influenced by the cost of trip in terms of time and money and whether or not transit is a viable option for the trip. Consequently, the CRC's financial analysis of traffic and tolling has always found that a significant immediate reduction in traffic on I-5 would occur due to tolling. The analysis has also found that some trips would shift to I-205, other trips across the river would be foregone, some trips would shift to non-highway modes (particularly light rail), and the motorists would adjust the time of some trips to avoid peak hour tolls. The demand for river crossings is increasing due to regional growth. I-205 will be overcrowded with or without the Columbia River Crossing; tolling makes this happen sooner but is not the reason that it happens.

The I-5 replacement bridge project is one of the most scrutinized, reviewed and analyzed projects by legislators, citizens, local elected officials and federal partners. Our most recent toll report was completed Sept. 2 and delivered to the Oregon State Treasurer and legislators with other materials on Sept. 12. For the last two years presentations to legislative committees have included discussions on diversion because diversion is always part of the equation in every toll project across the country. Additionally, the project is the subject of extensive public records requests by the media, opponents to the project and interested citizens.

Mr. Cortright, a paid lobbyist for Plaid Pantry, a project opponent, has made 55 separate requests since March 2011. We welcome his continued interest.

Finally, funding transportation and infrastructure improvements is a challenge for our state and our nation. The partnership of federal, state and toll funding sources for the I-5 replacement bridge project allows us to address a major infrastructure problem over the Columbia River.

ODOT recognizes the importance of rigorous, consistent, timely and transparent review of the data used to determine the feasibility of these financing elements.

Matthew L. Garrett, director of the Oregon Department of Transportation, is writing to Gov. John Kitzhaber, Senate President Peter Courtney and House Speaker Tina Kotek.

3 comments



Leave a message...

Best Community

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David Clark · 5 days ago

Hey Matt,

Tell us what the average commuter will pay in annual tolls?

Tell us what effect tolls will have on Jantzen Beach businesses.

Tell us what percent of people and freight will be carried by light rail and what % of the cost is for light rail.

Reply Share >



Paul Edgar · 5 days ago

The spin that is made made on the CRC Project has about 5% of what citizens need to know and should be included. Matthew knows that I know the real facts of how terrible this project would be on our region and the partners we have in the State of Washington. We cannot have trust in government, when they continue to spin this story and all of the ramifications, with the majority of the ramifications being negative. We need a 3rd bridge and probably a 4th bridge before we need anything done as outlined in the CRC Project. I just makes me laugh at this illusion that Matthew is attempting to make, that Light Rail will eliminate all of the problems, that is a "Oh My God", you lose all credibility with that statement. Tri-Met is truly a bankrupt entity with about \$1.2-Billion in unfunded Retirement and health care obligations. They have omitted that they have to reduce these contractual obligations or if they cannot they must start reducing service levels. When you do not have bus service that connects working commuters coming for Vancouver Clark County if there was Light Rail across the river it will not work. Honest-estimate are that Light Rail could possibly achieve



WILLAMETTE WEEK

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September 23rd, 2013 By ANDREA DAMEWOOD | News | Posted In: Environment, Transportation, PDX News, Politics

Tolls on the Columbia River Crossing Will Max Out Interstate 205

New Public Records Unveil Massive Exodus from Interstate 5



The One-State Solution - SOURCE: CRC

Only about **half as many cars** would use the **Columbia River Crossing** than previously predicted, and far more will choke the Interstate 205 bridge as drivers try to avoid paying tolls, according to new information uncovered by Portland economist Joe Cortright.

Plans for **tolling Interstate 5 at the CRC will cause Interstate 205 to reach capacity**. Meanwhile, traffic on Interstate 5

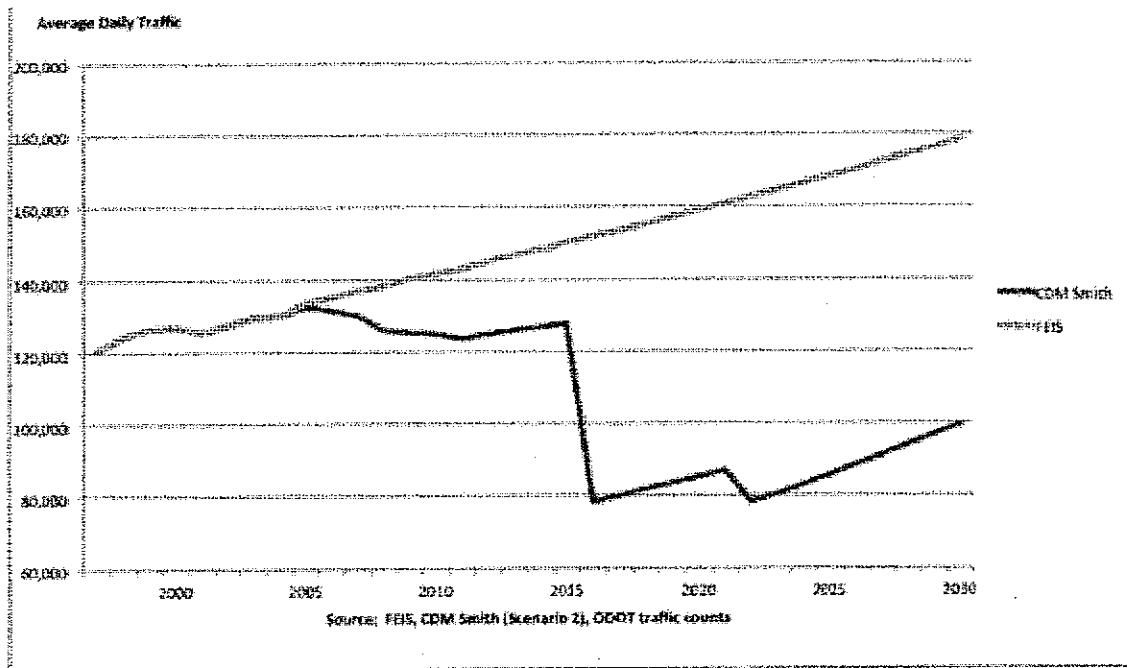
will plummet to half that originally predicted by state officials. State officials were counting on higher traffic counts—and the tolls drivers would pay—to cover the costs of the \$2.8 billion project.

The projections were made by CDM Smith—the company the CRC hired to perform an investment grade analysis on tolls—but were **previously not disclosed by the CRC to state legislators or the media**, despite a number of public records requests.

"Here's what the world looks like after the new bridge opens: 87,000 cars a day are using the brand-new 12 lane bridge, while over 200,000 cars are using the I-205 bridge," says Cortright, who has long been an outspoken critic of the CRC. "The good news here, if people from Portland want to shop at Jantzen Beach, they should have no trouble getting there."

(The green line in the chart below shows the previous projection they've been using to convince federal officials; the red line are the new numbers Cortright uncovered):

I-5 Bridge: FEIS Forecast v. CDM Smith



The numbers echo a point that many critics have been making for years: that **tolling I-5 while keeping I-205 toll-free is foolhardy**, especially since driving overall is on the decline. (The *Portland Mercury* reported in 2010 that one independent expert called the plan "stupid.")

Cortright released his 12-page analysis (PDF) today, just hours before **Gov. John Kitzhaber** officially announced a Sept. 30 special session for Oregon lawmakers. The \$2.8 billion Oregon-only CRC wasn't on the list of topics for the session, but *WW* has reported it could be squeezed in.

In the past, CRC officials have characterized the projected traffic on the new bridge by giving estimated annual counts of trips—estimated in the millions.

The way the project gave its tolling and traffic predictions meant the new study couldn't be compared with the CRC's Final Environmental Impact Statement, which gave its predictions in average daily trips, Cortright says.

But the records Cortright turned up provide the average number of daily trips—the way CRC officials had presented it to federal officials in seeking approval for the project.

For example, the new numbers he uncovered show the new tolled CRC would see about 78,400 daily trips—far fewer than the more than 160,000 cars earlier predicted.

Meanwhile, the newly disclosed numbers say the I-205 will carry two and a half times as predicted earlier.

"Nobody really thinks in terms of millions of transactions per year," he tells *WW*. "But if you say there are 138,000 cars a day using I-205, and we're going to add 50,000—that paints a pretty clear picture in people's minds."

Maxing out I-205 (which reaches its saturation point at 210,000 daily trips; a point CDM Smith predicts it will hit in 2023) **will jam up traffic to Portland International Airport**, which Cortright argues is even more economically important and time-sensitive than I-5.

He also points out that CDM Smith has still not explained how the project will make the \$1.3 billion in toll revenue it needs with such high levels of diversion.

His guess? Higher tolls.

CRC Tolls Will Produce Gridlock On I-205

Analysis of CDM Smith Traffic Forecast

Joseph Cortright, Impresa, Inc., September 2013

Tolling I-5 for the Columbia River Crossing will cause nearly 50,000 vehicles daily to shift to the I-205 Bridge, which will be jammed to capacity, according to a previously undisclosed traffic study prepared for the CRC.

Starting in 2016, the CRC will impose peak hour tolls of \$2.50 on the existing I-5 bridges, plus a surcharge of another \$1.50 those who don't buy transponders. But the nearby I-205 Bridge will remain un-tolled. According to traffic studies prepared by CRC contractor CDM Smith, this will lead to 48,800 more vehicles crossing I-205 daily than is the case today. Meanwhile, traffic on the I-5 bridges will drop by more than 45,000 vehicles, to traffic levels not experienced since the early 1970s.

Daily Traffic on Columbia River Bridges, 2011 and 2016

Bridge	2011	2016, with tolls	Change from 2011
I-5	124,000	78,400	-45,600
I-205	138,700	187,500	+48,800
Total River Crossings	262,700	265,900	+3,200

Source: CDM Smith Estimates, Scenario 2.

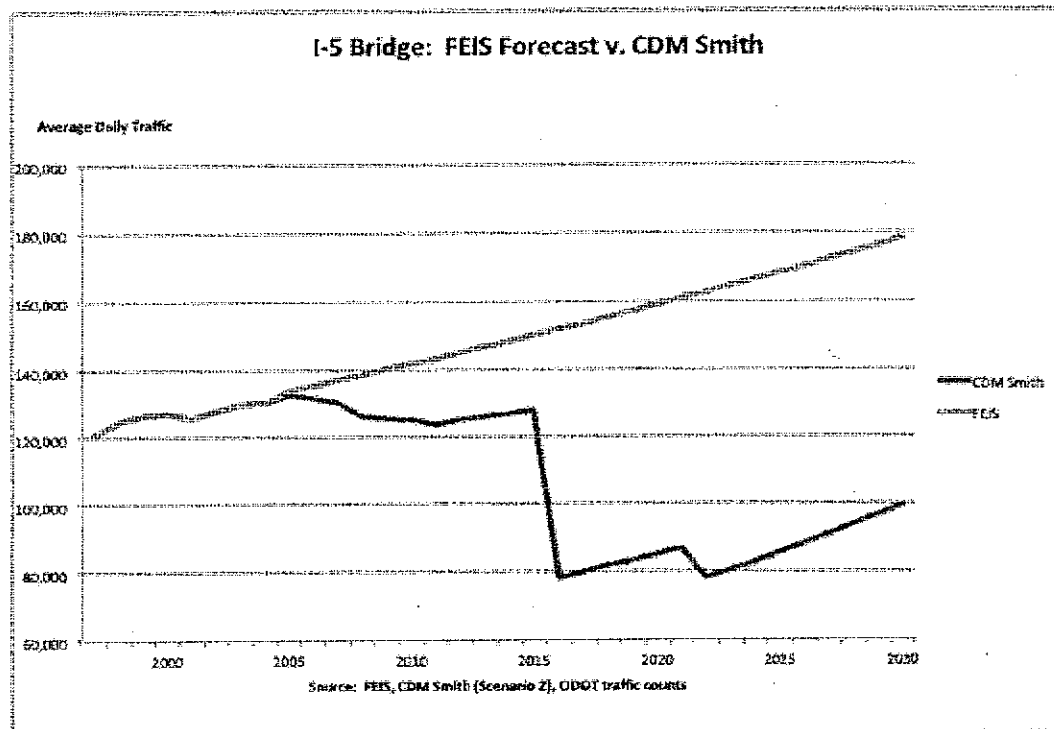
Currently, the I-205 Bridge handles about 139,000 vehicles per day. Tolling I-5 in 2016 will cause that total to jump to more than 187,000 vehicles each day.

When the new bridge opens in 2022, tolls will be raised further, to \$3.62 plus surcharges for peak travelers, causing even more vehicles to divert to I-205. CDM Smith predicts that traffic on I-205 will increase to more than 210,000 vehicles per day, up 70,000 from today's levels. Meanwhile, traffic on the new, widened I-5 bridges will fall to 78,200 per day (under Scenario 2), about the same level of traffic as in 1972, and justly slightly more than half as many cars as use the existing bridges today. The new I-5 CRC crossing will be greatly underused, while at the same time, the I-205 crossing will be carrying two and a half times as much traffic as the new I-5 bridges.

Under all but the lowest traffic forecast, the CDM Smith analysis shows that the I-205 bridge will be jammed to its full capacity—about 210,000 cars per day, shortly after the new I-5 bridge opens in 2022. Once the I-205 bridge is saturated, the CDM Smith traffic model assumes that traffic congestion and delays on the I-205 bridge will force more traffic growth to travel on I-5—a critical factor in generating estimated toll revenues.

While the documents disclosing the CDM Smith projections show travel *volumes*, they do not show travel *times*— since I-205 will be at capacity, travelers on I-205 will doubtless face much longer travel times than they do today. In addition, filling I-205 to capacity will produce higher traffic volumes and slower travel speeds on routes connected to I-205, especially I-84 and State Route 14. The congestion on I-205 would be especially likely to increase travel times to and from Portland International Airport. CRC has not disclosed or evaluated the negative economic effects associated with degraded access to the region's airport, arguably a much more time-sensitive destination for travelers and freight than truck trips on I-5.

These data show that the traffic projections contained in the project's environmental impact statement are dramatically wrong. The Final Environmental Impact Statement (FEIS) claimed that the new I-5 bridges would carry 178,000 vehicles in 2030, and that there would be only minor diversion to I-205. The new CDM Smith analysis shows only slightly more than half as many vehicles will use a new I-5 bridge (99,000 under Scenario 2).



The new analysis confirms what Impresa has been saying about CRC traffic projections for more than five years: CRC completely missed the big decline in driving that has been underway in the U.S. for almost a decade, and they grossly under-estimated the diversion effects of I-5 tolling.

This forecast invalidates the transportation rationale for the CRC project. The CRC was based on the premise that a new, larger bridge is needed to accommodate growing traffic flows. But the CDM Smith forecasts show that with tolling, fewer

vehicles will use the new bridge than use it today. Under CDM Smith's highest forecast (Scenario 4) traffic on the new I-5 Bridges will be lower in 2030 (122,000 vehicles per day) than it is today (about 124,000 vehicles per day). The region will have spent nearly \$3 billion dollars to widen this freeway and increase its capacity—but fewer motorists will use it than do so today. And tolling will leave the new I-5 bridges grossly under-utilized, while overwhelming the existing I-205 bridges. The day the new bridge opens, I-205 will carry two and a half times as many vehicles (210,300), as the new tolled I-5 CRC (78,400).

Even though much more realistic than the FEIS analysis, there are strong reasons to believe that the estimates created by CDM Smith still significantly over-estimate toll traffic on I-5 and underestimate the amount of diversion to I-205.

- The CDM Smith estimates are based on un-realistic forecasts of the underlying growth of cross-Columbia River traffic. The CDM Smith forecasts assume that between 2016 and 2036—in the absence of tolls—the total number of daily auto trips across the Columbia River will increase from 269,100 to 366,500, a rate of annual increase of 1.5% per year. Over the past decade, trips across the river have actually declined at a rate of -0.2% per year (from 270,000 in 2001 to 267,300 in 2011). Vehicle miles of travel are in long-term decline in the region and throughout the United States. The CDM Smith estimates provide no explanation of why this decline will reverse, and accelerate to this high rate, nor does it provide any sensitivity analysis that explains the revenue implications if this assumption is wrong. If traffic growth across the Columbia River fails to accelerate as dramatically as CDM Smith is forecasting, the CRC could experience a major shortfall in revenue.

Forecast/ Time Period	Annual Growth in Columbia River Crossings
Actual Growth Rate 2002-2012	-0.2% per year
CDM Smith "Toll Free" 2016-2036	1.5% per year
CDM Smith "with Tolls" 2016-2036	1.1 to 1.2% per year

- The CDM Smith estimates are not based on actual data on traveler value of time. While a key part of the CDM Smith work plan was to develop a customized estimate of the value of travel time, based on a survey of actual I-5 bridge users, the estimates in developed so-far rely on a "back of the envelope" estimate travel time value based on secondary data about county-wide wage rates, and a "rule of thumb" relationship between travel time values and wage rates.
- The CDM Smith figures likely over-estimate truck traffic and the high sensitivity of truckers to tolled facilities.
- The CDM Smith estimates do not separately recognize the effect of tolls on shopping trips to Oregon by Washington residents seeking to avoid sales taxes.

How CRC Tolls Force Traffic to I-205

<p>Average Daily Traffic</p> <p>250,000 200,000 150,000 100,000 50,000 0</p> <p>2000 2005 2010 2015 2020 2025 2030</p>	<p>1. Flat Traffic on I-5 and I-205</p> <ul style="list-style-type: none"> For the past decade, traffic on the I-5 and I-205 bridges has been flat to decreasing, down an average of 0.2% per year. CDM Smith expects this trend to continue through 2015. <p>(All data from CDM Smith; Scenario 2)</p>
<p>Average Daily Traffic</p> <p>250,000 200,000 150,000 100,000 50,000 0</p> <p>2000 2005 2010 2015 2020 2025 2030</p>	<p>2. 2016: Pre-Completion Tolling</p> <ul style="list-style-type: none"> Tolling I-5 begins in 2016, and CDM Smith's Scenario 1 forecast says 43,000 more cars will use the I-205 bridge than today. Traffic on the I-5 bridges drops to 78,400 cars per day—the 1972 level of traffic.
<p>Average Daily Traffic</p> <p>250,000 200,000 150,000 100,000 50,000 0</p> <p>2000 2005 2010 2015 2020 2025 2030</p>	<p>3. 2016 to 2021: Construction</p> <ul style="list-style-type: none"> Diversion to I-205 continues. CDM Smith predicts some traffic growth on both I-5 and I-205. Traffic levels on I-5 remain well below pre-tolling levels.
<p>Average Daily Traffic</p> <p>250,000 200,000 150,000 100,000 50,000 0</p> <p>2000 2005 2010 2015 2020 2025 2030</p>	<p>4. 2022: CRC Bridge Opens, Tolls Rise</p> <ul style="list-style-type: none"> In 2022, the new CRC bridge opens, and tolls are increased to \$3.62 each way at the peak hour, plus surcharges. Even more vehicles will divert to the I-205 bridge as a result of these toll increases. I-5 traffic falls to 78,200 daily.
<p>Average Daily Traffic</p> <p>250,000 200,000 150,000 100,000 50,000 0</p> <p>2000 2005 2010 2015 2020 2025 2030</p>	<p>5. 2023 to 2030: I-205 Saturated</p> <ul style="list-style-type: none"> After 2023, the CDM Smith forecasts show that I-205 reaches its capacity limit of about 210,000 cars per day. The CDM Smith model forces all traffic growth to the tolled I-5 bridge. The wider new I-5 bridge is grossly underused.

Analysis

Panel 1 shows the historical pattern of traffic on the I-5 and I-205 bridges since 1997. Traffic growth during this period ebbed and then went into reverse. Over the past decade, travel on the I-5 and I-205 bridges combined has declined by an average of 0.2% per year. CDM Smith expects flat to stagnant growth through 2015.

Panel 2 shows CDM Smith's forecast of what will happen in 2016, when the CRC begins charging a toll for users of the existing I-5 bridge, the so-called "pre-completion tolling." Tolls will range up to \$2.50 per peak hour crossing, plus a surcharge of \$1.50 for those who do not buy a transponder.

Panel 3 shows that from 2016 through 2021, while the new bridge is constructed, that CDM Smith projects that the pattern of diversion to I-205 will persist, but that there will be growth in traffic on both I-5 and I-205.

Panel 4 shows what CDM Smith expects to happen when the new CRC Bridge is opened to traffic—and tolls are increased to \$3.62 per peak hour crossing (plus surcharges of up to \$1.77 for those who do not purchase transponders). The further increase in tolls serves to divert additional traffic to I-205. When the new bridge opens, it is expected to carry just 78,200 vehicles per day, the same level of traffic that crossed the bridge in 1969.

Panel 5 shows what is projected to happen after 2023. Critically, the CDM Smith forecasts project that I-205 will be saturated to full capacity—about 210,000 vehicles per day or about 50% higher than current traffic levels (this is shown as I-205 "flat-lining" after 2023. Once I-205 is saturated, CDM Smith assumes that traffic growth will shift to the tolled I-5 bridges. This assumption is a key driver of increased toll revenues in the post-completion period.

The CDM Smith model contradicts and invalidates the traffic projections used in the CRC planning and environmental impact reports over the past 7 years. These new forecasts for traffic levels on a tolled I-5 bridge completely contradict the forecasts the CRC has used for the past seven years, and cast serious doubt on the project's environmental impact statement, the need for the project, supposed transit benefits and also pose the risk of extreme traffic diversion.

These forecasts are dramatically different than those in the Columbia River Crossing Final Environmental Impact Statement (FEIS), which claimed that traffic would be 178,000 vehicles per day if a new, tolled CRC were built. The CDM Smith estimates show that the FEIS overstated 2030 traffic levels on the I-5 bridge by between 45 percent and 104 percent. Despite the fact that it forecasts 80,000 fewer I-5 trips daily in 2030; the CDM Smith report is the basis for an assertion that tolling will

produce nearly as much revenue as was forecast in the FEIS. Neither the CDM Smith report, nor the Parsons Brinkerhoff report that accompany it provide any explanation of how so much smaller traffic flows generate nearly as much net revenue.

In sum, the results of the CDM Smith report show:

- The unintended consequences of tolling just one bridge will likely produce even worse traffic congestion on alternate, non-tolled routes, especially those leading to the Portland airport (which are arguably far more time-sensitive and economically important than truck or commuter traffic across the present I-5 bridges).
- With tolling, no additional cross-river capacity is needed. Although the project is supposedly needed to expand capacity, tolling the I-5 bridges will reduce demand for the foreseeable future to a level that could easily be accommodated by the existing structure.
- A high fraction of current bridge users do not value the trip highly enough to pay the toll; this is critical, since toll revenues are expected to cover perhaps a third of the cost of the project.

Long-term growth rates assumed for the CRC with tolls have not been validated by the experience of other tolled facilities. The CDM Smith analysis assumes that in the long term, growth rates on the I-5 bridges *with tolls* will range from 1.1 percent to 1.2 percent per year. In the past decade, *with no tolls*, the growth rate of traffic across the Columbia River on the I-5 and I-205 bridges combined has averaged -0.2 percent per year and has exceeded 0.5 percent in only one year (2005). Yet the CDM Smith figures assume that traffic will grow faster on a tolled bridge than it has grown on the existing non-tolled bridges, and it will do so on a sustained basis. The materials submitted with the CDM Smith forecast do not explain what factors will cause this historical reversal in bridge traffic. As the Bain Report to the Treasurer noted in the face of an unsubstantiated claim that traffic growth would accelerate after 15 years of slowing, such a projection requires "strong, evidence-based arguments to support such a 'story.'"

The CDM Smith Forecasts Invalidate the Traffic Forecasts Contained in the FEIS

The traffic projections contained in the DEIS are the foundation of many of the key conclusions about the project's environmental, economic and social impacts. The newly released CDM Smith projections show the estimates used in the FEIS are incorrect—the amount of traffic that will be carried on the I-5 bridges will be dramatically less in 2030 than the 178,000 vehicles estimated in the FEIS, and this invalidates many of the conclusions contained in the FEIS.

Although the CDM Smith estimates omit the critical No-Build no-toll baseline, it is evident that their estimates and the past seven years of stagnant to declining traffic volumes on the I-5 totally discredit the FEIS estimate of 184,000 vehicles per day for the No-Build alternative. There is no evidence that traffic levels on I-5 in the No-Build case will ever reach the level of 184,000 vehicles per day forecast in the Draft and Final Environmental Impact Statements. The bridges currently carry about 124,000 vehicles per day, and in fact, traffic levels have actually declined over the past five years. Previous CRC documents have omitted information showing the steady decline in traffic: the project's vintage 2006 projections were not updated in the FEIS, issued in September 2011; the FEIS contains no post-2005 data on actual traffic levels on the bridges.

The No-Build estimates contained in the FEIS create a fictional and exaggerated baseline that makes the proposed project seem more necessary and environmentally benign than it actually is. In effect, the traffic levels ascribed to the No-Build scenario have served to create a high traffic, high delay, high pollution straw man against which the build alternatives could be claimed to have better performance.

A corrected baseline No-Build forecast, coupled with lower estimates of traffic and higher estimates of diversion associated with tolling the proposed new I-5 bridges would produce dramatically different results from those portrayed in the CRC Environmental Impact Statement. Specifically, such changes would:

- **Invalidate traffic congestion analysis.** The FEIS claims that toll driven diversion to I-205 will be minimal. The CDM Smith figures show that many more vehicles will divert away from I-5 because of tolls—about 45,000 trips in 2016, according to its Scenario 2 forecast. This diversion will also produce additional traffic and congestion on other key routes (I-84, SR-14 and other East-West connectors). The FEIS does not analyze the effects of this congestion, and is therefore invalid.
- **Invalidate the freight analysis.** Similarly, the FEIS claims that freight travel will face increasing congestion and delay on the I-5 bridges. These forecasts hinge on a comparison with the inaccurate baseline. In fact, traffic levels have not been increasing on the I-5 bridges, and the fraction of the cross-river truck traffic carried by I-5 has decreased dramatically in the past five years.
- **Invalidates safety analysis.** The FEIS claims that the number of crashes on the I-5 bridges will increase—but this figure is based on a faulty forecast of future traffic levels. A realistic baseline would show far fewer crashes.
- **Invalidates cost-benefit analysis.** The CRC has published a cost-benefit analysis, which is based on assumed travel savings for the 178,000 vehicles

estimated to cross the bridge in 2030 under the FEIS. Since far fewer vehicles will use the bridge, there will be far smaller benefits. Moreover, the cost-benefit analysis doesn't include an analysis of the costs associated with the delays from congestion on parallel and alternate routes because the FEIS traffic projects failed to accurately estimate these flows. This invalidates the cost benefit analysis.

- **Invalidates the analysis of transit benefits.** The comparison of bus service times under the No-Build analysis with light rail service times under the proposed project is strongly influenced by the high levels of traffic congestion in the No-Build. A more realistic No-Build scenario with less traffic congestion would show much smaller (and perhaps negative) transit travel time benefits with light rail.

It is not possible to reconcile the DEIS and FEIS forecasts with the forecasts provided by CDM Smith. CRC officials have made misleading claims about the nature of the forecasts. Officials have claimed that the numbers presented in the EIS are a "worst-case" for estimating environmental impacts, and that the project uses a different and lower set of traffic numbers to gauge financial feasibility.

To claim that a forecast with a higher or lower level of traffic on I-5 is better or worse, or represents a worst case analysis, is simply incorrect. Different projections necessarily imply different environmental impacts.

- Neither federal highway regulations nor federal environmental regulations authorize or direct using multiple, conflicting forecasts for a single project, or using one set of traffic numbers for one purpose, and a different set for another.
- The CRC FEIS projections of project traffic levels do not, in any case, represent an environmental worst-case because the CDM Smith estimates show that there will be a diversion of 45,000 vehicles to other routes/destinations with tolling; this is a far higher level than the minimal diversion estimated in the FEIS. This diversion has far larger and more negative environmental effects than previously disclosed.
- The CRC projections in fact, create a fictitiously bad "No-Build" scenario that serves to make the build alternatives seem less environmentally harmful than they actually are.
- Federal regulations require that CRC certify that it has used only a single, consistent set of forecasts as part of its application for federal transit funds. (Nancy Boyd, New Starts Certification of Technical Methods and Planning Assumptions September 7, 2012).

Important Questions Remain About the Reliability of the CDM Smith Forecasts

The preliminary CDM Smith numbers show that even in the highest range of assumptions, traffic levels on I-5 will be dramatically lower than forecast in the FEIS. Even so, the CDM Smith preliminary estimates leave other important questions about specific traffic demand markets unanswered. As indicated earlier in this report, the entire set of CDM Smith forecasts assume levels of cross-river traffic growth that are at odds with trends over the past decade. In addition, the report doesn't show traffic effects by vehicle type, by trip purpose, time of day, or by income level. This is important because some trips are highly sensitive to toll levels. Each of these factors means that diversion could be greater, and adverse effects even worse than those implied in the preliminary estimates.

Not Disaggregated by Vehicle Type: According to the CRC financial plan, commercial trucks are expected to provide about 25 percent of gross toll revenue. Careful studies of trucker travel patterns and behavior conducted by the Transportation Research Board show that most truckers dislike tolls, and avoid tolled routes, especially independent truckers who are paid a fixed price on a per trip basis, and who are not reimbursed for tolls, and who have ample delivery windows. Already, without tolls, truck traffic on the I-5 bridges has fallen 23 percent since 2007, and a further decline in traffic would have major implications for toll revenue estimates.

Not Disaggregated by Trip Purpose: Journey-to-work trips across the two bridges account for almost half of all trips. But a high fraction of trips are shopping and personal/social trips. A significant fraction of these trips is Washington residents shopping in Oregon to avoid sales taxes. Many occasional and personal trips may divert away from I-5 because of the high cost of tolls: For those who do not purchase a transponder, the cost of a peak hour round trip when the new bridge opened in 2022 would be \$10.78: a \$3.62 base toll, plus a \$1.77 surcharge each way ($\$3.62 + \$1.77 = \$5.39$; $\$5.39 * 2 \text{ trips} = \10.78). This would more than negate the tax savings to the typical shopping trip to Jantzen Beach which averages about \$50 in purchases. Over the past two decades, cross-border retail activity has shifted substantially to the East, with the development of large scale retail at Cascade Station and other big box retail on Airport Way, both served by I-205. Activity at the Jantzen Beach Mall, served by I-5, has stagnated. Given the motivation of these trips (saving about \$8.50 per hundred dollars of taxable retail purchases), retail shoppers may be deterred from using the I-5 bridge and instead travel to the East. Also, the value of time of shoppers is likely to be much lower than the \$12.28 to \$17.24 estimates used by CDM Smith.

Not Disaggregated by Time of Day: Tolls charged vary by time of day, as does the attractiveness of alternative routes. The experience with the SR-520 Floating Bridge in Seattle shows that the biggest traffic drop off is in off-peak hours, when the non-

tolled route offers free traffic flow. Travelers are much less likely to choose a tolled route when there is no congestion on the un-tolled route.

Not Disaggregated by Income Level: The CDM Smith preliminary results do not show results by the income level of bridge users. Different income groups have very different values of time. Low income travelers generally have a much lower value of time, and will modify travel patterns to avoid tolls; while higher income travelers value time savings more highly than toll costs. The CDM Smith model uses a single value of time for each category of vehicle trips. If the results were disaggregated by income group, the model would likely show higher rates of diversion, especially for lower income groups.

Model Not Demonstrated to Accurately Forecast Tolled Traffic. The materials provided to document the findings do not show whether the CDM Smith model, which is based on the Metro transportation model, has addressed the methodological limitations identified by an ODOT-commissioned study which concluded that the current four-step traffic forecasting models used in the Portland area were incapable of accurately predicting traffic volumes on tolled facilities.

The CDM Smith Report fails to present basic information about its traffic model and its results. As part of constructing its model of traffic over I-5, CDM Smith would also have to forecast traffic speeds across the I-205 bridges and on other major connecting links. The CDM Smith preliminary report omits any data on traffic speeds or levels of service on these other routes.

About the CRC and CDM Smith Forecasts

The CRC prepared traffic forecasts for the project's environmental impact statement in 2007. These forecasts were based on traffic data through 2005, and on transportation surveys that assessed traveler behavior in the early 1990s. These forecasts predicted very rapid growth in travel on I-5 through 2030—even if a new bridge was not built. CRC did nothing to revise these models when it published the Final Environmental Impact Statement in late 2011; in fact, the FEIS contains no post-2005 data on traffic levels—even though traffic declined significantly and showed CRC projections were fundamentally flawed.

In late 2012, CRC hired CDM Smith to undertake an "Investment Grade Analysis" of the CRC. An Investment Grade Analysis or IGA is a more detailed study of possible traffic levels and toll revenues that would be submitted to potential bond buyers who would be lending money to the project. The IGA will take more than a year, and is not expected to produce final results until December 2013.

In reports made public in March 2013 (to the Oregon Legislature) and in September 2013 (to the Oregon State Treasurer), ODOT has provided CDM Smith work products that summarize traffic data only on an annual transactions basis, and not on the average daily traffic (ADT) basis routinely used to describe traffic levels (and

used throughout the project's environmental impact statement). Also, these CDM Smith reports did not disclose traffic levels on other competing routes, i.e. I-205.

Impresa has repeatedly requested access to ADT level data. This traffic data in this report are taken from data prepared as part of the CRC's Investment Grade Traffic Analysis and was obtained by Impresa, Inc., through a public records request filed with the CRC. The data are contained in a spreadsheet prepared ("CRC Prelim ADT Summary File.XLSX") attached to an email from Eugene Ryan of CDM Smith to Steve Siegel, another CRC project consultant, and dated March 2, 2013. This spreadsheet contains estimates of daily traffic levels on I-5 and I-205 for the years 2016, 2022, 2036 and 2060, and also reports the estimated level of traffic under a "no-toll scenario" for both routes in 2016, 2036, and 2060. Impresa computed values for all intermediate years by interpolating a constant annual growth rate. This report uses values from Scenario 2 of the 4 scenarios presented by CDM Smith which corresponds to the middle of the range of CDM Smith estimates. Scenario 1 would produce even lower levels of utilization of the new I-5 bridges than shown here. Scenarios 1-4 were developed by CDM Smith for its document "Preliminary Gross Toll Revenue Estimates," submitted to the Oregon Legislature and dated February 22, 2013. The estimates presented in this document revealed only annual transactions, and did not report data for the I-205 crossing. This document is available on the State Treasurer's website:

<http://www.oregon.gov/treasury/AboutTreasury/Documents/CDM%20Smith%20memo%20on%20tolls%20Feb%2022%202013.pdf>

Impresa has filed public records requests for this same information with the Columbia River Crossing, with the Washington Department of Transportation and the Oregon Department of Transportation, but has been provided with no additional information that addresses daily traffic levels since April 2013.

The ADT data contained in this report appear to be derived from the February preliminary traffic estimates presented to the Legislature. As noted, CRC has not provided ADT estimates consistent with the toll revenue projections provided to the State Treasurer in September. However, the range of annual transactions reported for the February forecasts in Scenarios 1-3 substantially overlap the range of reported annual transactions for the September toll revenue projections. For February Scenarios 1-3, annual transactions for 2030 range from 32 to 45 million; for September Scenarios A-F, annual transactions for 2030 range from 32 to 41 million. This implies that the ADT estimates for the September forecast would be in the same range as those presented here.