PUBLIC REVIEW DRAFT

2018 Regional Transportation Plan

Financial strategy documentation

An explanation of methods to develop the 2018-2040 financial forecast

June 29, 2018

oregonmetro.gov/rtp

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Project web site: oregonmetro.gov/rtp

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1.0 INTRODUCTION AND SUMMARY

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1.1 Financial/Fiscal Constraint Overview ..... **Error! Bookmark not defined.**

1.2 Reasonable Availability of Expected Funds ..... **Error! Bookmark not defined.**

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This appendix summarizes the financial planning component to the 2018 Regional Transportation Plan (RTP) for the three-county Metro region. As part of the RTP development, federal regulations require a financially/fiscally constrained RTP that clearly demonstrate that the included total project costs do not exceed the total revenue level reasonably expected to be available to the greater Portland region over the life of the plan.

1. The Financial Plan appendix is divided into five primary sections which includes the following:
2. Introduction: A short introduction and brief discussions of fiscal constraint, defining Reasonably Expected to be Available funding, and Year of Expenditure methodology is included.
3. Economic Conditions: A brief overview of the national, state and local economic conditions is provided in this section.
4. Revenue Assumptions: Key assumptions developing the revenue forecasts are proved here.
5. Revenue Source Summary: The summary of funding by federal, state and local is identified here.
6. Revenue Programs Glossary: Revenue program definitions and use parameters.

1.1 Financial/Fiscal Constraint Overview[1]

Financial planning takes a long-range look at how transportation investments are funded, and at the possible sources of funds. The RTP, with a 20+ year planning horizon, must include a financial plan that estimates how much funding will be needed to implement recommended improvements, as well as operate and maintain the system as a whole, over the life of the plan. This includes information on how the Metro and our partnering agencies reasonably expect to fund the projects included in the plan, including anticipated revenues from FHWA and FTA, state government, regional or local sources, the private sector, and user charges. The metropolitan transportation plan must demonstrate that there is a balance between the expected revenue sources for transportation investments and the estimated costs of the projects and programs described in the plan. The plan must be fiscally (or financially) constrained to satisfy the requirements identified by 23 CFR §450.324, Development and Content of the Metropolitan Transportation Plan.

The requirement of financial/fiscal constraint as part of the RTP development has been in place since the enactment of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991. It was followed by the Transportation Equity Act for the 21st Century (TEA-21) in 1998. It continued as part of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005, and most recently as part of Moving Ahead for Progress in the 21st Century (MAP-21) in 2012.

The total of all federal, state, and local funding revenue streams identified over the RTP 20+ year planning horizon becomes the "financially constrained" portion to the RTP. This becomes the region's budget to plan and implement strategies to fund specific projects identified in the RTP to meet the RTP's outcomes. The process to identify all appropriate federal, state, and local revenue sources to be included in the RTP involves using different methodologies which all must meet the federal criteria of "reasonably expected to be available."

1.2 Reasonable Availability of Expected Funds[2]

Projecting accurate revenue streams and expected funding levels beyond a five-year planning horizon is a difficult challenge. The current level of fiscal uncertainty surrounding the transportation planning and implementation process only exacerbates the difficulty. During the period of SAFETEA-LU, FHWA established the planning concept of "reasonable availability of funding" enabling a metropolitan planning organization (MPO), such as Metro, to develop revenue estimates, methodologies, and potential new funding streams that are expected to be available to fund projects and RTP strategies over the RTP's planning horizon years. Over the life of SAFETEA-LU and MAP-21, the revenue forecasting concept of reasonable availability of funding has evolved and been clarified to include methodologies such as:

- Identification of new funding sources and levels of funding not currently in place, but are reasonably expected to be in place in the future. Examples:
    - Estimating a reauthorization of a long-term funding measure based on past support for the measure and projects.
    - Estimating revenues out of a draft transportation legislation bill not yet approved that has documented strong support in the state legislature
- Projecting future revenues using historical trends including consideration of past legislative or executive actions. Examples:
    - Using the average of formula allocation from multiple past years to project annual future year amounts.
    - Using approved future development schedules and plans that include with developer system charges to extrapolate future potential local revenues.
- Projecting future revenues based on valid and agreed upon economic forecasting methodologies. Example:

  - Incorporating a future annual growth rate or inflationary escalation based on historical trends and available economic projections
  - Projecting the continuation of formula allocations based upon the agree assumption a new transportation funding bill will be passed at similar funding rates.
- Identification of new revenue sources that do not currently exist, or that require additional actions before the state DOT, MPO, or public transportation operator can commit such funding to transportation projects. Examples:
  - Metro's High Capacity Transit funding methodology that will require Legislature approval for the state revenue commitment, but may count as constrained funding based on prior year historical allocations.
  - The passage of a future gas tax increase based on existing support by the public and in the legislature,

Determining whether a future funding source is reasonably expected to be available is a judgment call. When developing and utilizing the reasonable availability concept to identify new or enhanced revenue sources, two key considerations must be included to determine if the assumption is reasonable:

1. Evidence of review and support of the new revenue assumptions by state and local officials.
2. Documentation of the rationale and procedural steps to be taken with milestone dates for securing the funds.

The 2018 RTP financial plan includes a number of projects and strategies based on reasonable availability of future funding. These projects and strategies are identified within the RTP constrained list. The 2018 RTP financial plan includes a number of projects and strategies based on reasonable availability of future funding. These projects and strategies are identified within the RTP constrained list. Metro's financially constrained plan includes a core revenue forecast consisting of federal, state, and local funds. The funds are identified within this appendix along with a summary outlining the parameters and eligibility for their use.

While current revenue forecasting methodologies assume a continued flow of federal transportation fund apportionments, Metro acknowledges the considerable challenge associated with financing future transportation investments. The possible future insolvency with the Highway Trust Fund, continued expanding demands for system maintenance, and a growing population that will require new capacity roadway and transit system improvements require Metro to examine and evaluate possible alternate funding sources beyond traditional federal sources to support the transportation demand within the region.

1.3 Year of Expenditure (YOE$) or Constant Year $

In accordance with 23 CFR §450.324(g)(11)(iv). Metro must include "an inflation rate(s) to reflect "year of expenditure dollars," based on reasonable financial principles and information, developed cooperatively by the MPO, State(s), and public transportation operator(s)."

Consistent with the federal guidelines, the financial plan takes into account inflation and incorporates possible inflationary impacts to the project costs.

The rationale behind this requirement is that long-range estimates of transportation costs have understated the deficit between costs and revenues. By adding a cost escalator to project costs to reflect them in YOE dollars, the impact of inflation is addressed. A second approach is to leave the project costs in current year dollar values, and then discount the future revenues into current dollars. Through this approach the impact from inflation upon the annual purchasing power is also addressed. Metro's review of the requirement determined discounting the revenues back into current dollars was the more efficient way to address the impact of inflation. We believe it presents a more accurate picture of costs, revenues, and deficits associated with a long-range transportation plan. The following provides the methodology used in calculating costs and revenues into discounted dollars.

Inflation and 2018 $

Projects are reflected in YOE dollars out to 2040 in many of the revenue tables. The agreed upon inflation rate for the RTPs was set at 3.1% Rather than assign an inflationary value to the project costs, Metro discounted estimated federal revenues back into current dollars. This approach de-values the estimated revenues to account for inflation. The approach was consistent with the ODOT Long Range Funding Assumptions (LRFA) workgroup and was developed by ODOT's Senior Economist in collaboration with transit providers and MPOs for the MPOs to use when updating long-range transportation plans. Three overall real dollar approaches were used:

3. The basic approach starts with federal revenues stated in 2018 YOE dollars. Each year, the 2018 real dollars are de-valued by 1% from the initial 2018 revenue value. This occurs because the forecasted growth is about 2.1-2.2% annually for the federal funds while the annual inflation rate has been established at 3.1%. Even with the 2.2% growth, the federal funds are not keeping up with inflation. From the 2018 amount, funds then lost 1% each year to reflect them in constant 2018 $ dollars. There is no inflationary accelerator or multiplier included with the funds. The 2018$ revenues continue each year losing 1% annually, (or, specifically, 1.031%annually). This shows the impact inflation has on the true purchasing power of the revenues.

4. Converting into 2016 $: Some revenues were already converted into 2016$. These amounts were used where appropriate starting then with the discounted 2018 value.

5. No Annual Growth: A third version used eliminated annual growth resulting in a straight-line, 0% revenue growth. Revenue growth may occur annually, but it is offset by inflation. Each year annual inflation continues to weaken the true purchasing power of the funds. So, unless the annual revenues see a true growth of at least 3.1%, the real value diminishes each year due to inflation. The farther the revenue projections are shown, the greater the impact on the real purchasing power of the available revenues. This approach was used primarily for the local revenue sources that provided 23 years totals, but did not include any annual growth. The total amount was then divided by 23 into annual amounts to account for the length of the 2018 RTP planning timeframe.

In Table A at right page, estimated 5311 discretionary revenues are provided by the LRFA for Oregon and the Portland metropolitan area. The funds are listed in YOE which includes annual inflation growth multipliers, and in 2016 $ dollars. A comparison shows the impact inflation has on the true purchasing power of the 5311 funds over time using the 2016 $ approach. Between 2018 and 2040, 5311 revenues are projected to total $22.5 million. Adjusting the revenues in 2016 $s, reduces the true revenues from $22.5 million to an estimated $15 million due to inflation. Stating the available 5311 revenues in 2016 $ reduces their amount by 33% from inflation. As much as possible, the projected constrained RTP revenues are shown in 2016 $s to discount their value and show their reduced purchasing power due to inflation.

Table A
PROJECTIONS OF DISCRETIONARY INTERCITY FUNDS (5311 (C))

Year	Oregon Total YOE $s	Oregon Total 2016 $s	Portland Area YOE $s	Portland Area 2016 $s
2016	1.8	1.8	0.7	0.7
2017	1.9	1.8	0.7	0.7
2018	1.9	1.8	0.8	0.7
2019	2.0	1.8	0.8	0.7
2020	2.0	1.8	0.8	0.7
2021	2.0	1.8	0.8	0.7
2022	2.1	1.7	0.8	0.7
2023	2.1	1.7	0.8	0.7
2024	2.2	1.7	0.9	0.7
2025	2.2	1.7	0.9	0.7
2026	2.3	1.7	0.9	0.7
2027	2.3	1.7	0.9	0.7
2028	2.4	1.6	0.9	0.7
2029	2.4	1.6	1.0	0.7
2030	2.5	1.6	1.0	0.6
2031	2.5	1.6	1.0	0.6
2032	2.6	1.6	1.0	0.6
2033	2.6	1.6	1.1	0.6
2034	2.7	1.6	1.1	0.6
2035	2.8	1.5	1.1	0.6
2036	2.8	1.5	1.1	0.6
2037	2.9	1.5	1.2	0.6
2038	3.0	1.5	1.2	0.6
2039	3.0	1.5	1.2	0.6
2040	3.1	1.5	1.2	0.6
2041	3.2	1.5	1.3	0.6
2042	3.2	1.5	1.3	0.6
2043	3.3	1.4	1.3	0.6
2044	3.4	1.4	1.3	0.6
2045	3.4	1.4	1.4	0.6
2046	3.5	1.4	1.4	0.6
2047	3.6	1.4	1.4	0.6
2018-2047		47.6	33.4	19.0
		2018-2040 -->	22.5	15.0

Why use the Discounting Approach to Estimating RTP Constrained Revenues?

Discussion among the local agencies and ODOT revealed all had differing cost methodologies to apply an appropriate inflationary cost increase to their projects to state them in YOE. There was resistance in applying the LRFA annual inflationary amount of 3.1% to their projects. Some indicated that as a result using YOE, the project cost estimates would be extensively low-balled which would negate to some degree the use of a YOE inflationary multiplier. Others argued that sufficient project level funding contingencies had been already incorporated into their costs which addressed the inflation issue. Without agreement to apply cost increases increase to submitted project, discounting the revenues back into to 2016 $ was the solution to show how reduced revenues would impact the projects submitted into the constrained RTP. Through this approach, the impact of inflation out to 2040 (through reduced revenues) has been addressed

1.4 Constrained Revenue Forecast Summary

Developing the constrained revenue forecast down to the fund type code level utilized several approaches and methodologies to ensure the estimations met the reasonable availability of

expected funds for the future. The approaches and methodologies used are discussed in later sections of this financial plan.

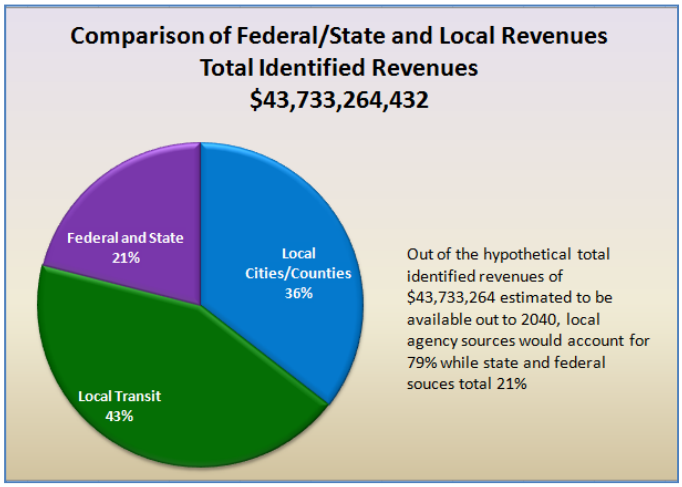
Due to the centralized funding approach ODOT uses, several federal and state fund types could not be separated and estimated out to 2040. Determining the reasonable availability of some federal and state funds had to be accomplished through ODOT programmatic totals. While the methodology use holds true the logic of reasonable availability of funding, it could not solve the ODOT "mixing" approach at a centralized statewide level rather than by individual fund type code identification down to the MPO and regional level. Example, there was no way to determine the Region 1 reasonable availability of annual Surface Transportation Block Grant (STBG) funds due to the centralized approach in mixing federal and state fund types across statewide allocations and not specific regional allocations by individual fund type codes. This limitation has serious implications for developing and demonstrating accurate fiscal constraint validations to the fund type code level per requirements identified across 23 CFR 450.300-338.

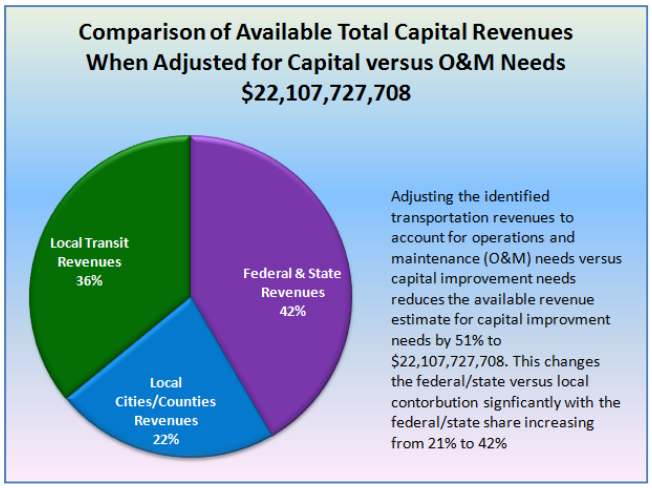
Even with the above limitations, Metro was able to develop a total constrained revenue forecast that appears to still meet the parameters of reasonable availability of expected future funding for the 2018 RTP. The summary is stated below:

2018-2040 RTP Constrained Revenue Forecast Summary		
Revenue Category	Constrained Revenues	Notes
Federal (FHWA based – non transit)	$1,290,864,879	By individual fund type code
Federal (FTA based – transit)	$4,010,744,005	By individual fund code with some grouping due to formula allocations
State Revenues to Transit Needs	$514,617,430	State generate revenues committed to transit purposes (by fund type code or funding program code)
State Revenues (HB2017 – non-transit)	$701,626,500	Identified by HB2017 allocation categories in support of capital needs)
ODOT Combined Revenues (capital/enhance/modernization areas)	$993,373,500	Combined federal & State for capital/modernization needs. Estimated at the Region 1 level and within the MPO boundary area
ODOT Fix-It (OM&P) Combined Program Revenues	$1,635,898,375	Combined state and federal revenues estimated at the Region 1 level
Subtotal federal and State Revenues:	**$9,197,285,778**	**Subtotal from all above categories**
Local Revenues (counties and cities)	$15,530,627,690	Three counties and cities combined all local revenue programs
Local Revenues - Transit	$19,005,350,964	TriMet and SMART
Total All Revenues	**$43,733,264,432**	

2018-2040 RTP Constrained Revenue Forecast Summary Revenues Estimates Adjusted for Capital vs O&M		
Revenue Category	Constrained Revenues	Notes
Federal and State Revenues	$9,197,285,778	By individual fund type code
Local Revenues (Estimated available for capital needs)	$4,971,217,430	3 counties and cities together
Local Revenues for Transit (Estimated available for capital needs)	$7,939,217,500	TriMet and SMART
Total Constrained Revenues for Projects inclusion in the RTP	**$22,107,72,708**	Limits local funds to available funds for capital needs identified by agencies

As shown in the previous phase revenue tables and below, the hypothetical total revenues 43,733,264,432 for the greater Portland region do not represent the actual available revenues for regional system capital improvements. The three counties, cities, TriMet, SMART, ODOT all have to address operations and maintenance (O&M) needs which removes available revenues from capital improvmenent needs. The regional O&M commitment for the region is significant and consumes approximately 51% of the total identified federal, state, and local revenues identified for the greater Portland region. When removing the estimated O&M funding piece of the transportation revenue forecast decreases the constrained revenue forecast to an estimated $22.1 billion available for capital improvements needs.





Reducing the identified revenues for capital improvement needs results in the share of federal and state revenues doubling from 21% to 42%, as noted above. However, the net future share of federal funds to the greater Portland region is anticipated to decrease due to inflation. The federal fund growth projection was set at 2.2% over the RTP's years of 2018-2040. A 2.2% growth forecast is considered to be moderate and represents the prognosis of favorable long-term economic growth for the region.

However, inflation is estimated to be annually at 3.1%. As a result, the greater Portland region will face expanding challenges trying to fund future projects primarily with federal funds. The net impact of inflation upon transportation revenues will result in a decreasing true purchasing

power of allocated and available federal funds for transportation capital projects. The gap between available federal funds and needed federal funds for transportation projects will expand over future years. Each RTP cycle, the region can expect the contribution percentage of federal funds supporting needed transportation projects to decrease. Like a well going dry, the greater Portland region over time will face a shrinking federal share of transportation revenues for needed capital improvement projects. Other and additional nonfederal transportation revenue sources will need to be secured to adequately meet the regional transportation system's capital improvement plus operations and maintenance project needs.

Remaining Sections of the Constrained Revenue Forecast

Section 2 discusses the economic indicators and methodologies used to determine the revenue growth projections. The economic forecast is positive; however, the issue of inflation undermines the revenue growth, especially to federal funds.

Section 3 identifies the various revenue programs and the assumptions in their allocation amounts and use.

Section 4 covers the specific revenues or their funding programs with the estimates out to 2040.

Section 5 provides a federal glossary of the revenue program definitions and uses.

2.0 ECONOMIC CONDITIONS

2.0 Economic Conditions..... **Error! Bookmark not defined.**

2.1 Economic Summary ..... **Error! Bookmark not defined.**

2.2 The National Economic Picture ..... **Error! Bookmark not defined.**

2.3 The State of Oregon Economic Picture ..... **Error! Bookmark not defined.**

2.4 The Metro Regional Picture ..... **Error! Bookmark not defined.**

2.5 Economic Indicators Summary..... **Error! Bookmark not defined.**

2.1 Economic Summary[3][4]

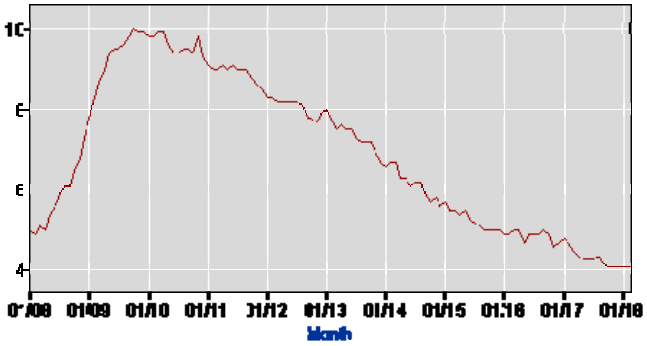
The overall economic health of the nation, the state, and the region all combine to influence the revenue forecasts of available revenues for transportation projects through 2040. Most economic experts agree that the national economy has improved since the Great Recession of 2008-09. At the national level, fears of global economic vulnerabilities to global inflation and to another banking meltdown continue to surface. At the state level, the picture for Oregon is more optimistic, with job and income growth being cited as clear indicators of a strengthening economy. Yet, pundits also warn to watch out for storm clouds that could be on the horizon. At the regional level, the picture is encouraging as well. As of 2018, the Portland area is now experience a construction labor shortfall due to a booming construction section in both private and public infrastructure improvements.

2.2 The National Economic Picture

The glass is murky

The national economic picture remains a mixed bag of indicators. Some suggest the United States is well onto a solid recovery, with slow but steady growth for the future. They cite a decreasing national unemployment rate that hit 10% during 2010 to a current 4.1% as of January 2018 as a key indicator of a healthy economy. They also cite the continuing surge of the markets as proof that economic prosperity is here again, along with the passage of the Trump Administration's Tax Reform Bill.

Chart 1. National Unemployment Rates 1/2008 to 1/2018
Source: Bureau of Labor Statistics
https://data.bls.gov/timeseries/LNS14000000



Others are not as optimistic and stress that the national economy is vulnerable and could slip back into a recession. This camp believes that the gains the national economy has made over the last two years may have reached a plateau, and the economy is not as strong as some have

reported. They fear the markets reflect an economic bubble, which along with the banking and real estate sectors, will burst soon, plunging the national economy into recession again. They cite the market sell-off during February 2018 as proof of a symptom of a fragile economy that goes beyond a required correction.

Overall, many economists and financial investment leaders are optimistic about our national economic future. They point to decreasing unemployment numbers, strong job growth in multiple regional areas, and stress opinions that many industrial sectors are poised for significant investment and expansion over the next several years. The one condition also expressed for a general optimist expansion period is that inflation must be maintained and kept under control.

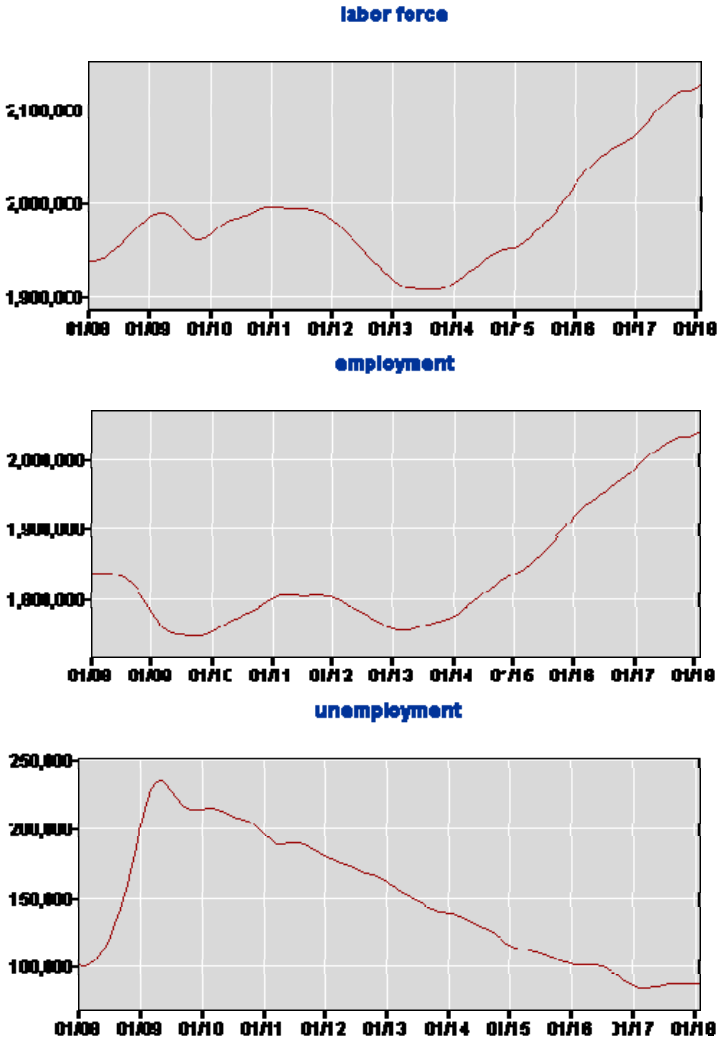
2.3 The State of Oregon Economic Picture

Perhaps the glass is half-full

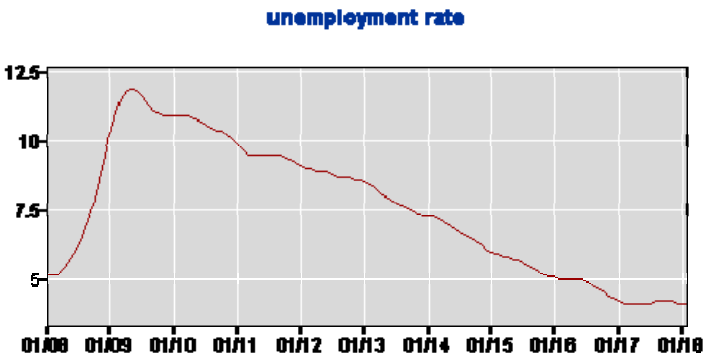
Contrary to the national economic picture, the State of Oregon Economic picture is far different. Analysts describe Oregon's economic summary as "*at full-throttle growth. Job and income are rising fast, if not faster than the mid 2000s.*"[3] Oregon has regained its traditional growth advantage relative to other states and appears to be seeing a deeper labor market recovery.

However, Oregon is still healing from the impact of the 2008-09 Recession. The state's labor market is nearly two-thirds of the way back to pre-recession levels and is projected to reach full employment by 2017[5]. After this, net labor growth rates are expected to slow significantly over the longer horizon as Baby Boomers fully age into their retirement years. Job growth over the next several years is projected to be around 3%, reflecting a slow but steady growing economy. Key economic and job growth indicators (e.g., labor force participation, employment numbers, unemployment numbers, and unemployment rates) are reflecting a

Charts 2-5. Oregon 10-Year History (2008-2018) for Labor Force Participation, Employment, Unemployment, and Unemployment Rate
Source: Bureau of Labor Statistics
https://data.bls.gov/timeseries/LASST410000000000003



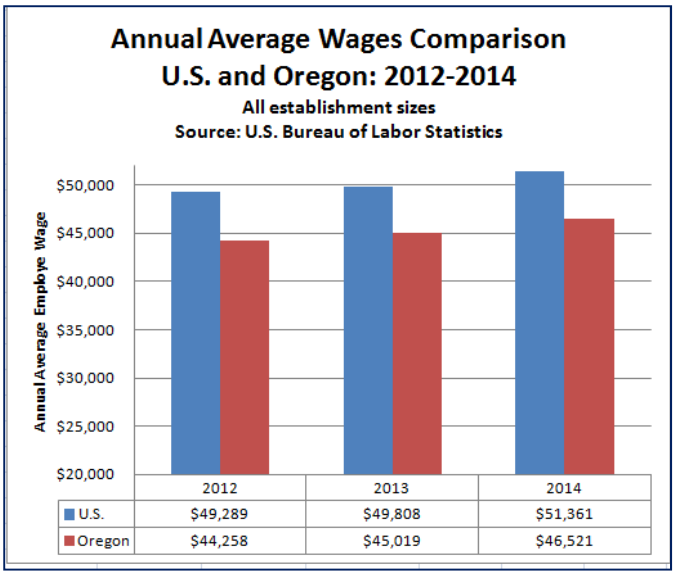
positive turn around for the state's overall economic health.



A key indicator that Oregon is on its way back is also seen in labor wages. Wages for the average Oregon worker are increasing faster than the national average. Although, Oregon trails the national annual average, the gap is closing.

During the 2012-2014 timeframe, the national and Oregon annual average wages are shown at right below. Over the three- year period, the national annual average wage increased by 4.2%. Annual wages in the state of Oregon's increased by 5.1%.[6]

Graph 1



Another indicator that provides Oregon an advantage for long-term economic growth is the State's underlying fundamentals (e.g., industrial structure and strong in-migration flows) that provide long lasting positive impacts to the Oregon economy. Additionally, unlike other areas that are subject to seasonal weather impacts (e.g., New England area), Oregon's industrial structure does not face the same climate impediments to a steady economy.

While the overall Oregon economy is set on a strong foundation and could enjoy several years of growth, several issues and concerns could still derail the s positive economic future. Forecast risks facing the Oregon economy include:

- *Federal fiscal policy:*
  The negative: Oscillating spending adjustments, federal reductions, and ongoing continuing resolution, short-term fixes can impact available transportation funding over short-term cycles and complicate short-term planning and implementation activities.

- The positive: Outside of outright land ownership, the federal government does not have a large presence in Oregon. The state does not feel the major impact of federal spending reductions. On the flip side, Oregon does not benefit as much as other states when federal spending increases occur. When looking at federal grants the state receives as a share of state revenue, Oregon ranks 29th highest. When considering federal procurement as a share of the economy, Oregon ranks 48th highest. *Strength and Durability of the Housing Market Recovery:*
  Growth of the housing market in Oregon saw brisk growth through 2012 and braking to a

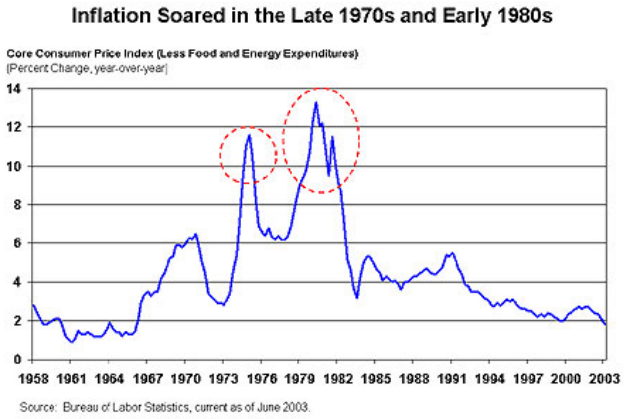
complete stall in 2013, with recovery to moderate growth in 2014. How long the housing market continues to improve, and to what degree can and will the impact be upon the overall state economy, is a topic for ongoing debate. While the housing market appears to have passed the crucible of foreclosure activity, sales of both existing homes and new construction does not yet approach pre-recession levels. Another concern is the possibility of another subprime rate real estate bubble emerging that could negatively impact the housing market again.

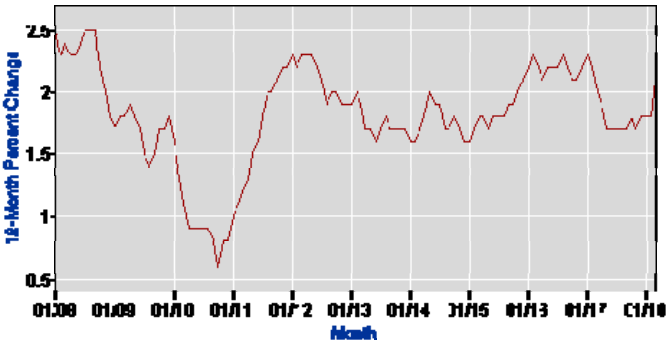
- *Real Estate Supply Not Keeping Up Demand:*
  Expectations are that in a stable and growing economy, new construction starts will increase as well to help meet the increase in demand. As demand outweighs supply, rental prices have increased and home affordability is decreasing. As rents and home prices are increased faster than income and wages, households are facing less discretionary income to spend in other areas, impacting retail sale areas. Questions remain if new construction activity will pick up sufficiently to alleviate the demand and help improve home rental and ownership affordability.

- *Commodity Price Index and Inflation:*
  The last period of extreme inflation in the United States occurred during the 1970s when inflation exceeded 10% and hit almost 14% during 1979. The high inflationary impact changed the monetary policy for the United States from1980 onward. The Federal Reserve System (or Fed) implemented new procedures to closely monitor inflation to ensure radical periods of inflation did not occur again.

  For the most part, the Fed has controlled inflation and kept it to a creep over the past twenty years. However, fears still abound that Untied States could again experience a hyper-inflation period brought on by global economic instability or as a result of out-of-control growth. Part of the rationale is that global economic instability could result in world-wide commodity shortages resulting in extreme price increases. Each year the Fed must decide if interest rates should be raised to reduce the money supply as a way to control

Charts 6-7. CPI – All Urban Consumers 10-year inflation rate 2008-2018
Source: Bureau of Labor Statistics
https://data.bls.gov/timeseries/CUUR0000SA0L1E?output_view=pct_12mths





inflation. Since the 2008-09 Recession, the Fed has held off significantly raising interest rates. Rate increases are occurring as of 2017, but not in the manner that would indicate an attempt to off-set hyper inflation

Overall, the economic picture appears positive and favorable for steady long term growth. The state possesses all the needed resources, multiple economic legs, labor supply, tourism, quality of life resources, etc. to develop and sustain long-term economic growth. At the same time, there exist some serious challenges just beyond the horizon that could impact long-term economic growth and available funding for transportation. The 2018 RTP Financial Plan Revenue Forecast reflects a pragmatic but optimistic set of assumptions about future revenue.

2.4 The Regional Picture[7]

The glass is filling up quickly

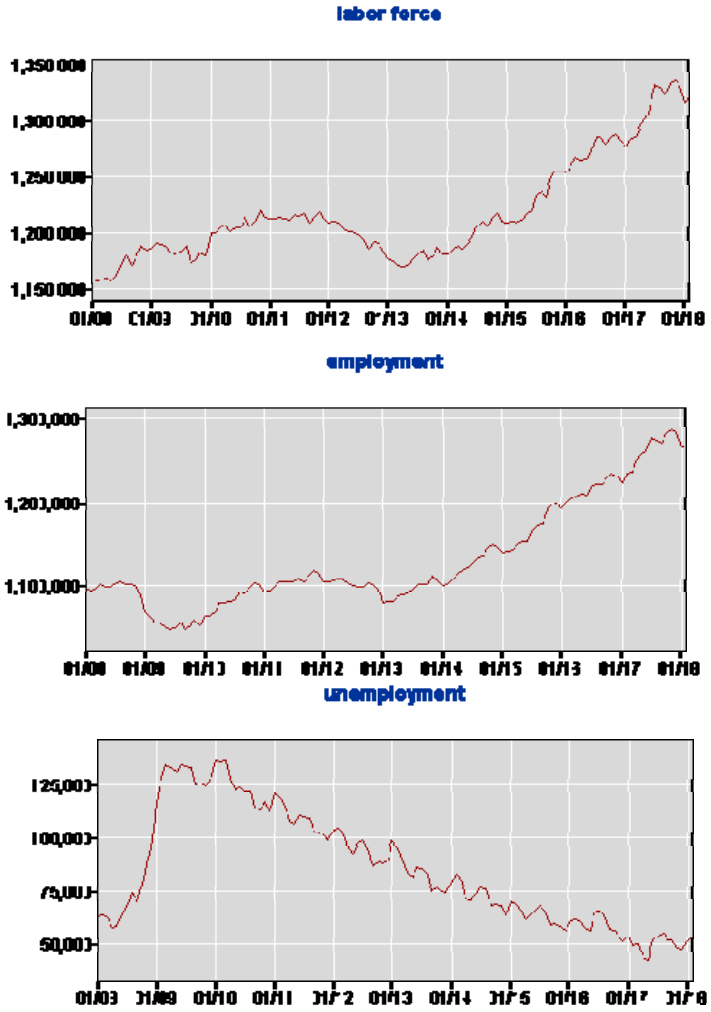
Does the greater Portland region also demonstrate the same positive growth trends? The 10-year available Bureau of Labor Statistics data suggests "yes."

As with the state labor force and employment trends, the Portland region parallels the strengthening economic conditions around the state. Labor force participation rates have significantly increased since 2008. The numbers of "employed" have increased as well.

The regional unemployment rate also has decreased from 6.6% in the expansion period of 2005 with a recession high of 11.3% during February of 2010 down to 5.8% as of January 2015. The unemployment rate in the Portland Metropolitan Statistical Area (MSA), post-recession recovery timeframe (2015-2018), reflects a still decreasing rate down to 4.0% as of January 2018.

During 2017-18 the national unemployment rate also decreased. However, the Portland MSA was

Charts 8-11. Portland-Vancouver-Hillsboro MSA 10-Year History (2008-2018) for Labor Force Participation, Employment, Unemployment, and Unemployment Rate
Source: Bureau of Labor Statistics
https://data.bls.gov/timeseries/LAUMT413890000000003



significantly below the national rate which was 5.1% as of January 2017 and 4.5% as of January 2018.

The unemployment rate has decrease so much since the high of 11.3% in 2010 that several industries have now expressed labor shortage issues. The construction industry in the Portland region is an example. Both residential, commercial, and transportation related companies have expressed the need for more labor. While the construction industry employment payrolls in the Portland area have grown by 7.7% between January 2017 to January 2018, trade industry representative are concerned a labor shortage still exists for many companies.

Increasing annual average wages for the Portland region

If annual average wages statewide have been increasing, have they been increasing significantly in the Portland region? The short answer is yes, per the Bureau of Labor Statistics (BLS). The BLS' 2016 Occupational Employment and Wages Table in the Portland Metropolitan Statistical Area (MSA) region (next page), which includes Clackamas, Multnomah, and Washington Counties in Oregon and Clark County in Washington, indicates that workers in the Portland MSA had an average (mean) hourly salary of $25.94 as of May 2016. This is about 9% above the nationwide average of $23.86. Additionally, wages in the local area were higher in their respective national averages in 13 of 22 major occupational groups, including healthcare practitioners and technical, healthcare support, and construction extraction.

Graph 2. Portland Area Unemployment Rate 2017-2018
Source Bureau of Labor Statistics

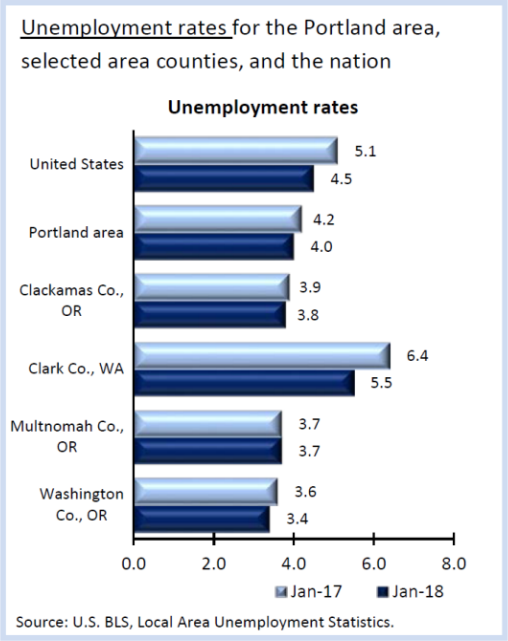


Table B. Key Occupation Wage Comparison for the Portland-Vancouver MSA and U.S., May 2016
Source: Bureau of Labor Statistics

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Portland	United States	Portland	Percent difference [1]
Total, all occupations	100.0	100.0	$23.86	$25.94*	9
Management	5.1	6.8*	56.74	53.83*	-5
Business and financial operations	5.2	5.6*	36.09	34.63*	-4
Computer and mathematical	3.0	3.8*	42.25	41.26	-2
Architecture and engineering	1.8	3.2*	40.53	43.06	6
Life, physical, and social science	0.8	1.0*	35.06	32.51*	-7
Community and social service	1.4	1.8*	22.69	23.01	1
Legal	0.8	0.7*	50.95	45.63*	-10
Education, training, and library	6.2	5.7*	26.21	28.93	10
Arts, design, entertainment, sports, and media	1.4	1.8*	28.07	26.29*	-6
Healthcare practitioners and technical	5.9	5.5*	38.06	43.07*	13
Healthcare support	2.9	2.5*	14.65	17.42*	19
Protective service	2.4	1.7*	22.03	24.24*	10
Food preparation and serving related	9.2	9.1	11.47	12.43*	8
Building and grounds cleaning and maintenance	3.2	2.7*	13.47	14.81*	10
Personal care and service	3.2	3.3	12.74	13.81*	8
Sales and related	10.4	10.0*	19.50	20.03*	3
Office and administrative support	15.7	14.6*	17.91	18.93*	6
Farming, fishing, and forestry	0.3	0.3	13.37	15.81*	18
Construction and extraction	4.0	4.2*	23.51	26.16*	11
Installation, maintenance, and repair	3.9	3.2*	22.45	23.69*	6
Production	6.5	6.3	17.88	18.69*	5
Transportation and material moving	6.9	6.1*	17.34	18.55*	7

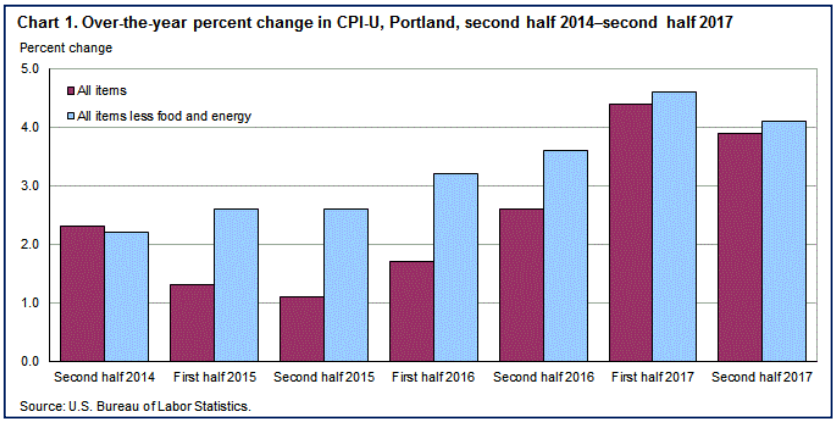
Local Inflation Trends:

"Inflation" reflects a general increase in prices and fall in the purchasing value of money. The inflation rate measures of how fast a currency loses its value. The inflation rate may rise due to massive printing of money, which increases supply in the economy and thus reduces demand. Equally, it may occur because certain important commodities become rarer and thus more expensive. Central banks attempt to control the inflation rate by increasing and decreasing the money supply. The standard measurement of the change in process is the Consumer Price Index (CPI). As monitored by the Bureau of Labor Statistics, the CPI a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.

From the BLS CPI Portland MSA Second half of 2017 report, the Portland MSA area CPI rose 3.9%. The BLS report attributes much of the increase to the rise in the price of gasoline and medical care. This reflects a significant increase in inflation for the region as the annually average since 2012 has ranged from as low as 1.5% to 2.5%. The 2017 rate of 3.9% is not expected to last and decrease down towards the 3% range. Nationally, the one-year change from March 2017 to March 2018 saw the CPI rise 2.4%.

The variance in CPI between national changes and the Portland area's inflationary fluctuations resulted in the ODOT Long Range Funding Assumptions workgroup to adopt a 3.1% average inflation rate to use in development of the MPO's Regional Transportation Plans. The rate signifies that overall inflation will not get out of control, but acknowledges that the Portland region could experience short periods of higher inflation due to the continued growth and expansion.

Graph 3. CPI Changes first half and second half 2014-2017

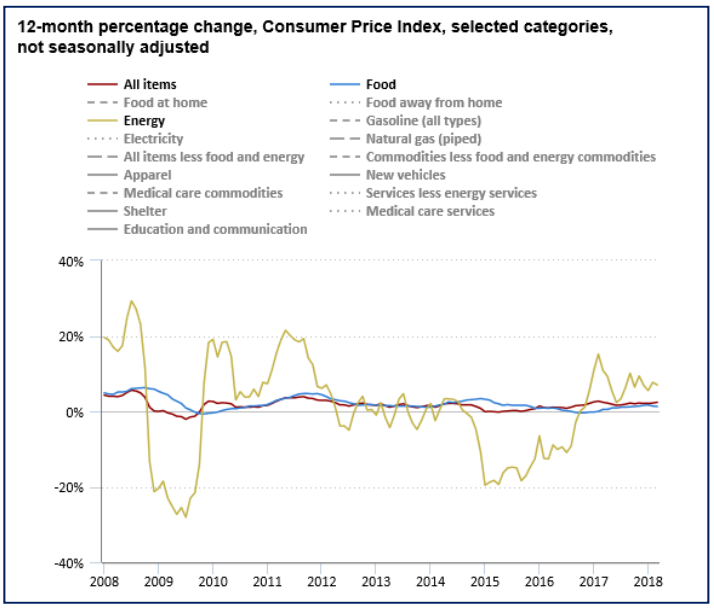


To help avoid planning impacts of possible future short-term inflationary swings, FHWA imposed an inflationary year of expenditure (YOE) requirement to address the impact of inflation on the true purchasing power of identified revenues. MPOs have two approaches to comply with the YOE requirement: Add inflationary costs to each project on the constrained RTP. Or, discount the identified revenues to address inflation. Metro chose the latter to discount the revenues. This was discussed in more detail previously in section 1.3.

Chart 13. The Economic Daily – CPI 12 month National March 2017 to March 2018

Source Bureau of Labor Statistics

https://www.bls.gov/opub/ted/2018/consumer-price-index-rose-2-point-4-percent-over-the-year-ending-march-2018.htm



2.5 Economic Indicators Summary

The review of the major economic indicators nationally, at the state level and across the metropolitan Metro area supports long term positive growth and an optimistic economic picture. The LFRA assessment is optimistic as well resulting in a long-term economic growth projection that is revealed in the federal revenue estimates. All economic indicators from labor force participation, employment, unemployment, and wages reflect current and future strong economic growth. CPI and inflation remains as a bit of a wildcard that could trip up the future state and regional economy. However, with the Federal Reserve Board's strong anti-inflationary fiscal policies being implemented, the likelihood of hyperinflation or prolonged periods of high inflation do not appear evident for the future.

As positive as economic picture appears to be resulting in expected moderately high growth for future transportation federal and state revenue estimates, the LRFA could not support a key economic assumption that most future annual federal and state revenues will not exceed annual inflation. Even the passage of the FAST Act and the effort to resolve the insolvency to the Highway Trust Fund was not enough to justify an LRFA forecast that federal revenue growth would be at 3.1% or higher. Meeting or exceeding annual inflation would represent an extremely strong economic growth forecast which does not appear to be evident. The LRFA's position supports a moderate revenue growth forecast. The LRFA established a 2.2% annual growth forecast for most federal funds to use for the MPO's RTPs.

The federal revenue forecast of an annual growth rate of 2.2% is still very optimistic when actual annual federal revenue growth rates have been around 1.5%-2.0%. However, it still trails the annual inflation by about 1%. This leaves the region with the unfortunate realization that the federal share to major transportation projects will continue to decrease for the future. Other revenue options will need to be explored to help off-set the continuing loss of federal revenues for transportation infrastructure improvements.

3.0 REVENUE ASSUMPTIONS

3.0 Revenue Assumptions ..... **Error! Bookmark not defined.**

3.1 Revenue Growth and Inflation ..... **Error! Bookmark not defined.**

3.2 Federal Revenues Allocated to Metro ..... **Error! Bookmark not defined.**

3.3 Federal Transit Revenues (FTA based revenue allocations) ..... **Error! Bookmark not defined.**

3.4 Federal Funds Allocated to Local Agencies through the ODOT Enhance Program... **Error! Bookmark not defined.**

3.5 Federal Fund Appropriations to the Oregon Department of Transportation (ODOT)..... **Error! Bookmark not defined.**

3.6 ODOT Operations Maintenance and Pavement (Fix-It) Program ..... **Error! Bookmark not defined.**

3.7 State Revenue Growth Assumptions ..... **Error! Bookmark not defined.**

3.8 Oregon HB2017 ..... **Error! Bookmark not defined.**

3.9 Local Revenue Assumptions..... **Error! Bookmark not defined.**

3.1 Revenue Growth and Inflation

This financial plan continues using historical apportionment and allocation trends and assumes that Congress can resolve the insolvency issues facing the Highway Trust Fund. Metro acknowledges the fund's insolvency issue is serious and the passage of the FAST Act is not the complete solution. Congress will need to implement additional long-term solutions to maintain the fund's solvency. Since 2005, there have been fluctuations, but overall Metro has received its annual appropriations within the historical allocation trends.

The consensus of the ODOT Long Range Funding Assumptions (LRFA) workgroup and with the passage of the FAST Act is that federal funding appropriations will continue at their historical levels and see moderate growth for the future. The LRFA recommended an average 2.2% annual growth rate for many of the identified federal funds. While this represents a solid future revenue forecast, the expected and LRFA adopted inflation rate is projected to be 3.1%. This equates to a constant dollar value loss of about 1% annually.

Since the federal funds will not keep up with annual inflation, their real contribution to transportation projects will continue to be diminished over time. Other revenue sources, especially locally generated sources, will need to be to pursued such as self-help tax measures, regional assessments, or other ideas that residents will support to help offset the projected and ongoing decrease of available federal funds for transportation projects.

3.2 Federal Revenues Allocated to Metro

Metro receives an annual apportionment from ODOT for three federal funding programs:

- Surface Transportation Block Grant STBG) funds.

- Congestion Mitigation Air Quality (CMAQ) improvement funds.
- Transportation Alternatives (TA) funds.

Metro is a direct recipient of the above funds and responsible for their management, allocation/distribution, programming in the four-year Metropolitan Transportation Improvement Program (MTIP), plus providing expenditure and reimbursement monitoring in partnership with ODOT to ensure the funds are used correctly and in a timely fashion.

Metro also is responsible for the programming of all federal transportation funds into the MTIP that include transit (e.g., Urbanized Area Formula Grants- 5307, New Starts/Small Starts Capital Investment Grants - 5309, Enhanced Mobility of Seniors and People with Disabilities - 5310, etc.), other roadway/bridge improvement funds (e.g., HBRR), and special annual federal budget transportation funds designated for specific projects. This financial plan includes revenue forecasts for all federal transportation funds with a history of being allocated or award to the region. Section 4.0 identifies the applicable federal transportation funds included in the revenue forecast. Section 5.0 provides additional descriptive details and revenue forecast methodologies.

3.3 Federal Transit Revenues (FTA based revenue allocations)

The Metro MPO area falls within the Portland Urbanized Area (UZA) which includes portions of Marion County, Oregon and Clark County, Washington which is not part of the MPO boundary. Per the FTA National Transit database Glossary, an UZA is an area defined by the U. S. Census Bureau that includes:

- One or more incorporated cities, villages, and towns (central place); and
- The adjacent densely settled surrounding territory (urban fringe) that together has a minimum of 50,000 persons.

The urban fringe generally consists of contiguous territory having a density of at least 1,000 persons per square mile. Urbanized areas do not conform to congressional districts or any other political boundaries. The Portland, OR-WA UZA consist of the three transit agencies: Tri-County Metropolitan District of Oregon (TriMet), South Metro Area Regional Transit (SMART), and the Clark County Public Transportation Benefit Authority (C-TRAN). Appropriated federal transit formula funds are then split by agreed formula among three transit agencies. For the purposes of this revenue forecast, allocations to C-TRAN are not included, as the Vancouver, WA area falls outside of the Metro Portland MPO boundary area.

TriMet and SMART receive formula FTA Section funds that may include: 5307, 5310, 5337, and 5339 funds. Both also have been successful in competing for and securing discretionary FTA 5309 grants and other FTA discretionary grants over the years. TriMet also will be the implementing lead agency for the FTA New Starts and Small Starts grants assuming Metro and TriMet successfully obtain these large discretionary grants for the expansion of TriMet's MAX light rail system.

3.4 Federal Funds Allocated to Local Agencies through the ODOT Enhance Program

A portion of the various federal funds ODOT is appropriated statewide will be allocated to local agencies through ODOT's Enhance/Modernization Program. The Enhance program combines several sources of funding for investments into a single proposal process. The program focuses on capital needs and is separate from ODOT's capital program. This helps to meet the expectation of ODOT to identify and fund the best multimodal transportation solutions needed to move people and goods through the transportation system. Eligible projects must be consistent with state and local plans; local proposers are required to provide match funds; and projects must benefit the state's multimodal transportation system (either on or off the state system).

Project activities that are eligible for the Enhance category funds include:

- Bicycle and/or Pedestrian facilities on or off the highway right-of-way
- Public Transportation (capital projects only, not ongoing operations), Transit Fleet replacements in which title is notheld by ODOT
- Safe Routes to School (infrastructure projects)
- Scenic Byways (construction projects)
- Transportation Alternatives as defined by the Transportation Alternatives Data Exchange (TrADE)
- Transportation Demand Management
- Transportation Options

For purposes of the RTP Constrained Revenue Forecast, the estimated federal funds that will end being allocated to the local agencies and include the following revenues or specific fund types:

- Modernization/Enhance-L (federal discretionary for capital/modernization purposes. Includes a combination of multiple federal fund types)
- HBRR-L (federal Highway Bridge Replacement and Rehabilitation Program local allocations)
- Federal Highway Safety Improvement Program (HSIP)
- Connect Oregon
- Miscellaneous federal discretionary allocations (Tiger grants, FAST Lane, INFRA Grants, ITS, etc.)

The federal funds or allocated fund programs are listed in the federal revenue section.

3.5 Federal Fund Appropriations to the Oregon Department of Transportation (ODOT)

ODOT is the direct recipient of most of the federal transportation funds the state of Oregon receives for highway improvements. ODOT is also charged with the stewardship and

management of all federal transportation funds allocated to the state. Typical federal funds ODOT is allocated includes:

- Emergency Relief (ER) funds
- Federal Lands Access Program (FLAP)
- Highway Safety Improvement Program (HSIP)
- Intelligent Transportation Systems (ITS) program
- Highway Bridge Program (HBP)
- National Highway Performance Program (NHPP)
- National Highway Freight Program NHFP)
- Railway-Highway Crossings Program
- Statewide and Nonmetropolitan Planning (SPR)
- Surface Transportation Block Grant (STBG) funds
- Discretionary federal transportation improvements (TIGER FAST Lane grants, INFRA Grants)

Due to the centralized approach ODOT utilizes when determining the priority and allocation of their federal and state funds, determining specific federal revenue allocations by specific the specific fund type (as listed above) is not possible currently. However, ODOT Region 1 did examine and develop a long-range revenue forecast estimate based on historical allocation estimates and the ODOT LRFA projections for numerous statewide federal fund allocations for their capital program needs. The ODOT Region 1 Capital program estimate includes federal and state funds mixed together and can't separate the state funds with the exception of HB2017 state funds and specific state funds identified for transit needs. Currently, Region 1 can't identify the ratio or forecast annual federal fund amounts that will be allocated to them due to the centralized and statewide approach ODOT Headquarters uses to allocate federal funds to projects.

The estimate out to 2040 for ODOT Region 1 developed their capital program needs based on six areas as follows:

- Minimum Modernization Program
- Remaining State JTA (HB2001) funds
- Federal Freight Program (HFP)
- Federal Lands Access Program (FLAP)
- Federal Discretionary
- Modernization (Mod) Legislature (HB2017)

ODOT Region 1 estimated a total of $1.522 billion in revenues are reasonably expected to be available out to 2040 for the above capital programs in the MPO boundary area and is shown in

the Revenue Table C below. However, upon a further review of HB 2017, Metro found the total for the capital program potentially higher as shown in Table D.

TABLE C ODOT Region 1 Projected Modernization/Capital Revenues (2018 Constant $) (December 2017)				
Revenue Program	**Use**	**2018-2027**	**2028-2040**	**Total**
Minimum Modernization Program	Capital	$114,956,521	$149,443,479	$264,400,000
Remaining JTA	Capital	$10,000,000	$0	$10,000,000
Federal Freight Program (HFP)	Capital	$42,643,480	$55,436,520	$98,080,000
Federal Lands Access Program (FLAP)	Capital	$0	$0	$0
Federal Discretionary	Capital	$65,217,390	$84,782,610	$150,000,000
Mod Legislature (HB2017)	Capital	$434,782,610	$565,217,390	$1,000,000,000
	Totals:	**$667,600,001**	**$854,879,999**	**$1,522,480,000**

TABLE D Updated ODOT Region 1 Modernization/Capital Revenues(2018 Constant $) (March 2018)				
Revenue Program	**Use**	**2018-2027**	**2028-2040**	**Total**
Minimum Modernization Program	Capital	$122,760,292	$142,210,641	$264,970,933
Remaining JTA	Capital	$10,000,000	$0	$10,000,000
Federal Freight Program (HFP)	Capital	$42,643,480	$55,436,520	$98,080,000
Federal Lands Access Program (FLAP)	Capital	$0	$0	$0
Federal Discretionary	Capital	$65,217,390	$84,782,610	$150,000,000
HB2017 Rose Quarter	Capital	$375,000,000	$0	$375,000,000
HB2017 Safe Routes to School-SR2S	Capital	$31,387,500	$48,964,500	$80,352,000
HB2017 Highway and Street projects	Capital	$249,700,000	$0	$249,700,000
HB2017 Bridges Safety (Sec 71a-c)	Capital	12,555,000	$19,585,800	$32,140,800
HB2017 Seismic (Sec 71a-c)	Capital	$9,416,250	$14,689,350	$24,105,600
HB2017 Pavement (Sec 71a-c)	Capital	7,533,000	$11,751,580	$19,284,480
HB2017 Maintenance (Sec 71 a-c)	Capital	$1,883,250	2,937,870	$4,821,120
Future Legislature (After HB2017)	Capital	$507,655,054	$565,217,390	$1,000,000,000
	Totals:	**$1,435,751,217**	**$380,358,770**	**$1,816,109,987**

Notes and qualifications:

1. A total of $10 million of JTA funds is estimated to be available. The funds have been applied in the first RTP Year Division
2. FLAP: The estimated allocation of FLAP over the RTP 23 year period is estimated at a maximum $107.3 million. FLAP is assumed to be allocated to projects outside of the MPO Boundary and therefore no funding in the MPO boundary is reflected. Region 1 does not assume a contribution from FLAP to the ODOT Metro modernization target.
3. Federal discretionary are various large transportation grants (FAST Lane, etc.) that ODOT estimates they will receive over the RTP horizon year period.

4. "Mod Legislature" includes three projects that would be funded from the State Legislature through a combination of fee and tax increases. The projects are identified in draft bill format now. Based on historical funding trends in the state, and that the projects are in draft legislation, Metro supports the assumption the funding meets the definition of "Reasonable Availability". The total estimated funding would be $1 billion. Mod Legislature also includes state funding o specifically named projects. In the final revenue forecast tables, the amount identified in the Mod Legislature does not include the funding for the HB2017 named capital improvement projects which are shown separately under the HB2017 revenue source.
5. Revenues identified in HB2017 Section 71 a-c do not provide a regional split only a statewide annual estimate. Metro used the 81% of 31% methodology for these identified funds for inclusion in the RTP.

3.6 ODOT Operations Maintenance and Pavement (Fix-It) Program

The Fix-It program includes funding categories that maintain or fix ODOT's portion of the transportation system. This is the non-capacity enhancing operations and maintenance (O&M) component to ODOT's overall system preservation. There are generally four major categories of Fix-it programs which include:

- Bridges (repair/rehabilitate)
- Culverts (repair/replace)
- Highway Pavement Maintenance
- Safety and operations

Within Safety and operations, the following subcategories define the larger safety and operations program:

- Highway crossings
- Roadway safety (non-capacity repairs/rehabilitation)
- Landslides/rockfalls mitigation
- Illumination/Signals/ ITS

On average, the Fix-It program has been funded primarily with federal funds (well over 90% of project funding has been federal) with the state funds providing the required match. However, because of the centralized statewide allocation of funding, Region 1 could not provide a breakout out of federal funding composition down to the specific fund type code.

Developing the constrained revenue forecast out to 2040 utilized the three year state-wide Fix-it program funding estimates from the 2018-2021 STIP and the draft 2021-2024 STIP. The total three-year estimate from the current 2018-2021 STIP for the Fix-It program is $814,857,085 as shown in Revenue Table E. This averages out to approximately $286,499,518 over the three year funding period.

Revenue Table E

FIX-IT				
Federal Fix-It Totals	*$ 265,951,695*	*$ 265,901,695*	*$ 265,901,695*	*$ 797,755,085*
State Funded Fix-It Totals	*$ 20,547,823*	*$ 20,547,823*	*$ 20,547,823*	*$ 61,643,468*
Grand Total Fix-It	*$ 286,499,518*	*$ 286,449,518*	*$ 286,449,518*	*$ 814,857,085*

Table F. ODOT OM&P Revenue Estimates

2018 RTP Financial Plan
State Revenue Sources
Operations, Maintenance, and Pavement (OM&P) Based on 2021-2024 STIP Fix-It Allocation

Year	State Revenue Constant 2018 $S	Percent of State Revenue to Region 1	Region 1 Allocation	Percent Remaining in MPO Boundry Area	**Metro Area Revenues Constant 2018 $s**		RTP Segment Year Totals	RTP Division Year Totals
2016	$ -	31.0%	$ -	81.0%	$ -			
2017	$ -	31.0%	$ -	81.0%	$ -	$ -		
2018	$ 286,499,518	31.0%	$ 88,814,851	81.0%	$ 71,940,029		2018 to	2018
2019	$ 286,499,518	31.0%	$ 88,814,851	81.0%	$ 71,940,029		2020	to
2020	$ 286,449,518	31.0%	$ 88,799,351	81.0%	$ 71,927,474		**$ 215,807,532**	2027
2021	$ 286,449,518	31.0%	$ 88,799,351	81.0%	$ 71,927,474		2021	
2022	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		to	
2023	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		2025	
2024	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967			
2025	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		**$ 355,751,341**	
2026	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		2026	
2027	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		to	**$ 713,470,807**
2028	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		2030	2028
2029	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967			to
2030	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		**$ 354,779,834**	2040
2031	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		2031	
2032	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		to	
2033	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		2035	
2034	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967			
2035	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		$ 354,779,834	
2036	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		2036	
2037	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		to	
2038	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		2040	
2039	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967			
2040	$ 282,580,513	31.0%	$ 87,599,959	81.0%	$ 70,955,967		**$ 354,779,834**	**$ 922,427,569**
Totals:	$ 6,514,927,819		$ 2,019,627,624		**$ 1,635,898,375**		$ 1,635,898,375	$ 1,635,898,375

Notes:
1. 2018-2021 = Fix-it Program annual average for the current 2018-2021 STIP
2. 2019-2022 = The three year average from the draft 2021-2024 STIP
3. A straight-line project using the 2022-2024 annual average was used out to 2040.

As mention previously, ODOT uses a centralized approved to allocating Fix-It program revenues to the various ODOT regions. Additionally, ODOT mixes the composition of the program fund type codes. It was not possible to split out the specific fund type code and amount for each Fix-It program category and specify how much STBG, NHPP, NHFP, etc. are being allocated to each ODOT region and to the MPOs.

If a specific funding split allocation methodology was available to determine the approximate split for ODOT Region 1 and then for the MPO area, it was used and is identified as the revenue methodology source in Section 4.2 for each identified fund code. If no methodology was available, then Metro relied on a standard "81% of 31%" allocation methodology. The 81% of 31% allocation methodology comprises the following assumptions:

a. The revenue source total was identified and confirmed to be a statewide allocation.

b. 31% of the statewide total was estimated would be allocated to the ODOT Region 1 area

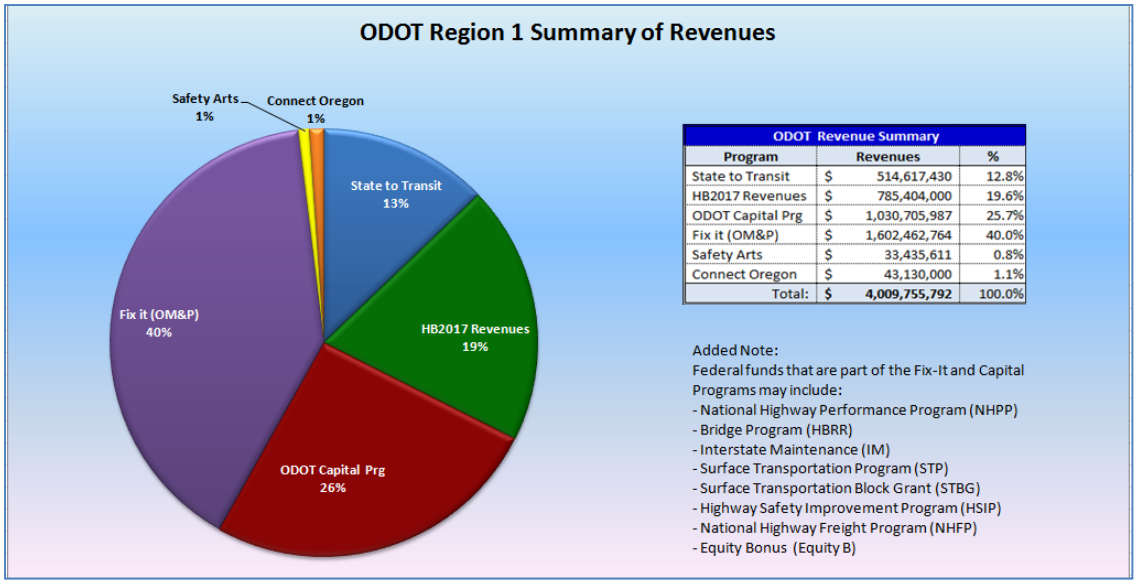
c. 81% of the 31% was estimated would remain in the MPO boundary area. This became the annual amount for the Metro MPO area.

d. The funds (if allocated in YOE amounts) were then discounted into 2016 $ dollars for each year out to 2040.

For the 2018-2040 STIP Fix- it Program estimate, ODOT identified a statewide total of $847,741,539 over the three-year (2022-2024) funding period. The $847 million estimate is comprised of a reduced program estimate of $658,241,539 by OTC direction plus an augmentation by HB2017 of $189,500,000. The three-year average totaled $282,580,513 which was used for the 2022-2024 timeframe. The $282 million was used as the baseline amount out to 2040 as shown in Table C on the next page. Based on the estimates provide in both STIPs, the Fix-It program revenues would total approximately $1,635,898,375 which will be a combination of both federal and state revenues from HB2017.

Combining both the ODOT Region 1estimated capital/modernization revenues with their O&M Fix-It revenues provides a total revenue picture of $4 billion dollars. Unfortunately, estimating specific fund code revenues down to the Region 1 level is not possible due to the centralized allocation methodology ODOT uses and the lack of specific funding table methodology developed by the ODOT LRFA. The best Metro could estimate are the combined federal and state revenues ODOT receives and extrapolate their revenue assumptions by funding program out to 2040. Metro anticipates development of revenue estimates for all identified fund type codes down to the MPO and Region 1 level will continue to be a discussion and directive from USDOT. However, without formal direction from USDOT, little change is expected for the next RTP update cycle (due in 2023).

Listed in the below table is a summary of ODOT federal and state revenues as best identified by Metro using estimates provided by ODOT's LRFA, with additional input from Region 1 staff and a fair-share allocation methodology applied to estimate funds in the MPO region. The total of the six identified funding programs is estimated will generate a total of $4 billion dollars for ODOT out to 2040.



ODOT Revenue Summary			
Program	Revenues		%
State to Transit	$	514,617,430	12.8%
HB2017 Revenues	$	785,404,000	19.6%
ODOT Capital Prg	$	1,030,705,987	25.7%
Fix it (OM&P)	$	1,602,462,764	40.0%
Safety Arts	$	33,435,611	0.8%
Connect Oregon	$	43,130,000	1.1%
Total:	$	**4,009,755,792**	100.0%

3.7 State Revenue Growth Assumptions

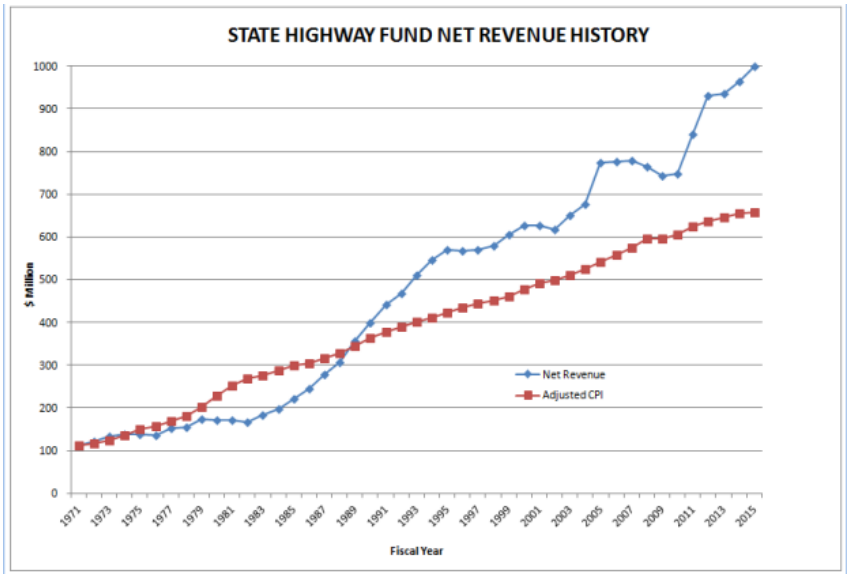
In determining state revenue estimates, the ODOT LRFA workgroup drew from several sources including the General Fund growth History, and the passage of HB2017's anticipated impact upon Oregon State transportation revenues. The remaining portion of Section 3.7 and Section 3.8 discuss the rational that helped establish the state revenue estimates used in this plan.

Over the 10-year forecast period, the General Fund revenue growth is expected to be stable with around 10.5% through the 2019-21 biennium according to the Oregon Economic and Revenue Forecast produced by the Office of Economic Analysis. Note: The below table (Table D) was completed before the passage of HB2017. The full impact of HB 2017 will not be known on the overall state revenue forecast until the development of the next State Biennium Forecast.

Table G
General Fund Revenue Forecast Summary (Millions of Dollars, Current Law) [11]

Revenue Source	Forecast 2015-17 Biennium	% Chg	Forecast 2017-19 Biennium	% Chg	Forecast 2019-21 Biennium	% Chg	Forecast 2021-23 Biennium	% Chg	Forecast 2023-25 Biennium	% Chg
Personal Income Taxes	15,749.7	12.1%	17,593.0	11.7%	17,593.0	11.7%	21,380.8	9.8%	23,473	9.8%
Corporate Income Taxes	1080.7	-1.5%	1,057.1	-2.2%	1,106.4	4.7%	1,198.8	8.4%	1,265.2	5.5%
All others	1,021	0.2%	1,054.1	3.2%	1,129.8	7.2%	1,1189.3	5.3%	1,242.2	4.4%
Gross General Fund	17,852.1	10.5%	19,704.3	10.4%	21,702.2	10.1%	23,768.9	9.5%	25.980.5	9.3%
Offsets and Transfers	*(96.3)*		*(98.0)*		*(41.9)*		*(45.9)*		*(47.2)*	
Net Revenue	17,755.8	10.4%	19,606.3	10.4%	21,660.3	10.5%	23,723.0	9.5%	25,933.3	9.3%

Table H



The State Highway Fund Revenue History supports the overall project revenue growth of 9.3% out to 2025 as shown above. Since the early 1970s, the Oregon State Highway Fund has grown dramatically from $100 million in 1971 to almost $800 million by 2009 in YOE amounts. From development of the Bienniums forecast, positive State Highway Fund historical revenue growth, and the passage of HB 2017 provide the basis of a moderately strong state revenue growth forecast developed by the LRFA for the identified state revenues in the constrained RTP revenue forecast.

3.8 Oregon HB2017

House Bill 2017, passed in 2017, is Oregon's new long-range transportation act. HB2017 will greatly assist the State Highway Fund Net Revenues continue in an upward direction. House Bill 2017 provides additional funding for projects named in the bill and for bridge, pavement,

culvert, seismic and safety projects. HB 2017-A implements a variety of initiatives for the transportation funding package of 2017. The bill includes the following:

- Makes various changes to the Oregon Transportation Commission (OTC). Directs the OTC to maintain a real property inventory of ODOT, to develop and maintain a comprehensive 20 year plan, creates the Continuous Improvement Advisory Committee, directs the OTC to develop a set of uniform standards for traffic infrastructure, and to develop a website to include project information.
- Establishes an internal auditor within ODOT.
- Makes permanent the Joint Committee on Transportation.
- Provides for new revenue from increased fees and taxes, and the creation of a payroll, privilege, and use tax. Distribution of new revenue is as follows:
  - For calendar years beginning on or after January 1, 2022, $30 million for the I5 Rose Quarter Project.
  - $10 million for Safe Routes to Schools
  - After these distributions, funds will be distributed as follows:
    - 50% to ODOT
    - 30% to Counties
    - 20% to Cities
- Of the funds made available to ODOT, they will be allocated as follows:
  - First, $10 million for safety, and the remainder split as listed below:
    - 40% for bridges
    - 30% for seismic improvements related to highways and bridges
    - 24% for state highway pavement preservation and culverts
    - 6% for state highway maintenance and safety improvements
  - Additionally, the bill authorizes ODOT to issue higher user bonds not to exceed $480 million. These bond proceeds will be distributed to the following regions, for a variety of projects:
    - Region 1: $249,700,000
    - Region 2: $201,950,000
    - Region 3: $75,000,000
    - Region 4: $76,493,000
    - Region 5: $43,647,000
- Increases the distribution of funds to small cities and counties through the Small Cities and Counties Program. And creates the small city advisory committee.

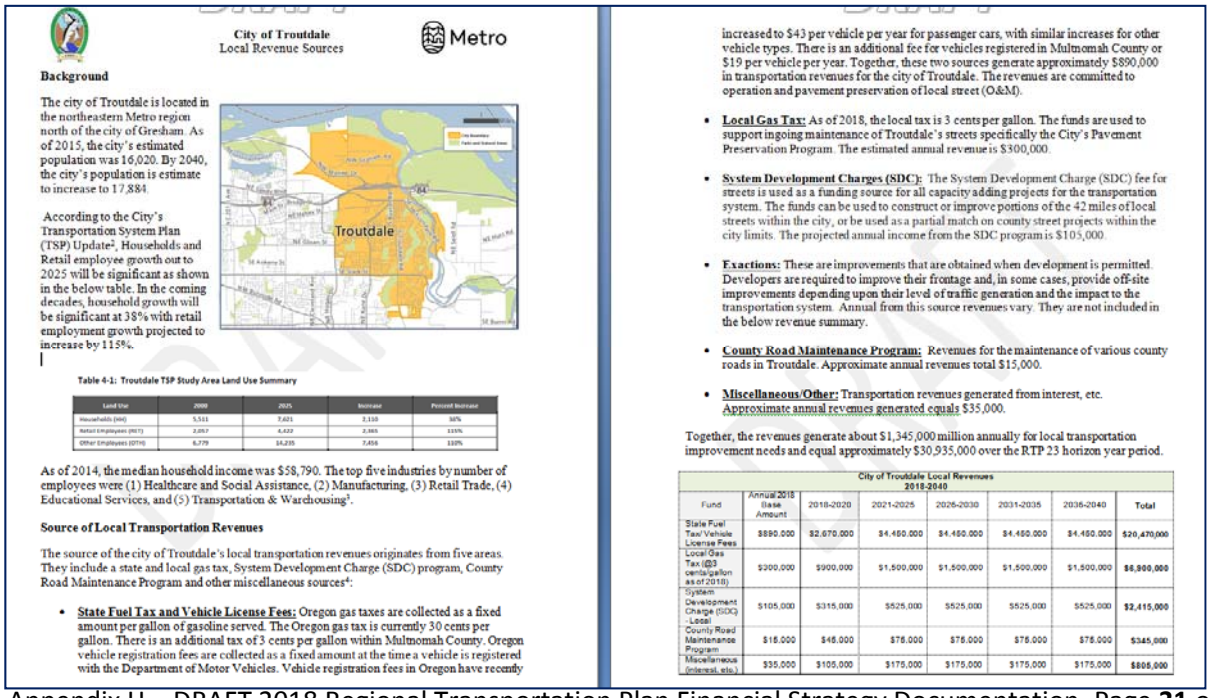
- The bill establishes requirements for the distribution of Connect Oregon funds.
- Transfers the jurisdiction of various highways to local governments.
- Additional gas and vehicle registration tax revenues allocated directly to the cities, counties, and ODOT. Added gas tax revenues for the counties and cities as identified in HB2017 are considered a pass-through revenue and are identified as local funds for the cities and counties on top of their existing gas tax/vehicle registration revenues that are identified in their local revenue templates
- Additional employer/employee payroll tax revenues generated as a result of HB2017 are considered local revenues and are identified in the local revenue section.

3.9 Local Revenue Assumptions

Transportation System Plans (TSPs)

Three counties (Clackamas, Multnomah, and Washington) plus 24 cities within them comprise the Metro MPO area. As of 2015, the MPO population is about 1.6 million and rapidly growing. Within this area are two major transit agencies (TriMet and SMART) serving the transit needs within the three counties. Local revenue template summaries were developed for each agency using the agency's Transportation System Plan (TSP) as the revenue as show in Figure 1. Each TSP includes a 20 year priority of needs, projects and an identification of revenues to

Figure 1. Example of Agency Local Revenue Template



City of Troutdale
Local Revenue Sources

Metro

Background

The city of Troutdale is located in the northeastern Metro region north of the city of Gresham. As of 2015, the city's estimated population was 16,020. By 2040, the city's population is estimate to increase to 17,884.

According to the City's Transportation System Plan (TSP) Update[2], Households and Retail employee growth out to 2025 will be significant as shown in the below table. In the coming decades, household growth will be significant at 38% with retail employment growth projected to increase by 115%.

Table 4-1: Troutdale TSP Study Area Land Use Summary

Land Use	2000	2025	Increase	Percent Increase
Households (HH)	5,511	7,621	2,110	38%
Retail Employees (RET)	2,057	4,422	2,365	115%
Other Employees (OTH)	6,779	14,235	7,456	110%

As of 2014, the median household income was $58,790. The top five industries by number of employees were (1) Healthcare and Social Assistance, (2) Manufacturing, (3) Retail Trade, (4) Educational Services, and (5) Transportation & Warehousing[3].

Source of Local Transportation Revenues

The source of the city of Troutdale's local transportation revenues originates from five areas. They include a state and local gas tax, System Development Charge (SDC) program, County Road Maintenance Program and other miscellaneous sources[4]:

- State Fuel Tax and Vehicle License Fees: Oregon gas taxes are collected as a fixed amount per gallon of gasoline served. The Oregon gas tax is currently 30 cents per gallon. There is an additional tax of 3 cents per gallon within Multnomah County. Oregon vehicle registration fees are collected as a fixed amount at the time a vehicle is registered with the Department of Motor Vehicles. Vehicle registration fees in Oregon have recently increased to $43 per vehicle per year for passenger cars, with similar increases for other vehicle types. There is an additional fee for vehicles registered in Multnomah County or $19 per vehicle per year. Together, these two sources generate approximately $890,000 in transportation revenues for the city of Troutdale. The revenues are committed to operation and pavement preservation of local street (O&M).
- Local Gas Tax: As of 2018, the local tax is 3 cents per gallon. The funds are used to support ingoing maintenance of Troutdale's streets specifically the City's Pavement Preservation Program. The estimated annual revenue is $300,000.
- System Development Charges (SDC): The System Development Charge (SDC) fee for streets is used as a funding source for all capacity adding projects for the transportation system. The funds can be used to construct or improve portions of the 42 miles of local streets within the city, or be used as a partial match on county street projects within the city limits. The projected annual income from the SDC program is $105,000.
- Exactions: These are improvements that are obtained when development is permitted. Developers are required to improve their frontage and, in some cases, provide off-site improvements depending upon their level of traffic generation and the impact to the transportation system. Annual from this source revenues vary. They are not included in the below revenue summary.
- County Road Maintenance Program: Revenues for the maintenance of various county roads in Troutdale. Approximate annual revenues total $15,000.
- Miscellaneous/Other: Transportation revenues generated from interest, etc. Approximate annual revenues generated equals $35,000.

Together, the revenues generate about $1,345,000 million annually for local transportation improvement needs and equal approximately $30,935,000 over the RTP 23 horizon year period.

City of Troutdale Local Revenues 2018-2040

Fund	Annual 2018 Base Amount	2018-2020	2021-2025	2026-2030	2031-2035	2036-2040	Total
State Fuel Tax/ Vehicle License Fees	$890,000	$2,670,000	$4,450,000	$4,450,000	$4,450,000	$4,450,000	$20,470,000
Local Gas Tax (@3 cents/gallon as of 2018)	$300,000	$900,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$6,900,000
System Development Charge (SDC) - Local	$105,000	$315,000	$525,000	$525,000	$525,000	$525,000	$2,415,000
County Road Maintenance Program	$15,000	$45,000	$75,000	$75,000	$75,000	$75,000	$345,000
Miscellaneous (interest, etc.)	$35,000	$105,000	$175,000	$175,000	$175,000	$175,000	$805,000

support the projects.

Theoretically, this effort would have quickly produced a sound local revenue foundation for each agency. From each TSP, basic draft revenue templates were developed summarizing the available local revenues generated or collected by the agency. This effort should have produced a reliable basic foundation of local revenues for each agency. However, virtually every agency discovered revenue logic, computational, or methodology discrepancies in their TSPs. As a result, Metro worked with each lead agency to review, update, and correct the revenues assumptions and estimates.

Each agency had to verify the revenue program estimated annual or total revenues the program projected would be generated. Nearly all of the local revenue programs did not include growth multipliers to address for inflation over future years. Therefore, Metro's review for most of the local revenue programs did not require discounting and have been included as constant real dollars in the constrained RTP forecast. The reason inflationary growth multipliers were not used in the TSPs were based on a lack of proper growth assumptions available for the revenue programs. Rather than overestimate the generation of local revenues from inflation, local agencies accepted the TSPs conservative revenue findings. *Note*: Some programs did include revenue growth from population growth and the impact on the project. However, again they did not include inflationary growth factors. As such, the revenues were considered already discounted.

Figure 2

Example of Revenue Determination

- City: Gresham
- Revenue Source: System Development Charges
- TSP description:
  SDCs are a one-time charge collected by the City when a development permit is issued. By law, SDCs are limited to use for improvements necessary to accommodate new development. The City's SDC list, and associated project costs, was updated concurrently with the TSP's project list. Those projects on the SDC list are indicated in Table 13. The SDC is development driven and forecasted to generate approximately $55 million over twenty years to pay for growth-related transportation improvements.
- Revenues and Period: $55 million over 20 years (TSP date December 2013)
- Annual Average of $2,750,000
- No multiplier or special growth factors noted
- The annual amount of $2,750,000 was used then as the 2018 base year amount and carried out to 2040 with no associated growth. Why? – By using this approach, we have effectively discounted the revenues and kept them in 2016 real dollars. The below table shows the revenue methodology for this specific fund.

Gresham Local Revenues Totals				
SDC Program				
Year	Amount	Annual Inflationary Growth	RTP Segment Years Total	RTP Divisions
2015				
2016		#VALUE!		
2017		#VALUE!		
2018	$ 2,750,000	#VALUE!	2018-20	2018
2019	$ 2,750,000	0.00%		to
2020	$ 2,750,000	0.00%	$ 8,250,000	2027
2021	$ 2,750,000	0.00%	2021-25	
2022	$ 2,750,000	0.00%		
2023	$ 2,750,000	0.00%		
2024	$ 2,750,000	0.00%		
2025	$ 2,750,000	0.00%	$ 13,750,000	
2026	$ 2,750,000	0.00%	2026-30	
2027	$ 2,750,000	0.00%		$ 27,500,000
2028	$ 2,750,000	0.00%		2028
2029	$ 2,750,000	0.00%		to
2030	$ 2,750,000	0.00%	$ 13,750,000	2040
2031	$ 2,750,000	0.00%	2031-35	
2032	$ 2,750,000	0.00%		
2033	$ 2,750,000	0.00%		
2034	$ 2,750,000	0.00%		
2035	$ 2,750,000	0.00%	$ 13,750,000	
2036	$ 2,750,000	0.00%	2036-40	
2037	$ 2,750,000	0.00%		
2038	$ 2,750,000	0.00%		
2039	$ 2,750,000	0.00%		
2040	$ 2,750,000	0.00%	$ 13,750,000	$ 35,750,000
Total:	$ 63,250,000		$ 63,250,000	$ 63,250,000

Once the annual amount and length of applicable generation period, or the total amount and logic behind the total, was determined, the annual amounts were determined for each RTP year (2018-2040) along with RTP division year required totals.

Figure 3. Example of County Level – Local Revenues with Split between O&M and Capital

Clackamas County Estimated Capital Revenues								Metro
Agency	2018-2027	2028-2040	Total	O&M %	Capital %	2018-2027 Capital Revenues	2028-2040 Capital Revenues	Total Capital Local Revenues
Clackamas County	$ 383,247,950	$ 498,222,235	$ 881,470,185	88.5%	11.5%	$ 44,073,514	$ 57,295,557	$ 101,369,071
Gladstone	$ 6,574,300	$ 8,546,590	$ 15,120,890	98.4%	1.6%	$ 105,189	$ 136,745	$ 241,934
Happy Valley	$ 74,675,190	$ 97,077,747	$ 171,752,937	14.8%	85.2%	$ 63,623,262	$ 82,710,240	$ 146,333,502
Lake Oswego	$ 58,970,000	$ 76,661,000	$ 135,631,000	56.2%	43.8%	$ 25,828,860	$ 33,577,518	$ 59,406,378
Milwaukie	$ 79,020,660	$ 101,088,858	$ 180,109,518	59.8%	40.2%	$ 31,766,305	$ 40,637,721	$ 72,404,026
Oregon City	$ 58,950,000	$ 76,635,000	$ 135,585,000	36.8%	63.2%	$ 37,256,400	$ 48,433,320	$ 85,689,720
West Linn	$ 40,813,578	$ 82,966,252	$ 123,779,830	60.0%	40.0%	$ 16,325,431	$ 33,186,501	$ 49,511,932
Wilsonville	$ 64,500,000	$ 83,850,000	$ 148,350,000	44.2%	55.8%	$ 35,991,000	$ 46,788,300	$ 82,779,300
Totals:	$ 766,751,678	$ 1,025,047,682	$ 1,791,799,360	66.6%	33.4%	$ 254,969,961	$ 342,765,903	$ 597,735,864

O&M versus capital improvement needs summations totals for each city and county were estimated by each jurisdiction to determine the total capital revenues that would be available in each county. Once this amount was known, each county worked with their member agencies to determine the latitude and flexibility they may have in pooling their resources to support later project submissions into the RTP. The effort also helped define the first constrained revenue ceiling for the RTP based only on local funds for each county. Example: On the previous page in Figure 3, the estimated local revenues are shown for Clackamas County along with the O&M versus Capital revenue split. The totals not only reveal different O&M requirements, but overall about one-third of the total local revenues are available for capital improvements on the regional network. While there exists a total of $1.79 billion in possible local revenues, two-thirds are already committed for local O&M needs within the county.

While each agency's revenue sources differed, there was a commonality among them as well. Over the years, local agencies within the Metro MPO boundary have passed various revenue assessments and special taxes to help them meet their transportation O&M and capital needs. A summary of the programs include the following:

- Bike/pedestrian specific programs to support commuter trail/ active transportation projects
- Street Improvement/Maintenance Programs – Locally developed and implemented
- Street Improvement/Maintenance Programs – County developed, participation with the County
- Franchise Fee programs
- Gain Share programs
- Local Gas Tax programs
- General Special Allocations (from the agency's General Funds)
- Major Street Transportation Improvement Program (MSTIP) (Washington County)

- Miscellaneous programs (interest generating programs supporting transportation, etc.)
- Parking Fee programs
- Private Developer Credit Contributions
- Property Tax transportation improvement allocations
- Road Utility Fee programs
- Special Funding District Assessments
- System Development Charges (SDC) – Locally developed and managed
- System Development Charges (SDC) County develop with local participation
- Transportation Development Tax (TDT) programs
- General Obligation/Capital Bond programs
- Transportation and Storm Drainage Utility programs
- School Partnership programs
- Street Light Fee programs
- Urban Road and Maintenance programs

4.0 REVENUE SOURCE SUMMARY

4.0 Revenue Source Summary ..... **Error! Bookmark not defined.**

4.1 Revenue Source Scenarios and Overview ..... **Error! Bookmark not defined.**

4.2 Federal Revenue Forecasts (by fund type or funding program) ..... **Error! Bookmark not defined.**

4.3 State and Federal Combined Revenue Forecasts ..... **Error! Bookmark not defined.**

4.4 Summary of State and Federal Combined Constrained Revenues ..... **Error! Bookmark not defined.**

4.5 Local Revenues ..... **Error! Bookmark not defined.**

4.6 Constrained Revenue Sources Split Across RTP Division Years ..... **Error! Bookmark not defined.**

4.1 Revenue Source Scenarios and Overview

The tables on the following pages describe the specific revenue assumptions used to develop the financially constrained 2018-2040 RTP. Developing the final constrained revenue scenario began by considering four possible future funding possibilities for the federal revenues. Based on the future economic conditions the LRFA work group reviewed and evaluated (also discussed in Section 2), the LRFA considered the most likely funding scenarios the region could expect and if they matched up with the four funding scenarios. As part of the evaluation, the LRFA also established an annual inflationary growth of 3.1% as the target inflation rate. Any revenue scenario would be judged against the annual inflationary rate. Based on the economic indicators four funding scenarios were established for consideration. They included:

- **Existing Resources – No Action (ER-NA)** This funding scenario is based on the 10-year average the region has received without any annual growth included. It represents the minimum amount of funding the region might receive. In some cases where the historical annual funding has been sporadic or not consistently available, the worst case scenario of a $0 funding balance was applied. The ER-NA scenario represents a poor economic outlook, unresolved highway trust fund issues, poor revenues being available, and would not keep up with annual inflation rates. The evaluation of the economic indicators did not match up or support the logic of this scenario. Therefore, it was eliminated as a reasonable revenue scenario.

- **Financially Constrained** This scenario generally represents a more positive economic growth scenario. It has been divided into a range among a Conservative Scenario, Moderate Scenario, and Optimistic Scenario as follows:

    - **Conservative Scenario:** This funding scenario can be described as a slow or weak growth revenue scenario. It utilizes the projected FY 2018 annual allocation (or historical average if FY 2018 was not available) and applied a small positive annual growth amount in the range of about 1% to 1.5% to the federal revenues. While it would reflect an annual positive change, it did not match up consistently with past historical allocations. It also reflects a revenue scenario that is well short of the ability

to sufficiently keep up with annual inflation. This revenue scenario was deemed excessively conservative and dismissed as a possible funding scenario.

- **Optimistic Scenario:** This revenue scenario can be best described as a never-ending hot economy". The optimistic revenue scenario provides going revenue growth that would outpace inflation. Federal fund annual growth would have to exceed 3.1%. While the economic indicators suggest a short-term hot economy might emerge from time to time, the fear of uncontrolled expansion and hyper-inflation would quickly result federal monetary constraint policies the negate the hot economy. Also, the idea of a sustained hot economy over a 23-year period seemed unrealistic as well. As a result, the optimistic revenue scenario was eliminated from consideration.

- **Moderate Scenario:** The moderate scenario increases the annual growth for the federal revenues. The review and evaluation of the economic indicators favored a moderate scenario above the conservative scenario, but below the Optimistic scenario. From the review of the economic indicators and the newly passed FAST Act, the LRFA established a 2.2% annual growth rate for the federal funds. This effectively splits the difference between the conservative and optimistic revenues. At 2.2%, the LRFA agreed the growth was still reasonable and met the "reasonable availability" definition of constrained revenues for the RTP. Revenue funding tables were then developed for the various identified federal revenues.

  The estimated revenues were calculated in Year of Expenditure (YOE) and in many cases discounted 2016 dollars. Upon review of the estimated revenues, Metro concurred with the LRFA's assumption and determined these revenue recommendations would be used for Metro's new RTP. **These recommendations are the federal revenue projections Metro has used in developing the constrained RTP Revenue Forecast and are shown in Section 4.2.** Below is a sample table (federal FTA 5310 revenue estimates) from the LRFA Funding Assumptions Revenue Tables.

  While the revenue forecasts are much stronger than the Conservative Scenario, the Moderate Revenue Scenario at 2.2% annual growth still fails to keep up with annual inflation which was established at 3.1% resulting in a diminishing purchasing power of the federal funds and a need for the region to look at other funding options.

  In developing the revenue forecasts, the LRFA evaluated the major economic indicators and funding trends that are discussed in the beginning of this Financial Plan. Metro's review supported the LRFA's findings. We found no discrepancies with their analyses or financial conclusions. Therefore, Metro chose to follow the LRFA recommendations as closely as possible to develop Metro's final financially constrained revenue forecast for the new RTP.

  Because of the way ODOT manages, allocates, and prioritizes their funding requirements from a centralized state-wide approach, it ODOT Region 1 could not break-out their federal funding revenue estimates based on the LRFA statewide projections. However, Metro attempted to determine the federal revenues based on

funding program for ODOT. This is detailed further in the State portion in Section 4.3. Overall, the combined federal and state revenues for both highway capacity, highway O&M, and transit needs are estimated to be approximately $9.2 billion.

PROJECTIONS OF FTA SENIORS AND PEOPLE WITH DISABILITIES FUNDS
($ Millions)

Year	Oregon Total YOE $s	Oregon Total 2016 $s	Portland Area YOE $s	Portland Area 2016 $s	Salem YOE $s	Salem 2016 $s	Lane YOE $s	Lane 2016 $s
2016	3.3	3.3	1.5	1.5	0.2	0.2	0.2	0.2
2017	3.4	3.3	1.5	1.5	0.2	0.2	0.2	0.2
2018	3.5	3.3	1.6	1.5	0.2	0.2	0.2	0.2
2019	3.6	3.3	1.6	1.5	0.2	0.2	0.2	0.2
2020	3.7	3.2	1.6	1.4	0.2	0.2	0.3	0.2
2021	3.7	3.2	1.7	1.4	0.2	0.2	0.3	0.2
2022	3.8	3.2	1.7	1.4	0.3	0.2	0.3	0.2
2023	3.9	3.1	1.7	1.4	0.3	0.2	0.3	0.2
2024	4.0	3.1	1.8	1.4	0.3	0.2	0.3	0.2
2025	4.1	3.1	1.8	1.4	0.3	0.2	0.3	0.2
2026	4.2	3.1	1.9	1.4	0.3	0.2	0.3	0.2
2027	4.3	3.0	1.9	1.4	0.3	0.2	0.3	0.2
2028	4.3	3.0	1.9	1.4	0.3	0.2	0.3	0.2
2029	4.4	3.0	2.0	1.3	0.3	0.2	0.3	0.2
2030	4.5	3.0	2.0	1.3	0.3	0.2	0.3	0.2
2031	4.6	2.9	2.1	1.3	0.3	0.2	0.3	0.2
2032	4.7	2.9	2.1	1.3	0.3	0.2	0.3	0.2
2033	4.8	2.9	2.2	1.3	0.3	0.2	0.3	0.2
2034	5.0	2.9	2.2	1.3	0.3	0.2	0.3	0.2
2035	5.1	2.8	2.3	1.3	0.3	0.2	0.3	0.2
2036	5.2	2.8	2.3	1.3	0.3	0.2	0.4	0.2
2037	5.3	2.8	2.4	1.2	0.3	0.2	0.4	0.2
2038	5.4	2.8	2.4	1.2	0.4	0.2	0.4	0.2
2039	5.5	2.7	2.5	1.2	0.4	0.2	0.4	0.2
2040	5.6	2.7	2.5	1.2	0.4	0.2	0.4	0.2
2041	5.8	2.7	2.6	1.2	0.4	0.2	0.4	0.2
2042	5.9	2.7	2.6	1.2	0.4	0.2	0.4	0.2
2043	6.0	2.6	2.7	1.2	0.4	0.2	0.4	0.2
2044	6.2	2.6	2.8	1.2	0.4	0.2	0.4	0.2
2045	6.3	2.6	2.8	1.2	0.4	0.2	0.4	0.2
2046	6.4	2.6	2.9	1.2	0.4	0.2	0.4	0.2
2047	6.6	2.6	2.9	1.1	0.4	0.2	0.5	0.2
2018-2047		**87.1**		**39.1**		**5.7**		**6.0**

- **Strategic Unconstrained Scenario:** This scenario is not financially constrained and exists outside of the constrained revenue forecast. It was not considered as a viable option for the constrained revenue forecast. It does not represent the concept of "reasonably available funding." However, it serves an important purpose to help define the unfunded needed segment beyond the constrained revenues that the region requires to adequately meet the RTP's capital and operations and maintenance (O&M) goals and strategies.

  The Strategic Unconstrained Scenario represents an exercise to identify additional funding to meet the RTP system improvement needs above the constrained revenues. Whether this amount is 120%, 150%, 175%, or more beyond the constrained available revenues is not yet known. This will be up to the Joint Policy Advisory Committee on Transportation, the advisory body for Metro's MPO functions, to determine. By establishing the strategic unconstrained revenue scenario, regional leaders will be able to consider if and where

additional local or state transportation revenue sources could be developed to support the strategic scenario.

4.2 Federal Revenue Forecasts (by fund type or funding program)

Federal Revenue Forecast (Highway/Active/ITS – Non Transit Allocations)			
Fund and Administrator	**Description**	**2018-2040 Amount**	**Notes**
Congestion Mitigation Air Quality (CMAQ) Improvement Funds – Metro allocation (FHWA)	Description: The FAST Act continued the CMAQ program to provide a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Funding is available to reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) and for former nonattainment areas that are now in compliance (maintenance areas).	**$258,496,858**	ODOT Long Range Funding Assumptions (LRFA) workgroup recommendation at 2.2% annual growth from 2016-2018. Revised state wide formula amount in 2019 and then converted to 2018 constant dollars out to 2040
Federal Miscellaneous (Discretionary grants e.g. Tiger, FAST Lane, INFRA, ITS, etc.) (FHWA/FTA)	Description: Based on discussions and a historical review with ODOT and the local agencies, this funding represents various discretionary federal transportation grants generally for capital purposes the local agencies should receive over the RTP horizon period	**$100,000,000**	Primarily involves grants for roadway improvements at $100 million over life of RTP. State in constant dollars – no discounting
Bridge Program - Local (HBRR-L)	Description: Provides funding for replacement, rehabilitation and systematic preventive maintenance of the Nation's highway bridges.	**$130,725,698**	Anticipated to be split among the three counties with approximately 80% to Multnomah County based on past history. Discounted into constant 2016 $s
Highway Safety Improvement Program (HSIP) (ODOT from FHWA)	Description: The program was established under SAFETEA-LU consolidating several safety-based highway programs and creating new safety programs designed to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.	**$33,435,611**	Per the LRFA assumption: 50% of appropriated HSIP will be allocated to the local agencies/ Discounted into constant 2016 $s
Rail-Highways Crossings	Description: The FAST Act continues the Railway-	**$14,580,943**	Intended for grade separation needs or

Federal Revenue Forecast (Highway/Active/ITS – Non Transit Allocations)			
Fund and Administrator	**Description**	**2018-2040 Amount**	**Notes**
	Highway Crossings program, which provides funds for safety improvements to reduce the number of fatalities, injuries, and crashes at public railway-highway grade crossings.		other eligible improvements. Discounted into constant 2016 $s.
Modernization/ Enhance – Local (ODOT from FHWA)	Description: Combination of appropriated federal funds to OODT which are then allocated through discretionary means in the Enhance program to the local agencies for capital needs	**$50,279,114**	Intended for capital needs. Discounted into constant 2016 $s.
Metropolitan Planning (PL) FHWA)	Description: The FAST Act continues the Metropolitan Planning program. The Program establishes a cooperative, continuous, and comprehensive framework for making transportation investment decisions in metropolitan areas. Program oversight is a joint Federal Highway Administration/Federal Transit Administration responsibility.	**$37,793,352**	FY 2017 & 18 average allocation used for 2017 & 018 and then discounted into constant 2018 $s out to 2040.
Statewide and Non Metropolitan Panning (SPR) (FHWA/FTA)	Description: The FAST Act continues the statewide and nonmetropolitan planning process, which establishes a cooperative, continuous, and comprehensive framework for making transportation investment decisions throughout the State. Oversight of this process is a joint responsibility of the Federal Highway Administration and the Federal Transit Administration.	**$50,161,089**	Based on historical averages and then discounted into constant 2016 $s
Surface Transportation Program (STBG) Funds – Metro allocation (FHWA)	Description: The Surface Transportation Block Grant (STBG) Program provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.	**$559,305,291**	ODOT LRFA funding recommendation in 2018 YOE and then discounted back into in 2018 constant $s out to 2040
Clackamas County Surface	Description: Rural STBG allocated and	**$21,127,499**	ODOT LRFA funding recommendation for

Federal Revenue Forecast (Highway/Active/ITS – Non Transit Allocations)			
Fund and Administrator	**Description**	**2018-2040 Amount**	**Notes**
Transportation Block Grant (STBG) Allocation (FHWA)	administered by ODOT to Clackamas County.		2018 in YOE and then maintained in constant 2018 $s out to 2040
Multnomah County Surface Transportation Block Grant (STBG) Allocation	Description: Rural STBG allocated and administered by ODOT to Multnomah County.	**$5,131,973**	ODOT LRFA funding recommendation for 2018 in YOE and then maintained in constant 2018 $s out to 2040
Washington County Surface Transportation Block Grant (STBG) Allocation (FHWA)	Description: Rural STBG allocated and administered by ODOT to Washington County.	**$10,892,047**	ODOT LRFA funding recommendation for 2018 in YOE and then maintained in constant 2018 $s out to 2040
Transportation Alternatives (TA-Metro) (FHWA)	Description: The FAST Act eliminates the MAP-21 Transportation Alternatives Program (TAP) and replaces it with a set-aside of Surface Transportation Block Grant (STBG) program funding for transportation alternatives (TA). These set-aside funds include all projects and activities that were previously eligible under TAP, encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to storm water and habitat connectivity	**$30,132,315**	ODOT LRFA funding recommendation for 2018 in YOE and then discounted in constant 2018 $s out to 2040
Federal Highways Totals (Non ODOT Application):		**$1,290,864,879**	

Federal Revenue Forecast (Transit Grant Allocations)			
Fund and Administrator	**Description**	**2018-2040 Amount**	**Notes**
Section 5303 Metropolitan & Statewide Planning and Non-Metropolitan Transportation Planning – 5303 - Formula (FTA)	Description: Provides funding and procedural requirements for multimodal transportation planning in metropolitan areas and states. Planning needs to be cooperative, continuous, and comprehensive, resulting in long-range plans and short-range programs reflecting transportation investment priorities.	**$11,932,005**	Allocated to ODOT and then to Metro for transit UPWP planning purposes
The below FTA Section funds are transit formula funds that are allocated to TriMet and SMART			
Section 5307 Urbanized Area Formula 5307 Grants (FTA)	Provides funding to public transit systems in Urbanized Areas (UZA) for public transportation capital, planning, job access and reverse commute projects, as well as operating expenses in certain circumstances.	**$1,064,712,000**	Formula allocation to the UZA and split among TriMet, CTRAN, and SMART. CTRAN already removed. (Overall formula split among the three used was TriMet = 87%, CTRAN = 12%, and SMART = 1%.) Funds combined with other formula funds include 5307, 5310, 5337, and 5339. Funds are discounted into 2016 $s. Note: FTA formula funds are sent to the UZA combined together.
Section 5337 State of Good Rep[air Grants - 5337	Description: The State of Good Repair Grants Program (49 U.S.C. 5337) provides capital assistance for maintenance, replacement, and rehabilitation projects of high-intensity fixed guideway and bus systems to help transit agencies maintain assets in a state of good repair. Additionally, SGR grants are eligible for developing and implementing Transit Asset Management plans.		
Section 5339 Grants for Buses and Bus Facilities Formula Program - 5339(a).	Description Provides funding to states and transit agencies through a statutory formula to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities. In addition to the formula allocation, this program includes two discretionary components: The Bus and Bus Facilities Discretionary Program and the Low or No Emissions Bus Discretionary Program.		
Section 5310 Enhanced Mobility of Seniors &	Description: This program (49 U.S.C. 5310) provides formula funding to states for the purpose of assisting private		Split between TriMet and SMART via agreed formula Approximate split of

Federal Revenue Forecast (Transit Grant Allocations)			
Fund and Administrator	**Description**	**2018-2040 Amount**	**Notes**
Individuals with Disabilities - Section 5310	nonprofit groups in meeting the transportation needs of older adults and people with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs		5310 share for TriMet = 79.48%
State (ODOT) Allocated **STBG Flex to 5310**	Description: These funds reflect additional State STBG funds that will be flex-transferred to FTA in support of 5310 program area needs.	**$84,100,000**	Allocation = 100% to TriMet discounted into 2016 $
FTA 5309 New Starts/Small Starts grants	Description: HCT (MAX Line) future expansion will occur with an assumption that 40% of the required funding will be sourced from FTA Section 5309 New Starts and Small Starts grants un support of the HCT expansion.	**$2,850,000,000**	Multiple federal grants for the expansion of HCT MAX lines
	Federal Transit Totals:	**$4,010,744,005**	

4.3 State and Federal Combined Revenue Forecasts

State to Transit Revenue Forecast			
Fund and Administrator	**Description**	**2018-2040 Amount**	**Notes**
Lottery Funds to Transit Capital Oregon Legislature	For RTP planning purposes to demonstrate the expected state contribution to the HCT. Metro, TriMet, and the ODOT LRFA have identified State Lottery funds as one potential funding source to represent the state contribution	**$353,920,000**	The funds represent the expected State support for the new planned Max light rail lines discounted into 2016 $s
Special Transportation Fund (STF)	The STF Program provides a flexible, coordinated, reliable and continuing source of revenue in support of transportation services for people who are senior and people with disabilities of any age	**$160,697,430**	ODOT LRFA estimates in 2016 $s which include a projected 1% annual real growth rate
	Totals:	**$514,617,430**	

State Revenue Forecast (HB2017 - Highway/Active/ITS – Non Transit Allocations)			
Fund/Program and Administrator	**Description**	**2018-2040 Amount**	**Notes**
HB2017 Section 71a,b, & c Rose Quarter	Description: Provides $30 million per year after 2021 to pay debt service for bonds to finance the I-5 Rose Quarter Project	**$375,000,000**	Off the top in support of the Rose Quarter improvement project
HB2017 Section 71a, b, & c Safe Routes to Schools Program	Description: Provides $10 million per year (2018-2021) and then $15 million per year after 2022 for the Safe Routes to School Program	**$31,387,500**	81% of 31% formula split for Metro MPO region out of the total $125 million to be allocated statewide
HB2017 Section 71d Highway , Road and Street Projects	Description: Requires OTC to use the bond proceeds to finance named transportation projects within each ODOT Region that include: • Columbia Blvd Pedestrian Safety Improvements • Powell Blvd Improvements • I-205 ATMS • I-205 Corridor Bottleneck • OR 217 NB Aux Lane • OR217 SB Aux Lane • Improvements to Graham Rd at I-84 in the city of Troutdale	**$248,200,000**	Region 1 total allocation (including out of MPO areas) of $249,700,000. In MPO area totals $248,200,000
HB2017 **Bridges** Section s 71a, b, & c Designates a portion of HB2017 funding for Highway Safety	Description: Allocates $10 million per year (2018-2021) and then $15 million after 2020 (2022-2027) for a 130 million total. Bridge portion in Metro MPO area includes: • US30 Sandy River (Troutdale Bridge – BR#02019) • OR99W Tualatin River NB bridge • I-5 Over Hassalo St and Holiday St	**$11,952,000**	Safety Purposes: Up to 40% for bridges Identified funding is for Region 1 MPO area for B
HB2017 **Maintenance,** Section s 71a, b, & c Designates a portion of HB2017 funding for Highway Safety	Description: Allocates $10 million per year (2018-2021) and then $15 million after 2020 (2022-2027) for a 130 million total. Maintenance, pavement rehab, and culverts replacement portion in Metro MPO area includes approximately 16 identified projects	**$23,987,000**	Safety Purposes: Up to 24% for maintenance and replacement of payments and culverts

State Revenue Forecast (HB2017 - Highway/Active/ITS – Non Transit Allocations)			
Fund/Program and Administrator	**Description**	**2018-2040 Amount**	**Notes**
HB2017 **Safety,** Section s 71a, b, & c Designates a portion of HB2017 funding for Highway Safety	Description: Allocates $10 million per year (2018-2021) and then $15 million after 2020 (2022-2027) for a 130 million total. Safety/Maintenance/Preservation improvements: 2 projects identified: • I-84 East Portland Fwy – NE 181st Ave • I-84 Fariview – Marine Dr & Tooth Rock Tunnel	**$4,600,000**	Safety Purposes: Up to 6% for maintenance, preservation and safety improvements
	Totals:	**$701,626,500**	

State and Federal Combined Revenue Forecast (ODOT Capital Programs)			
Fund or Program and Administrator	**Description**	**2018-2040 Amount**	**Notes**
Minimum Modernization (Mod) Program (capital) (ODOT)	Description: ODOT's Modernization program, which is used to pay for highway improvements that add capacity, such as widening a highway, building a bypass, or improving an interchange	**$264,970,933**	Comprised of both federal and state funding elements in discounted 2016 $
Remaining JTA Funding (capital) (Oregon Legislature)	Description: In 2009, the Legislative Assembly enacted the Oregon Jobs and Transportation Act of 2009 (JTA). JTA authorizes a number of transportation programs. The funding is winding down and will expire during the first ten-7ear period of the 2018 RTP	**$10,000,000**	Expected to be expended by the end of the first RTP 10-year period
National Highway Freight Program (FHWA)	Description: The FAST Act establishes a new National Highway Freight Program to improve the efficient movement of freight on the National Highway Freight Network (NHFN) and support several freight related infrastructure improvement goals	**$67,374,013**	Based on LRFA tables for modernization needs initially estimated in YOE and then discounted back into 2016 $s
Federal Discretionary (capital)	Various federal discretionary transportation grants (Fast Lane, INFRA, Tiger, ITS, etc.) ODOT anticipates they will receive over the	**$150,000,000**	Revenues based on past history of about $6.5 million average per year with no growth. ODOT

State and Federal Combined Revenue Forecast (ODOT Capital Programs)			
Fund or Program and Administrator	**Description**	**2018-2040 Amount**	**Notes**
(FHWA)	RTP horizon year		estimates that over the 23 RTP horizon year, they would secure a total of $150 million in various forms of discretionary transportation funds (e.g. FAST Lane, INFRA, TIGER, ITS, etc.
Mod Legislature Future Undefined for Capital purposes (Oregon Legislature OTC)	Remaining revenues for capital improvements over the life of the RTP	**$501,028,554**	Remaining estimated funding over the RTP horizon years when the Oregon Legislature passes a follow-on transportation program (2028-20240 timeframe)
Total State and Federal Revenue Estimates in Support of ODOT Region 1 Mod/Enhance Programs:		**$993,373,500**	

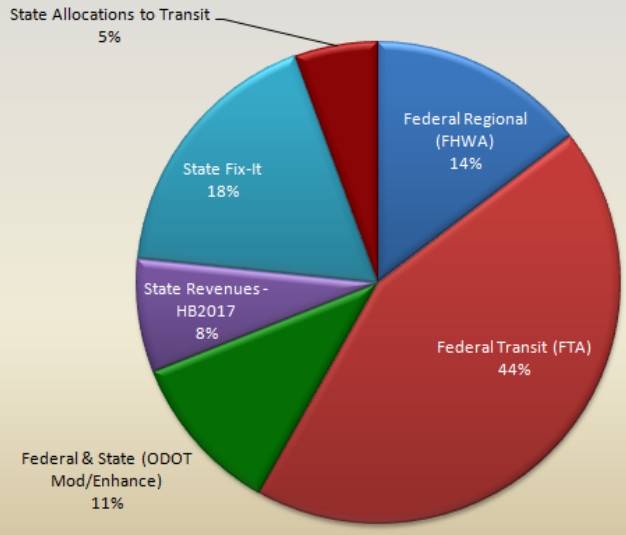
State and Federal Combined Revenue Forecast (ODOT Non-Capacity Fix-it/O&M Program)			
Funding Program and Administrator	**Description**	**Amount**	**Notes**
Fix-It Program Oregon Legislature OTC	Description: The Fix-It program includes funding categories that maintain or fix ODOT's portion of the transportation system. This is the non-capacity enhancing operations and maintenance (O&M) component to ODOT's overall system preservation. There are generally four major categories of Fix-it programs which include Bridges (repair/rehabilitate), Culverts (repair/replace), Highway Pavement Maintenance, and Safety and operations	**$1,635,898,375**	Estimates from the current 2018-2021 and 2021-2024 draft STIP with a straight-line projection out to 2040, then discounted back into 2018 $
Total federal and State combined revenues for ODOT:		**$1,635,898,375**	

Fix-It Non-Capacity Project Grouping Buckets Proposed for the RTP			
Project Grouping	**Description**	**Project Grouping Bucket Programming**	**Notes**
Bridge Rehabilitate & Repair	Minor repair/rehabilitate projects. Out of the total identified Fix-it revenues approximately 20% will be committed to the Bridge Program	$327,179,675	Project grouping total cost threshold = $5 million
Culverts Repair and Replace	Repair and replacement eligible projects that do not change the roadway existing capacity. Out of the total identified Fix-it revenues approximately 10% will be committed to the Bridge Program	$163,589,838	Project grouping total cost ceiling threshold = $5 million
Highway Pavement Maintenance	Non-capacity pavement rehabilitation/repair projects that could include overlays, slurry seals, full pavement replacement, and other minor non-capacity roadway improvements (curb and gutters, adding/widening shoulders as long as the project remains exempt and will clear NEPA as a CE. Out of the total identified Fix-it revenues approximately 30% will be committed to the Bridge Program	$490,769,513	Project grouping total cost ceiling threshold = $5 million
Safety and Operations Improvements	All included grouping projects must be non- capacity type project improvements, must be exempt for air quality analysis, must clear NEPA with a CE and can't exceed the total project cost threshold of $5 million. Projects that exceed the threshold must be individually identified in the RTP as stand- alone projects. Eligible safety and operational improvements for this project grouping may include the following: • Highway crossings improvements • Roadway safety (non capacity repairs/rehabilitation • Landslides/rock falls mitigation • Illumination/Signals, ITS Out of the total identified Fix-it revenues approximately 40% will be committed to the Bridge Program	$654,359,350	Project grouping total cost threshold = $5 million
	Total:	**$1,635,898,375**	

Notes:
1. All projects eligible to be included in a project grouping must clearly demonstrate that they are not capacity enhancing projects.
2. Only projects that will clear NEPA with a CE are eligible to be included in the project grouping bucket.
3. All projects in the project grouping bucket must be exempt for air quality analysis and clearly show they meet this requirement per 40 CFR 93.126, Table 2 and 40 CFR 93.127, Table 3.
4. Specific project listings are not required to be submitted for the identified project groupings in the RTP. They are required when used in the MTIP.

5. The funding amount stated in the project groupings do not represent additional revenues, but an estimated commitment from the total Fix-It program for the four identified project grouping buckets.
6. The threshold amounts reflect a total project cost ceiling for the applicable bucket. If the project has a total project cost above the ceiling threshold it will need to be added to the RTP as a stand-alone project and may not be included in the project grouping bucket
7. While not capacity enhancing, the Fix-it program projects are considered to be regionally significant as they are:
    - Located on the Metro Roadway Arterials and Throughway system network
    - Will most likely receive federal funds and become federalized
    - Are expected to complete NEPA with a CE
    - Reflect a federal, state, and/or local funding investment ensuring the operations and maintenance needs for the Arterials and Throughways network are being addressed.

Table 4.2
Federal and State Revenues



Federal and State Revenues Summary	Amount		%
Federal Regional (FHWA)	$	1,341,025,968	14.6%
Federal Transit (FTA)	$	4,010,744,005	43.6%
Federal & State (ODOT Mod/Enhance)	$	993,373,500	10.8%
State Revenues - HB2017	$	701,626,500	7.6%
State Fix-It	$	1,635,898,375	17.8%
State Alocations to Transit	$	514,617,430	5.6%
Total:	$	9,197,285,778	100.0%

4.4 Summary of State and Federal Combined Constrained Revenues

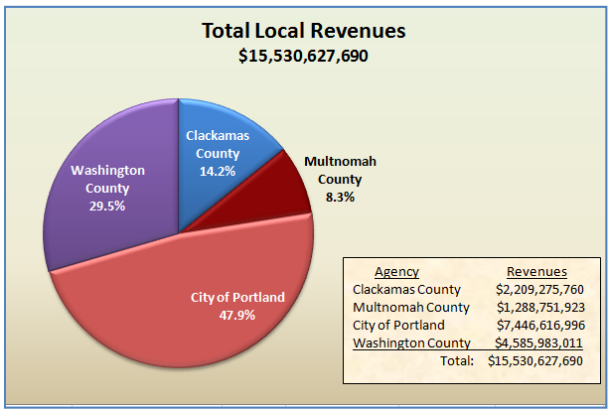
Table 4.2 above represents a total funding of federal and state constrained revenues divided by their allocation or program source. The total estimated constrained federal and state revenues for both highway and transit needs is $9,197,285,778.

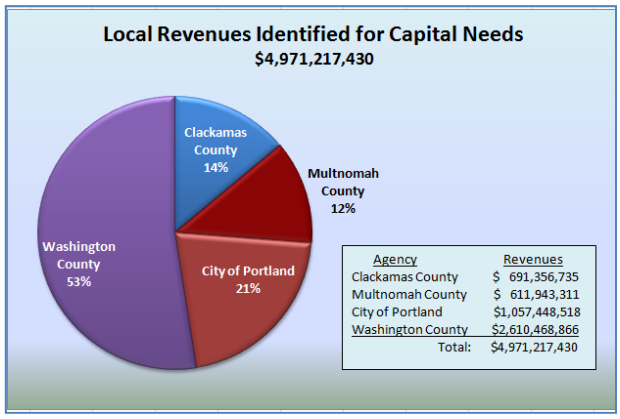
4.5 Local Revenues

As noted in Section 3.10, local agencies utilize multiple assessments, taxes, and other means to generate transportation revenues for their jurisdiction. Only a portion of the total generate local revenues can be applied for capital project needs. Some jurisdiction's operations and maintenance (O&M) annual requirements can consume as high as 100% of their available local funds. Comparing other jurisdictions, their annual O&M requirements range, and can consume between 50%-90% of the total local funds generated. As a result local agencies struggle with the ability to meet their annual O&M requirements and still retain sufficient local funds for capital and expansion needs. The table below provides a three-county and the City of Portland summary of local revenues and their identified amount for capital project needs.

Local Revenues

Funding Program and Administrator	Description	Estimated Total Local Revenues	Estimated Local Revenues Available for Capital Needs	Note
Clackamas County and cities	Various local generated revenue programs and supplemental HB2017 Gas Tax/Vehicle Registration/ Privilege Tax revenues	$2,209,275,760	**$691,356,735**	The difference between the total revenues and the amount stated for capital revenues reflects the commitment to O&M needs
Multnomah County and cities, except Portland	Various local generated revenue programs and supplemental HB2017 Gas Tax/Vehicle Registration/ Privilege Tax revenues	$1,288,751,923	**$611,943,311**	
City of Portland	Various local generated revenue programs and supplemental HB2017 Gas Tax/Vehicle Registration/ Privilege Tax revenues	$7,446,616,996	**$1,057,448,518**	
Washington County and cities	Comprised of various local revenue programs, Transportation Development Tax (TDT) program, Major Streets Transportation Improvement Program (MSTIP), and supplemental HB2017 Gas Tax/Vehicle Registration/Privilege Tax revenues	$4,585,983,011	**$2,610,468,866**	
Total Estimated Local Revenues		**$15,530,627,690**	**$4,971,217,430**	





Local Revenues for Transit

Funding Program and Administrator	Description	Estimated Total Local Revenues	Notes

SMART Employer/Self Employed Payroll Tax Revenues	Gross payroll and/or self employment earnings tax assessed in Wilsonville area businesses	$99,440,592	
SMART Passenger Fare Box Returns	Passenger generated revenues	$5,033,803	
SMART ETax (STIF) Revenues	Statewide Transportation Improvements Fund (STIF) revenues (from HB2017)	$23,000,000	Estimated at $1 million per year
	SMART Local Revenues Subtotal:	**$127,474,395**	
TriMet - Employer/Self Employed Payroll Tax Revenues	Employer paid payroll tax supporting TriMet	$13,336,849,257	
TriMet - State contribution in Lieu of Payroll Tax Payments	State contribution in place of payroll tax	$53,738,329	
TriMet - ETax (STIF Revenues)	Statewide Transportation Improvements Fund (STIF) revenues (from HB2017)	$1,506,105,812	
TriMet – Pasenger Revenues/Fare Box Returns	Passenger generated revenues	$3,242,550,104	
TriMet – Other operating Revenues	Reflects multiple smaller local revenue programs TriMet manages	$689,893,847	Summation of multiple smaller local revenue programs
TriMet – Interest Revenues	Local revenues reflecting interest gains	$48,739,220	
	TriMet Local Revenues Subtotal:	**$18,877,876,569**	
	Total Estimated Local Transit Revenues:	**$19,005,350,964**	

4.6 Constrained Revenue Sources Split Across RTP Division Years

Federal Fund or Funding Program Revenue Sources – Split by RTP Division Year

Fund	Scenario	2018-2027	2028-2040	Total	Notes
Federal FHWA (Highway & non ODOT implementation) Revenues for Regional Improvements					
CMAQ-Metro	2019 revised allocation reduced by 1% each year	$121,089,200	$137,407,658	**$258,496,858**	LRFA in 2018 then revised formula in 2019 and converted to 2018 $s at 1% reduction
Federal Discretionary Miscellaneous	RTP YOE total of $100 million then discounted into 2016 $s	$43,478,260	56,521,740	**$100,000,000**	Miscellaneous federal grants (Fast Lane, INFRA, TIGER, ITS, etc.) the local agencies are reasonably expected to secure over the life of the RTP (for capital purposes)
Highway Bridge Replacement and Rehabilitation Program - Local	LRFA estimates in YOE then discounted into 2016 $s	$60,564,850	$70,944,986	**$33,435,611**	HBRR-L program with funding allocated the three counties to address bridge rehabilitation and repair needs.

(HBRR-L)					
Highway Safety Improvement Program (HSIP)	LRFA YOE statewide estimates. 31% to Region 1 with 81% remaining in the MPO, discounted back to 2016 $s	$15,490,625	$17,944,986	**$33,435,611**	Out of the total statewide annual allocation, 50% is expected to be committed to local agency projects with the remaining 50% staying with ODOT
Rail-Highways Crossings	LRFA YOE statewide estimates. 31% to Region 1 with 81% remaining in the MPO, discounted back to 2016 $s	$6,755,310	$7,825,633	**$14,580,943**	Reflects the allocation local agencies will have access to.
Modernization/ Enhance - Local	LRFA YOE statewide estimates. 31% to Region 1 with 81% remaining in the MPO, discounted back to 2016 $s	$23,294,173	$26,984,941	**$50,279,114**	Funding expected to be available from ODOT's Enhance Discretionary program for local capital project needs
PL-Metro	2018 $s based on historical averages	$17,509,554	$20,283,798	**$37,793,352**	Constrained projection – Moderate scenario using historical average and then discounted into 2018 $s
State Planning & Research (SPR)	LRFA in 2016 $s based on 81% of 31% allocation	$23,239,492	$26,921,597	**$50,161,089**	LRFA estimates are statewide. MPO allocation based on 81% of 31% allocated to Region 1
STBG-Metro	LRFA grow YOE, then discounted into 2018 $s	$259,124,177	$300,180,715	**$559,305,291**	Direct STBG apportionment Metro receives
STBG Clackamas County	LRFA growth to 2018 then discounted into 2018 $s	$9,788,311	$11,339,188	**$21,127,499**	Rural STBG county allocations
STBG Multnomah County	2.2% LRFA scenario then discounted into 2018 $	$2,377,629	$2,754,344	**$5,131,973**	Rural STBG county allocations
STBG Washington County	2.2% LRFA then discounted into 2018$	$5,406,255	$5,845,792	**$10,892,047**	Rural STBG County allocations
TA-Metro	2.2% LRFA then discounted into 2018 $s	13,960,217	$16,172,098	**$30,132,315**	Formerly TAP under MAP-21. Now a sub category within STBG
	Totals:	$615,074,177	$725,951,791	**$1,341,025,968**	

Federal Transit Revenues

Fund	Scenario	2018-2027	2028-2040	Amount	Notes
Section 5303 Planning	LRFA then discounted into 2016 $s	$5,526,946	$6,405,059	**$11,932,005**	Planning funds to Metro
Formula Section 5307/	LRFA YOE, then split by UZA	$489,456,000	$575,256,000	**$1,064,712,000**	Annual transit formula funds allocated to the

5337/5339	formula. then discounted into 2016 $s				Portland OR-WA UZA consisting of TriMet, CTRAN, and SMART
State (ODOT) Allocated **STBG Flex to 5310**	LRFA estimates already discounted into 2016 $s	$39,600,000	$44,500,000	**$84,100,000**	ODOT STBG flex transferred to FTA supporting transit elderly and disabled needs consistent with the 5310 program. 100% to TriMet
FTA 5309 New/Small Starts discretionary grant revenues	LRFA estimates based on Metro and ODOT LRFA concurrence	$1,450,000	$1,400,000,000	**$2,850,000,000**	A total of $2.85 billion of New Starts and Small Starts will be needed to support the HCT expansion as measured in constant dollars
	Totals:	**$1,984,582,946**	**$2,026,161,059**	**$4,010,744,005**	All known FTA based transit funds

State Allocation to Transit Revenue Uses Forecast (counts towards transit needs)

Funds	Scenario	2018-2027	2028-2040	Amount	Notes
Lottery funds to transit capital	LRFA estimates to Portland area	79,140,000	$274,780,000	**$353,920,000**	Assumes all to TriMet and discounted into 2016 $s
Special Transportation Funds	LRFA estimates to TriMet	$65,376,845	$95,320,585	**$160,697,430**	Assumes all to TriMet. LRFA estimates discounted to 2016 $s with 1% AARG
	Totals:	**$144,516,845**	**$370,100,585**	**$514,617,430**	

Local City/County Funds

Funds	Scenario	2018-2027	2028-2040	Amount	Notes
Clackamas County and Cities	Annual averages	$911,449,978	1,297,825,782	**$2,209,275,760**	Sources: TSPs, agency budget histories, CIPs, historical averages, agency reviews, estimations, and projections
Multnomah County and Cities except Portland	Annual averages	$508,690,610	$780,061,313	**$1,288,751,923**	
Washington County and Cities	Annual Averages	$2,068,857,530	$2,517,125,481	**$4,585,983,011**	
City of Portland	Annual Averages	$3,208,442,120	$4,238,174,876	**$7,446,616,996**	
	Totals:	$6,697,440,238	$8,833,187,452	**$15,530,627,690**	

Local Transit Funds

Funds	Scenario	2018-2027	2028-2040	Amount	Notes
SMART Payroll Tax	Annual average	$43,235,040	$56,205,552	**$99,440,592**	5-year historical average of $4,323,504 projected out to 2040
SMART Fare Box Return	Annual average	$2,188,610	$2,845,193	**$5,033,803**	5-year historical average of $216,861 projected out to 2040
SMART ETax (STIF)	Annual Average	$10,000,000	$13,000,000	**$23,000,000**	Source is HB2017

TriMet Payroll Tax	Agency developed	$4,412,923,949	$8,923,925,309	**$13,336,849,257**	Historical averages project out to 2040
TriMet – State In Lieu of Payroll	LRFA estimates to TriMet	$22,611,157	$31,127,172	**$53,738,329**	LRFA estimates/Agency concurrence
TriMet ETax STIF	HB2017/Agency developed	$510,661,738	$995,444,074	**$1,506,105,812**	Source is HB2017
TriMet Passenger/Fare Box Returns	Agency developed	$1,308,008,545	$1,934,541,559	**$3,242,550,104**	Agency averages and projections
TriMet Other Operating Revenues	Agency developed	$267,466,437	$422,427,410	**$689,893,847**	Agency averages and projections
TriMet Interest Revenues	Agency developed	$20,505,873	$28,233,347	**$48,739,220**	Agency projections
	Totals:	$6,597,601,348	$12,407,749,616	**$19,005,350,964**	

5.0 REVENUE PROGRAMS GLOSSARY

5.0 Revenue programs glossary ..... **Error! Bookmark not defined.**

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5.1 Key Federal Revenues

Congestion Mitigation Air Quality (CMAQ) Improvement Funds

The FAST Act continued the CMAQ program to provide a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Funding is available to reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) and for former nonattainment areas that are now in compliance (maintenance areas).

Eligible Activities

Funds may be used for a transportation project or program that is likely to contribute to the attainment or maintenance of a national ambient air quality standard, with a high level of effectiveness in reducing air pollution, and that is included in the metropolitan planning organization's (MPO's) current transportation plan and transportation improvement program (TIP) or the current state transportation improvement program (STIP) in areas without an MPO.

The FAST Act added eligibility for verified technologies for non-road vehicles and non-road engines that are used in port-related freight operations located in ozone, PM10, or $PM_{2.5}$ nonattainment or maintenance areas funded in whole or in part under 23 U.S.C. or chapter 53 of 49 U.S.C. [23 U.S.C. 149(b)(8)(A)(ii)]

The Act also specifically makes eligible the installation of vehicle-to-infrastructure communications equipment. [23 U.S.C. 149(b)(9)]

The FAST Act continues eligibility for electric vehicle and natural gas vehicle infrastructure and adds priority for infrastructure located on the corridors designated under 23 U.S.C. 151. [23 U.S.C. 149(c)(2)]

The FAST Act amended the eligible uses of CMAQ funds set aside for $PM_{2.5}$ nonattainment and maintenance areas. $PM_{2.5}$ set-aside funds may be used to reduce fine particulate matter emissions in a $PM_{2.5}$ nonattainment or maintenance area, including:

- Diesel retrofits;
- Installation of diesel emission control technology on non-road diesel equipment or on-road diesel equipment that is operated on a highway construction projects; and

- The most cost-effective projects to reduce emissions from port-related landside nonroad or on- road equipment that is operated within the boundaries of the area. [23 U.S.C. 149(k)(2) & (4)]

Unlike STP funding, the eligibility for using CMAQ must focus on direct air quality improvement projects that reduce harmful pollutants that include ozone, carbon monoxide, and particulate matter (PM). The focus on air quality improvement criteria requires nominated projects to undergo a much more detailed level of review to ensure the proposed improvements are eligible for CMAQ funding.

Surface Transportation Block Grant (STBG)

The FAST Act converts the long-standing Surface Transportation Program into the Surface Transportation *Block Grant* Program acknowledging that this program has the most flexible eligibilities among all Federal-aid highway programs and aligning the program's name with how FHWA has historically administered it. The STBG promotes flexibility in State and local transportation decisions and provides flexible funding to best address State and local transportation needs.

Eligible Projects and Activities

Location of Projects (23 U.S.C. 133(c)): STBG projects may not be undertaken on a road functionally classified as a local road or a rural minor collector unless the road was on a Federal-aid highway system on January 1, 1991, except-

- For a bridge or tunnel project (other than the construction of a new bridge or tunnel at a new location);
- For a project described in 23 U.S.C. 133(b)(4)-(11) and described below under "Eligible Activities" (b)(4) through (11);
- For transportation alternatives projects described in 23 U.S.C. 101(a)(29) before enactment of the FAST Act (these are described in 23 U.S.C. 133(h) and in separate TA Set-Aside guidance.); and
- As approved by the Secretary.

Eligible Activities (23 U.S.C. 133(b)): Subject to the location of projects requirements in paragraph (a), the following eligible activities are listed in 23 U.S.C. 133(b):

- Construction, as defined in 23 U.S.C. 101(a)(4), of the following:
    - Highways, bridges, and tunnels, including designated routes of the Appalachian development highway system and local access roads under 40 U.S.C. 14501;
    - Ferry boats and terminal facilities eligible under 23 U.S.C. 129(c); transit capital projects eligible under chapter 53 of title 49, United States Code;
    - Infrastructure-based intelligent transportation systems capital improvements, including the installation of vehicle-to-infrastructure communication equipment;

  - Truck parking facilities eligible under Section 1401 of MAP-21 (23 U.S.C. 137 note); and
  - Border infrastructure projects eligible under Section 1303 of SAFETEA- LU (23 U.S.C. 101 note).
- Operational improvements and capital and operating costs for traffic monitoring, management, and control facilities and programs. Operational improvement is defined in 23 U.S.C. 101(a)(18).
- Environmental measures eligible under 23 U.S.C. 119(g), 328, and 329, and transportation control measures listed in Section 108(f)(1)(A) (other than clause (xvi) of that section) of the Clean Air Act (42 U.S.C. 7408(f)(1)(A)).
- Highway and transit safety infrastructure improvements and programs, including railway-highway grade crossings.
- Fringe and corridor parking facilities and programs in accordance with 23 U.S.C. 137 and carpool projects in accordance with 23 U.S.C. 146. Carpool project is defined in 23 U.S.C. 101(a)(3).
- Recreational trails projects eligible under 23 U.S.C. 206, pedestrian and bicycle projects in accordance with 23 U.S.C. 217 (including modifications to comply with accessibility requirements under the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.)), and the Safe Routes to School Program under Section 1404 of SAFETEA-LU (23 U.S.C. 402 note).
- Planning, design, or construction of boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.
- Development and implementation of a State asset management plan for the National Highway System (NHS) and a performance-based management program for other public roads.
- Protection (including painting, scour countermeasures, seismic retrofits, impact protection measures, security countermeasures, and protection against extreme events) for bridges (including approaches to bridges and other elevated structures) and tunnels on public roads, and inspection and evaluation of bridges and tunnels and other highway assets.
- Surface transportation planning programs, highway and transit research and development and technology transfer programs, and workforce development, training, and education under chapter 5 of title 23, United States Code.
- Surface transportation infrastructure modifications to facilitate direct intermodal interchange, transfer, and access into and out of a port terminal.
- Projects and strategies designed to support congestion pricing, including electronic toll collection and travel demand management strategies and programs.
- Upon request of a State and subject to the approval of the Secretary, if Transportation Infrastructure Finance and Innovation Act (TIFIA) credit assistance is approved for an STBG-eligible project, then the State may use STBG funds to pay the subsidy and administrative costs associated with providing Federal credit assistance for the projects.

- The creation and operation by a State of an office to assist in the design, implementation, and oversight of public-private partnerships eligible to receive funding under title 23 and chapter 53 of title 49, United States Code, and the payment of a stipend to unsuccessful private bidders to offset their proposal development costs, if necessary to encourage robust competition in public-private partnership procurements.
- Any type of project eligible under 23 U.S.C. 133 as in effect on the day before the FAST Act was enacted. Among these are:
  - Replacement of bridges with fill material;
  - Training of bridge and tunnel inspectors; Application of calcium magnesium acetate, sodium acetate/formate, or other environmentally acceptable, minimally corrosive anti-icing and deicing compositions for bridges (and approaches to bridges and other elevated structures) and tunnels;
  - Projects to accommodate other transportation modes continue to be eligible pursuant to 23 U.S.C. 142(c) if such accommodation does not adversely affect traffic safety;
  - Transit capital projects eligible for assistance under chapter 53 of title 49, United States Code, including vehicles and facilities (publicly or privately owned) that are used to provide intercity passenger bus service;
  - Approach roadways to ferry terminals to accommodate other transportation modes and to provide access into and out of the ports;
  - **Transportation alternatives** previously described in 23 U.S.C. 101(a)(29) and described in 23 U.S.C. 213;
  - Projects relating to intersections having disproportionately high accident rates, high levels of congestion (as evidenced by interrupted traffic flow at the intersection and a level of service rating of "F" during peak travel hours, calculated in accordance with the Highway Capacity Manual), and are located on a Federal-aid highway;
  - Construction and operational improvements for any minor collector if the minor collector and the project to be carried out are in the same corridor and in proximity to an NHS route; the construction or improvements will enhance the level of service on the NHS route and improve regional traffic flow; and the construction or improvements are more cost-effective, as determined by a benefit-cost analysis, than an improvement to the NHS route;
  - x. Workforce development, training, and education activities discussed in 23 U.S.C. 504(e);
  - Advanced truck stop electrification systems. Truck stop electrification system is defined in 23 U.S.C. 101(a)(32);
  - Installation of safety barriers and nets on bridges, hazard eliminations, projects to mitigate hazards caused by wildlife;
  - Electric vehicle and natural gas vehicle infrastructure in accordance with 23 U.S.C. 137;
  - Data collection, maintenance, and integration and the costs associated with obtaining, updating, and licensing software and equipment required for risk-based asset

management and performance based management, and for similar activities related to the development and implementation of a performance based management program for other public roads;

- Construction of any bridge in accordance with 23 U.S.C. 144(f) that replaces any low water crossing (regardless of the length of the low water crossing); any bridge that was destroyed prior to January 1, 1965; any ferry that was in existence on January 1, 1984; or any road bridge that is rendered obsolete as a result of a Corps of Engineers flood control or channelization project and is not rebuilt with funds from the Corps of Engineers. Not subject to the Location of Project requirement in 23 U.S.C. 133(c); and
- Actions in accordance with the definition and conditions in 23 U.S.C. 144(g) to preserve or reduce the impact of a project on the historic integrity of a historic bridge if the load capacity and safety features of the historic bridge are adequate to serve the intended use for the life of the historic bridge. Not subject to the Location of Project requirement in 23 U.S.C. 133(c).

Transportation Alternatives (TA-Metro)

The FAST Act eliminates the MAP-21 Transportation Alternatives Program (TAP) and replaces it with a set-aside of Surface Transportation Block Grant (STBG) program funding for transportation alternatives (TA). These set-aside funds include all projects and activities that were previously eligible under TAP, encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to storm water and habitat connectivity.

Federal Lands Access Program (G200) [13]

The purpose of the Federal Lands Access Program (Access Program) provides funds for projects on Federal Lands access transportation facilities that are located on or adjacent to, or that provide access to Federal lands.

Equity Bonus (LZ20)

The Equity Bonus provides funding to States based on equity considerations. These include a minimum rate of return on contributions to the Highway Account of the Highway Trust Fund. Generally, committed funds take on the eligibility and match requirements of the program they are added to. For planning purposes, the standard STP federal share of 89.73% with a match requirement of 10.27% is used for programming purposes.

Highway Safety Improvement Program (HSIP)

The HSIP program is intended to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance. The federal share is normally 90% which requires a participant match of at least 10%.

Metropolitan Planning Funds (PL)

The FAST Act continues the Metropolitan Planning program. The Program establishes a cooperative, continuous, and comprehensive framework for making transportation investment decisions in metropolitan areas. Program oversight is a joint Federal Highway Administration/ Federal Transit Administration responsibility. The funds are primarily used in support of Metro's annual Unified Planning Work Program (UPWP)

State Planning & Research (SPR):

The State Planning and Research Program funds States' statewide planning and research activities. The funds are used to establish a cooperative, continuous, and comprehensive framework for making transportation investment decisions and to carryout transportation research activities throughout the State.

5.2 Federal Transit Agency Sourced Funding

Section 5307 Urbanized Area Formula Grants:

This program provides grants to Urbanized Areas (UZA) for public transportation capital, planning, job access and reverse commute projects, as well as operating expenses in certain circumstances. In the greater Portland region TriMet and SMART are the primary direct recipients of 5307 funds. The federal share is normally 80% which requires a participating match of 20%. One notable exception exists to the match requirement. If the 5307 will be used for a Job Access Reverse Commute (JARC) project, the required match now is 50% against a 50% federal share.

Section 5309 Fixed Guideway Capital Investment Grants (New Starts)

Provides grants for new and expanded rail, bus rapid transit, and ferry systems that reflect local priorities to improve transportation options in key corridors. The federal share is normally 80% which requires a participating match of 20%.

Revenue Scenarios: The Base scenario used the FY2018 amount followed by the eleven-year historical average with no growth. The Constrained scenario used FY 2018 amount with 1% annual growth. The Adequately Constrained used FY 2018 amount with 2% annual growth.

Section 5310 Enhanced Mobility for Seniors and Individuals with Disabilities

Section 5310 funds are intended to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options. This program supports transportation services planned, designed, and carried out to meet the special transportation needs of seniors and individuals with disabilities in all areas – large urbanized (over 200,000), small urbanized (50,000-200,000), and rural (under 50,000). Eligible projects include both traditional capital investment and nontraditional investment beyond the Americans with Disabilities Act (ADA) complementary paratransit services.

At least 55 percent of program funds must be used on capital or "traditional" 5310 projects. Examples include:

- Buses and vans; wheelchair lifts, ramps, and securement devices; transit-related information technology systems including scheduling/routing/one-call systems; and mobility management programs.
- Acquisition of transportation services under a contract, lease, or other arrangement. Both capital and operating costs associated with contracted service are eligible capital expenses. User-side subsidies are considered one form of eligible arrangement. Funds may be requested for contracted services covering a time period of more than one year. The capital eligibility of acquisition of services as authorized in 49 U.S.C. 5310(b)(4) is limited to the Section 5310program.

The remaining 45 percent is for other "nontraditional" projects. Under MAP-21, the program was modified to include projects eligible under the former 5317 New Freedom program, described as: Capital and operating expenses for new public transportation services and alternatives beyond those required by the ADA, designed to assist individuals with disabilities and seniors. Examples include:

- Travel training;
- Volunteer driver programs
- Building an accessible path to a bus stop including curb-cuts sidewalks, accessible pedestrian signals or other accessible features
- Improving signage, or way-finding technology
- Incremental cost of providing same day service or door-to-door service; purchasing vehicles to support new accessible taxi, rides sharing and/or van pooling, programs
- Mobility management.

Section 5312 Research, Development, Demonstration, and Deployment Projects

Section 5312 supports research activities that improve the safety, reliability, efficiency, and sustainability of public transportation by investing in the development, testing, and deployment of innovative technologies, materials, and processes; carry out related endeavors; and to support the demonstration and deployment of low-emission and no-emission vehicles to promote clean energy and improve air quality. Under MAP-21, 5314 funds which are very similar were consolidated into the 5312 program. The federal share is normally 80% of the total project cost which requires a 20% participating match.

Section 5337 State of Good Repair Formula Grants

Section 5337 funds are dedicated to repairing and upgrading the nation's rail transit systems along with high-intensity motor bus systems that use high-occupancy vehicle lanes, including

bus rapid transit (BRT). The federal share is normally 80% of the total project cost requiring a participating match of 20%.

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