



REGIONAL TRANSPORTATION COMMISSION

REGIONAL ROAD IMPACT FEE TECHNICAL ADVISORY COMMITTEE

MEETING AGENDA

**THURSDAY, FEBRUARY 28, 2019, 2:00pm-4:00pm
1105 TERMINAL WAY, SUITE 101, RENO, NV
1ST FLOOR CONFERENCE ROOM**

I. The RTC 1st Floor Conference Room is accessible to individuals with disabilities. Requests for auxiliary aids to assist individuals with disabilities should be made with as much advance notice as possible. For those requiring hearing or speech assistance, contact Relay Nevada at 1.800.326.6868 (TTY, VCO or HCO); other requests should be directed to RTC Engineering at 775.348.0171. Supporting documents may also be found on the RTC website: www.rtcwashoe.com.

II. The Regional Road Impact Fee Technical Advisory Committee (RRIF TAC) has a standing item for accepting public comment on topics relevant to the RRIF TAC that are not included on the agenda. No action may be taken on a matter raised under this item of the agenda until the matter itself has been specifically included on an agenda as an item upon which action will be taken. For specific items on the RRIF TAC agenda, public comment will be taken at the time the item is discussed. Individuals providing public comment will be limited to three minutes. Individuals acting as a spokesperson for a group may request additional time. Attempts to present public input in a disruptive manner will not be allowed. Remarks will be addressed to the RRIF TAC as a whole and not to individual members.

III. The RRIF TAC may combine two or more agenda items for consideration and/or may remove an item from the agenda or delay discussion relating to an item on the agenda at any time.

ITEM 1 Approval of Agenda (*For Possible Action*)

ITEM 2 Public Comment - *please read paragraph II near the top of this page*

ITEM 3 Approval of the January 24, 2019 Meeting Minutes (*For Possible Action*)

ITEM 4 Approval of the Draft 6th Ed RRIF Capital Improvement Plan (*For Possible Action*)

ITEM 5 Public Comment - *please read paragraph II near the top of this page*

ITEM 6 Member Items

a) next RRIF TAC meeting: March 28, 2019

ITEM 7 Adjournment (*For Possible Action*)

The Committee may take action on any item noted for possible action

Posting locations: Washoe Co Admin Bldg, 1001 E. 9th St., Reno, NV; RTC, 1105 Terminal Way., Reno, NV; 4th STREET STATION, 200 E. 4th St., Reno, NV; CENTENNIAL PLAZA, Victorian Square, Sparks, NV; Sparks City Hall, 431 Prater Way, Sparks, NV; Reno City Hall, 1 E. First St., Reno, NV; Incline Village General Imp. Dist., 893 Southwood Blvd., Incline Village, NV; area press & media via fax; RTC website www.rtcwashoe.com.



REGIONAL TRANSPORTATION COMMISSION

Metropolitan Planning • Public Transportation & Operations • Engineering & Construction

Metropolitan Planning Organization of Washoe County, Nevada

February 28, 2019

AGENDA ITEM 2

TO: Regional Road Impact Fee Technical Advisory Committee (RRIF TAC)

FROM: Julie Masterpool, P.E.
RRIF Program Manager

SUBJECT: Public Input

This agenda item allows the public the opportunity to provide information on topics within the jurisdiction of the Regional Road Impact Fee Technical Advisory Committee (RRIF TAC). Any person wishing to wait to provide public comment on a specific agenda item should indicate that item number on the “comment” card. The RRIF TAC reserves the right to take all public comment during Public Input. Individuals addressing the RRIF TAC during the Public Input portion of the meeting will be limited to three minutes total. However, an individual acting as a spokesperson for a group of individuals may request additional time. Individuals are expected to provide public input in a professional and constructive manner.

**REGIONAL TRANSPORTATION COMMISSION (RTC)
REGIONAL ROAD IMPACT FEE (RRIF)
TECHNICAL ADVISORY COMMITTEE**

Meeting Minutes

Thursday, January 24, 2019

Members Present:

Amy Cummings, Regional Transportation Commission

Brian Stewart, Regional Transportation Commission

Ed Hawkins, Reno Planning Commission

Jim Rundle, City of Sparks Community Development

John Krmptic, Private Sector

Jon Ericson, City of Sparks Public Works

Kurt Dietrich, City of Reno Public Works

Mike Lawson, Washoe County Planning Commission

Mike Mischel, City of Reno Community Development

Mitchell Fink, Washoe County Public Works

Randy Walter, Private Sector

Scott Carey, City of Sparks Planning Commission

Ted Erkan, Private Sector

Members Absent:

Kraig Knudsen, Private Sector

Guests:

Carl Savely

Jeremy Smith

RTC Staff:

Adam Spear (after 3pm)	Dan Doenges	Jeaneen Preston
Jelena Williams	Julie Masterpool	Lee Anne Olivas
Lee Gibson	Sharon Britt	Stephanie Haddock
Xuan Wang		

The meeting was called to order at 2:01pm.

Item 1: Approval of Agenda

The agenda was approved unanimously.

Item 2: Public Comment

None

Item 3: Approval of the November 29, 2018 Meeting Minutes

The November 29, 2018 Meeting Minutes were approved. Ted Erkan and John Krmpotic abstained, as they did not attend the November meeting.

Item 4: Presentation on the Buildout Model by TMRPA

Jeremy Smith from TMRPA went through his PowerPoint presentation (available upon request). Jeremy notified everyone that there is quite a bit of information available at PlanTruckeeMeadows.org, including four scenarios or sets of assumptions for future growth. Jeremy explained how information is gathered for the full buildout model. PUDs and tentative maps are reviewed with a focus is on what's "buildable" land. Slopes above 30%, flood plains, and government lands are not considered "buildable".

Jeremy briefly discussed the four scenarios (Classic, McCarran, Smart Greenfield, and Infill) and the characteristics and weighting that affects development. The five density classes of housing were also discussed. Jeremy noted that we need to think about the job component and how the population build out matches up with the job build out. There is a lot of potential for build out

available. There was discussion about not over-inflating the buildout availability. Jeremy factors in about 10-20% for inefficiencies and could add another 5-10% to keep the maximum buildout numbers conservative.

Jeremy stated next steps for the buildout model include looking at the number of households, including household fields, and including employment fields. Jeremy will be handing off the buildout model to Xuan Wang at the RTC in February so she can use it for the Travel Demand Model.

Item 5: Approval of the 6th Edition RRIF General Administrative Manual

Julie Masterpool discussed some minor text modifications/clarifications incorporated into the RRIF GAM since the last meeting. The changes include:

IX. Exemptions

B.4. State Buildings – Per an opinion issued by the State Attorney General, the State of Nevada is exempt from the payment of impact fees.

X. Impact Fee Offsets Requested after the 5th Edition RRIF GAM CIP (3/2/2018) Update

B.1. Offset Agreements – Due to the timing of adoption of the RRIF CIP and subsequently eligible improvements constructed by private development, the RRIF TAC determined it would be in the best interest of the program to modify language regarding RRIF Offset agreements to allow RRIF Waivers to be earned for improvements constructed prior to an executed Offset Agreement pending approval of the agreement within 12 months after start of construction or completion of work or prior to completion of the eligible improvements.

A motion to accept the draft 6th Edition RRIF General Administrative Manual was approved unanimously.

Item 6: Approval of the Draft RRIF Capital Improvement Plan

Julie Masterpool provided a PowerPoint presentation (see Attachment A). The Capital Improvement Plan (CIP) serves two purposes; one to outline methodology to develop fees and one to include the list of capacity projects which the fees are based. Julie discussed some of the history of the CIP as well as the inputs used to determine the impact fee rates.

The impact fee rates are based on the cost of the CIP and the number of new vehicle trips by Service Area. New VMT's by Service Area was determined using the methodology set up by TischlerBise for the 5th Edition RRIF CIP. Population was converted into housing types based on statistical data from the 2016 American Community Survey for Washoe County and employment was converted into employment categories. ITE Trip Generation rates were used to determine the number of new vehicle trips (Average Daily Traffic) anticipated over the 10 year timeframe of the CIP by Service Area for housing and employment types. Total VMTs were then calculated multiplying ADT by the average trip length anticipated on the regional road network for each Service Area. Julie noted the travel demand model (using the consensus forecast and TMRPA's development model) anticipates more growth in the North Service Area than in the South Service Area which changed from the previous model used for the 5th Edition.

To determine the CIP costs, the projects listed in the 1st 10 years of the RTP were divided into the appropriate Service Areas. Costs for program level projects, ie, ADA Improvements, Pavement Preservation, etc, were divided equally between the Service Areas.

The revenue used to fund the projects listed in the RTP (and subsequently the CIP), is a combination of Federal, State, Regional (Fuel tax, Sales tax, impact fees) and other revenue sources. To determine new development's share of the CIP, Julie used the forecasted revenue as shown in the 2040 Regional Transportation Plan Amendment # 1 resulting in \$193, 935,057 attributable to RRIF funding. Based on the results, the proposed 6th Edition RRIF fee by service area was calculated as \$302.27/VMT for the North and \$415.27/VMT for the South. There was discussion about trip lengths and growth. While the trip lengths have gone down from the 5th Edition to the 6th Edition, it would appear that as you drive less, you pay more in fees. However, it would be more accurate to describe the results as the associated RRIF Share of the CIP is distributed over more growth (VMTs) in the North Service Area than in the South Service Area, hence a higher fee for the South Service Area.

There was discussion about having an exhibit that shows the percentage by service area for each project on the CIP. Julie stated she would include the information in the upcoming Exhibits in the RRIF CIP. Julie asked the group to provide her any other viewpoints or suggestions for how to evaluate the data.

One possibility is to look at the Spaghetti Bowl project on the CIP. Another could be to eliminate all of the freeway projects and then re-run the numbers.

A motion to bring back the CIP with additional analysis to the February meeting was approved unanimously.

Item 7: Public Comment

None

Item 8: Member Items

- John Krmptotic asked about the speed limit study on the SouthEast Connector project. Doug Maloy from the RTC is working with the local agencies to increase the speed limit by 10 miles per hour.
- The next RRIF TAC meeting is scheduled for February 28, 2019 at 2pm in the RTC's 1st Floor Conference Room located at 1105 Terminal Way, Suite 101 in Reno. Lee Anne Olivas introduced Jeaneen Preston. She will handle the recording and transcription of the February meeting in Lee Anne's absence.

Item 8: Adjournment

There being no further business, the meeting adjourned at 3:35pm.

Respectfully Submitted,
Lee Anne Olivas



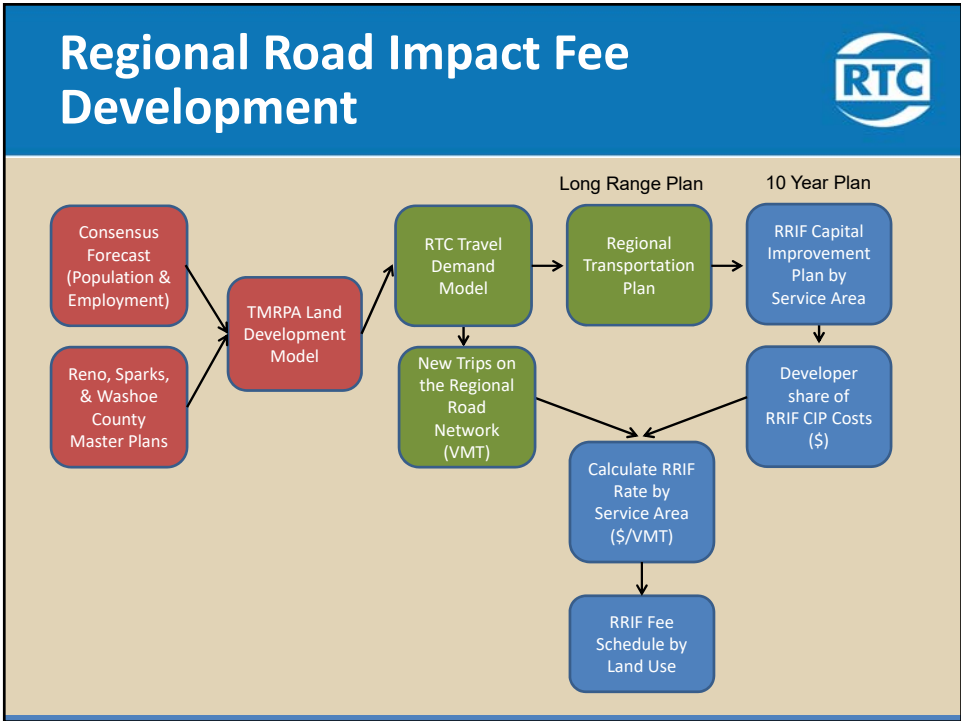
Regional Road Impact Fee

RRIF TAC
January 24, 2019

Item 6 - Draft RRIF Capital Improvement Plan

Julie Masterpool, P.E.
RTC Engineering Manager – Traffic/RRIF





RRIF Inputs



- Population (Consensus Forecast)
- Employment (Consensus Forecast)
- Trip Lengths by Service Area (TDM)
- Capital Improvement Plans by Service Area (\$)
- Other Revenue Sources – Fed, State, Local (\$)
- Trip Generation Rates by land use (10 Ed ITE)

$$\frac{\$}{\text{VMT}}$$

North Travel Demand



North Service Area	2015	2019	2029	2030	2019-2029 Increase
Total Population	262,793	276,604	314,394	318,446	37,790
Total Housing Units	112,786	118,714	134,933	136,672	16,219
Single Housing Units	78,596	82,726	94,029	95,240	11,302
2+ Housing Units	34,191	35,988	40,904	41,432	4,917
Industrial Jobs	14,706	16,408	21,574	22,173	5,166
Commercial Jobs	12,244	13,056	15,330	15,578	2,274
All Other Services Jobs	48,757	51,639	59,610	60,472	7,971
Total Jobs	75,707	81,103	96,514	98,223	15,412
KSF					
Industrial KSF	32,877	36,682	48,232	49,571	11,550
Commercial KSF	6,122	6,528	7,665	7,789	1,137
All Other Services KSF	16,619	17,602	20,319	20,613	2,717
Vehicle Trips					
Single Unit Trips	349,845	368,232	418,540	423,934	50,308
2+ Units Trips	103,653	109,101	124,006	125,604	14,905
Industrial Trips	58,521	65,293	85,853	88,236	20,560
Commercial Trips	86,265	91,987	108,007	109,755	16,020
All Other Services Trips	91,656	97,073	112,058	113,679	14,985
Total Vehicle Trips	689,941	731,686	848,464	861,207	116,778
Weekday Vehicle Miles of Travel (VMT)	1,995,679	2,111,505	2,433,550	2,468,528	322,046

South Travel Demand



South Service Area	2015	2019	2029	2030	2019-2029 Increase
Total Population	161,371	169,853	193,058	195,546	23,205
Total Housing Units	69,258	72,898	82,858	83,925	9,959
Single Housing Units	48,263	50,799	57,740	58,484	6,940
2+ Housing Units	20,995	22,099	25,118	25,442	3,019
Industrial Jobs	35,608	36,327	38,189	38,380	1,862
Commercial Jobs	22,250	23,185	25,698	25,964	2,513
All Other Services Jobs	128,544	134,562	150,868	152,604	16,306
Total Jobs	186,402	194,074	214,755	216,948	20,681
KSF					
Industrial KSF	79,606	81,214	85,376	85,804	4,162
Commercial KSF	11,125	11,593	12,849	12,982	1,257
All Other Services KSF	43,816	45,867	51,425	52,017	5,558
Single Unit Trips					
Single Unit Trips	215,209	226,520	257,467	260,786	30,947
2+ Units Trips					
2+ Units Trips	63,763	67,114	76,283	77,266	9,169
Industrial Trips					
Industrial Trips	141,699	144,561	151,969	152,730	7,408
Commercial Trips					
Commercial Trips	156,762	163,350	181,056	182,929	17,706
All Other Services Trips					
All Other Services Trips	241,644	252,957	283,611	286,874	30,654
Total Vehicle Trips	819,078	854,502	950,387	960,585	95,885
Weekday Vehicle Miles of Travel (VMT)	1,903,071	1,988,703	2,221,055	2,245,814	232,352

RRIF Capital Improvement Costs



	North Service Area	South Service Area	2017-2026 Total
2017-2021	\$390,582,000	\$481,318,000	\$871,900,000
2022-2026	\$645,775,000	\$545,975,000	\$1,191,750,000
1 st 10 Years of RTP by Service Area	\$1,036,357,000	\$1,027,293,000	\$2,063,650,000
Debt Service	\$141,150,000	\$141,150,000	\$282,300,000
Net 1 st 10 Years of RTP by Service Area	\$895,207,000	\$886,143,000	\$1,781,350,000
% of Net RTP	50.25%	49.75%	

% of RTP to be used to distribute Federal, State, Local funding sources by Service Area

RRIF Share of the CIP by Service Area



Fund Source	2017-2021	2022-2026	2017-2026 Total
Federal	\$188,534,000	\$222,985,000	\$411,519,000
State	\$168,300,000	\$356,489,000	\$524,789,000
Regional (Fuel, Sales, RRIF)	\$458,111,000	\$528,573,000	\$986,684,000
Other Revenues (Private)	\$57,000,000	\$83,800,000	\$140,800,000
Total	\$871,945,000	\$1,191,847,000	\$2,063,792,000

Fund Source	2017-2021	2022-2026	2017-2026 Total
Fuel Tax	\$406,344,091	\$465,378,079	\$871,722,170
Sales Tax	\$27,205,268	\$34,721,582	\$61,926,850
RRIF	\$24,561,522	\$28,473,535	\$53,035,057
Regional Total	\$458,110,880	\$528,573,196	\$986,684,076

RRIF Share	2017-2021	2022-2026	2017-2026 Total
Total RRIF Share	\$81,561,522	\$112,273,535	\$193,835,057

RRIF Summary



Description	North Service Area	South Service Area
Total CIP by Service Area	\$301,504,792	\$114,577,830
Total CIP	\$416,082,622	
Total RRIF Share	\$193,835,057	
% of Total RTP	50.22%	49.78%
RRIF Share by Service Area	\$97,345,201	\$96,489,856
VMT Growth by Service Area	322,046	232,352
\$/VMT for RRIF Share	\$302.27	\$415.27

RRIF Share (\$) / VMT Growth = \$/VMT Rate

RRIF 6th Edition Fee Schedule



RRIF Input Variables					North	South		
Average Miles per Trip					2.79	2.64		
RRIF Share of CIP					\$97,410,671	\$96,424,385		
VMT Increase Over Ten Years					322,046	232,352		
Capital Cost per VMT					\$302.47	\$414.99		
Development Type	Development Unit	Avg Wkdy Veh Trip Ends	Trip Rate Adjustment	Trip Length Adjustment	VMT North	6th Ed RRIF North	VMT South	6th Ed RRIF South
Residential								
Single Unit	Dwelling	8.56	52%	121%	15.03	\$4,545.23	14.22	\$5,900.75
3+ Units per Structure	Dwelling	5.83	52%	121%	10.23	\$3,095.64	9.68	\$4,018.85
Industrial								
Light Industrial	1000 Sq Ft	4.96	50%	73%	5.05	\$1,527.80	4.78	\$1,983.44
Manufacturing	1000 Sq Ft	3.93	50%	73%	4.00	\$1,210.54	3.79	\$1,571.56
Warehouse	1000 Sq Ft	1.74	50%	73%	1.77	\$535.96	1.68	\$695.80
Mini-Warehouse	1000 Sq Ft	1.51	50%	73%	1.54	\$465.12	1.46	\$603.83
Commercial								
Retail and Eating/Drinking Places	1000 Sq Ft Leasable	37.75	33%	66%	22.94	\$6,938.54	21.71	\$9,007.82
Casino Gaming Area	1000 Sq Ft	46.05	50%	73%	46.90	\$14,184.56	44.37	\$18,414.81
Office & Other Services								
Lodging	Room	3.35	50%	73%	3.41	\$1,031.88	3.23	\$1,339.62
Public Park	Acre	0.78	50%	73%	0.79	\$240.26	0.75	\$311.91
Schools and Daycare	1000 Sq Ft	19.52	33%	73%	13.12	\$3,968.35	12.41	\$5,151.83
Hospital	1000 Sq Ft	10.72	50%	73%	10.92	\$3,302.03	10.33	\$4,286.79
Nursing Home	1000 Sq Ft	6.64	50%	73%	6.76	\$2,045.29	6.40	\$2,655.25
Office and Other Services	1000 Sq Ft	9.74	50%	73%	9.92	\$3,000.17	9.39	\$3,894.90
Medical Office	1000 Sq Ft	34.80	50%	73%	35.44	\$10,719.28	33.53	\$13,916.08

Comparisons between the 5th Ed and the draft 6th Ed RRIF CIP



Input Values	5th Edition		6th Edition	
	North	South	North	South
Population Growth	30,367	27,703	37,790	23,205
Employment Growth	15,109	34,081	15,412	20,681
Total Vehicle Trips	90,877	143,828	116,778	95,885
Trip Length (Miles)	2.87	2.82	2.79	2.64
Total VMTs	258,081	350,027	322,046	232,352
1st 10 years of RTP (\$)	\$1,838,900,000		\$2,063,650,000	
RRIF Share (\$)	\$65,394,800	\$100,474,800	\$97,410,671	\$96,424,385
\$/VMT Rate	\$253.39	\$287.05	\$302.47	\$414.99
Current \$/VMT Rate	\$267.58	\$303.11		



Questions?

Julie Masterpool, P.E.

RTC RRIF Program Manager

1105 Terminal Way, Suite 108

Reno, NV 89502

775-335-1897

jmasterpool@rtcwashoe.com



REGIONAL TRANSPORTATION COMMISSION

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February 28, 2019

AGENDA ITEM 4

TO: Regional Road Impact Fee Technical Advisory Committee (RRIF TAC)

FROM: Julie Masterpool, P.E.
RRIF Program Manager

SUBJECT: Draft 6th Edition RRIF Capital Improvement Plan

RECOMMENDATION

Acknowledge receipt of the draft version of the RRIF Capital Improvement Plan (CIP) Manual and provide direction.

SUMMARY

The RRIF CIP outlines the methodology used in the preparation of the RRIF program. The RRIF CIP includes in-depth discussions on the following:

- RRIF Service Areas and Benefit Districts
- Regional Road Network
- Capital Improvement Plan for the North and South Service Areas
- Forecast of Service Units
- Project Vehicle Miles of Travel
- Net Cost per Service Unit
- Impact Fee Schedule Equivalency Rates
- Impact Fee Cost Schedule

RRIF Revenue was distributed by Service Area based on the distribution (%) of total costs of RRIF eligible projects listed in the 1st 10 years of the 2040 Regional Transportation Plan (RTP) Amendment No. 1.

	North Service Area	South Service Area
Total RRIF Share	\$193,835,057	
% RRIF Eligible RTP	52.18%	47.82%
RRIF Share by Service Area	\$101,138,248	\$92,696,809
VMT Growth by Service Area	322,046	232,352
\$/VMT for RRIF Share	\$314.05	\$398.95

Attachments

REGIONAL ROAD IMPACT FEE SCHEDULE

Land Use	Unit	North Service Area (\$314.05/VMT)		South Service Area (\$398.95/VMT)	
		VMT ¹	Cost Per Unit ²	VMT ¹	Cost Per Unit ²
Residential					
Single-Family	Dwelling	15.03	\$4,719.16	14.22	\$5,672.64
Multi-Family	Dwelling	10.23	\$3,214.10	9.68	\$3,863.49
Industrial					
General Light Industrial	1,000 GFA	5.05	\$1,586.27	4.78	\$1,906.77
Manufacturing	1,000 GFA	4.00	\$1,256.86	3.79	\$1,510.80
Warehouse	1,000 GFA	1.77	\$556.47	1.68	\$668.91
Mini-Warehouse	1,000 GFA	1.54	\$482.92	1.46	\$580.49
Commercial/Retail					
Commercial/Retail	1,000 GFA	22.94	\$7,204.06	21.71	\$8,659.59
Eating/Drinking Places	1,000 GFA	22.94	\$7,204.06	21.71	\$8,659.59
Casino/Gaming	1,000 GFA	46.90	\$14,727.35	44.37	\$17,702.93
Office and Other Services					
Schools	1,000 GFA	13.12	\$4,120.21	12.41	\$4,952.67
Day Care	1,000 GFA	13.12	\$4,120.21	12.41	\$4,952.67
Lodging	Room	3.41	\$1,071.37	3.23	\$1,287.84
Hospital	1,000 GFA	10.92	\$3,428.39	10.33	\$4,121.07
Nursing Home	1,000 GFA	6.76	\$2,123.55	6.40	\$2,552.61
Medical Office	1,000 GFA	35.44	\$11,129.47	33.53	\$13,378.11
Office and Other Services	1,000 GFA	9.92	\$3,114.97	9.39	\$3,744.33
Regional Recreational Facility	Acre	2.32	\$729.17	2.20	\$876.50

¹ VMT/Unit

² Cost per Unit is approximate due to rounding; the Actual Fee is \$/VMT x VMT/Unit x # of Units

Regional Road Impact Fee (RRIF)

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DATE

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REGIONAL ROAD IMPACT FEE SYSTEM

CAPITAL IMPROVEMENTS PLAN

6TH EDITION



DATE

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REGIONAL ROAD IMPACT FEE SYSTEM CAPITAL IMPROVEMENTS PLAN

I. INTENT AND HISTORY

Impact fees are charges against new development to fund the construction and/or expansion of future off-site capacity improvements necessitated by and to benefit new development within a defined region.

The Regional Road Impact Fee (RRIF) program was implemented in November 1995 as a way to fund regional road capital improvements and charge new development their proportionate fair share cost of needed capacity improvements.

As required by the Nevada impact fee statute, NRS 278B, *Impact Fees for New Development*, impact fee programs require the preparation of a “capital improvements plan” (CIP), a list of capacity projects, over a period not to exceed 10 years for which the fees are based. With the preparation of the 10 year RRIF CIP and its companion, General Administrative Manual, the RRIF program is adopted and is jointly administered by the Regional Transportation Commission of Washoe County (RTC), the City of Reno, the City of Sparks and Washoe County, within the framework of an Interlocal cooperation agreement as authorized by the State Interlocal Cooperation Act. Revenue collection through the RRIF program began in February 1996.

As indicated in the General Administration Manual, the RRIF Program will be reviewed and updated every two years. Contained in this document is an explanation of the methodology used to compute the road impact fees, a listing of proposed roadway projects and their associate costs, and an impact fee schedule based on the cost per service unit.

II. SERVICE AREAS/BENEFIT DISTRICTS

Impact fees must be assessed uniformly within defined “service areas.” Impact fee service areas serve two distinct purposes. The first purpose is for fee calculation (i.e., a road impact fee schedule applies to all new development within a defined service area). The second purpose is to show benefit to fee-paying development (impact fees collected in the service area are spent within the service area).

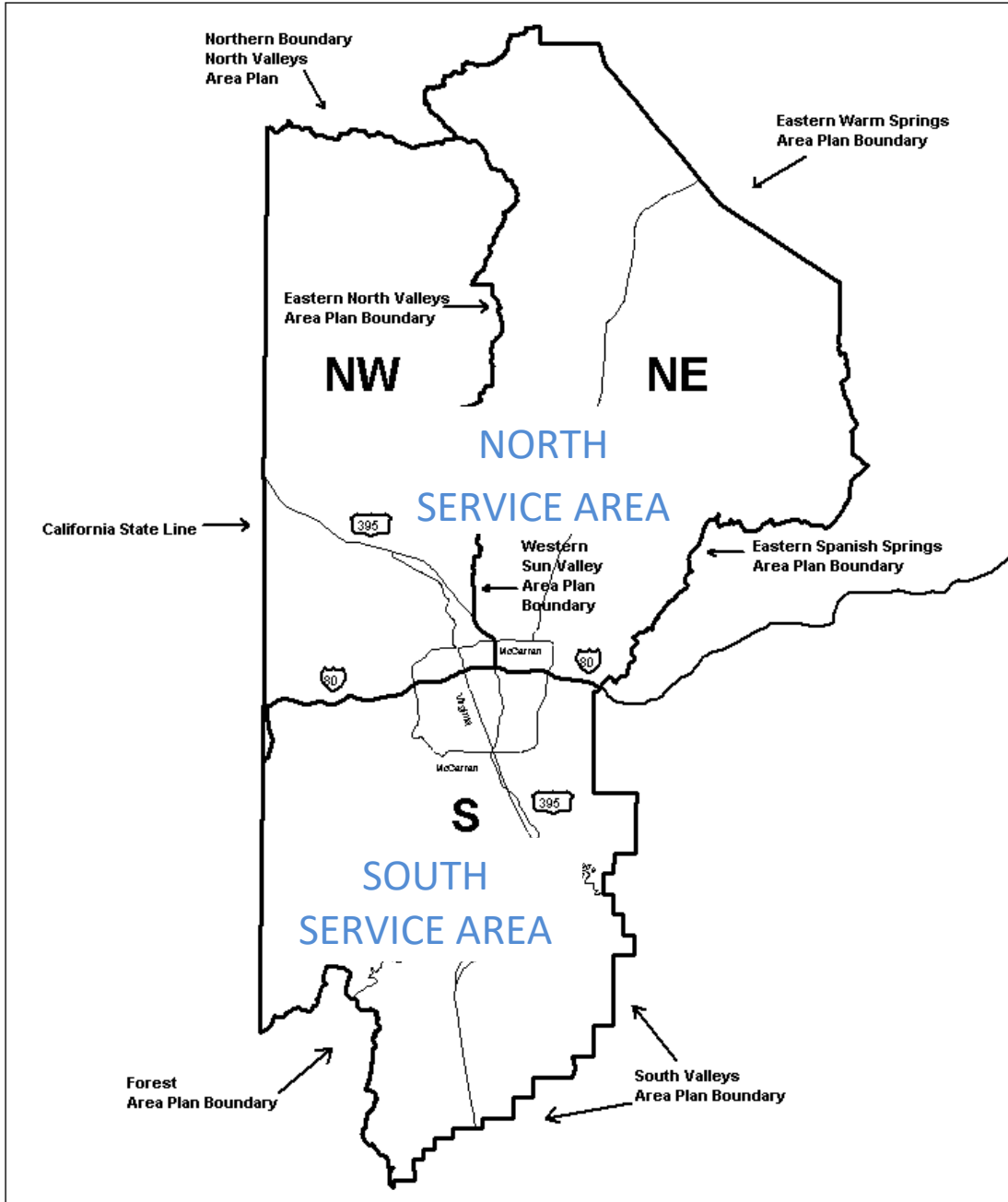
Initially, the impact fee program was created using a single service area with 3 benefit districts under the assumption that a single regional service area is appropriate for a regional road network. The major roadway network functions as a system to facilitate the movement of traffic throughout the region. Travel on the major roadway system during the peak hour, when the capacity the system is most critical, tends to be dominated by relatively long commuting trips.

The Benefit Districts are shown in Figure 1 and defined as:

- Northwest Benefit District – Starting at the southwest corner of the district at the California Nevada state line and Interstate 80, follow the state line north to the northern boundary of the Washoe County North Valleys Area (i.e., northern boundary of the Red Rock Hydrographic Basin boundary), then east along the northern boundary of the North Valleys Planning Area (i.e. northern boundary of the Red Rock and Bedell Flat Hydrographic Basin boundary), then south along the eastern edge of the North Valleys Planning Area (i.e. eastern boundary of the Bedell Flat and Antelope Valley Hydrographic Basin boundary) to the western edge of the Washoe County Sun Valley Planning Area boundary, then continue south along the western edge of the Sun Valley Planning Area to US 395 at the Sutro Street terminus then southeast along the US 395 alignment to Interstate 80, then west along Interstate 80 to the state line.
- Northeast Benefit District – Starting at the southwest corner of the district at the US395/Interstate 80 interchange, follow US 395 northwest to the Sutro Street terminus, then continue north along the western edge of the Washoe County Sun Valley Planning Area to the eastern edge of the Washoe County North Valleys Planning area, then north to the western edge of the Washoe County Warm Springs Planning Area, then north to the northwest corner of the Warm Springs Planning Area, then east along the northern boundary of the Warm Springs Planning Area, then southwest and south along the boundary of the Warm Springs Planning Area, then west along the southern boundary of the Warm Springs Planning Area to the eastern edge of the Washoe County Spanish Springs Planning Area and the Washoe County Truckee Canyon Planning Area, then southwest along the western edge of the Truckee Canyon Planning Area to Interstate 80, then west along Interstate 80 to US 395.
- South Benefit District – Starting at the northwest corner of the district at the California/Nevada line and Interstate 80, follow Interstate 80 east to the western edge of the Washoe county Truckee Canyon Planning Area, then south along the Washoe County/Storey County line to the Washoe County/Carson City line, then west along the Washoe County/Carson City line to the southern jurisdictional line of the Tahoe Regional Planning Agency and the Washoe County Tahoe Planning Area, then north along the California/Nevada line to Interstate 80.

During the update to the 5th Edition RRIF GAM and CIP, the geographic area defining the service boundary was modified to meet NRS 278B.100 which limited a single service area from incorporating an entire city (or county) whose population

**FIGURE 1
REGIONAL ROAD IMPACT FEE SERVICE AREAS
AND BENEFIT DISTRICTS**



is over 15,000. A North Service Area was created by combining the Northeast and Northwest Benefit Districts and the South Benefit District was used as the boundary of the South Service Area. The boundaries of the North and South Service Areas divide both the City of Reno and Sparks, meeting the NRS requirement. Separate Capital Improvement Plans and subsequent fees are calculated for each Service Area with revenue generated from the payment of impact fees to be spent within the Service Area it was collected.

III. REGIONAL ROAD NETWORK

NRS 278B authorizes local governments to adopt impact fees for “street projects,” which are defined as arterial or collector streets or roads that have been designated on the streets and highways plan in the master plan adopted by the local government pursuant to NRS 278.220, including all appurtenances and incidentals necessary for any such facilities.

Only those roadways, existing and planned, that are identified as part of the regional road network in the Regional Transportation Plan (RTP) are eligible for funding with Regional Road Impact Fees. All high (expressway), moderate (major) and low (minor) access control arterial roadways, as defined in the RTP, within the service area, excluding freeways, are included in the regional road network. Most freeway ramps are deemed by the RTC as regionally significant and are included. In addition, collectors are included if they have a forecast volume of 5,000 average daily trips at build-out. Build-out is defined as the full development of the master planned land use in each jurisdiction. The roadways and their classifications are included in the regional road network as listed and defined in the 2040 RTP in *Appendix E, Table E-3 Regional Road System*.

For purposes of the Regional Road Impact Fee Program, the RRIF Network excludes limited access highways, ie, I-80, I-580, and US 395 and all local streets. In addition, the RRIF Program excludes collectors with a forecast volume of less than 14,000 annualized average daily trips at build-out. New roadways proposed by a private development and not listed on the RRIF Capital Improvement Plan may be added to the RRIF Network coincident with or after the first two lanes are constructed and if it provides a significant connection between other regional roads or services regional traffic in excess of the proposed development.

IV. CAPITAL IMPROVEMENTS PLAN

The Regional Road Impact Fees are based on the development of a regional impact fee capital improvements plan (CIP) that identifies planned projects over 10 year timeframe to provide additional roadway capacity to accommodate new development within each Service Area.

The RRIF CIP was established based on the projects identified in the first 10 years of the *2040 Regional Transportation Plan Appendix A: Complete Streets Project*

Listing. The projects included in the 2040 RTP were identified as necessary to accommodate new growth based on analysis of existing and forecasted conditions, regional travel demand model outputs incorporating the adopted land use assumptions, and the professional judgment of transportation planners of the RTC and participating local governments.

The RTP also includes livability projects which address the safety and mobility needs of all corridor travelers. While livability projects do not necessarily add lane capacity, bicycle and pedestrian improvements have been determined a benefit to new development based on regional growth and included in the RRIF CIP.

Construction cost estimates were developed for each roadway project based on generalized cost estimates for the various types of improvements. Exhibit B includes typical right-of-way cross sections for various width roadways which were the basis of the construction cost estimates. Cost estimates for ramp improvements were based on recent NDOT and RTC interchange improvement costs and/or plan line studies. See Exhibit C for the 2017-2026 Project Listing from the 2040 RTP.

V. SERVICE UNITS

NRS 278B requires that capital facilities, and the demand for those facilities, be expressed in terms of “service units”. The statute defines a service unit as “a standardized measure of consumption, use, generation or discharge which is attributable to an individual unit of development calculated for a particular category of capital improvements or facility expansions”. Road impact fees use Average Weekday Vehicle Miles of Travel (VMT) as the service units for allocating the cost of future improvements.

VI. PROJECTED VEHICLE MILES OF TRAVEL (VMT)

Vehicle Miles of Travel (VMT) is the product of vehicle trips generated by land use categories multiplied by the average trip length.

To determine the number of VMTs, an aggregate travel model was created to convert development units within each of the North and South Service Areas to vehicle trips. Development units are based on population and job projections from the 2016 Consensus Forecast. TMRPA’s Population & Employment model uses the Consensus Forecast to predict where and what type of growth will occur. Future growth is incorporated into RTC’s travel demand model by location (travel analysis zones). Population is converted to number of housing units and housing types based on statistical data from the 2016 American Community Survey for Washoe County. Employment is broken down into employment categories and total square footage using standardized square foot per employee by employment type. Vehicle trips can then be calculated using ITE Trip Generation rates.

Average Trip Length, measured in miles, is an output of the regional travel demand-forecasting model. The recommended trip lengths by service area for the regional road network excludes travel on local streets and freeways. The average trip length for the North Service Area on the regional road network is 2.79 miles and 2.64 miles for the South Service Area.

VMTs are calculated for 2015 and 2030 and prorated for the intermediate years. Growth projections of VMT over the 10 year timeframe (2019-2029) used for the RRIF CIP are shown in Table 1 and Table 2 for the North and South Service Areas.

Table 1
North Service Area Travel Demand

North Service Area	2015	2019	2029	2030	2019-2029 Increase
Total Population	262,793	276,604	314,394	318,446	37,790
Total Housing Units	112,786	118,714	134,933	136,672	16,219
Single Housing Units	78,596	82,726	94,029	95,240	11,302
2+ Housing Units	34,191	35,988	40,904	41,432	4,917
Industrial Jobs	14,706	16,408	21,574	22,173	5,166
Commercial Jobs	12,244	13,056	15,330	15,578	2,274
All Other Services Jobs	48,757	51,639	59,610	60,472	7,971
Total Jobs	75,707	81,103	96,514	98,223	15,412
KSF					
Industrial KSF	32,877	36,682	48,232	49,571	11,550
Commercial KSF	6,122	6,528	7,665	7,789	1,137
All Other Services KSF	16,619	17,602	20,319	20,613	2,717
Vehicle Trips					
Single Unit Trips	349,845	368,232	418,540	423,934	50,308
2+ Units Trips	103,653	109,101	124,006	125,604	14,905
Industrial Trips	58,521	65,293	85,853	88,236	20,560
Commercial Trips	86,265	91,987	108,007	109,755	16,020
All Other Services Trips	91,656	97,073	112,058	113,679	14,985
Total Vehicle Trips	689,941	731,686	848,464	861,207	116,778
Weekday Vehicle Miles of Travel (VMT)	1,995,679	2,111,505	2,433,550	2,468,528	322,046

Table 2
South Service Area Travel Demand

South Service Area	2015	2019	2029	2030	2019-2029 Increase
Total Population	161,371	169,853	193,058	195,546	23,205
Total Housing Units	69,258	72,898	82,858	83,925	9,959
Single Housing Units	48,263	50,799	57,740	58,484	6,940
2+ Housing Units	20,995	22,099	25,118	25,442	3,019
Industrial Jobs	35,608	36,327	38,189	38,380	1,862
Commercial Jobs	22,250	23,185	25,698	25,964	2,513
All Other Services Jobs	128,544	134,562	150,868	152,604	16,306
Total Jobs	186,402	194,074	214,755	216,948	20,681
KSF					
Industrial KSF	79,606	81,214	85,376	85,804	4,162
Commercial KSF	11,125	11,593	12,849	12,982	1,257
All Other Services KSF	43,816	45,867	51,425	52,017	5,558
Trips					
Single Unit Trips	215,209	226,520	257,467	260,786	30,947
2+ Units Trips	63,763	67,114	76,283	77,266	9,169
Industrial Trips	141,699	144,561	151,969	152,730	7,408
Commercial Trips	156,762	163,350	181,056	182,929	17,706
All Other Services Trips	241,644	252,957	283,611	286,874	30,654
Total Vehicle Trips	819,078	854,502	950,387	960,585	95,885
Weekday Vehicle Miles of Travel (VMT)	1,903,071	1,988,703	2,221,055	2,245,814	232,352

VII. NET COST PER SERVICE UNIT

The cost per service unit is determined by dividing the cost of providing additional roadway capacity by the amount of new capacity supplied. As described in Section IV, the RRIF CIP is developed from the first 10 years of the RTP which includes not only capacity and livability projects, but pavement preservation, freeway improvements, and debt service.

As impact fees can't be responsible for the entire cost of the first 10 years of the RTP if other funding sources are used to supplement the overall cost, we must determine the RRIF share by deducting the other funding sources from the total cost of the RTP/CIP.

The financial investment plan used in the development of the 2040 RTP identifies the funding sources to be used over the various timeframes of the RTP – *Chapter 11 – Investing Strategically*. The major sources of funding for improvements to the regional roadway network are based on Fuel and Sales Taxes, and Federal and State highway funds, in addition to Regional Road Impact Fees.

**Table 3
2040 RTP Revenue Projections**

Fund Source	2017-2021	2022-2026	2027-2040	Total	2017-2026 Total
Federal	\$188,534,000	\$222,985,000	\$755,697,000	\$1,167,216,000	\$411,519,000
State	\$168,300,000	\$356,489,000	\$703,120,000	\$1,227,909,000	\$524,789,000
Regional (Fuel, Sales, RRIF)	\$458,111,000	\$528,573,000	\$2,151,414,000	\$3,138,098,000	\$986,684,000
Other Revenues (Private)	\$57,000,000	\$83,800,000	\$145,000,000	\$285,800,000	\$140,800,000
Total	\$871,945,000	\$1,191,847,000	\$3,755,231,000	\$5,819,023,000	\$2,063,792,000

Breaking down the Regional funding sources for Fuel Tax, Sales Tax, and RRIF, result in the following:

**Table 4
Regional Funding**

Fund Source	2017-2021	2022-2026	2027-2040	Total	2017-2026 Total
Fuel Tax	\$406,344,091	\$465,378,079	\$1,888,005,728	\$2,759,727,898	\$871,722,170
Sales Tax	\$27,205,268	\$34,721,582	\$157,177,311	\$219,104,161	\$61,926,850
RRIF	\$24,561,522	\$28,473,535	\$106,231,257	\$159,266,314	\$53,035,057
Regional Total	\$458,110,880	\$528,573,196	\$2,151,414,296	\$3,138,098,373	\$986,684,076

Based on the above, approximately \$936 million in Federal and State Highway funds should be available over the ten-year period to help fund improvements identified in the Regional Road Impact Fee CIP. In addition, another \$934 million of Fuel and Sales Taxes will be available to fund CIP improvements, leaving \$194 million as the remaining local share of growth-related.

Table 5
New Development Share Funding

Fund Source	2017-2021	2022-2026	2017-2026 Totals
RRIF	\$24,561,522	\$28,473,535	\$53,035,057
Other Revenues (Private)	\$57,000,000	\$83,800,000	\$140,800,000
Total RRIF Share	\$81,561,522	\$112,273,535	\$193,835,057

Since the RRIF program has two separate Service Areas, the projects in the RTP must also be divided into separate CIPs for each Service Area. The cost for each project was assigned to the service area it was located. If the project crossed the service area boundary, costs were prorated based on the length of the project within the service area. Costs for program level improvements, ie, Traffic Signals, ITS Operations & Intersections, Pedestrian & Bicycle Facility Improvements, etc, were split equally between service areas.

In order to determine the RRIF share of each CIP, revenue for the non-RRIF sources were divided proportionately based on the total cost of the service area CIP.

Table 6
1st 10 Years of the RTP by Service Area

	North Service Area	South Service Area	2017-2026 Total
2017-2021	\$390,582,000	\$481,318,000	\$871,900,000
2022-2026	\$645,775,000	\$545,975,000	\$1,191,750,000
Total RTP 2017-2026	\$1,036,357,000	\$1,027,293,000	\$2,063,650,000
Total RRIF Eligible RTP	\$506,252,000	\$463,998,000	\$970,250,000
% of RRIF Eligible RTP	52.18%	47.82%	100%

Dividing the RRIF Share of the CIP by the growth in VMT within the Service Area results in the \$/VMT rate.

Table 7
Impact Fee Summary

	North Service Area	South Service Area
Total RRIF Share	\$193,835,057	
% RRIF Eligible RTP	52.18%	47.82%
RRIF Share by Service Area	\$101,138,248	\$92,696,809
VMT Growth by Service Area	322,046	232,352
\$/VMT for RRIF Share	\$314.05	\$398.95

VIII. IMPACT FEE SCHEDULE EQUIVALENCY RATES

This section describes the determination of an appropriate equivalency rate that estimates the number of service units generated by specific land use types. For the purpose of fee assessment, the demand placed on the roadway system by new development is expressed in terms of vehicle miles of travel during an average weekday. VMT is a product of trip generation and the average length of a trip. The input variables used to calculate VMT are summarized below.

Trip generation rates, expressed as average weekday Vehicle Trip Ends (VTE) by land use categories, are from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition). Rates were established for specific land use types within the broader categories of residential, office, commercial, industrial and institutional land uses. Rates are per dwelling unit, 1,000 square feet of gross floor area, or other appropriate unit of development.

Since ITE rates represent the total number of trips (inbound and outbound) associated with a specific land use, all trip rates have been divided by two to eliminate double-charging any particular trip. This places the burden of travel equally between the origin and destination of the trip.

Trip adjustment factors also include adjustments to accommodate pass-by and diverted trips. Pass-by trips are those trips that are already on a particular route for a different purpose and simply stop at a particular development on that route. For example, a stop at a convenience store on the way home from the office is a pass-by trip for the convenience store. A pass-by trip does not create an additional burden on the street system and therefore should not be counted in the assessment of impact fees. A diverted trip is similar to a pass-by trip, but a diversion is made from the regular route to make an interim stop. On a system-wide basis, this trip also does not add an additional burden on the street system, so it is not considered in assessing impact fees.

In addition, residential development has a larger trip adjustment factor of 52% to account for commuters leaving Washoe County for work. In other words, residential development is assigned all inbound trips plus 15% of outbound trips to account for job locations outside of Washoe County, calculated as follows. According to the 2009 National Household Travel Survey weekday work trips are typically 31% of production trips (i.e., all outbound trips). As shown in the Census Bureau's web application, OnTheMap indicates that approximately 15% of resident workers traveled outside the county for work in 2011. In combination, these factors ($0.31 \times 0.50 \times 0.15 = 0.02$) support the additional 2% allocation of trips to residential development.

For commercial development, the trip adjustment factor is less than 50% because retail development attracts vehicles as they pass by on arterial and collector roads. For an average shopping center, ITE data indicate 34% of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66% of attraction trips have the commercial site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 66% multiplied by 50%, or approximately 33% of the trip ends.

Many institutional land uses, like schools, also have significant pass-by and diverted link trips as children are dropped off and picked up by parents on their way to some other primary destination. Given this travel pattern, the pass-by adjustment for schools and daycare utilized the commercial trip adjustment factor.

Average Trip Length, measured in miles, is derived from the computerized regional travel demand-forecasting model. The recommended trip lengths by service area for the regional road network excludes travel on local streets and freeways. The average trip length for the North Service Area on the regional road network is 2.79 miles and 2.64 miles for the South Service Area.

Trip length weighting factors by type of land use are used to account for trip length variations by the type of land use. Per the 2009 National Household Travel Survey, vehicle trips from residential development account for 121% of the average trip length. Conversely, shopping trips associated with commercial development are roughly 66% of the average trip length while other non-residential development typically accounts for trips that are 73% of the average for all trips.

The result of combining trip generation and trip length information is an equivalency table establishing the number of service units (VMT) generated by various land use types per unit of development. The recommended equivalency rates are presented in Tables 6 and 7.

Table 8
North Service Area
Service Unit Generation by Land Use

<i>Development Type</i>	<i>Development Unit</i>	<i>Avg Wkdy Veh Trip Ends¹</i>	<i>Trip Rate Adjustment</i>	<i>Trip Length Adjustment</i>	<i>6th Ed North VMT's</i>
<i>Residential</i>					
Single Family Detached	1,000 Sq Ft	8.56	52%	121%	15.03
Apartment	1,000 Sq Ft	5.83	52%	121%	10.23
<i>Industrial</i>					
Light Industrial	1000 Sq Ft	4.96	50%	73%	5.05
Manufacturing	1000 Sq Ft	3.93	50%	73%	4.00
Warehousing	1000 Sq Ft	1.74	50%	73%	1.77
Mini-Warehouse	1000 Sq Ft	1.51	50%	73%	1.54
<i>Commercial</i>					
Shopping Center	1000 Sq Ft Leasable	37.75	33%	66%	22.94
Casino Gaming Area	1000 Sq Ft	46.05	50%	73%	46.90
<i>Office & Other Services</i>					
Lodging	Room	3.35	50%	73%	3.41
Regional Park	Acre	2.28	50%	73%	2.32
Elementary School	1000 Sq Ft	19.52	33%	73%	13.12
Hospital	1000 Sq Ft	10.72	50%	73%	10.92
Nursing Home	1000 Sq Ft	6.64	50%	73%	6.76
Office & Other Services	1000 Sq Ft	9.74	50%	73%	9.92
Medical Office	1000 Sq Ft	34.8	50%	73%	35.44

Sources: Trip Generation by land use category is based on the ITE Trip Generation 10th Edition. VMTs are the resulting calculation of Avg weekday vehicle trips x Trip Rate Adjustment x Trip Length Adjustment x Average Trip Length for the South Service Area (2.79 miles)

Table 9
South Service Area
Service Unit Generation by Land Use

<i>Development Type</i>	<i>Development Unit</i>	<i>Avg Wkdy Veh Trip Ends</i>	<i>Trip Rate Adjustment</i>	<i>Trip Length Adjustment</i>	<i>6th Ed South VMT's</i>
Residential					
Single Unit	Dwelling	8.56	52%	121%	14.24
2+ Units per Structure	Dwelling	5.83	52%	121%	9.68
Industrial					
Light Industrial	1000 Sq Ft	4.96	50%	73%	4.78
Manufacturing	1000 Sq Ft	3.93	50%	73%	3.79
Warehousing	1000 Sq Ft	1.74	50%	73%	1.68
Mini-Warehouse	1000 Sq Ft	1.51	50%	73%	1.46
Commercial					
Shopping Center	1000 Sq Ft Leasable	37.75	33%	66%	21.71
Casino Gaming Area	1000 Sq Ft	46.05	50%	73%	44.37
Office & Other Services					
Lodging	Room	3.35	50%	73%	3.23
Regional Park	Acre	2.28	50%	73%	2.20
Elementary School	1000 Sq Ft	19.52	33%	73%	12.41
Hospital	1000 Sq Ft	10.72	50%	73%	10.33
Nursing Home	1000 Sq Ft	3.06	50%	73%	6.40
Office & Other Services	1000 Sq Ft	9.74	50%	73%	9.39
Medical Office	1000 Sq Ft	34.8	50%	73%	33.53

Sources: Trip Generation by land use category is based on the ITE Trip Generation 10th Edition. VMTs are the resulting calculation of Avg weekday vehicle trips x Trip Rate Adjustment x Trip Length Adjustment x Average Trip Length for the South Service Area (2.64 miles)

IX. IMPACT FEE COST SCHEDULE

The Regional Road Impact fee for a given land use type is the product of the number of service units generated by the land use and net cost per service unit (\$/VMT). Based on the capital improvements program, and the data, analysis and assumptions contained in this study, the impact fees by land use type are presented in Exhibit E.

EXHIBIT A
ACCESS MANAGEMENT STANDARDS

EXHIBIT A ACCESS MANAGEMENT STANDARDS

Access Management Standards-Arterials ¹ and Collectors							
Access Management Class	Posted Speeds	Signals Per Mile and Spacing ²	Median Type	Left From Major Street? (Spacing from signal)	Left From Minor Street or Driveway?	Right Decel Lanes at Driveways?	Driveway Spacing ³
High Access Control	45-55 mph	2 or less Minimum spacing 2350 feet	Raised w/channelized turn pockets	Yes 750 ft. minimum	Only at signalized locations	Yes ⁴	250 ft./500 ft.
Moderate Access Control	40-45 mph	3 or less Minimum spacing 1590 feet	Raised or painted w/turn pockets	Yes 500 ft. minimum	No, on 6- or 8-lane roadways w/o signal	Yes ⁵	200 ft./300 ft.
Low Access Control	35-40 mph	5 or less Minimum spacing 900 feet	Raised or painted w/turn pockets or undivided w/painted turn pockets or two-way, left-turn lane	Yes 350 ft. minimum	Yes	No	150 ft./200 ft.
Ultra-Low Access Control	30-35 mph	8 or less Minimum spacing 560 feet	Raised or painted w/turn pockets or undivided w/painted turn pockets or two-way left-turn lane	Yes 350 ft. minimum	Yes	No	150 ft./200 ft. 100 ft./100 ft. ⁶

¹ On-street parking shall not be allowed on any new arterials. Elimination of existing on-street parking shall be considered a priority for major and minor arterials operating at or below the policy level of service.

² Minimum signal spacing is for planning purposes only; additional analysis must be made of proposed new signals in the context of existing conditions, planned signalized intersections, and other relevant factors impacting corridor level of service.

³ Minimum spacing from signalized intersection/spacing from other driveways.

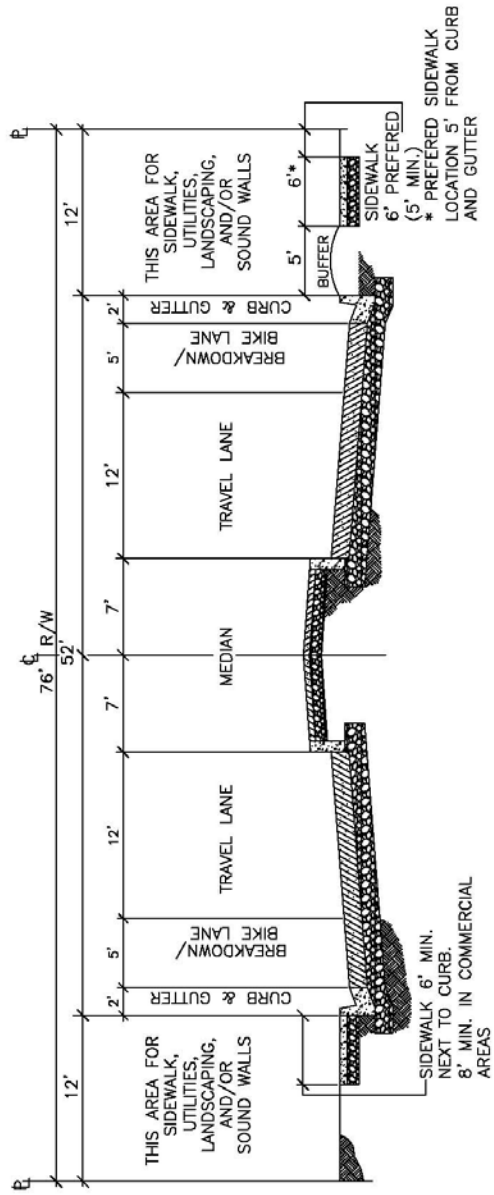
⁴ If there are more than 30 inbound, right-turn movements during the peak-hour.

⁵ If there are more than 60 inbound, right-turn movements during the peak-hour.

⁶ Minimum spacing on collectors.

EXHIBIT B
Typical Right of Way Sections

EXHIBIT B TYPICAL 2-LANE RIGHT-OF-WAY SECTION

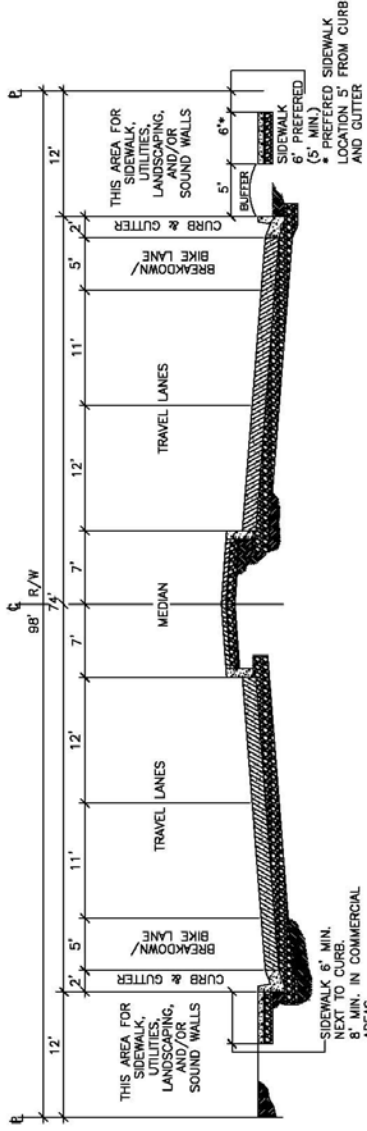


TYPICAL 76' RIGHT-OF-WAY SECTION
TWO TRAVEL LANES

REGIONAL TRANSPORTATION COMMISSION
RIGHT-OF-WAY SECTION



EXHIBIT B TYPICAL 4-LANE RIGHT-OF-WAY SECTION

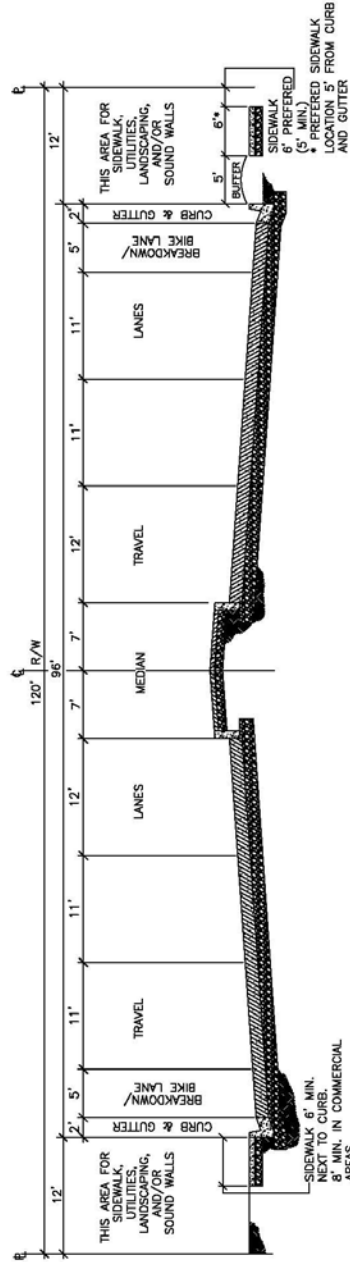


TYPICAL 98' RIGHT-OF-WAY SECTION
FOUR TRAVEL LANES

REGIONAL TRANSPORTATION COMMISSION
RIGHT-OF-WAY SECTION



EXHIBIT B TYPICAL 6-LANE RIGHT-OF-WAY SECTION



TYPICAL 120' RIGHT-OF-WAY SECTION
SIX TRAVEL LANES

REGIONAL TRANSPORTATION COMMISSION
RIGHT-OF-WAY SECTION



EXHIBIT C
2040 Regional Transportation Plan
2017-2026 Project Listing

EXHIBIT C
2040 Regional Transportation Plan
2017-2026 Project Listing

Timeframe A #1	Service Area	Roadway	Limits	Description	RTP Cost	% North Service Area	% South Service Area	RTP RRIF Eligible North	RTP RRIF Eligible South
2017-21	S	2nd Street	Keystone Ave to I-580	Multimodal improvements (corridor study completed) Phase 1	\$3,000,000	0%	100%	\$0	\$3,000,000
2017-21	NS	4th St/Prater Way Bus RAPID Transit Project	Evans Ave to Pyramid Hwy	RAPID Extension & Complete Street Improvements	\$57,800,000	0%	0%	\$0	\$0
2017-21	S	4th Street (Reno)	Keystone Avenue to Evans Ave	Enhanced sidewalks and bus/bike lanes, intersection improvements	\$8,300,000	0%	100%	\$0	\$8,300,000
2017-21	NS	ADA Accessibility Improvements	Spot improvements systemwide - ADA Transition Plan	\$1 million per year	\$5,500,000	0%	0%	\$0	\$0
2022-26	NS	ADA Accessibility Improvements	Spot improvements systemwide - ADA Transition Plan	\$1.28 million per year	\$6,400,000	0%	0%	\$0	\$0
2017-21	S	Arlington Ave	At Truckee River Bridge	Replace existing bridges (PE/NEPA)	\$500,000	0%	0%	\$0	\$0
2022-26	S	Arlington Ave	At Truckee River Bridge	Replace existing bridges	\$25,500,000	0%	0%	\$0	\$0
2022-26	S	Arrowcreek Pkwy	Wedge Pkwy to Zolezzi Ln	Widen 2 to 4 lanes	\$8,300,000	0%	100%	\$0	\$8,300,000
2022-26	N	Buck Dr	Lemmon Dr to N Hills Blvd	Widen 2 to 4 lanes	\$1,700,000	100%	0%	\$1,700,000	\$0
2017-21	S	Center Street	S Virginia to I-80	Widen sidewalks & add bike lanes	\$5,400,000	0%	100%	\$0	\$5,400,000
2022-26	S	Damonte Ranch Pkwy	Veterans Pkwy to Rio Wrangler Pkwy	New 2 lane road	\$7,100,000	0%	100%	\$0	\$7,100,000
2017-21	NS	Debt Service		\$27.3 million per year	\$136,500,000	0%	0%	\$0	\$0
2022-26	NS	Debt Service		\$27.4 million per year	\$145,800,000	0%	0%	\$0	\$0
2017-21	N	Dolores Drive	Existing Dolores west to Lazy 5 Pkwy	New 2 lane road	\$1,500,000	100%	0%	\$1,500,000	\$0
2017-21	S	Forest Street	California Avenue to Mount Rose Street	Bike facility	\$4,100,000	0%	100%	\$0	\$4,100,000
2022-26	S	Geiger Grade	Toll Rd to Rim Rock	Widen 2 to 4 lanes	\$26,300,000	0%	100%	\$0	\$26,300,000
2022-26	S	Geiger Grade Realignment	Virginia St to Toll Rd	New 4 lane road	\$75,100,000	0%	100%	\$0	\$75,100,000
2017-21	S	Glendale Ave	Kietzke Ave to McCarran Blvd	Pavement reconstruction & multimodal improvements	\$16,400,000	0%	100%	\$0	\$16,400,000
2017-21	NS	I-580 Improvements South of Spaghetti Bowl	I-80 to Mill St interchange	Widen eastbound I-80 ramp to southbound I-580 to two lanes, reconfigure Wells Ave eastbound I-80	\$101,300,000	0%	0%	\$0	\$0
2022-26	NS	I-580 Improvements South of Spaghetti Bowl	I-80 to Mill St interchange	Widen eastbound I-80 ramp to southbound I-580 to two lanes, reconfigure Wells Ave eastbound I-80	\$60,700,000	0%	0%	\$0	\$0
2022-26	NS	I-80	East Truckee River Canyon	Safety improvements - add shoulders	\$9,000,000	0%	0%	\$0	\$0
2022-26	NS	I-80	Patrick Interchange	Interchange improvements	\$11,600,000	0%	0%	\$0	\$0
2022-26	NS	I-80/I-580/US 395 (Spaghetti Bowl)	I-80/I-580/US 395 interchange & southbound lanes on US 395 from I-80 to California to I-80	Operational & capacity improvements - widen US 395 to 8 lanes, Phase 2	\$93,500,000	0%	0%	\$0	\$0
2022-26	S	Keystone Ave	California to I-80	Multimodal improvements and Truckee River bridge replacement	\$58,600,000	0%	100%	\$0	\$58,600,000

EXHIBIT C
2040 Regional Transportation Plan
2017-2026 Project Listing

Timeframe A #1	Service Area	Roadway	Limits	Description	RTP Cost	% North Service Area	% South Service Area	RTP RRIF Eligible North	RTP RRIF Eligible South
2017-21	S	Kietzke Ln	Virginia St to Galletti Way	Multimodal improvements Phase 1	\$3,800,000	0%	100%	\$0	\$3,800,000
2022-26	S	Kietzke Ln	Virginia St to Galletti Way	Multimodal improvements (corridor study initiated) Phase 2	\$10,700,000	0%	100%	\$0	\$10,700,000
2017-21	N	Kiley Pkwy	Wingfield Hills Rd to Henry Orr Pkwy	New 2 lane road	\$6,400,000	100%	0%	\$6,400,000	\$0
2017-21	N	Lazy 5 Pkwy	W Sun Valley Arterial to Pyramid Hwy	New 4 lane road west of Pyramid Hwy transitioning to 2 lanes at future development entrance	\$27,600,000	100%	0%	\$27,600,000	\$0
2022-26	N	Lemmon Dr	US 395 to Military Rd and Fleetwood Dr to Chickadee Dr	Widen 4 to 6 lanes from US 395 to Military Rd and Widen 2 to 4 lanes from Fleetwood Dr to Chickadee	\$12,300,000	100%	0%	\$12,300,000	\$0
2017-21	N	Lemmon Drive	US 395 to Military Rd and Fleetwood Dr to Chickadee Dr	Widen 4 to 6 lanes from US 395 to Military Rd and Widen 2 to 4 lanes from Fleetwood Dr to Chickadee	\$3,000,000	100%	0%	\$3,000,000	\$0
2022-26	N	Loop Rd	Salomon Circle to Eastern Slope Rd	New 2 lane road	\$4,900,000	100%	0%	\$4,900,000	\$0
2022-26	N	Military Rd	Lemmon Dr to Echo Ave	Widen 2 to 4 lanes	\$22,600,000	100%	0%	\$22,600,000	\$0
2017-21	S	Mill St/Terminal Way	Reno-Tahoe International Airport to Lake St (downtown Reno)	Multimodal improvements, intersection improvements, additional eastbound lane from	\$1,600,000	0%	100%	\$0	\$1,600,000
2022-26	S	Mill St/Terminal Way	Reno Tahoe International Airport to Lake St (downtown Reno)	Multimodal improvements, intersection improvements, additional eastbound lane from	\$17,500,000	0%	100%	\$0	\$17,500,000
2022-26	N	Moya Blvd	Red Rock Rd to Echo Ave	Widen 2 to 4 lanes	\$17,500,000	100%	0%	\$17,500,000	\$0
2022-26	N	N/S Connector Rd	Stonebrook Pkwy to Wingfield Hills Rd	New 2 lane road	\$8,400,000	100%	0%	\$8,400,000	\$0
2022-26	N	North Virginia St	McCarran Blvd to Panther	Sidewalks and bike lanes. An off-street shared-use path may be considered	\$14,050,000	100%	0%	\$14,050,000	\$0
2022-26	N	North Virginia St	Panther to Stead Blvd	Widen from 2 to 4 lanes and multimodal improvements	\$38,500,000	100%	0%	\$38,500,000	\$0
2017-21	N	Oddie Blvd/Wells Ave	I-80 to Pyramid Way	Multimodal improvements	\$37,600,000	100%	0%	\$37,600,000	\$0
2022-26	N	Parr Blvd	Ferrari McLeod to Raggio Pkwy	Interchange improvements	\$7,700,000	100%	0%	\$7,700,000	\$0
2017-21	NS	Pavement Preservation	Systemwide	\$18.7 million per year	\$101,200,000	0%	0%	\$0	\$0
2022-26	NS	Pavement Preservation	Systemwide	\$23.8 million per year	\$119,000,000	0%	0%	\$0	\$0
2017-21	NS	Pedestrian & Bicycle Facility Improvements	Spot improvements systemwide based on BPMP	\$1 million per year	\$5,500,000	50%	50%	\$2,750,000	\$2,750,000
2022-26	NS	Pedestrian & Bicycle Facility Improvements	Spot improvements systemwide based on BPMP	\$1.28 million per year	\$6,400,000	50%	50%	\$3,200,000	\$3,200,000
2022-26	S	Plumb Lane	Lakeside Drive to Kietzke Lane	Sidewalks and bike lanes	\$8,200,000	0%	100%	\$0	\$8,200,000
2017-21	N	Pyramid Hwy	@ McCarran Blvd	Improve capacity, safety & multimodal access (under construction)	\$30,000,000	100%	0%	\$30,000,000	\$0
2022-26	N	Pyramid Hwy/Sun Valley/US 395 Connector Phase 1	Queen Way to Golden View	Widen Pyramid to 6 lanes from Queen Way to Golden View	\$50,500,000	100%	0%	\$50,500,000	\$0
2017-21	N	Pyramid Hwy/Sun Valley/US 395 Connector Phase 1	Queen Way to Golden View	Widen Pyramid to 6 lanes from Queen Way to Golden View (PE/NEPA)	\$5,000,000	100%	0%	\$5,000,000	\$0

EXHIBIT C
2040 Regional Transportation Plan
2017-2026 Project Listing

Timeframe A #1	Service Area	Roadway	Limits	Description	RTP Cost	% North Service Area	% South Service Area	RTP RRIF Eligible North	RTP RRIF Eligible South
2022-26	N	Red Rock Rd	Moya Blvd to Evans Ranch Access	Widen 2 to 4 lanes	\$51,800,000	100%	0%	\$51,800,000	\$0
2022-26	NS	Sierra Street	At Truckee River Bridge	Replace existing bridge	\$19,100,000	0%	0%	\$0	\$0
2017-21	NS	Sierra Street	California Ave to 9th St	Widen sidewalks & add bike lanes	\$4,400,000	9%	91%	\$396,000	\$4,004,000
2022-26	N	Sky Vista Pkwy	Lemmon Dr to Silver Lake Rd	Widen 2 to 4 lanes	\$8,900,000	100%	0%	\$8,900,000	\$0
2017-21	S	South Virginia Street	South of Arrowcreek Pkwy to the I-580 interchange	Safety and multimodal improvements including traffic signal and median	\$5,000,000	0%	100%	\$0	\$5,000,000
2022-26	S	South Virginia Street	E Patriot Blvd to Mt. Rose Hwy/Geiger Grade	Add sidewalks and bike lane, convert travel lane to bus/bike lane	\$18,000,000	0%	100%	\$0	\$18,000,000
2017-21	S	SouthEast Connector	South Meadows Pkwy to Greg St	New 6 lane road (under construction)	\$130,000,000	0%	100%	\$0	\$130,000,000
2017-21	N	Sparks Blvd	Greg to Baring	Multimodal improvements, widen 4 to 6 lanes from Greg to I-80, widen 4-6 lanes I-80 to Springland on	\$1,600,000	77%	23%	\$1,232,000	\$368,000
2022-26	N	Sparks Blvd	Greg to Baring	Multimodal improvements, widen 4 to 6 lanes from Greg to I-80, widen 4-6 lanes I-80 to Springland on	\$56,200,000	77%	23%	\$43,274,000	\$12,926,000
2017-21	N	Stonebrook Parkway	La Posada Dr to N/S Connector Rd	New 2 lane road	\$11,300,000	100%	0%	\$11,300,000	\$0
2022-26	N	Stonebrook Parkway	N/S Connector Rd to Pyramid Highway	New 2 lane road	\$8,100,000	100%	0%	\$8,100,000	\$0
2017-21	N	Sun Valley Blvd	7th Ave to Pyramid Hwy/US 395 Connector	Multimodal improvements PE/NEPA	\$3,000,000	100%	0%	\$3,000,000	\$0
2022-26	N	Sun Valley Blvd	7th Ave to Pyramid Hwy/US 395 Connector	Multimodal improvements	\$52,700,000	100%	0%	\$52,700,000	\$0
2017-21	NS	Traffic Signals, ITS Operations & Intersections	Systemwide, including: La Posada at Cordoba Blvd roundabout; Damonte Ranch	\$2.6 million per year	\$14,100,000	50%	50%	\$7,050,000	\$7,050,000
2022-26	NS	Traffic Signals, ITS Operations & Intersections	Systemwide	\$3.32 million per year	\$16,600,000	50%	50%	\$8,300,000	\$8,300,000
2017-21	NS	US 395	Clear Acre Ln to Lemmon Dr	Freeway widening PE/NEPA	\$1,500,000	0%	0%	\$0	\$0
2022-26	NS	US 395	N McCarran Blvd to Lemmon Dr	Additional southbound lane and auxiliary lanes northbound and southbound	\$66,800,000	0%	0%	\$0	\$0
2017-21	NS	US 395/I-580/I-80	Spaghetti Bowl (Kietzke to N McCarran, Keystone to Pyramid)	Capacity expansion at Spaghetti Bowl, PE/NEPA	\$12,800,000	0%	0%	\$0	\$0
2017-21	NS	US 395/I-580/I-80	System wide ramps and freeways ITS	Auxiliary lanes/freeway management/ITS project	\$14,600,000	0%	0%	\$0	\$0
2022-26	S	Vassar Street	Holcomb Avenue to Terminal Way	Bike lanes	\$4,300,000	0%	100%	\$0	\$4,300,000
2017-21	N	Victorian Avenue	16th Street to Pyramid Way	Bike lanes	\$2,300,000	100%	0%	\$2,300,000	\$0
2022-26	S	Vine Street	Riverside Drive to University Terrace	Bike lanes	\$3,200,000	0%	100%	\$0	\$3,200,000
2017-21	NS	Virginia St Bus RAPID Extension	Plumb Ln to 17th St	Pedestrian improvements & pavement reconstruction	\$104,300,000	0%	0%	\$0	\$0
2022-26	S	W 2nd Street (Reno)	Keystone Avenue to Galletti Way	Enhanced sidewalks, landscaping, bike lanes	\$10,500,000	0%	100%	\$0	\$10,500,000

**EXHIBIT C
2040 Regional Transportation Plan
2017-2026 Project Listing**

Timeframe A #1	Service Area	Roadway	Limits	Description	RTP Cost	% North Service Area	% South Service Area	RTP RRIF Eligible North	RTP RRIF Eligible South
2022-26	N	Whitelake Parkway	Between US 395 ramp terminals	Widen 2 to 4 lanes	\$7,700,000	100%	0%	\$7,700,000	\$0
2017-21	N	Wingfield Hills Rd	Existing Wingfield Hills Rd west to David Allen Pkwy	New 4 lane road	\$5,000,000	100%	0%	\$5,000,000	\$0
Subtotal					\$2,063,650,000			\$506,252,000	\$463,998,000
Percent of RTP RRIF Eligible Improvements by SA								52.18%	47.82%

EXHIBIT D
CAPITAL IMPROVEMENT PLANS
NORTH & SOUTH SERVICE AREAS

**EXHIBIT D
NORTH SERVICE AREA
CAPITAL IMPROVEMENT PLAN**

Roadway	Limits	Description	RTP Cost	% North Service Area	RTP RRIF Eligible	% RRIF Share North	North CIP
4th St/Prater Way Bus RAPID Transit Project	Evans Ave to Pyramid Hwy	RAPID Extension & Complete Street Improvements	\$57,800,000	0%	\$0	0%	\$0
Buck Dr	Lemmon Dr to N Hills Blvd	Widen 2 to 4 lanes	\$1,700,000	100%	\$1,700,000	100%	\$1,700,000
Dolores Drive	Existing Dolores west to Lazy 5 Pkwy	New 2 lane road	\$1,500,000	100%	\$1,500,000	0%	\$0
Kiley Pkwy	Wingfield Hills Rd to Henry Orr Pkwy	New 2 lane road	\$6,400,000	100%	\$6,400,000	0%	\$0
Lazy 5 Pkwy	W Sun Valley Arterial to Pyramid Hwy	New 4 lane road west of Pyramid Hwy transitioning to 2 lanes at future development entrance	\$27,600,000	100%	\$27,600,000	50%	\$13,800,000
Lemmon Dr	US 395 to Military Rd and Fleetwood Dr to Chickadee Dr	Widen 4 to 6 lanes from US 395 to Military Rd and Widen 2 to 4 lanes from Fleetwood Dr to Chickadee	\$12,300,000	100%	\$12,300,000	100%	\$12,300,000
Lemmon Drive	US 395 to Military Rd and Fleetwood Dr to Chickadee Dr	Widen 4 to 6 lanes from US 395 to Military Rd and Widen 2 to 4 lanes from Fleetwood Dr to Chickadee	\$3,000,000	100%	\$3,000,000	100%	\$3,000,000
Loop Rd	Salomon Circle to Eastern Slope Rd	New 2 lane road	\$4,900,000	100%	\$4,900,000	0%	\$0
Military Rd	Lemmon Dr to Echo Ave	Widen 2 to 4 lanes	\$22,600,000	100%	\$22,600,000	100%	\$22,600,000
Moya Blvd	Red Rock Rd to Echo Ave	Widen 2 to 4 lanes	\$17,500,000	100%	\$17,500,000	100%	\$17,500,000
N/S Connector Rd	Stonebrook Pkwy to Wingfield Hills Rd	New 2 lane road	\$8,400,000	100%	\$8,400,000	0%	\$0
North Virginia St	Panther to Stead Blvd	Widen from 2 to 4 lanes and multimodal improvements	\$38,500,000	100%	\$38,500,000	100%	\$38,500,000
North Virginia St	McCarran Blvd to Panther	Sidewalks and bike lanes. An off-street shared-use path may be considered	\$14,050,000	100%	\$14,050,000	15%	\$2,107,500
Oddie Blvd/Wells Ave	I-80 to Pyramid Way	Multimodal improvements	\$37,600,000	100%	\$37,600,000	15%	\$5,640,000
Parr Blvd	Ferrari McLeod to Raggio Pkwy	Interchange improvements	\$7,700,000	100%	\$7,700,000	100%	\$7,700,000
Pedestrian & Bicycle Facility Improvements	Spot improvements systemwide based on BPMP	\$1 million per year	\$5,500,000	50%	\$2,750,000	15%	\$412,500
Pedestrian & Bicycle Facility Improvements	Spot improvements systemwide based on BPMP	\$1.28 million per year	\$6,400,000	50%	\$3,200,000	15%	\$480,000
Pyramid Hwy	@ McCarran Blvd	Improve capacity, safety & multimodal access (under construction)	\$30,000,000	100%	\$30,000,000	0%	\$0
Pyramid Hwy/Sun Valley/US 395 Connector Phase 1	Queen Way to Golden View	Widen Pyramid to 6 lanes from Queen Way to Golden View	\$50,500,000	100%	\$50,500,000	100%	\$50,500,000
Pyramid Hwy/US 395 Connector Phase 1	Queen Way to Golden View	Widen Pyramid to 6 lanes from Queen Way to Golden View (PE/NEPA)	\$5,000,000	100%	\$5,000,000	100%	\$5,000,000
Red Rock Rd	Moya Blvd to Evans Ranch Access	Widen 2 to 4 lanes	\$51,800,000	100%	\$51,800,000	100%	\$51,800,000
Sierra Street	California Ave to 9th St	Widen sidewalks & add bike lanes	\$4,400,000	9%	\$396,000	15%	\$59,400
Sky Vista Pkwy	Lemmon Dr to Silver Lake Rd	Widen 2 to 4 lanes	\$8,900,000	100%	\$8,900,000	100%	\$8,900,000
Sparks Blvd	Greg to Baring	Multimodal improvements, widen 4 to 6 lanes from Greg to I-80, widen 4-6 lanes I-80 to Springland on	\$1,600,000	77%	\$1,232,000	100%	\$1,232,000
Sparks Blvd	Greg to Baring	Multimodal improvements, widen 4 to 6 lanes from Greg to I-80, widen 4-6 lanes I-80 to Springland on	\$56,200,000	77%	\$43,274,000	100%	\$43,274,000
Stonebrook Parkway	La Posada Dr to N/S Connector Rd	New 2 lane road	\$11,300,000	100%	\$11,300,000	0%	\$0

**EXHIBIT D
NORTH SERVICE AREA
CAPITAL IMPROVEMENT PLAN**

Roadway	Limits	Description	RTP Cost	% North Service Area	RTP RRIF Eligible	% RRIF Share North	North CIP
Stonebrook Pkwy	N/S Connector Rd to Pyramid Highway	New 2 lane road	\$8,100,000	100%	\$8,100,000	0%	\$0
Sun Valley Blvd	7th Ave to Pyramid Hwy/US 395 Connector	Multimodal improvements PE/NEPA	\$3,000,000	100%	\$3,000,000	15%	\$450,000
Sun Valley Blvd	7th Ave to Pyramid Hwy/US 395 Connector	Multimodal improvements	\$52,700,000	100%	\$52,700,000	15%	\$7,905,000
Traffic Signals, ITS Operations & Intersections	Systemwide	\$2.6 million per year	\$14,100,000	50%	\$7,050,000	33%	\$2,326,500
Traffic Signals, ITS Operations & Intersections	Systemwide	\$3.32 million per year	\$16,600,000	50%	\$8,300,000	33%	\$2,739,000
Victorian Avenue	16th Street to Pyramid Way	Bike lanes	\$2,300,000	100%	\$2,300,000	15%	\$345,000
Virginia St Bus RAPID Extension	Plumb Ln to 17th St	Pedestrian improvements & pavement reconstruction	\$104,300,000	0%	\$0	0%	\$0
Whitelake Parkway	Between US 395 ramp terminals	Widen 2 to 4 lanes	\$7,700,000	100%	\$7,700,000	100%	\$7,700,000
Wingfield Hills Rd	Existing Wingfield Hills Rd west to David Allen Pkwy	New 4 lane road	\$5,000,000	100%	\$5,000,000	50%	\$2,500,000
					\$506,252,000	Total	\$310,470,900

**EXHIBIT D
SOUTH SERVICE AREA
CAPITAL IMPROVEMENT PLAN**

Roadway	Limits	Description	RTP Cost	% South Service Area	RTP RRIF Eligible	% RRIF Share South	South CIP
2nd Street	Keystone Ave to I-580	Multimodal improvements (corridor study completed) Phase 1	\$3,000,000	100%	\$3,000,000	12%	\$360,000
4th St/Prater Way Bus RAPID Transit Project	Evans Ave to Pyramid Hwy	RAPID Extension & Complete Street Improvements	\$57,800,000	0%	\$0	0%	\$0
4th Street (Reno)	Keystone Avenue to Evans Ave	Enhanced sidewalks and bus/bike lanes, intersection improvements	\$8,300,000	100%	\$8,300,000	12%	\$996,000
Arrowcreek Pkwy	Wedge Pkwy to Zolezzi Ln	Widen 2 to 4 lanes	\$8,300,000	100%	\$8,300,000	100%	\$8,300,000
Center Street	S Virginia to I-80	Widen sidewalks & add bike lanes	\$5,400,000	100%	\$5,400,000	12%	\$648,000
Damonte Ranch Pkwy	Veterans Pkwy to Rio Wrangler Pkwy	New 2 lane road	\$7,100,000	100%	\$7,100,000	0%	\$0
Forest Street	California Avenue to Mount Rose Street	Bike facility	\$4,100,000	100%	\$4,100,000	12%	\$492,000
Geiger Grade	Toll Rd to Rim Rock	Widen 2 to 4 lanes	\$26,300,000	100%	\$26,300,000	100%	\$26,300,000
Geiger Grade Realignment	Virginia St to Toll Rd	New 4 lane road	\$75,100,000	100%	\$75,100,000	50%	\$37,550,000
Glendale Ave	Kietzke Ave to McCarran Blvd	Pavement reconstruction & multimodal improvements	\$16,400,000	100%	\$16,400,000	12%	\$1,968,000
Keystone Ave	California to I-80	Multimodal improvements and Truckee River bridge replacement	\$58,600,000	100%	\$58,600,000	12%	\$7,032,000
Kietzke Ln	Virginia St to Galletti Way	Multimodal improvements Phase 1	\$3,800,000	100%	\$3,800,000	12%	\$456,000
Kietzke Ln	Virginia St to Galletti Way	Multimodal improvements (corridor study initiated) Phase 2	\$10,700,000	100%	\$10,700,000	12%	\$1,284,000
Mill St/Terminal Way	Reno-Tahoe International Airport to Lake St (downtown Reno)	Multimodal improvements, intersection improvements, additional eastbound lane from	\$1,600,000	100%	\$1,600,000	100%	\$1,600,000
Mill St/Terminal Way	Reno Tahoe International Airport to Lake St (downtown Reno)	Multimodal improvements, intersection improvements, additional eastbound lane from	\$17,500,000	100%	\$17,500,000	100%	\$17,500,000
Pedestrian & Bicycle Facility Improvements	Spot improvements systemwide based on BPMP	\$1 million per year	\$5,500,000	50%	\$2,750,000	12%	\$330,000
Pedestrian & Bicycle Facility Improvements	Spot improvements systemwide based on BPMP	\$1.28 million per year	\$6,400,000	50%	\$3,200,000	12%	\$384,000
Plumb Lane	Lakeside Drive to Kietzke Lane	Sidewalks and bike lanes	\$8,200,000	100%	\$8,200,000	12%	\$984,000
Sierra Street	California Ave to 9th St	Widen sidewalks & add bike lanes	\$4,400,000	91%	\$4,004,000	12%	\$480,480
South Virginia Street	South of Arrowcreek Pkwy to the I-580 interchange	Safety and multimodal improvements including traffic signal and median	\$5,000,000	100%	\$5,000,000	12%	\$600,000
South Virginia Street	E Patriot Blvd to Mt. Rose Hwy/Geiger Grade	Add sidewalks and bike lane, convert travel lane to bus/bike lane	\$18,000,000	100%	\$18,000,000	12%	\$2,160,000
SouthEast Connector	South Meadows Pkwy to Greg St	New 6 lane road (under construction)	\$130,000,000	100%	\$130,000,000	0%	\$0
Sparks Blvd	Greg to Baring	Multimodal improvements, widen 4 to 6 lanes from Greg to I-80, widen 4-6 lanes I-80 to Springland on	\$1,600,000	23%	\$368,000	100%	\$368,000
Sparks Blvd	Greg to Baring	Multimodal improvements, widen 4 to 6 lanes from Greg to I-80, widen 4-6 lanes I-80 to Springland on	\$56,200,000	23%	\$12,926,000	100%	\$12,926,000
Traffic Signals, ITS Operations & Intersections	Systemwide	\$2.6 million per year	\$14,100,000	50%	\$7,050,000	33%	\$2,326,500
Traffic Signals, ITS Operations & Intersections	Systemwide	\$3.32 million per year	\$16,600,000	50%	\$8,300,000	33%	\$2,739,000

**EXHIBIT D
SOUTH SERVICE AREA
CAPITAL IMPROVEMENT PLAN**

Roadway	Limits	Description	RTP Cost	% South Service Area	RTP RRIF Eligible	% RRIF Share South	South CIP
Vassar Street	Holcomb Avenue to Terminal Way	Bike lanes	\$4,300,000	100%	\$4,300,000	12%	\$516,000
Vine Street	Riverside Drive to University Terrace	Bike lanes	\$3,200,000	100%	\$3,200,000	12%	\$384,000
Virginia St Bus RAPID Extension	Plumb Ln to 17th St	Pedestrian improvements & pavement reconstruction	\$104,300,000	0%	\$0	0%	\$0
W 2nd Street (Reno)	Keystone Avenue to Galletti Way	Enhanced sidewalks, landscaping, bike lanes	\$10,500,000	100%	\$10,500,000	12%	\$1,260,000
					\$463,998,000	Total	\$129,943,980

EXHIBIT E
IMPACT FEE SCHEDULE

Draft 6th Edition Regional Road Impact Fee Schedule by Service Area

Regional Transportation Commission

Draft 6th Edition

RRIF Input Variables

Average Miles per Trip

RRIF Share of CIP

VMT Increase Over Ten Years

Capital Cost per VMT

North

South

2.79	2.64
\$101,138,248	\$92,696,809
322,046	232,352
\$314.05	\$398.95

ITE Code	Development Type	Development Unit	Avg Wkdy Veh Trip Ends	Trip Rate Adjustment	Trip Length Adjustment	VMT North	6th Ed RRIF North	VMT South	6th Ed RRIF South
	Residential								
210	Single Unit	Dwelling	8.56	52%	121%	15.03	\$4,719.16	14.22	\$5,672.64
220	3+ Units per Structure	Dwelling	5.83	52%	121%	10.23	\$3,214.10	9.68	\$3,863.49
	Industrial								
110	Light Industrial	1000 Sq Ft	4.96	50%	73%	5.05	\$1,586.27	4.78	\$1,906.77
140	Manufacturing	1000 Sq Ft	3.93	50%	73%	4.00	\$1,256.86	3.79	\$1,510.80
150	Warehouse	1000 Sq Ft	1.74	50%	73%	1.77	\$556.47	1.68	\$668.91
151	Mini-Warehouse	1000 Sq Ft	1.51	50%	73%	1.54	\$482.92	1.46	\$580.49
	Commercial								
820	Retail and Eating/Drinking Places	1000 Sq Ft Leasable	37.75	33%	66%	22.94	\$7,204.06	21.71	\$8,659.59
RTC	Casino Gaming Area	1000 Sq Ft	46.05	50%	73%	46.90	\$14,727.35	44.37	\$17,702.93
	Office & Other Services								
320	Lodging	Room	3.35	50%	73%	3.41	\$1,071.37	3.23	\$1,287.84
411	Public Park	Acre	2.28	50%	73%	2.32	\$729.17	2.20	\$876.50
520	Schools and Daycare	1000 Sq Ft	19.52	33%	73%	13.12	\$4,120.21	12.41	\$4,952.67
610	Hospital	1000 Sq Ft	10.72	50%	73%	10.92	\$3,428.39	10.33	\$4,121.07
620	Nursing Home	1000 Sq Ft	6.64	50%	73%	6.76	\$2,123.55	6.40	\$2,552.61
710	Office and Other Services	1000 Sq Ft	9.74	50%	73%	9.92	\$3,114.97	9.39	\$3,744.33
720	Medical Office	1000 Sq Ft	34.80	50%	73%	35.44	\$11,129.47	33.53	\$13,378.11



REGIONAL TRANSPORTATION COMMISSION

Metropolitan Planning • Public Transportation & Operations • Engineering & Construction

Metropolitan Planning Organization of Washoe County, Nevada

February 28, 2019

AGENDA ITEM 5

TO: Regional Road Impact Fee Technical Advisory Committee (RRIF TAC)

FROM: Julie Masterpool, P.E.
RRIF Program Manager

SUBJECT: Public Input

This agenda item allows the public the opportunity to provide information on topics within the jurisdiction of the Regional Road Impact Fee Technical Advisory Committee (RRIF TAC). Any person wishing to wait to provide public comment on a specific agenda item should indicate that item number on the “comment” card. The RRIF TAC reserves the right to take all public comment during Public Input. Individuals addressing the RRIF TAC during the Public Input portion of the meeting will be limited to three minutes total. However, an individual acting as a spokesperson for a group of individuals may request additional time. Individuals are expected to provide public input in a professional and constructive manner.