

Kittitas County Department of Public Works 2022 – 2032 Transportation Asset Management Plan

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Executive Summary

The Kittitas County Board of County Commissioners adopted Public Works' twenty-year Transportation Improvement Plan with Resolution 2018-165. The plan identifies a funding shortfall of approximately \$100 million dollars financing necessary improvements to the County's aging Public Works infrastructure. The plan evaluates all funding mechanisms in state law and inventories strategies for funding the shortfall. In 2018, Public Works identified a significant Road Fund Levy increase of approximately 98 cents per thousand dollars of assessed property value as the necessary increase meeting identified plan improvements. The identified funding shortfall was approximately \$50 million.

Recognizing the likelihood of not raising the Road Levy by \$0.98/\$1,000; Public Works spent the bulk of 2021 re-evaluating critical infrastructure needs and completed an intensive review of existing programs and improvement strategies. The project costs estimate in 2018 were planning level estimates. The project estimates in the ten-year plan are significantly refined. A much more intensive engineering evaluation accompanies projects selected for the ten-year plan. This refined approach reduces the funding shortfall to approximately \$10 million.

This ten-year Transportation Asset Management Plan provides the County a specific path forward addressing critical transportation asset investments. The plan advances two key scenarios: **PRESERVATION** and **REHABILITATION/REPLACEMENT**. **PRESERVATION** assumes current revenue streams will continue with additional Road Fund Levy. This course of action maintains existing road maintenance service levels and replaces critical bridges and key road upgrades for the next ten years. The cost of this service level is estimated to require an increase of the Road Fund levy of \$0.15/\$1,000 of assessed value.

REHABILITATION/REPLACEMENT allows for the existing road and bridge network to remain but does not fund critical bridge replacements nor support significant road network upgrades. Currently, the Road Levy is \$1.04/\$1,000 of assessed property value. Management will have the option to divest from Public Works assets (roads, bridges, and facilities) creating fund savings that will then go in a prioritized fashion to keeping a backbone system in place. This service level necessitates allowing the local roadway network to decline in order to preserve funding for more important routes on the public roadway system. By divesting from local road maintenance, the savings will then be applied to prioritized bridge replacements and key road upgrades.

The longer the County delays acting on a Road Levy increase, the greater the impact from deferred maintenance and the larger the decline in public works infrastructure leading to increased costs. Current cash reserves will carry the **PRESERVATION** program another two years – after that – management will need to begin divesting of Public Works assets.

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CHAPTER ONE: PURPOSE

The Department of Public Works (PW) created the department's first Transportation Asset Management Plan (TAMP) in 2018. Previous "long-range" transportation plans did not contemplate the necessity to financially plan for long term management of transportation assets. The 2018 plan was adopted by the Board of County Commissioners with Resolution 2018-165. The 2018 document provides a financial plan for project implementation that was produced by evaluating all current transportation funding mechanisms in state law against a list of necessary twenty-year transportation improvement projects. The adopted plan advances five goals for implementation and puts in place project review criteria that the department utilizes annually when producing the annual and six-year construction programs. The plan can be found on our website at: <https://www.co.kittitas.wa.us/uploads/documents/public-works/construction/2020-20-Year-Transportation-Plan.pdf>. A funding shortfall of approximately \$100,000,000 dictates significant community investment over the twenty-year planning period. At the heart of plan funding is an anticipated Road Fund levy tax rate increase of approximately 85 percent from 2018 levels. The 2018 TAMP does not provide alternatives to rate payers, other than the financial plan addressing the list of network deficiencies contained in the twenty-year project listing. PW is updating the 2018 planning effort and reducing the study period from twenty years to ten years. This focused effort allows for greater accuracy in predictive analysis and offers a more paced approach to financing asset management. A copy of the 2018 TAMP financial plan appears as APPENDIX 1 to this plan.

CHAPTER TWO: OBJECTIVES

The Department of Public Works is providing the Board of County Commissioners and Kittitas County Road Fund rate payers a frank discussion about the current state of Public Works' infrastructure. The recent (ongoing) global pandemic has strained financial resources for many public works organizations. Unemployment, the rising cost of living in Kittitas County and rapid urbanization of rural Kittitas County is stressing the Department's ability to adequately maintain transportation assets at the current level of funding. While the Department has been successful securing supplemental finances allowing significant bridge replacements the past several years, that history is unlikely to continue much further into the future. The Department desires meeting critical asset management essentials while minimally raising the Road Levy tax. This 10-year TAMP provides the rationale for supporting PRESERVATION efforts and the reality of moving to REHABILITATION/REPLACEMENT of critical transportation infrastructure.

Maintaining income sources at current levels will likely necessitate a reduction of overall assets in Public Works inventory. Said another way, it will become necessary to close roads and bridges as labor and material costs escalate in the absence of additional tax revenue. Finding the balance that rate payers are willing to pay against ease of traversing the County, will require definition in relatively short order as the amount of deferred maintenance on County roads and bridges is beginning to impact PW cash reserves. The time is approaching for difficult community decisions regarding the operation of the County's transportation system.

CHAPTER THREE: LEVELS OF SERVICE

Recognizing the significance of voting a near doubling of Road Fund levy from property tax increases, PW has prepared this ten-year TAMP. This ten-year plan is expected to set transportation service levels and associated expectations for service, at reduced financial impact as forecast in the twenty-year plan. Maintaining current levels of service (2021) with associated revenue increases (PRESERVATION) and reducing assets consistent with no levy increase (REHABILITATION/REPLACEMENT) - provide the two options for funding consideration. The ten-year plan evaluates bridge overall sufficiency ratings and specifically looks at deck element ratings to forecast probable maintenance, PRESERVATION, and replacement costing. Roads are now evaluated for PRESERVATION or REHABILITATION/REPLACEMENT. The two levels of asset condition are directly related to cost. Typically, preserving an asset is the most cost-effective approach followed by REHABILITATION/REPLACEMENT. The often-used analogy is changing your oil in your car or buying a new motor. What is critical to recognize is that failure in meeting PRESERVATION targets for roads and bridges results in exponential increases in costs as the asset tend towards replacement. Federal and State transportation guidelines dictate closure actions of bridges by local government – directly tied to asset decline.

Any level of service discussion necessitates assigning priorities for asset protection. Public transportation road networks are assigned significance using the Federal Highway Administration designation system: Federal Functional Classification. Roads are identified as increasingly important based on frequency of use: travel demand and associated average daily traffic. Rural systems (county) are assigned in order of importance to travelers as: Local Access (neighborhood roads), Minor Collectors (multiple neighborhoods), Major Collectors (regional areas) and Minor Arterials (multiple areas). Specific road examples of classification are Cooke Canyon Road (Local), Cabin Creek Road (Minor Collector), and Cove Road (Major Collector). The County has no Minor Arterials on the existing County Road network (not surprising given current County population). The Public Works Department maintains a “County Road Log” of every road owned or maintained by the -County. The log is updated annually reflecting changes in average daily traffic and/or new road construction. A robust traffic counting system enables the annual amendment. What we do not have is a community driven system for prioritizing local roadways for preservation. Pursuing a level of service REHABILITATION/REPLACEMENT necessitates prioritizing local roadways for PRESERVATION. Implementing the REHABILITATION/REPLACEMENT service level will require a reduction of local roadway maintenance. This plan does not address this future need, should County residents elect to adopt a declining level of service on its road network moving away from PRESERVATION towards REHABILITATION/REPLACEMENT.

CHAPTER FOUR: PLAN METHODOLOGY

PW Finance updated historic cost records from the 2018 effort. The cost look back includes years 2011 – 2020. Annual budget line items (BARS Codes) were queried and compiled by each year to inform cost trends. A companion effort was conducted for all revenue sources available in state law in 2018. PW Equipment, Rental and Replacement vehicles are evaluated for probable replacement during the ten-year analysis period (2022 – 2032). Bridge files are evaluated for two classes of county owned bridges: National Bridge Inventory System (NBIS) bridges (over twenty feet in length) and non-NBIS bridges (under twenty feet in length). Bridge sufficiency ratings (an indicator of bridge health) were reviewed and any rating below 50 was noted. This rating system is prescribed by the federal government and used by the County in annual bridge evaluations. In addition, bridge files were evaluated for bridge deck coding below (5) five (an indicator of the degree of deck deterioration – again as prescribed by the National Bridge Inspection System). Roads are evaluated based on current PRESERVATION standards (chip sealed every seven years). An assumed service level of today’s current standard utilizes the existing PRESERVATION standard for cost forecasting (70 miles of chip seal a year). As an alternative to continuing the service level of PRESERVATION, PW evaluated local roads on the existing network for removal with the understanding that gravel road maintenance costs will likely increase in the final three years of the ten-year TAMP. The inventory reduction is an iterative process matching available revenue with cost forecast during the evaluation period (2022 – 2032). The reduction is necessary for allowing replacement of critical assets related to road classification and/or critical bridge crossing. Reducing maintenance of local roadways over a ten-year period is forecast to retain approximately \$7.8 million in Road Fund reserves. It is anticipated that the Board of County Commissioners will determine the final list of asset reductions for both bridge, road, and equipment necessary to provide balanced PW budgets for the next ten years of operation assuming an adoption of level of service REHABILITATION/REPLACEMENT.

CHAPTER FIVE: EXPENSES

Expense Forecasting

Kittitas County PW is a certified Washington State Department of Transportation (WSDOT) local program agency. This certification allows PW to manage federal aid projects without reliance on the state. WSDOT estimates bridge replacement projects by assigning a value to the square footage of the bridge structure. PW bid and purchasing history indicates that a value of \$330 per square foot is a reasonable current value. This price does not include all project costs. Including all project costs, our cost history indicates an average square footage price of \$930 is more appropriate. For this ten-year plan, we utilize the \$930 per square foot value to best forecast impacts to rate payers.

Oil prices have been particularly volatile during the 2020-2021 pandemic. Adding to the challenge of forecasting crude oil prices for a ten-year period, is the reality of supply and demand. The

electrification of the automobile industry is expected to slow the demand on crude oil for fuel. While reductions are anticipated in the passenger vehicle arena, transportation of goods across the transportation system is expected to increase demand as electrification of heavy haul trucks is expected to lag behind passenger vehicles. Given the uncertainty of ten-years of crude oil demand, this ten-year TAMP averages the cost per mile of bituminous surface treatment (chip seal) over the previous ten years and applies the cost at an annual increase of two percent for the planning period.

Labor costs are anticipated to continue increasing during the study period. Historically, the County has granted payroll increases in the two to three percent range allowing employees to keep up with the cost of inflation. 2021 has seen the rise of inflation into the six percent range for fiscal year 2021. Best available financial forecasting suggests a moderation of inflation in 2022 returning to pre-COVID 19 levels in 2023. This plan takes 2022 payroll and increases at a rate of two percent per year over the study period.

Equipment costs are highly variable compared from one five-year period to the next. PW manages the heavy construction fleet by placing new equipment into an Equipment Rental and Replacement fund. We essentially rent our equipment back as we use it depositing the rental revenue into a replacement account. Our PRESERVATION practices on heavy equipment allow us to keep older equipment in service well beyond an assumed industry standard life term. Owing to our maintenance practice, equipment costs for the study period are specific to individual equipment that we expect to replace during the study period.

Expenses

Expenses are derived from the following sources:

- Bridge inspection records
- Road maintenance records
- Equipment costs
- Facility costs
- Labor costs

Detailed costing analysis (and associated project expenses) are provided as an APPENDIX 2 for line-item review. In summary, the following ten-year expenditures by category of expense are summarized below in Table 1.

Table 1: 10-year Forecast Expenditures by Expense Category

Period	PRESERVATION	Maintenance	Admin/Operations	Other (Equipment capital expense)
2022-2031	\$23,047,891	\$48,685,986	\$21,844,282	\$2,189,944

Combined planning period (2022 – 2031) expenditures total: **\$95,768,103.**

CHAPTER SIX: REVENUES

Road Fund Levy 2011 to 2021

The Road Fund was significantly impacted financially from 2015 to 2019 owing to Levy Shifts authorized by the Board of County Commissioners. From 2013 through 2019, \$5.6 million dollars were shifted out of the Road Fund and utilized for other purposes. In 2020, Public Works Administration successfully restored (utilizing banked capacity in the Road Fund) significant funding beginning in 2020 and continuing in 2021. This action is expected to reduce future Levy lift requests meeting selected levels of service. Road Levy revenue history (2012 – 2021) appears as APPENDIX 3 to this plan.

TAMP Revenue Forecast Assumptions

Local government in the State of Washington may increase tax revenue annually with a cap at one percent per year without taking a larger increase to a vote by county residents. This ten-year TAMP uses 2022 Road Fund Levy revenue and increases it by one percent per year for each year of the study period. 2021 – 2031 Revenue Forecasts appear as APPENDIX 4 of this plan.

PW has been extremely successful generating supplemental funding for asset replacement during the previous six years. This ten-year TAMP utilizes our previous ten-year revenue history in supplemental funding and imposes professional judgement to forecast likely supplemental funding during the study period. This forecast is subjective but not without performance experience and incorporates informed decision making based on that experience. The risk of over predicting supplemental revenue, is that PW fails to meet PRESERVATION funding levels and additional REHABILITATION costs require assignment to the plan – reducing service levels. Individual funding sources have been evaluated for continued program performance during the study period. While much discussion has been recently occurring around infrastructure funding, the reality for local government is that a minimal amount of federal spending will make it to the local level.

CHAPTER SEVEN: LEVELS OF SERVICE AND RISK

10 Year Service Levels – PRESERVATION versus REHABILITATION/REPLACEMENT

Currently, Public Works utilizes pavement management techniques that essentially places a surface wearing course on all paved roads every seven years. This “chip seal” practice results in resurfacing of the roadway wearing course of approximately 70 miles of roadway every year. This is a standard pavement preservation technique utilized by Public Works organizations across the country. Prior to surfacing, the selected roadways are “crack sealed” and “pre-leveled” to reduce roadbed and road subgrade failure. These business practices are consistent with PRESERVATION of the road asset. Maintenance of County roads also includes additional PRESERVATION efforts such as vegetation and drainage maintenance. These activities manage vegetation growth and

sedimentation in County roadside ditches. These combined efforts allow PW to keep the current paved roadway network from slipping back to gravel (REHABILITATION/REPLACEMENT). Decreasing PRESERVATION efforts will annually place more roads into “rehabilitation” status and ultimate decline leads to “replacement” status. PRESERVATION is essentially maintaining the status quo. It is important to note, that this ten-year TAMP contemplates very little capacity building of new infrastructure and focuses on maintaining what we have currently on the road and bridge network. For the ten-year TAMP the PRESERVATION service level presumes all bridges remain in asset inventory. PRESERVATION will necessitate a voter lift of the Road Levy.

Insufficient funding of PRESERVATION efforts necessitates divesting of assets. In the case of Public Works’ infrastructure, this means closing bridges and allowing paved roads to deteriorate back to gravel (REHABILITATION/REPLACEMENT). As a means of controlling the loss of inventory, Public Works recommends the public identify a critical roadway network that manages the inevitable decline of assets and reduction of paved road inventory – in the absence of additional revenue. The reduction of road inventory scenario maintains functional class prioritization of arterials and collectors. Local access is assumed to be expendable as a paved road asset. Network wide roadway service levels will decrease as efforts are made to stabilize the prioritized paved road network. As decisions are made to abandon duplicative roads (north-south and east-west), associated bridges will drop off the County’s asset inventory associated with those abandoned roads. Bridges represent the largest one-time expenditures to the Road Fund. The asset reduction scenario (REHABILITATION/REPLACEMENT) removes those bridges associated with local roadways slated to return to gravel. Local road pavement reductions generate the retained tax funding needed to preserve the priority road network of arterials and collector roadways.

APPENDIX 1: 2018 TAMP FINANCIAL PLAN

20-Year TAMP (May 2018)

Total Revenue	206,512,000
Portion of Total Revenue Restricted to Construction (Grant Related)	76,700,400
Net Revenues Available for Operating, Maintenance & Preservation Costs	129,811,600
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Administration and Overhead	20,412,000
Facility Operations	1,688,000
Other Operations	31,637,000
Planning	4,029,000
Engineering	15,565,000
Parks and Trails Maintenance	133,000
Total Operating Expenditures	73,464,000
Maintenance and Preservation Expenditures	97,000,000
Total Operating, Maintenance & Preservation Costs	170,464,000
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Projected Operating Expenditure Deficit over 20 years	(40,652,400)
<hr/>	
Original 20 Year Capital Project list based on need	
Total Revenue Restricted to Construction (Grant Related)	76,700,400
Total Estimated Expenditures based on 20 year Capital Project list	127,000,000
Projected Capital Needs Deficit over 20 years	(50,299,600)

APPENDIX 2: EXPENDITURE DETAIL INCLUDING PROJECT EXPENSES

FUTURE PROGRAMMATIC EXPENDITURES, 2022-2031

Growth Factor:

2%

YEAR	PRESERVATION	MAINTENANCE	ADMIN/OPERATIONS	OTHER	CONSTRUCTION	TOTAL	Revenue
2022	2,104,883.92	4,446,322.15	1,994,962.44	200,000.00	7,386,000.00	16,132,168.51	18,091,215.04
2023	2,146,981.60	4,535,248.59	2,034,861.69	204,000.00	6,521,000.00	15,442,091.88	13,389,843.69
2024	2,189,921.23	4,625,953.56	2,075,558.92	208,080.00	6,884,000.00	15,983,513.72	15,369,153.12
2025	2,233,719.66	4,718,472.63	2,117,070.10	212,241.60	4,350,000.00	13,631,503.99	14,355,405.06
2026	2,278,394.05	4,812,842.09	2,159,411.50	216,486.43	7,754,000.00	17,221,134.07	13,923,662.13
2027	2,323,961.93	4,909,098.93	2,202,599.73	220,816.16	10,798,000.00	20,454,476.76	14,366,987.83
2028	2,370,441.17	5,007,280.91	2,246,651.73	225,232.48	4,612,000.00	14,461,606.29	15,685,446.57
2029	2,417,850.00	5,107,426.52	2,291,584.76	229,737.13	9,298,000.00	19,344,598.42	15,269,103.67
2030	2,466,207.00	5,209,575.05	2,337,416.46	234,331.88	3,840,000.00	14,087,530.38	15,748,025.40
2031	2,515,531.14	5,313,766.56	2,384,164.79	239,018.51	7,000,000.00	17,452,480.99	17,082,278.95
TOTAL	23,047,891.70	48,685,986.99	21,844,282.13	2,189,944.20	68,443,000.00	164,211,105.02	153,281,121.44

14.0%

29.6%

13.3%

1.3%

41.7%

10,929,983.58
needed over 10 yrs

1,092,998.36
Per Year

10-Year TAMP (Jan 2022)

Total Revenue	153,281,121
Portion of Total Revenue Restricted to Construction (Grant Related)	29,204,470
Net Revenues Available for Operating, Maintenance & Preservation Costs	124,076,651
Administration and Overhead	21,844,282
Preservation	23,047,891
Maintenance	48,685,986
Other including Capital purchases (Equipment)	2,189,944
Total Operating, Maintenance & Preservation Costs	95,768,103
Projected Operating Expenditure Surplus over 10 years	28,308,548
10 year Capital Project list based on need	
Total Revenue Restricted to Construction (Grant Related)	29,204,470
Total Estimated Expenditures based on 10 year Capital Project list	68,443,000
Projected Capital Needs Deficit over 10 years	(39,238,530)
Projected Total Deficit (Operating and Capital) over 10 years	(10,929,982)

TEN YEAR PROJECT LIST

Project	Cost	\$ on tip	Est. Date	PE	CN	On TIP	Project	Revenue Outlet	Total
Roadway Investments									
Bender Road - Widening and Pedestrian Improvements	3,300,000	2,100,000		25	26	Yes - 2025	RC1585		2,100
Sanders Road Widening and Pedestrian Improvements	2,500,000	3,050,000		26	27	Yes - 2025			3,050
Manastash Road Creek Bank Stabilization and Snow Park Impr	1,468,851	1,578,000			22	Yes - 2021	RC1573	FLAP \$1,333M	1,578
Denmark Road Safety Improvements mp .5-3.08	2,500,000	2,980,000				Yes - 2025	Badger Ph2	RAP	2,980
Denmark Road Safety Improvements mp 3.08-4.35	1,750,000	471,000		27		Yes - 2025			1,750
Payne Road Safety Improvements mp 0 to mp	2,500,000	1,625,000				Yes - 2022	Badger Ph1		1,625
Dodge Road Safety Improvements mp 0 to mp	2,500,000	1,625,000				Yes - 2022	Badger Ph1		1,625
Bowers Road Extension	2,450,000	2,450,000		24	25	Yes-2021	RC1505		2,450
Kittitas Highway & No 6 Road - signalized intersection	750,000		2026			No			750
Vantage Highway & No 6 Road - signalized intersection	750,000		2026			No			750
I-90 Widening Easton to Cle Elum	500,000	100,000				Yes - 2022			500
Hungry Junction Road widening	5,000,000	4,351,000		23	24	Yes - 2023	RC2093	RAP	4,351
Intersection and Corridor Safety Improvements	416,000	416,000		22	23	Yes - 2022	RC2196	HSIP	416
Nonmotorized Projects									
Trails to Teanaway parking lot	200,000		2022			No			200
ATV/UTV Trail plan	200,000		2022			No			200
Evacuation Routes									
Middle Fork Teanaway Road to Salmon La Sac Road Connecto	3,000,000		2026			No			3,000
Phase 2 Middle Fork Teanaway Road to Ridgecrest Road	5,000,000		2030			No			5,000
Bridge Replacement									
Brick Mill Road Bridge over Naneum Creek mp .10 East Naneu	1,500,000		2028						1,500
Vantage Highway at Cascade Canal	2,500,000	1,650,000				Yes - 2022	RC2292	ARP	1,650
Reecer Creek Bridge over Ellensburg Water Company canal	2,500,000		2028			No			2,500
Cooke Canyon Road at Highline Canal	1,750,000		2029			No			1,750
Kittitas Highway at Cascade Canal	1,750,000		2029			No			1,750
Tjossem at Caribou Creek	1,250,000		2030			No			1,250
S Ferguson Road at Cooke Creek	1,250,000		2030			No			1,250
4th Parallel Road at Gravity Ditch	1,250,000		2031			No			1,250
Hungry Junction at Cascade Canal	1,250,000		2031			No			1,250
Lyon Road at Wilson Creek	1,250,000		2032			No			185
Teanaway Road at Dickey Creek	1,500,000	1,000,000				Yes - 2022		\$500 spent 2021	1,000
Cove Road over Manastash Creek mp .37	2,000,000		2028			No			2,000
N. Thorp Highway over Mill Ditch mp .51	2,000,000		2028			No			2,000
Liberty Rd Swauk Creek Bridge	2,947,000	2,947,000	2022			Yes - 2022		FLAP \$2463k	2,947
Necessary Maintenance/Rehabilitation									
Thorp Cemetery Road -inadequate railing and curves that nee	585,150		2028			No			585
Teanaway Road fill stabilization at HWY 97	1,500,000		2025			No			1,500
Bridge Rail Retrofits for short span bridges	3,500,000	3,664,000	2031			No		HSIP?	3,664
Tjossem Road over Wilson Creek added girder	1,876,000		2026			No			1,876
Airport Road Cle Elum - replace irrigation culverts crossing roa	1,500,000	275,000		27		Yes - 2027			1,500
McManamy Road Bridge over Dry Creek mp .21 SR 97	250,000		2032			No			38
Lambert Road Bridge mp .67-7.00 maintenance	500,000		2028			No			500
Reecer Creek Road & Robbins Road Intersection	731,434		2028			No	RC1587	local	731
Kachess Lake Road - Culvert Replacement mp 2.5	1,000,000	1,329,000			22	Yes-2021		moving to 2023?	1,329
Yellowstone Road Culvert Replacement mp .70	2,766,387	860,000		25	26	Yes-2021	RC2092	STBG?	860
Parke Creek Road turnaround	250,000	1,100,000		26	27	Yes - 2023			1,100
Pheasant Lane Road turnaround	250,000	15,000		27		Yes - 2027			250
Airport Road sidewalk repair	120,000	65,000		22	22	Yes - 2022			65
Micheletto Road improvements	120,000	40,000		22	22	Yes - 2022			40
Bar 14 Road turnaround	120,000	200,000		23	24	Yes - 2023			200
N. Thorp Highway Bridge over Yakima River - Joint Repair/Pair	3,000,000	1,951,000			22	Yes - 2022			1,951

APPENDIX 3: ROAD LEVY HISTORIC DATA

ROAD FUND LEVY DATA FROM 2012 TO 2022

Valuation		Tax Levied								
2022	7,516,464,832	Road	0.001041443	7,827,969.40	Valuation Increase	11.81%	1.04	per thousand	General .91 per thousand	
Estimated		Div.	0	-						
11/19/2021				7,827,969.40	Tax Increase	5.07%				
2021	6,722,411,723	Road	0.001078570	7,250,591.61	Valuation Increase	9.62%	1.08	per thousand	General .94 per thousand	
		Div.	0.000029751	199,998.47						
				7,450,590.08	Tax Increase	17.89%				
2020	6,132,189,532	Road	0.000994732	6,099,885.16	Valuation Increase	17.04%	0.99	per thousand	General .99 per thousand	
		Div.	0.000035876	219,998.43						
				6,319,883.59	Tax Increase	38.53%				
2019	5,239,366,479	Road	0.000828730	4,342,020.18	Valuation Increase	16.40%	0.83	per thousand	General 1.22 per thousand	
		Div.	0.000041989	219,995.76			1.02	before shift	Shift of Value to General Fund	
				4,562,015.94	Tax Increase	4.20%			Net Shift \$1,000,000	
2018	4,501,291,504	Road	0.000928225	4,178,211.31	Valuation Increase	2.68%	0.93	per thousand	General 1.35 per thousand	
		Div.	0.000044431	199,996.88			1.15	before shift	Shift of Value to General Fund	
				4,378,208.19	Tax Increase	4.84%			Net Shift \$1,000,000	
2017	4,383,738,708	Road	0.000907016	3,976,121.15	Valuation Increase	1.24%	0.91	per thousand	General 1.40 per thousand	
		Div.	0.000045623	199,999.31			1.14	before shift	Shift of Value to General Fund	
				4,176,120.46	Tax Increase	3.21%			Net Shift \$1,000,000	
2016	4,329,898,002	Road	0.000888275	3,846,140.15	Valuation Increase	5.02%	0.89	per thousand	General 1.37 per thousand	
		Div.	0.000046190	199,997.99			1.12	before shift	Shift of Value to General Fund	
				4,046,138.14	Tax Increase	3.88%			Net Shift \$1,000,000	
2015	4,123,047,160	Road	0.000896227	3,695,186.19	Valuation Increase	3.28%	0.90	per thousand	General 1.39 per thousand	
		Div.	0.000048509	200,005.31			1.14	before shift	Shift of Value to General Fund	
				3,895,191.49	Tax Increase	-20.44%			Net Shift \$1,000,000	
2014	3,992,232,185	Road	0.001176264	4,695,919.00	Valuation Increase	-6.30%	1.18	per thousand	General 1.21 per thousand	
		Div.	0.000050097	199,998.86						
				4,895,917.85	Tax Increase	2.72%				
2013	4,260,687,630	Road	0.001071687	4,566,123.54	Valuation Increase	-12.24%	1.07	per thousand	General 1.12 per thousand	
		Div.	0.000046940	199,996.68			1.14	before shift	Shift of Value to General Fund	
				4,766,120.22	Tax Increase	9.57%			Net Shift \$300,000	
2012	4,855,095,807	Road	0.000854770	4,149,990.24			0.85	per thousand	General 1.00 per thousand	
		Div.	0.000041193	199,995.96			0.91	before shift	Shift of Value to General Fund	
				4,349,986.20					Net Shift \$300,000	

APPENDIX 4: REVENUE FORECAST

FUTURE PROGRAMMATIC REVENUE, 2022-2031

Growth Factor: 2%

YEAR	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
Property Tax	7,877,965.00	8,236,744.65	8,599,112.10	8,965,103.22	9,334,754.25	9,708,101.79	10,085,182.81	10,466,034.64	10,850,694.98	11,239,201.93	95,362,895.37
Diversion/Shift	-	-	(200,000.00)	(200,000.00)	(200,000.00)	(200,000.00)	(200,000.00)	(200,000.00)	(200,000.00)	(200,000.00)	(1,600,000.00)
Leasehold Tax	12,286.32	12,532.04	12,782.69	13,038.34	13,299.11	13,565.09	13,836.39	14,113.12	14,395.38	14,683.29	134,531.76
Franchise Agreements	11,297.50	11,523.45	11,753.92	11,989.00	12,228.78	12,473.35	12,722.82	12,977.28	13,236.82	13,501.56	123,704.47
Licenses/Permits	157,825.00	160,981.50	164,201.13	167,485.15	170,834.86	174,251.55	177,736.58	181,291.32	184,917.14	188,615.48	1,728,139.72
MVFT	1,881,131.22	1,918,753.84	1,957,128.92	1,996,271.50	2,036,196.93	2,076,920.87	2,118,459.29	2,160,828.47	2,204,045.04	2,248,125.94	20,597,862.02
DNR PILT NAP/NRCA	80,000.00	81,600.00	83,232.00	84,896.64	86,594.57	88,326.46	90,092.99	91,894.85	93,732.75	95,607.41	875,977.68
Sales	910.00	928.20	946.76	965.70	985.01	1,004.71	1,024.81	1,045.30	1,066.21	1,087.53	9,964.25
Service	130,000.00	132,600.00	135,252.00	137,957.04	140,716.18	143,530.50	146,401.11	149,329.14	152,315.72	155,362.03	1,423,463.73
Federal Grants											
BRAC	1,951,000.00	-	-	-	-	-	-	-	-	-	1,951,000.00
CARES/ARP	656,900.00	-	-	-	-	-	-	-	-	-	656,900.00
FLAP	1,333,000.00	346,000.00	2,117,000.00	-	-	-	-	-	-	-	3,796,000.00
HSIP	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	5,000,000.00
STBG	870,000.00	-	-	870,000.00	-	-	870,000.00	-	-	870,000.00	3,480,000.00
Title II-Federal Forest	240,000.00	240,000.00	240,000.00	40,000.00	40,000.00	40,000.00	40,000.00	40,000.00	40,000.00	40,000.00	1,000,000.00
State Grants											
RCO	-	-	-	-	-	-	-	-	-	-	-
CRAB:RAP	750,000.00	750,000.00	750,000.00	750,000.00	750,000.00	750,000.00	750,000.00	750,000.00	750,000.00	750,000.00	7,500,000.00
CRAB:CAPP	464,000.00	473,280.00	482,745.60	492,400.51	502,248.52	512,293.49	522,539.36	532,990.15	543,649.95	554,522.95	5,080,670.54
QUADCO	20,000.00	20,000.00	-	-	-	-	-	-	20,000.00	20,000.00	80,000.00
REET 1	659,900.00	-	-	-	-	-	-	-	-	-	659,900.00
Jobbing/Contract	225,000.00	229,500.00	234,090.00	238,771.80	243,547.24	248,418.18	253,386.54	258,454.28	263,623.36	268,895.83	2,463,687.22
Interfund Transfers	200,000.00	204,000.00	208,080.00	212,241.60	216,486.43	220,816.16	225,232.48	229,737.13	234,331.88	239,018.51	2,189,944.20
Interest	50,000.00	51,000.00	52,020.00	53,060.40	54,121.61	55,204.04	56,308.12	57,434.28	58,582.97	59,754.63	547,486.05
Judgements/Settlements	20,000.00	20,400.00	20,808.00	21,224.16	21,648.64	22,081.62	22,523.25	22,973.71	23,433.19	23,901.85	218,994.42
Total Revenue	18,091,215.04	13,389,843.69	15,369,153.12	14,355,405.06	13,923,662.13	14,366,987.83	15,685,446.57	15,269,103.67	15,748,025.40	17,082,278.95	153,281,121.44
Grants	7,444,800.00	2,329,280.00	4,089,745.60	2,652,400.51	1,792,248.52	1,802,293.49	2,682,539.36	1,822,990.15	1,853,649.95	2,734,522.95	29,204,470.54
Non-Grant	10,646,415.04	11,060,563.69	11,279,407.52	11,703,004.55	12,131,413.60	12,564,694.33	13,002,907.20	13,446,113.52	13,894,375.44	14,347,756.00	124,076,650.89