



Citywide Transportation Plan

Prepared for

City of Richland

Submitted by

DKS Associates

TRANSPORTATION SOLUTIONS

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Pete Rogalsky
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Subject: Richland Transportation System Plan

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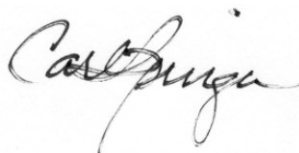
Dear Steve:

DKS Associates is pleased to submit this Transportation System Plan to the City of Richland. This report reflects comments and revisions collected from the TAC, City Staff, City Council, WSDOT, the public and other interested stakeholders.

It has been a pleasure to work with you, and the rest of the TSP team, in completing this document that will direct transportation investments in the City of Richland for years.

Sincerely,

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Table of Contents

1: SUMMARY	1-1
Overview	1-1
Plan Committees	1-1
Plan Organization	1-1
Goals and Policies	1-2
Suggested New Transportation Policies	1-3
Other Implementing Land Use Actions	1-3
Recommended Projects and Programs	1-4
Pedestrian	1-4
Bicycle	1-4
Transit	1-5
Motor Vehicle	1-5
Transportation Programs	1-6
Financing	1-6
Current Funding Sources	1-6
Additional Funding Needs	1-7
Outstanding Issues	1-8
2: GOALS AND POLICIES	2-1
Background	2-1
Comprehensive Plan	2-1
Transportation Goals and Policies	2-1
Purpose for Recommended New Transportation Policies	2-3
Relevant Transportation Plans	2-4
3: EXISTING CONDITIONS	3-1
System Performance Standards	3-1
Level of Service Definition	3-4
Pedestrians	3-4
Conditions Affecting Pedestrians with Disabilities	3-5
Observed Activity	3-5
Findings and Issues	3-5
Bicycles	3-8
Observed Activity	3-8
Findings and Issues	3-8
Transit	3-11
Observed Activity	3-12
Findings and Issues	3-12
Motor Vehicle	3-14
Street Functional Classification	3-14

Roadway Physical Characteristics	3-17
Observed Activity	3-21
Findings and Issues.....	3-23
Traffic Levels of Service	3-23
Corridor Operations.....	3-26
Traffic Safety.....	3-28
Trucks	3-29
Other Modes	3-33
Aviation Facilities.....	3-33
Rail.....	3-33
Marine	3-33
Pipeline.....	3-33
4: FUTURE TRAVEL DEMAND	4-1
Approach and Methodology	4-1
Future Land Use.....	4-1
Future (2020) System Assumptions	4-6
Benton-Franklin COG Area Travel Demand Forecast Model.....	4-7
Model Application to Richland	4-8
Performance Measures	4-10
5: PEDESTRIAN PLAN.....	5-1
Needs.....	5-1
Facilities.....	5-2
Criteria.....	5-3
Strategies.....	5-3
Strategy 1 - “Connect Key Pedestrian Corridors to Schools, Parks, Recreational Uses, Transit Centers and Activity Centers”	5-3
Strategy 2 - “Fill in Gaps in the Network Where Some Sidewalks Exist”	5-4
Strategy 3 - “Coordination of Land Use Approval Process to Provide Sidewalks and Links to Existing Sidewalks”	5-4
Strategy 4 - “Improved Crossings”	5-4
Strategy 5 - “Pedestrian Corridors that Connect to Major Recreational Uses”	5-4
Strategy 6 - “Reconstruct All Existing Substandard Sidewalks to City of Richland Standards”	5-4
Recommended Pedestrian Facility Plan.....	5-5
Recommended Project List	5-8
Action Plan Projects	5-8
Arterial Crossing Enhancements	5-8
Address Gaps in Pedestrian System	5-12
Parks and Trail Development.....	5-12
Complementing Land Use Actions	5-12
6: BICYCLE PLAN.....	6-1
Needs.....	6-1

Facilities.....	6-2
Criteria.....	6-2
Strategies.....	6-3
Strategy 1 - “Connect Key Bicycle Corridors to Schools, Parks, Transit Centers and Activity Centers”	6-3
Strategy 2 - “Bicycle Corridors that Connect to Major Recreational Facilities” ...	6-3
Strategy 3 - “Fill in Gaps in the Network where Some Bikeways Exist”	6-3
Strategy 4 - “Develop Maintenance Program to Clean Bike Lanes”.....	6-3
Strategy 5 - “Bicycle Corridors that Commuters Might Use”	6-3
Strategy 6 - “Bicycle Corridors that Connect Neighborhoods”	6-4
Strategy 7 - “Construct All Bikeways to City of Richland Standards”	6-4
Recommended Bicycle Facility Plan	6-6
Recommended Project List	6-8
Initial Bike Facility Projects.....	6-9
Complementing Land Use Actions	6-9
7: TRANSIT	7-1
Needs.....	7-1
Criteria.....	7-1
Strategies.....	7-2
Strategy 1 - “Provide More Frequent Service in Peak Commute Periods”	7-2
Strategy 2 - “Provide Express Routes to Regional Employment Centers”	7-2
Strategy 3 - “Provide Commuter Rail”	7-2
Strategy 4 - “Provide Bus Shelters/Improved User Amenities”.....	7-3
Strategy 5 - “Provide More Local Transit Service”	7-3
Strategy 6 - “Provide Access to Commercial Areas”	7-3
Strategy 7 - “Provide Park & Ride Lots”	7-3
Strategy 8 - “Provide Access to Activity & Service Centers”	7-3
Recommended Transit Plan	7-7
Public Transit.....	7-7
Complementing Land Use Actions	7-7
8: MOTOR VEHICLES.....	8-1
Criteria.....	8-1
Functional Classification.....	8-3
Connectivity and Functional Class.....	8-3
Functional Classification Definitions	8-5
Other Jurisdictions and Functional Class Definitions	8-8
Recommended Functional Classification Changes in Richland	8-8
Characteristics of Streets for each Functional Classification.....	8-10
Connectivity/Local Street Plan	8-17
Circulation and Capacity Needs	8-21
Strategies	8-21
Future Intersection Capacity Analysis.....	8-21

System Circulation Alternatives	8-25
George Washington and Jadwin Avenue Circulation	8-27
SR 240 Bypass.....	8-30
Interstate 182	8-31
Leslie Road near I-82	8-32
Access Management.....	8-33
Recommended Improvements	8-35
Neighborhood Traffic Management.....	8-42
Transportation System Management.....	8-43
Intelligent Transportation Systems.....	8-43
Incident Management	8-44
Trucks.....	8-44
Criteria	8-45
9: OTHER MODES.....	9-1
Criteria.....	9-1
Recommended Facilities.....	9-2
Rail.....	9-2
Pipeline.....	9-2
Air	9-2
Water	9-3
10: TRANSPORTATION DEMAND MANAGEMENT	10-1
Background	10-1
Criteria.....	10-4
Strategies.....	10-4
Recommended Plan	10-5
11: FUNDING & IMPLEMENTATION	11-1
Current Financial Structure.....	11-1
Historical Funding Patterns.....	11-3
Funding Overview	11-3
Recommended Projects and Programs	11-4
Project Cost Estimates	11-4
Transportation Programs.....	11-5
Recommended Bike Facility Projects	11-6
Motor Vehicle Projects	11-8
Funding Alternatives	11-8
Traditional / Existing Funding Sources	11-9
Debt Financing Tools	11-11
Other Funding Tools	11-12

Figures

Figure 3-1 Study Area	3-3
Figure 3-2: Existing Pedestrian Facilities and Volumes	3-7
Figure 3-4: Existing Transit Facilities	3-13
Figure 3-5: Existing Functional Classification.....	3-16
Figure 3-6: Posted Speed Limits	3-18
Figure 3-7: Existing Roadway Lanes.....	3-19
Figure 3-8: Existing Intersection Controls	3-20
Figure 3-9: Existing PM Peak Hour Traffic Volumes.....	3-22
Figure 3-10: Existing PM Peak Hour Intersection Operation	3-25
Figure 3-11: Existing Through Truck Routes	3-31
Figure 3-12: Existing PM Peak Hour Truck Volumes.....	3-32
Figure 4-1: Richland Transportation Analysis Zones (TAZ's).....	4-5
Figure 4-2: Model Process	4-9
Figure 5-1: Pedestrian Master Plan.....	5-7
Figure 6-2: Framework Bicycle Master Plan.....	6-7
Figure 7-1 Existing Coverages	7-5
Figure 7-2 Future Coverages	7-6
Figure 8-1: Street Functional Classification	8-7
Figure 8-2 Richland Existing Arterial/Collector Sample Street Cross-Sections	8-13
Figure 8-3 Richland Proposed Arterial/Collector Sample Street Cross-Sections	8-14
Figure 8-4: Richland Local Street Sample Street Cross-Section	8-15
Figure 8-5: Lane requirements of Street Plan	8-16
Figure 8-6: Local Street Connectivity Map	8-18
Figure 8-7: Local Street Connectivity Map	8-19
Figure 8-8: Local Street Connectivity Map	8-20
Figure 8-9: Motor Vehicle Master Plan.....	8-41
Figure 8-10: Proposed Truck Routes	8-46

Tables

Table 1-1: Non-Auto, Pedestrian and Bicycle Costs Issues	1-6
Table 1-2: Existing Transportation Funding Sources (2003 Dollars)	1-6
Table 1-3: Richland Transportation Action Plans Costs over 20 years (2003 Dollars,)	1-7
Table 2-1: Background Policies from Regional and State Plan Supporting Amendments to Recommended New City of Richland Transportation Policies	2-5
Table 3-1: Transportation Performance Standards	3-2
Table 3-2: Summary of Road Miles with Sidewalks on One or Both Sides.....	3-5
Table 3-3: Ben Franklin Fixed-Route Transit Weekday Peak Period Level of Service.....	3-11
Table 3-4: Ben Franklin Transit Ridership (based on surveys taken 4/30/02)	3-12
Table 3-5: Summary of Road Miles within City by Street Functional Classification	3-15
Table 3-6: Two-Way Peak Hour Volumes at Selected Locations	3-21
Table 3-7: Existing PM Peak Hour Intersection Level of Service (Traffic Signals)	3-23
Table 3-8: Existing PM Peak Hour Intersection Conditions (Non-Signals)	3-24
Table 3-9: Existing North-South Corridor Characteristics, Southbound in PM Peak Period	3-27
Table 3-10: Circulation Patterns on George Washington Way (Southbound, PM Peak Period)	3-28
Table 3-11: Top 10 Collision Locations (1998 to 2002)	3-29

Table 3-12: Average Daily Highway Truck Traffic, 1989-1999.....	3-30
Table 4-1: City of Richland Land Use Projections.....	4-2
Table 4-2: Richland Land Use by Traffic Analysis Zone.....	4-3
Table 4-3: RTP Projects Included in Future (2020) Travel Demand Modeling.....	4-6
Table 4-4: Overview of Travel Demand Model Forecast Performance Measures For Roadways and Highways Within Richland.....	4-10
Table 5-1: Pedestrian Facility Strategies Comparisons.....	5-5
Table 5-2: Recommended Pedestrian Projects.....	5-8
Table 5-3: Potential Pedestrian Crossing Enhancement Locations.....	5-10
Table 5-4: Potential Measures for Enhancing Pedestrian Crossings.....	5-11
Table 6-1: Bicycle Facility Strategies Comparisons.....	6-4
Table 6-2: Corridors in Proposed Bikeway Network.....	6-5
Table 6-3: Bicycle Connectivity to Adjacent Jurisdictions.....	6-5
Table 6-4: Recommended Bicycle Facility Projects.....	6-8
Table 6-5: Initial Bike Facility Projects.....	6-9
Table 7-1: Transit Facility Strategies Comparisons.....	7-4
Table 7-2: Potential Transit Projects.....	7-7
Table 8-1: BFCG Regional Motor Vehicle System Designations.....	8-8
Table 8-2: Proposed Changes to Existing Roadway Functional Classification.....	8-9
Table 8-3: Richland Street Routes that Change to Neighborhood Route.....	8-10
Table 8-4: Proposed Street Characteristics.....	8-11
Table 8-5: Future (2020) Base PM Peak Hour Intersection Level of Service (Signals).....	8-22
Table 8-6: Future (2020) Base PM Peak Hour Intersection Conditions (Unsignalized).....	8-23
Table 8-7: I-182 Ramp Weaving Analysis (2020 PM Peak Hour).....	8-24
Table 8-8: Peak Hour Model Volumes (2001 and 2020).....	8-25
Table 8-9: Intersection Level of Service (Base Case Compared to One and Two-Way Couplet).....	8-28
Table 8-10: Advantages/Disadvantages by Mode for One-Way Couplet.....	8-28
Table 8-11: Recommended Access Spacing Standards for City Street Facilities.....	8-34
Table 8-12: Recommended City Street Projects (not in order of priority).....	8-36
Table 8-13: Recommended Intersection Traffic Control Improvements.....	8-39
Table 8-14: State Facility Improvement Projects in Richland.....	8-40
Table 8-15: Neighborhood Traffic Management Effectiveness.....	8-43
Table 10-1: Transportation Demand Management Strategies.....	10-2
Table 11-1: Existing Transportation Funding Sources (2003 Dollars).....	11-3
Table 11-2: Richland Transportation Action Plans Costs over 20 years (2003 Dollars,).....	11-4
Table 11-3: Non-Auto, Pedestrian and Bicycle Costs Issues.....	11-5
Table 11-4: Bicycle Action and Master Plan Projects.....	11-6
Table 11-5: Pedestrian Action Plan Projects.....	11-7
Table 11-6: Proposed Motor Vehicle Project Costs.....	11-8

APPENDIX

- A. Level of Service Description
- B. Glossary
- C. Transportation Survey
- D. Horn Rapids Industrial Development Analysis
- E. Visual Simulations of Proposed Street Projects

1: SUMMARY

Overview

This Richland Citywide Transportation Plan identifies projects and programs needed to support the City’s Vision and to serve planned growth within the city and the greater Tri-Cities area over the next 20 years. This document presents the recommended investments and priorities for the Pedestrian, Bicycle, Transit, and Motor Vehicle systems along with new transportation programs to correct existing shortfalls and enhance critical services. For each travel mode, a Master Plan project map and list are identified to support the city’s transportation goals and policies. The most critical elements of these Master Plans are referred to as Action Plans. The final chapter identifies the estimated plan costs and makes recommendations about potential new funding sources to support the plan.

Plan Committees

The plan was developed in close coordination with Richland city staff and residents, and key representatives from the surrounding communities. Two formal committees were formed to participate in the plan development:

- *Steering Committee* – Eleven Richland residents were appointed to oversee plan goals and policies, and to provide critical input to strategies and pending solutions presented in the plan. The committee met five times to review interim work products, and provide feedback on draft materials.
- *Technical Advisory Committee* – Agency staff from Benton-Franklin Council of Governments, Ben Franklin Transit, City of Kennewick, Washington Department of Transportation and Richland participated in reviewing the technical methods and findings of the study. The focus of this group was on consistency with the plans and past decisions in adjoining jurisdictions, and consensus on new recommendations.

Plan Organization

This document is divided into eleven chapters and a separate Technical Appendix. The title and focus of each chapter is summarized below:

- *Chapter 1: Summary* – This chapter provides a brief overview of the plan recommendations and presents the estimated funding needed to implement it.
- *Chapter 2: Goals and Policies* – This chapter presents the City’s current goals and policies as contained in their Vision Statement and Comprehensive Land Use Plan – Transportation Element, and makes recommendations related to additional policies for this plan.
- *Chapter 3: Existing Conditions* – This chapter examines the current transportation system in terms of the built facilities, how well they perform and comply with

existing policies, and where outstanding deficiencies exist.

- *Chapter 4: Land Use Forecasts and Travel Demands* – This chapter presents the details of how the City of Richland is expected to grow under its present Comprehensive Plan over the next 20 years, and how travel demands on the city and regional facilities will change from general growth in the Tri-Cities area.
- *Chapter 5: Pedestrian Plan* – This chapter presents strategies and plan recommendations to enhance pedestrian facilities and focus new improvements in areas with the highest concentration of activity.
- *Chapter 6: Bicycle Plan* – This chapter presents strategies and plan recommendations to enhance bicycle facilities and focus on new improvements in areas with the highest concentration of activity.
- *Chapter 7: Transit* -- This chapter makes recommendations to be considered by Ben Franklin Transit in their future enhancements to transit services. Also, implementation issues related to site development applications and improving access to transit services is discussed.
- *Chapter 8: Motor Vehicles* – This chapter presents strategies and plan recommendations to provide adequate mobility and access to the city and state facilities as travel demands grow to 2020 levels. This chapter also recommends new street design standards, access spacing standards, functional class designations, and other programs to monitor and manage travel demand.
- *Chapter 9: Other Modes* – This chapter discussed transportation issues related to rail, air, water, and pipeline transportation.
- *Chapter 10: Transportation Demand Management* – This chapter presents recommendations related to reducing peak period demands on travel facilities, and complying with the state’s Commute Trip Reduction Program.
- *Chapter 11: Financing and Implementation* – This chapter presents the complete estimated revenues and costs for the transportation projects and programs developed in the plan. New funding alternatives are presented to bridge the gaps between the two.

Goals and Policies

The city’s Comprehensive Plan lays out a policy framework regarding transportation services. The current goals and polices are presented in Chapter 2. Goals are defined as brief guiding statements that describe a desired result. Policies associated with each of the individual goals describe the actions needed to move the community in the direction of completing each goal. These goals and policies were applied in the development of this transportation plan to develop strategies and implementing measures for each of the travel modes applied in the City of Richland. The next section presents several new policies that were recommended to amend the existing policies and to further address specific implementation needs of the plan.

Suggested New Transportation Policies

Four new transportation policies were recommended for implementation into the City's Vision statement to address specific issues related to facilities design and implementation.

- **Goal 1: Policy 8** -- *The City will seek to integrate appropriate facility design with compatible land use types to reduce environmental and livability impacts.*

This policy addresses the need to consider adjoining land use designations and existing development to balance transportation services with potential impacts. For example, smaller local and neighborhood streets are appropriate where residential units front onto the street. Narrow residential streets have been proven to reduce vehicle speeds and 'cut-through' traffic. Where existing conflicts exist between street functions and land use (e.g., Van Giesen between SR 240 and Stevens Drive), special consideration should be given to reduce impacts to residents.

- **Goal 1: Policy 9** -- *The City will pursue transportation equity throughout the City with an equitable distribution of transportation projects.*

This policy recognizes that geographical distribution of transportation improvements should be considered in selecting and prioritizing public facility investments. For the City of Richland, this will primarily focus on recommended improvements to pedestrian and bicycle facilities since these are more widely dispersed than recommended roadway improvements.

- **Goal 2: Policy 4** -- *The City will develop and deploy incident management plans on the primary arterial system.*

One measure of transportation efficiency is the level of peak period congestion that occurs on major roadways. Another measure that has been proven equally important through regional mobility research is the response to highway incidents (e.g., spills, crashes, etc.) that routinely disrupt traffic flow of trucks and autos. This is particularly true in Richland where an incident on one of the bridge crossings can dramatically impact mobility.

- **Goal 6: Policy 6** -- *The City will coordinate site development guidelines to encourage and enable use of alternative modes.*

The purpose of this new policy is to connect the guidelines for land use development applications related to transportation (access spacing, driveway locations, building location and orientation, on-site circulation, etc.) with the street features that are required by other policies (sidewalks, crossings, bus shelters, etc.) By joining these two purposes, the new development will have enhanced opportunities for access to other travel modes.

Other Implementing Land Use Actions

Several recommendations are made regarding implementing the pedestrian, bicycle, and transit Master Plans during application development review periods. These are explained in detail in the Pedestrian Plan (Chapter 5, p. 5-12), Bicycle Plan (Chapter 6, p. 6-8) and Transit Plan (Chapter 7, p. 7-8), and summarized briefly below:

- Pedestrian Facilities In-Fill – The land use applicant that adds vehicle trips that conflict with pedestrian flows or adds pedestrian flows that require safe facilities will

be asked to review the adequacy of pedestrian facilities near their site. The review will include sidewalk improvements along their property frontage, and off-site connections to sidewalks and pathways to provide clear and convenient pedestrian circulation. Off-site improvements can be identified up to 300 feet from the proposed development.

- Bicycle Facilities – The current city zoning code requires provisions for bike parking facilities on many uses. It does not presently include multi-family residential developments. It is recommended that the zoning code be amended to require multi-family development greater than four units include on-site bike parking.
- Transit Facilities – The city’s zoning code could be amended to require a review of the proposed sites propensity to generate transit trips. Developments above a defined threshold could be required to accommodate and/or construct transit related improvements such as bus shelters, bus turnouts, or connecting pathways.

Recommended Projects and Programs

Pedestrian

A detailed analysis was conducted on existing collector and arterial streets to identify locations where new or in-fill facilities would be required. Separate recommendations were made for enhancements to existing crossings at key arterial locations. Key findings and recommendations included:

- Establishing a new Pedestrian District in the Central Business District. The Pedestrian District will have new standards for enhanced pedestrian connectivity and street crossings.
- Identifying a toolbox of improvements that can be applied for pedestrian crossing enhancements including raised center refuge islands, pedestrian countdown timers at traffic signals, and curb extensions where on-street parking is provided (or planned).
- Identifying a series of sidewalk in-fill projects to connect existing sidewalks to key major pedestrian generators, such as schools, government facilities, etc.
- Modifying street standards to setback sidewalks from the curb on high speed arterial facilities. A landscaped (or hardscaped) buffer of four to six feet is recommended between sidewalks and the street curb in these cases.

The total cost of the Pedestrian Action plan is \$4.5 million.

Bicycle

The regional bicycle plan was used as a basis for developing a core of bicycle routes that connect regional trails and key destinations. Key findings and recommendations included:

- Identifying four-lane streets that could be re-striped to three-lanes with space for on-street bike lanes without adversely affecting traffic conditions.
- Providing for key north-south and east-west routes to connect residential neighborhoods to employment centers, transit centers, and regional trail facilities.
- Identifying program costs to expand arterial streets to provide on-street bike facilities

(or off-street trails).

The total cost of the Bicycle Action plan is \$29 million.

Transit

A number of strategies were reviewed, including increased fixed-route bus services, lengthening the time of service until 2:00 AM and extended new transit services to North Richland and the Hanford Reservation. However, based on work conducted recently by Ben Franklin Transit, the most cost effective solutions appear to be focused on expansion of their transit taxi service, which brings patrons to the nearest fixed-route bus stop free of charge. The existing and planned employment densities do not appear to support the investments associated with more frequent buses during commute hours, express bus service, or commuter rail.

Motor Vehicle

A comprehensive analysis of the 2020 motor vehicle needs for city streets and affected state highway facilities was performed within the City of Richland. Many of the new facilities required to serve 2020 travel demand are currently in the WSDOT's Highway System Plan, the BFCG's Regional Transportation Plan, and the City's adopted Transportation Improvement Plan. All of these recommended projects were found to be important to maintain mobility standards for city and state facilities. A few key findings and recommendations from the Motor Vehicle chapter are summarized below:

- The SR 240 Bypass Highway cannot adequately serve 2020 travel demands. The six-lane expressway configuration will require upgrading to freeway status, or a parallel corridor improvement will be required.
- The SR 240 widening across the Yakima River causeway will substantially relieve the existing bottleneck on this portion of SR 240. The 2020 forecasts should be adequately served on GWW and on this portion of SR 240.
- Further studies are needed on I-182 to identify additional improvements beyond those identified in WSDOT's Highway System Plan to reduce impacts of high traffic volumes and closely spaced interchanges.
- The proposed circulation alternatives on George Washington Way and Jadwin Avenue near the central business district can be accommodated with modest degrading of peak hour performance (LOS D at worst).
- The previously planned new off-ramp from I-182 westbound to Aaron Drive at Wellsian Way is not consistent with WSDOT facilities design standards, and could introduce critical operations challenges for that freeway section. Further study will be required if this option is to be considered.
- All of the signal controlled city street intersections will perform at LOS D or better with programmed improvements presented in Chapter 8.
- The one exception to the above statement occurs at George Washington Way and Columbia Point Drive where the 2020 PM peak hour conditions will degrade to LOS E. Further capacity improvements to this section of the corridor are not recommended.

Transportation Programs

Table 1-1 summarizes the elements of the plan that were not specifically defined in the recommended project lists, and explains how costs will be addressed for these elements.

Table 1-1: Non-Auto, Pedestrian and Bicycle Costs Issues

Travel Mode	Issues
Parking	The transportation plan does not define specific projects. Off-street parking will be provided by private property owners as land develops.
Neighborhood Traffic Management (NTM)	Specific NTM projects are not defined. These projects will be subject to neighborhood consensus based upon City placement and design criteria. A city NTM program, if desired, should be developed with criteria and policy adopted by the City Council. Traffic humps can cost \$2,000 to \$4,000 each and traffic circles can cost \$3,000 to \$8,000 each. A speed trailer can cost about \$10,000. It is important, where appropriate, that any new development incorporate elements of NTM as part of its on-site design. The City currently has no allocation for NTM in the current budget.
Public Transportation	Ben-Franklin Transit will continue to develop costs for implementing transit related improvements. The Cities can supplement this by incorporating transit features through development exactions, roadway project design and the provision of signal pre-emption or priority for buses. Developing new transit services in Richland will require Ben-Franklin Transit to reallocate funding or seek additional sources of operating funds.
Trucks/Freight	Roadway funding will address these needs.
Rail	Costs to be addressed and funded by private railroad companies and the state.
Air, Water, Pipeline	Not required by the City
Transportation Demand Management	Not required by the City but will be included in the pending Commute Trip Reduction program.

Financing

Current Funding Sources

The consultant team reviewed the City’s historical revenues and expenditures for transportation programs and projects to help understand the current level of investment made into its transportation system. Table 1-2 breaks out the annual revenues from general fund, state and federal funds, state fuel tax, and other charges that add to \$3.8 million. Over the course of the 20-year transportation plan, if this revenue stream is assumed to remain constant, the 20-year revenue total is \$76 million.

Table 1-2: Existing Transportation Funding Sources (2003 Dollars)

Source	Average Annual Revenue (\$1,000)
General Fund	\$1,368
State/Federal	\$1,064
State Fuel Tax	\$760
Charges for Services	\$304
Miscellaneous	\$304
Annual TOTAL	\$3,800
20 YEARS OF CURRENT FUNDING (\$1,000's)	\$76,000

Additional Funding Needs

Table 1-3 summarizes the costs outlined in the Transportation Plan to implement the Action Plans for Streets, Bicycles, Pedestrians, and several other recommended transportation programs (see Table 11-3 for details). The 20-year cost is estimated at \$104.8 million, which is \$28.8 million higher than current revenues provide. The following sections outline several methods for increasing transportation funding or seeking alternative solutions to better balance transportation costs and revenue.

Table 1-3: Richland Transportation Action Plans Costs over 20 years (2003 Dollars,)

Transportation Element	Approximate Cost (\$1,000)
Street Improvement Projects: Unfunded Action Plan	\$32,600
Road Maintenance (\$1,700,000/yr)	\$34,000
Bicycle Action Plan	\$27,000
Pedestrian Action Plan	\$3,700
Pedestrian/School Safety Program (\$10,000/yr)	\$200
Sidewalk Grant Program (\$50,000/yr)	\$1,000
Neighborhood Traffic Management (\$25,000/yr)	\$1,500
Transportation Plan Support Documents (i.e. Design standard update, TSP updates)	\$500
20 YEAR TOTAL in 2003 Dollars	\$100,500
Funding Shortfall for 20-year plan (minus \$76 million available)	\$24,500

Outstanding Issues

Several important issues remain unresolved at the time of the Final Draft Report release. These issues will be discussed with city staff and elected officials to reach consensus for inclusion in the Final Report:

- SR 240 Bypass Upgrade – The SR 240 Bypass Highway was demonstrated to have inadequate capacity to serve planned growth to 2020. Although this is a state maintained facility, the implications of upgrading corridor mobility will have substantial potential impacts on city circulations and access. The concept explored in Chapter 8 includes upgrading the SR 240 Bypass to freeway class, including grade separated interchanges at Stevens Drive, Van Giesen Street, limited access at Swift Boulevard, and an overpass at Duportail Street. With these improvements, the highway can adequately serve 2020 demands, however, substantial additional studies are required to explore the proper access changes and to understand their effects on local circulation.
- Aaron Drive Access onto SR 240 -- One of the most difficult issues related to the above point is how to provide reasonable access to and from Aaron Drive in the long-term. A freeway class facility would require eliminating the existing at-grade intersection at Aaron Drive and the I-182 Westbound on-ramps. The previously planned off-ramp from I-182 westbound onto Aaron Drive does not conform to WSDOT spacing standards for principal arterial facilities, and other solutions will need to be identified.
- Supplemental Funding – The shortfall in the transportation plan is about \$29 million in today’s dollars. The city must determine if new funding strategies are developed, or if portions of the plan policies and project lists should be revised to bring the revenues and expenditures into balance. Potential new funding mechanisms could include: a traffic impact fee for new development; a street utility fee to augment maintenance revenues; and incremental increases in local gas tax to fund new capital projects.