Implementation & Funding Opportunities

FEDERAL FUNDING SOURCES

Federal funding is typically directed through state agencies to local governments either in the form of grants or direct appropriations, independent from state budgets. Federal funding typically requires a local match of 20%, although there are sometimes exceptions, such as the recent American Recovery and Reinvestment Act stimulus funds, which did not require a match.
The following is a list of possible Federal funding sources that could be used to support construction of many pedestrian and bicycle improvements. Most of these are competitive, and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. It should be noted that the FHWA encourages the construction of pedestrian and bicycle facilities as an incidental element of larger ongoing projects. Examples include providing paved shoulders on new and reconstructed roads, or building sidewalks, on-street bikeways, trails and marked crosswalks as part of new highways.

RECREATION TRAILS PROGRAM

The Recreational Trails Program (RTP) is a federal funded, state administered grant program. The RTP provides grant funding for land acquisition for trails, trail construction, trail maintenance, trail rehabilitation and for trail head support facilities. These funds are distributed in the form of an 80% grant with a 20% match. Local, state and federal land managing agencies are eligible to apply as well as state chartered, non-profit organizations with IRS 501 (c) (3) status that have a written agreement for trail management with an agency. All grants must be on publicly owned land.

DEVELOPING A RELIABLE AND INNOVATIVE VISION FOR THE ECONOMY ACT (DRIVE)

The "Developing a Reliable and Innovative Vision for the Economy Act," or DRIVE Act, which was approved 65 to 34 July 30 by the U.S. Senate, would reauthorize the federal highway and public transportation programs for a six-year period, fiscal years 2016-21. It authorizes a total of $273.4 billion from the Highway Trust Fund for highway investment, a $28 billion increase compared to maintaining FY 2015 funding. About half of the increase would support two new proposed initiatives—a National Freight Program and a program of Assistance for Major Projects. The remainder would provide small annual increases in core highway program funding. An additional $2.7 billion would be authorized from the general fund subject to congressional appropriation.
More information: *http://www.artba.org/Media/PDFs/drive_act.pdf*

TRANSPORTATION ALTERNATIVES

MAP-21 collapsed the Transportation Enhancement Program, Safe Routes to School and the Recreational Trails Program into a comprehensive Transportation Alternatives Program. The most significant DRIVE Act modification to this program changes its funding from 2 percent of annual apportionments to a flat $850 million per year. The DRIVE Act would also expand eligible recipients for funds to include nonprofits responsible for administration of local transportation safety programs and would require annual reports from state and local planning organizations on the number of project applications and awards.

Complete eligibilities for TA include:

1. Transportation Alternatives as defined by Section 1103 (a)(29). This category includes the construction, planning, and design of a range of bicycle and pedestrian infrastructure including "on–road and off–road trail facilities for pedestrians, bicyclists, and other active forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety–related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990." Infrastructure projects and systems that provide "Safe Routes for Non-Drivers" is a new eligible activity.
For the complete list of eligible activities, visit: *http://www.fhwa.dot.gov/environment/transportation_enhancements/legislation/map21.cfm*

2. Safe Routes to School. The purpose of the Safe Routes to Schools eligibility is to promote safe, healthy alternatives to riding the bus or being driven to school. All projects must be within two miles of primary or middle schools (K-8).
Eligible projects may include:
Engineering improvements. These physical improvements are designed to reduce potential bicycle and pedestrian conflicts with motor vehicles. Physical improvements may also reduce motor vehicle traffic volumes around schools, establish safer and more accessible crossings, or construct walkways, trails or bikeways. Eligible improvements include sidewalk improvements, traffic calming/speed reduction, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, and secure bicycle parking facilities.
Education and Encouragement Efforts. These programs are designed to teach children safe bicycling and walking skills while educating them about the health benefits, and environmental impacts. Projects and programs may include creation, distribution and implementation of educational materials; safety based field trips; interactive bicycle/pedestrian safety video games; and promotional events and activities (e.g., assemblies, bicycle rodeos, walking school buses).
Enforcement Efforts. These programs aim to ensure that traffic laws near schools are obeyed. Law enforcement activities apply to cyclists, pedestrians and motor vehicles alike. Projects may include development of a crossing guard program, enforcement equipment, photo enforcement, and pedestrian sting operations.

3. Planning, designing, or constructing roadways within the right-of-way of former Interstate routes or divided highways. At the time of writing, detailed guidance from the Federal Highway Administration on this new eligible activity was not available.
Average annual funds available through TA over the life of MAP-21 equal $814 million nationally, which is based on a 2% set-aside of total MAP-21 authorizations. (http://www.fhwa.dot.gov/MAP21/funding.cfm). State DOTs may elect to transfer up to 50% of TA funds to other highway programs, so the amount listed above represents the maximum potential funding. TA funds are typically allocated through the planning districts.

SURFACE TRANSPORTATION PROGRAM (GUIDESHARE)

The Surface Transportation Program (STP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. A wide variety of bicycle and pedestrian improvements are eligible, including on-street bicycle facilities, off-street trails, sidewalks, crosswalks, bicycle and pedestrian signals, parking, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Unlike most highway projects, STP-funded bicycle and pedestrian facilities may be located on local and collector roads which are not part of the Federal-aid Highway System. Fifty percent of each state's STP funds are suballocated geographically by population. These funds are funneled through TDOT to the MPOs in the state. The remaining 50% may be spent in any area of the state.

HIGHWAY SAFETY IMPROVEMENT PROGRAM

MAP-21 doubles the amount of funding available through the Highway Safety Improvement Program (HSIP) relative to SAFETEA-LU. HSIP provides $2.4 billion nationally for projects and programs that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, bikeways, and walkways. MAP-21 preserves the Railway-Highway Crossings Program within HSIP but discontinues the High-Risk Rural roads set-aside unless safety statistics demonstrate that fatalities are increasing on these roads HSIP is a data-driven funding program and eligible projects must be identified through analysis of crash experience, crash potential, crash rate, or other similar metrics. . Infrastructure and non-infrastructure projects are eligible for HSIP funds. Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for active transportation users in school zones are examples of eligible projects. All HSIP projects must be consistent with the state's Strategic Highway Safety Plan.

CONGESTION MITIGATION/AIR QUALITY PROGRAM

The Congestion Mitigation/Air Quality Improvement Program (CMAQ) provides funding for projects and programs in air quality nonattainment and maintenance areas for ozone, carbon monoxide, and particulate matter which reduce transportation related emissions. States with no nonattainment areas may use their CMAQ funds for any CMAQ or STP eligible project. These federal dollars can be used to build bicycle and pedestrian facilities that reduce travel by automobile. Purely recreational facilities generally are not eligible.

NEW FREEDOM INITIATIVE

MAP-21 continues a formula grant program that provides capital and operating costs to provide transportation services and facility improvements that exceed those required by the Americans with Disabilities Act. Examples of pedestrian/accessibility projects funded in other communities through the New Freedom Initiative include installing Accessible Pedestrian Signals (APS), enhancing transit stops to improve accessibility, and establishing a mobility coordinator position.
More information: *http://www.hhs.gov/newfreedom/*

PILOT TRANSIT-ORIENTED DEVELOPMENT PLANNING

MAP-21 establishes a new pilot program to promote planning for Transit-Oriented Development. At the time of writing the details of this program are not fully clear, although the bill text states that the Secretary of Transportation may make grants available for the planning of projects that seek to "facilitate multimodal connectivity and accessibility," and "increase access to transit hubs for pedestrian and bicycle traffic."

PARTNERSHIP FOR SUSTAINABLE COMMUNITIES

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT). The partnership aims to "improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide." The Partnership is based on five Livability Principles, one of which explicitly addresses the need for bicycle and pedestrian infrastructure ("Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health").

COMMUNITY DEVELOPMENT BLOCK GRANTS

The Community Development Block Grants (CDBG) program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal CDBG grantees may "use Community Development Block Grants funds for activities that include (but are not limited to): acquiring real property; reconstructing or rehabilitating housing and other property; building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers and recreational facilities; paying for planning and administrative expenses, such as costs related to developing a consolidated plan and managing Community Development Block Grants funds; provide public services for youths, seniors, or the disabled; and initiatives such as neighborhood watch programs."
Trails and greenway projects that enhance accessibility are the best fit for this funding source. CDBG funds could also be used to write an ADA Transition Plans.
More information: *www.hud.gov/cdbg*

COMMUNITY TRANSFORMATION GRANTS

Community Transformation Grants administered through the Center for Disease Control support community–level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes. Active transportation infrastructure and programs that promote healthy lifestyles are a good fit for this program, particularly if the benefits of such improvements accrue to population groups experiencing the greatest burden of chronic disease.
More info: *http://www.cdc.gov/communitytransformation/*

Implementation & Funding Opportunities

ADDITIONAL FEDERAL FUNDING

The landscape of federal funding opportunities for bicycle and pedestrian programs and projects is always changing. A number of Federal agencies, including the Bureau of Land Management, the Department of Health and Human Services, the Department of Energy, and the Environmental Protection Agency have offered grant programs amenable to bicycle and pedestrian planning and implementation, and may do so again in the future.
For up-to-date information about grant programs through all federal agencies, see: *http://www.grants.gov*

STATE FUNDING SOURCES

The following is a list of possible State funding sources that could be used to support construction of many pedestrian and bicycle improvements...

LOCAL GOVERNMENT FUNDING SOURCES

Local funding sources that would support bike facility project construction will most likely be limited but should be explored to support active transportation projects.

METROPOLITAN PLANNING ORGANIZATION

Metropolitan Planning Organizations (MPOs) are federally required regional transportation planning organizations. MPOs are responsible for planning and prioritizing all federally funded transportation improvements within an urbanized area.
MPOs are a partnership between local and state government that makes decisions about transportation planning in urbanized areas and meets planning requirements established by federally authorizing legislation for transportation funding. MPOs work cooperatively with TDOT to develop transportation plans, travel models, transit plans, and bicycle and pedestrian plans. MPOs work with the state on funding issues for transportation improvements, project planning issues, and other issues such as environmental and air quality concerns. MPOs also work with local governments to coordinate land use and transportation planning.
MPOs maintain a long-range transportation plan (LRTP) and develop a transportation improvement program (TIP) to develop a fiscally constrained program based on the long-range transportation plan and designed to serve the region's goals while using spending, regulating, operating, management, and financial tools. The Knoxville Regional Transportation Planning Organization (TPO) is the federally designated MPO for the Knoxville Urban Area consisting of all of Knox County and the urbanized portions of Blount, Loudon, and Sevier Counties.

GENERAL FUND

The General Fund is often used to pay for maintenance expenses and limited capital improvement projects. Projects identified for reconstruction or re-pavement as part of the Capital Improvements list should also implement recommendations for bicycle or pedestrian improvements in order to reduce additional costs.

LOCAL BOND MEASURES

Local bond measures, or levies, are usually general obligation bonds for specific projects. Bond measures are typically limited by time based on the debt load of the local government or the project under focus. Funding from bond measures can be used for engineering, design and construction of trails, greenways, and pedestrian and bicycle facilities. A bond issued in Denver, Colorado funded $5 million for trail development and also funded the City's bike planner for several years. In 2012, voters in Austin, Texas approved a $143 million bond to fund a variety of mobility and active transportation projects.

STORMWATER UTILITY FEES

Stormwater charges are typically based on an estimate of the amount of impervious surface on a user's property. Impervious surfaces (such as rooftops and paved areas) increase both the amount and rate of stormwater runoff compared to natural conditions. Such surfaces cause runoff that directly or indirectly discharges into public storm drainage facilities and creates a need for stormwater management services. Thus, users with more impervious surface are charged more for stormwater service than users with less impervious surface.
The rates, fees, and charges collected for stormwater management services may not exceed the costs incurred to provide these services. The costs that may be recovered through the stormwater rates, fees, and charges includes any costs necessary to assure that all aspects of stormwater quality and quantity are managed in accordance with federal and state laws, regulations, and rules. Open space may be purchased with stormwater fees, if the property in question is used to mitigate floodwater or filter pollutants.

SYSTEM DEVELOPMENT CHARGES/DEVELOPER IMPACT FEES

System Development Charges (SDCs), also known as Developer Impact Fees, represent another potential local funding source. SDCs are typically tied to trip generation rates and traffic impacts produced by a proposed project. A developer may reduce the number of trips (and hence impacts and cost) by paying for on- or off-site pedestrian improvements that will encourage residents to walk (or use transit, if available) rather than drive. In-lieu parking fees may be used to help construct new or improved pedestrian facilities. Establishing a clear nexus or connection between the impact fee and the project's impacts is critical in avoiding a potential lawsuit.

UTILITY LEASE REVENUE

A method to generate revenues from land leased to utilities for locating utility infrastructure on municipally owned parcels. This can improve capital budgets and support financial interest in property that would not otherwise create revenue for the government.

Implementation & Funding Opportunities

LOCAL IMPROVEMENT DISTRICTS (LIDS)

Local Improvement Districts (LIDs) are most often used by cities to construct localized projects such as streets, sidewalks or bikeways. Through the LID process, the costs of local improvements are generally spread out among a group of property owners within a specified area. The cost can be allocated based on property frontage or other methods such as traffic trip generation.
Several cities have successfully used LID funds to make improvements on residential streets and for large scale arterial projects. LIDs formed to finance commercial street development can be "full cost," in which the property assessments are entirely borne by the property owners.

BUSINESS IMPROVEMENT AREA OR DISTRICT (BIA OR BID)

Trail development and pedestrian and bicycle improvements can often be included as part of larger efforts aimed at business improvement and retail district beautification. Business Improvement Areas collect levies on businesses in order to fund area wide improvements that benefit businesses and improve access for customers. These districts may include provisions for pedestrian and bicycle improvements, including as wider sidewalks, landscaping and ADA compliance.

SALES TAX

Local governments that choose to exercise a local option sales tax use the tax revenues to provide funding for a wide variety of projects and activities. The Tellico Parkway Greenway can be funded by a portion of local sales tax revenue or from a voter approved sales tax increase. The City of Colorado Springs implemented a TOPS tax (Trails, Open Space and Parks) to administer the ordinance passed by voters in April of 1997. The sales tax, 1/10th of one percent, generates about $6 million annually for trails, open space and parks. Any increase in the sales tax, even if applying to a single county, must gain approval of the state legislature. In 2004, Charleston County, South Carolina voters approved a ½ cent sales tax for the purpose of financing transportation and greenbelt projects. Voters approved a second referendum in 2006.

PROPERTY TAX

Property taxes generally support a significant portion of a local government's activities. However, the revenues from property taxes can also be used to pay debt service on general obligation bonds issued to finance open space system acquisitions. Because of limits imposed on tax rates, use of property taxes to fund open space could limit the county's or a municipality's ability to raise funds for other activities. Property taxes can provide a steady stream of financing while broadly distributing the tax burden. In other parts of the country, this mechanism has been popular with voters as long as the increase is restricted to parks and open space. Note, other public agencies compete vigorously for these funds, and taxpayers are generally concerned about high property tax rates.

TAX INCREMENT FINANCING (TIF)

Tax Increment Financing is a tool to use future gains in taxes to finance the current improvements that will create those gains. When a public project (e.g., shared use trail) is constructed, surrounding property values generally increase and encourage surrounding development or redevelopment. The increased tax revenues are then dedicated to support the debt created by the original public improvement project.

PRIVATE SECTOR FUNDING SOURCES

Many communities have solicited greenway funding assistance from private foundations and other conservation-minded benefactors. Below are several examples of private funding opportunities available.

BIKES BELONG GRANT PROGRAM

The Bikes Belong Coalition of bicycle suppliers and retailers has awarded $1.2 million and leveraged an additional $470 million since its inception in 1999. The program funds corridor improvements, mountain bike trails, BMX parks, trails, and park access. It is funded by the Bikes Belong Employee Pro Purchase Program.
More information: *http://www.bikesbelong.org/grants/*

NATIONAL TRAILS FUND

American Hiking Society created the National Trails Fund in 1998, the only privately supported national grants program providing funding to grassroots organizations working toward establishing, protecting and maintaining foot trails in America. 73 million people enjoy foot trails annually, yet many of our favorite trails need major repairs due to a $200 million backlog of badly needed maintenance. National Trails Fund grants help give local organizations the resources they need to secure access, volunteers, tools and materials to protect America's cherished public trails. To date, American Hiking has granted more than $240,000 to 56 different trail projects across the U.S. for land acquisition, constituency building campaigns, and traditional trail work projects. Awards range from $500 to $10,000 per project.
Projects the American Hiking Society will consider include:
Securing trail lands, including acquisition of trails and trail corridors, and the costs associated with acquiring conservation easements.
Building and maintaining trails which will result in visible and substantial ease of access, improved hiker safety, and/or avoidance of environmental damage.
Constituency building surrounding specific trail projects - including volunteer recruitment and support.
More information: *http://www.americanhiking.org/alliance/fund.html*

Implementation & Funding Opportunities

THE CONSERVATION ALLIANCE

The Conservation Alliance is a non-profit organization of outdoor businesses whose collective annual membership dues support grassroots citizen-action groups and their efforts to protect wild and natural areas. One hundred percent of its member companies' dues go directly to diverse, local community groups across the nation–groups like Southern Utah Wilderness Alliance, Alliance for the Wild Rockies, The Greater Yellowstone Coalition, the South Yuba River Citizens' League, RESTORE: The North Woods and the Sinkyone Wilderness Council (a Native American-owned/operated wilderness park). For these groups, who seek to protect the last great wild lands and waterways from resource extraction and commercial development, the Alliance's grants are substantial in size (about $35,000 each), and have often made the difference between success and defeat. Since its inception in 1989, The Conservation Alliance has contributed $4,775,059 to grassroots environmental groups across the nation, and its member companies are proud of the results: To date the groups funded have saved over 34 million acres of wild lands and 14 dams have been either prevented or removed-all through grassroots community efforts.
The Conservation Alliance is a unique funding source for grassroots environmental groups. It is the only environmental grant maker whose funds come from a potent yet largely untapped constituency for protection of ecosystems – the active transportation outdoor recreation industry and its customers. This industry has great incentive to protect the places in which people use the clothing, hiking boots, tents and backpacks it sells. The industry is also uniquely positioned to educate outdoor enthusiasts about threats to wild places, and engage them to take action. Finally, when it comes to decision–makers, especially those in the Forest Service, National Park Service, and Bureau of Land Management, this industry has clout - an important tool that small advocacy groups can wield.
The Conservation Alliance Funding Criteria: The Project should be focused primarily on direct citizen action to protect and enhance our natural resources for recreation. The Alliance does not look for mainstream education or scientific research projects, but rather for active campaigns. All projects should be quantifiable, with specific goals, objectives and action plans and should include a measure for evaluating success. The project should have a good chance for closure or significant measurable results over a fairly short term (one to two years). Funding emphasis may not be on general operating expenses or staff payroll.
More information: *http://www.conservationalliance.com/index.m*

THE TRUST FOR PUBLIC LAND

Land conservation is central to the mission of the Trust for Public Land (TPL). Founded in 1972, the Trust for Public Land is the only national nonprofit working exclusively to protect land for human enjoyment and wellbeing. TPL helps conserve land for recreation and spiritual nourishment and to improve the health and quality of life of American communities. Also, TPL is the leading organization helping agencies and communities identify and create funds for conservation from federal, state, local, and philanthropic sources.
Since 1996, TPL has helped states and communities craft and pass over 382 successful ballot measures, generating $34 billion in new conservation-related funding.
More information: *http://www.tpl.org/what-we-do/services/conservation-finance/*

LOCAL TRAIL SPONSORS

A sponsorship program for trail amenities allows smaller donations to be received from both individuals and businesses. Cash donations could be placed into a trust fund to be accessed for certain construction or acquisition projects associated with the greenways and open space system. Some recognition of the donors is appropriate and can be accomplished through the placement of a plaque, the naming of a trail segment, and/or special recognition at an opening ceremony. Types of gifts other than cash could include donations of services, equipment, labor, or reduced costs for supplies.

CORPORATE DONATIONS

Corporate donations are often received in the form of liquid investments (i.e. cash, stock, bonds) and in the form of land. Employers recognize that creating places to bike and walk is one way to build community and attract a quality work force. Bicycling and outdoor recreation businesses often support local projects and programs. Municipalities typically create funds to facilitate and simplify a transaction from a corporation's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.
OTHER SOURCES

VOLUNTEER WORK AND PUBLIC-PRIVATE PARTNERSHIPS

Individual volunteers from the community can be brought together with groups of volunteers from church groups, civic groups, scout troops and environmental groups to work on greenway development on special community workdays. Volunteers can also be used for fundraising, maintenance, and programming needs. Local schools or community groups may use the bikeway projects as a project for the year, possibly working with a local designer or engineer. Work parties may be formed to help clear the right-of-way where needed. A local construction company may donate or discount services. A challenge grant program with local businesses may be a good source of local funding, where corporations 'adopt' a bikeway and help construct and maintain the facility.

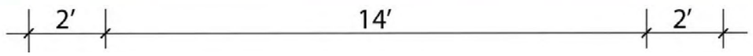
PRIVATE INDIVIDUAL DONATIONS

Private individual donations can come in the form of liquid investments (i.e. cash, stock, bonds) or land. Municipalities typically create funds to facilitate and simplify a transaction from an individual's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.

FUNDRAISING / CAMPAIGN DRIVES

Organizations and individuals can participate in a fundraiser or a campaign drive. It is essential to market the purpose of a fundraiser to rally support and financial backing. Oftentimes fundraising satisfies the need for public awareness, public education, and financial support.

NEV Concepts & Design Standards



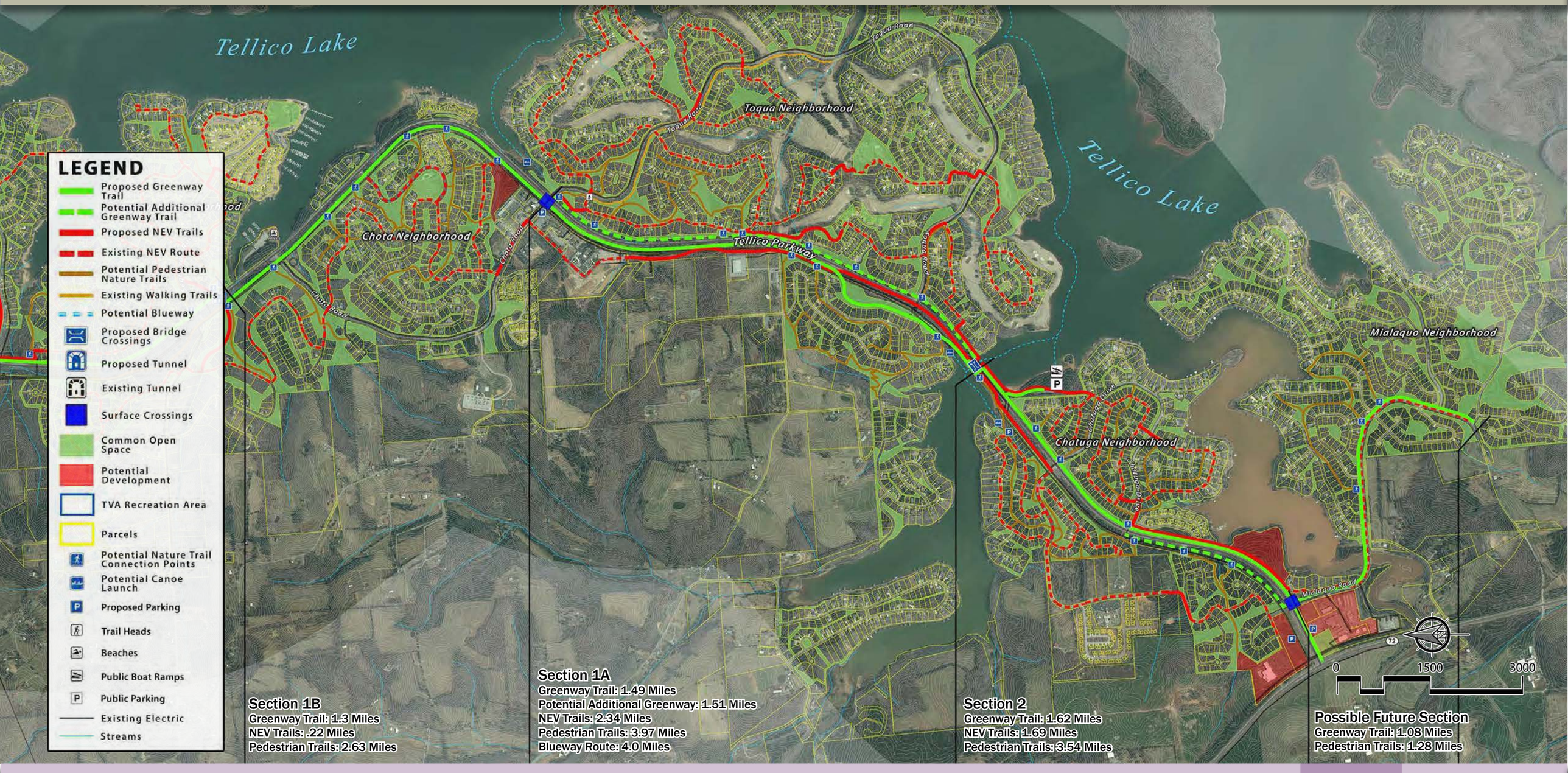
NEV Trail Design:

1. For the purpose of this Master Plan, Neighborhood Electric Vehicles, NEVs, are defined as low-speed four wheel vehicles that attain a top speed of 20 to 25 mph.
2. Typical NEVs have a width of 48" without mirrors and 66" with mirrors.
3. NEV trails should be designed to a width of 12-14' of hard surface material with 2' of level shoulders and level compacted stone.
4. Some NEV trails at Tellico Village may be designed to function as optional maintenance access for Loudon Utilities. These routes will need to have clear collaborative design, along with use and maintenance agreements with Loudon Utilities.
5. Specific trail layout and geometry will require detailed analysis and design based on field survey and appropriate criteria for NEVs.

Neighborhood Electric Vehicle (NEV) Overview:

- Tellico Village currently allows for low-speed electric vehicles to use some of the private road networks as means of travels.
- Throughout Tellico Village, traveling by means of an electric vehicle has become a popular alternative to traditional vehicles, largely due to the prevalence of golfing and the convenience of golf cart travel.
- The Tellico Parkway Corridor has the opportunity to provide NEV travel as an alternative mode of transportation by designing a network that uses existing private roads and additional trails built specifically for NEV use.
- Electric vehicle trails would be designed to be distinctly separate from greenway users and would require guidelines and regulations for use. Governance and monitoring of the electric vehicle routes would fall under the authority of Tellico Village and would function in similar fashion as the existing private road network.
- Funding opportunities for NEV trails will likely come from different funding sources than greenway grant opportunities.

Proposed Greenway Route with NEV: Sections 1-2



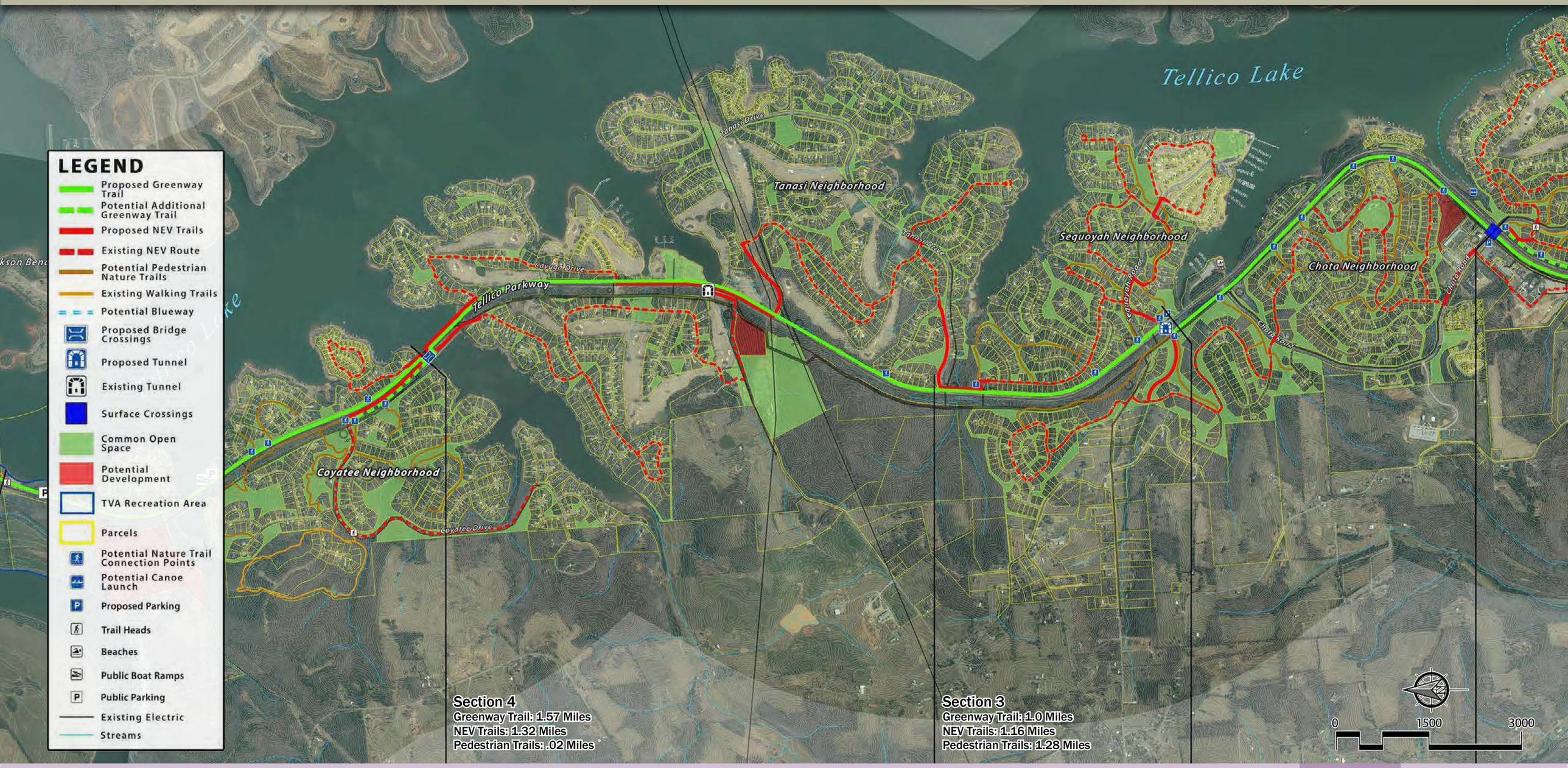
Section 1B
Greenway Trail: 1.3 Miles
NEV Trails: .22 Miles
Pedestrian Trails: 2.63 Miles

Section 1A
Greenway Trail: 1.49 Miles
Potential Additional Greenway: 1.51 Miles
NEV Trails: 2.34 Miles
Pedestrian Trails: 3.97 Miles
Blueway Route: 4.0 Miles

Section 2
Greenway Trail: 1.62 Miles
NEV Trails: 1.69 Miles
Pedestrian Trails: 3.54 Miles

Possible Future Section
Greenway Trail: 1.08 Miles
Pedestrian Trails: 1.28 Miles

Proposed Greenway Route with NEV: Sections 3-4



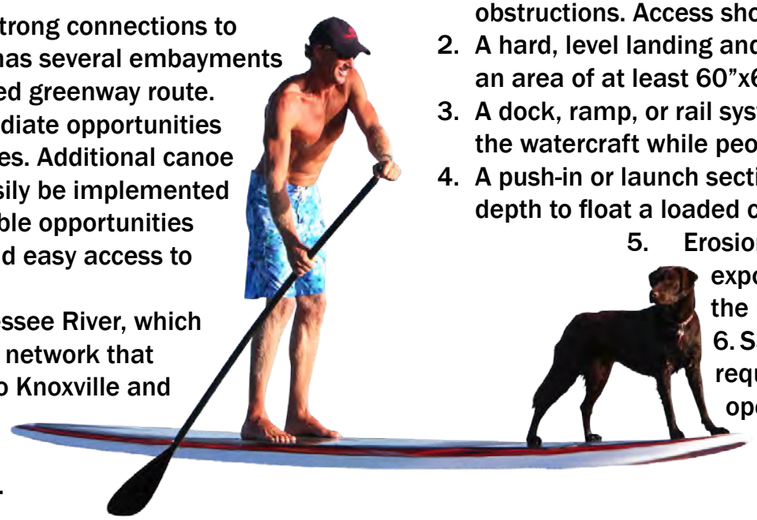
Proposed Greenway Route with NEV: Sections 5-6

Blueway Concepts & Design Standards

Heavy Duty Dock & Launch System, *image provided by The Dock Doctors*

Overview:

- Blueways are water-based networks designed for paddlers. They function much like greenways in that they provide a different mode of recreational travel. They also provide a unique view and experience for residents and visitors using the Tellico Parkway Corridor that could not be experienced from land-based transportation.
- The Tellico Parkway Corridor has strong connections to adjacent waterways. Tellico Lake has several embayments that will interface with the proposed greenway route. Existing boat ramps provide immediate opportunities for boat, canoe, and kayak launches. Additional canoe and kayak launch points could easily be implemented along Tellico Lake to provide variable opportunities for comfortable blueway routes and easy access to the water as a recreational outlet.
- Tellico Lake connects to the Tennessee River, which is a part of a much larger blueway network that extends from Fort Loudoun Dam to Knoxville and the Cherokee National Forest, providing 152 miles of blueway routes throughout East Tennessee.



Key Elements of a Blueway Design:

- Multiple access (launch) points to the water at intervals ranging from three to six miles apart.
- Maps designating the blueway routes and estimated travel times for paddling between access points.
- Potential water hazards should be identified using the American Whitewater definitions. Classifications range from Class I - mostly little current or obstruction, to Class V - whitewater, large waves, large volumes, and the possibility of large drops requiring skilled maneuvering.
- Information regarding possible hazards surrounding Tellico Dam should be provided to blueway users.
- Tellico Lake and its forebays function at or below Class I waterways, with little to no challenge from current or waves. However, wakes from large watercraft may have some impact.

Blueway launch points should consider the following design features:

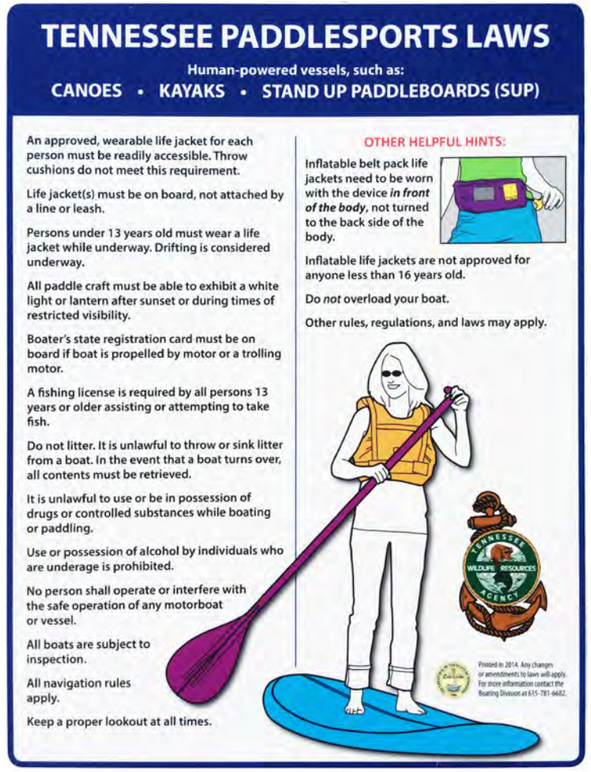
1. Easy access to parking and/or pull-off areas from the nearby road network with an easily navigated pathway free from obstructions. Access should comply with ADA criteria.
2. A hard, level landing and loading area at the waters edge with an area of at least 60”x60”.
3. A dock, ramp, or rail system that provides for stabilization of the watercraft while people transfer in and out of the water.
4. A push-in or launch section that provides for enough water depth to float a loaded craft.
5. Erosion control and bank protection for exposed stream or lakeside slopes next to the launch.
6. Safety signage identifying state requirements for life jackets, night time operation, fishing regulations, and other basic water safety considerations.

Pineland Marina Kayak & Canoe Launch, Bokeelia, FL, *image provided by Pineland Marina*

EZ Launch for Kayaks & Canoes, *image provided by EZ Dock of Western New York*

Blueway Concepts & Design Standards

Lake Kayaking, *image provided by Sandpoint Online*

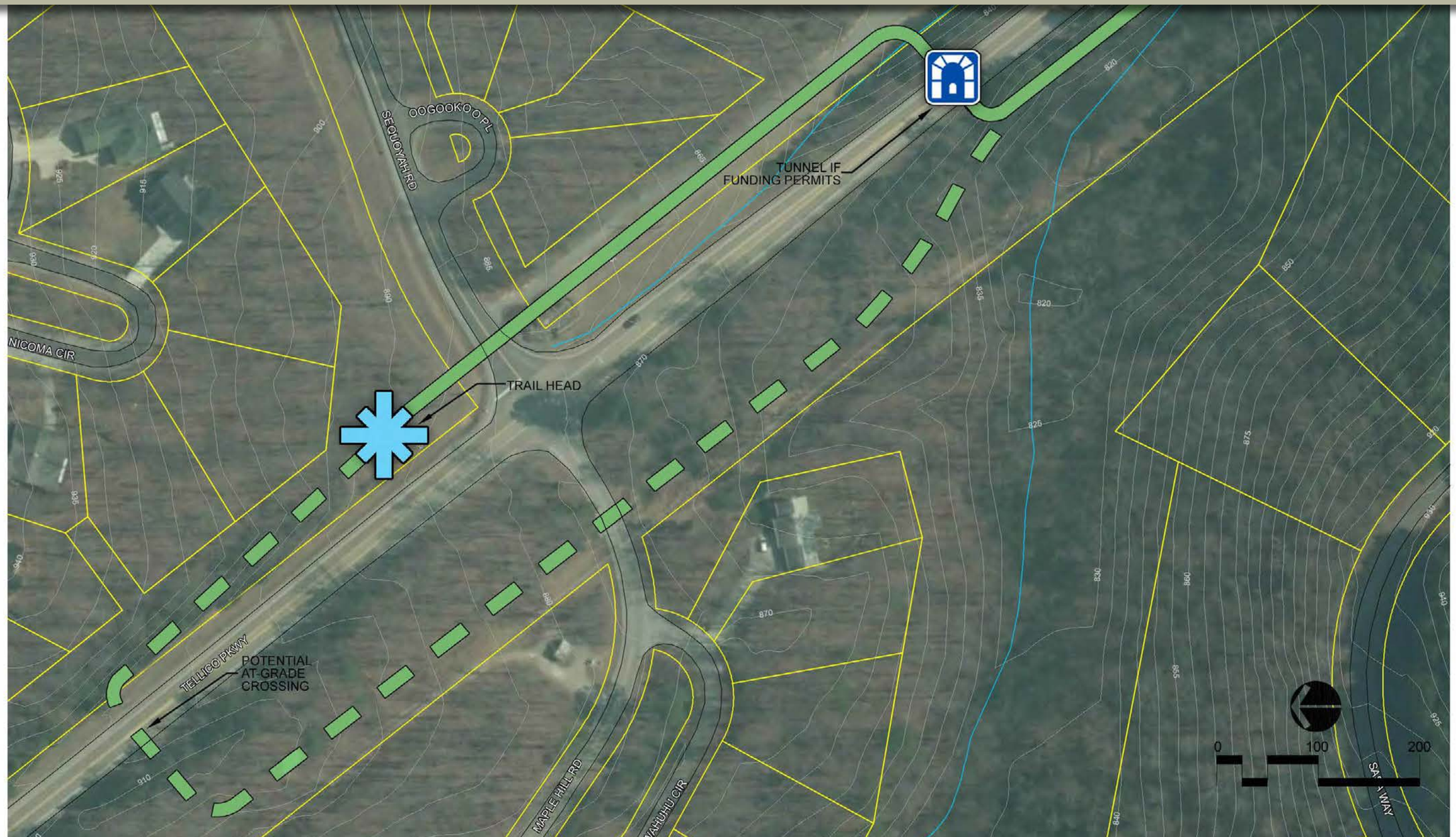


Typical Paddlesports Signage, *image provided by Tennessee Wildlife Resources Agency*

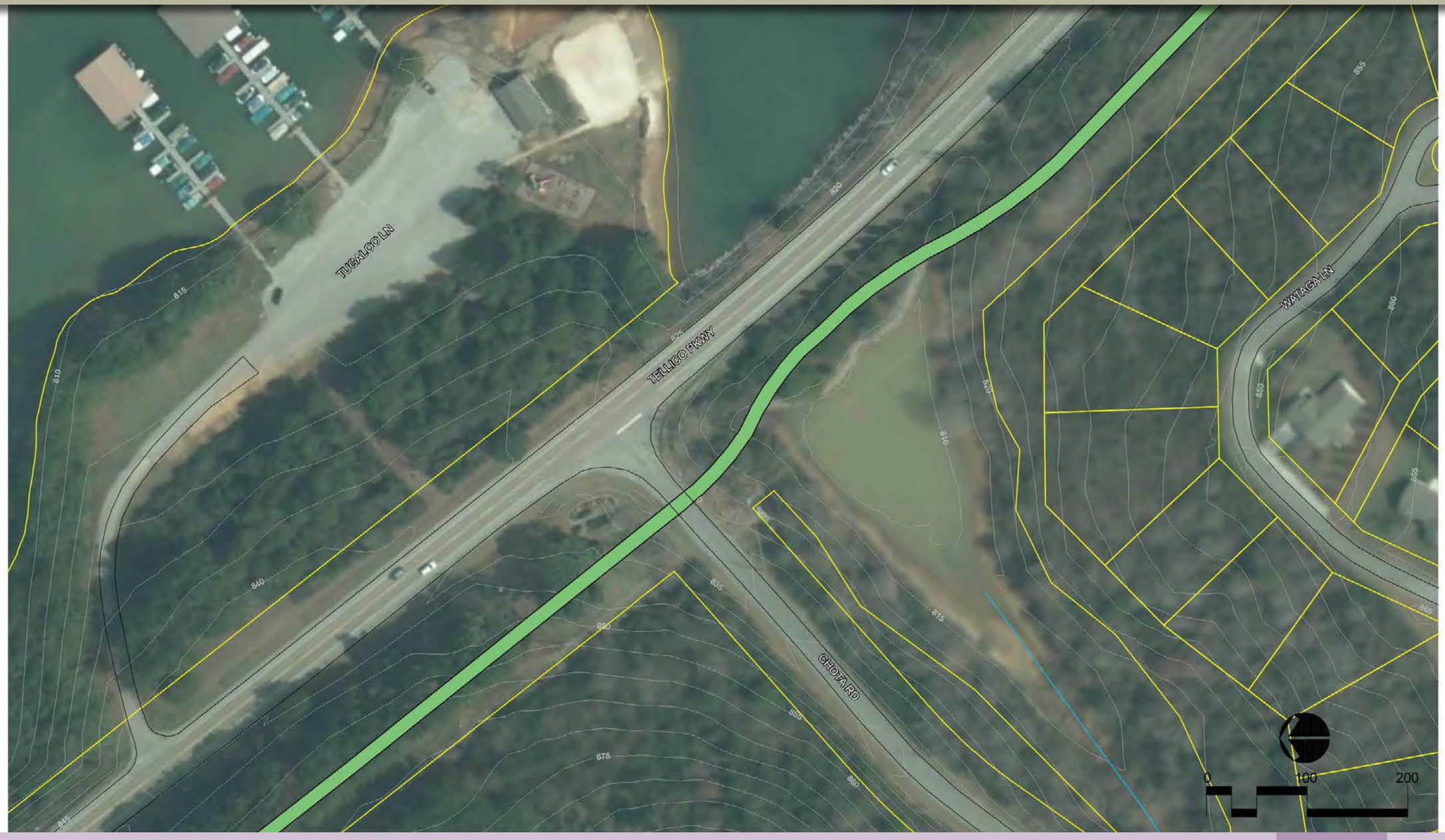
Lake Canoeing, *image provided by the City of Bloomington, IN*

Potential Blueway Routes for Phase One of Tellico Parkway Corridor

Phase One Potential Greenway Route



Phase One Potential Greenway Route



Phase One Potential Greenway Route

Phase One Potential Greenway Route

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Phase One Potential Greenway Route

Phase One Potential Greenway Route

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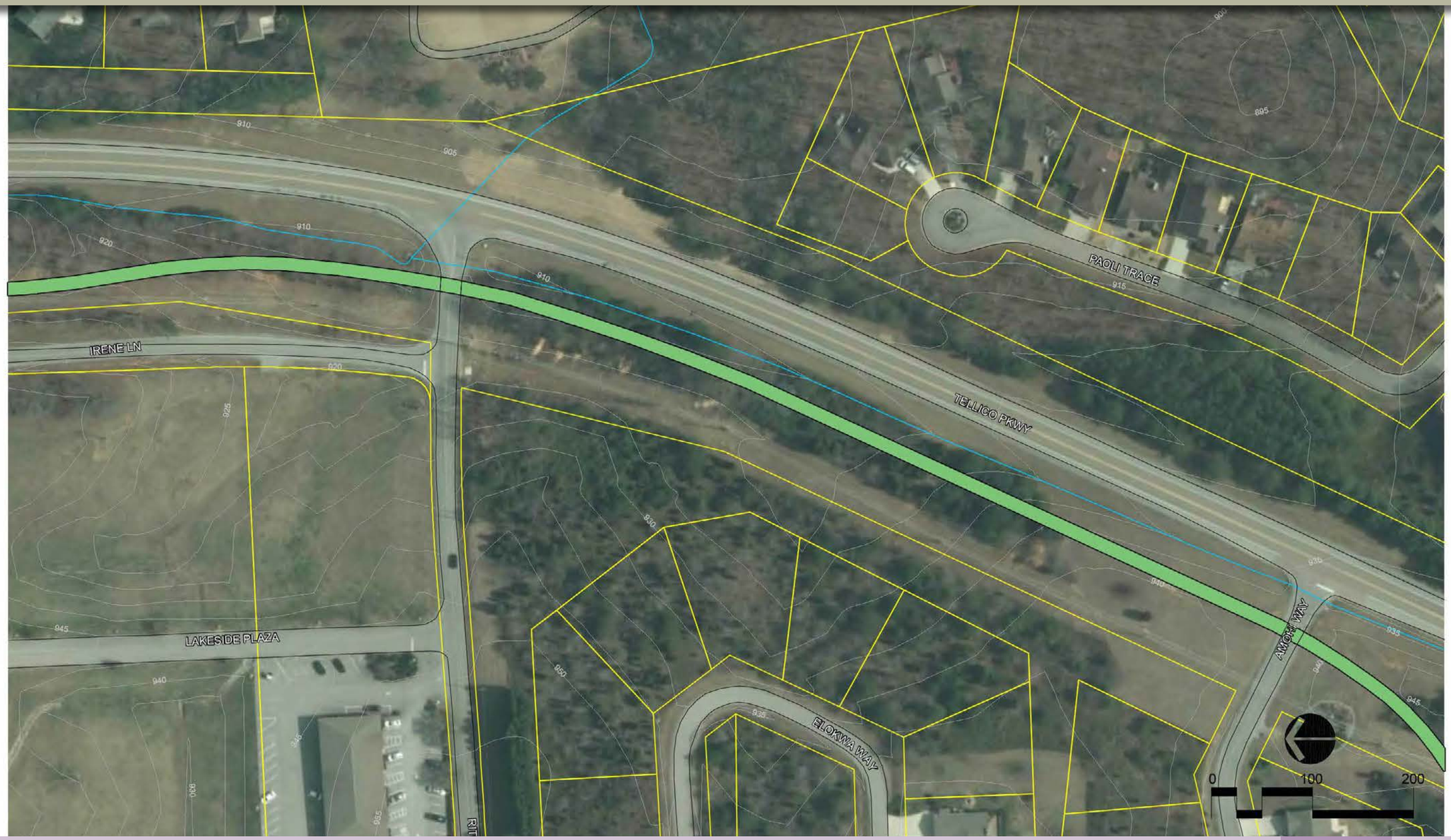

Phase One Potential Greenway Route

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Opinion of Probable Cost - Section 1A & 1B

Section 1A

ITEM	DESCRIPTION	QUANTITY	UNIT		COST		TOTAL
105-01	CONSTRUCTION STAKES, LINES AND GRADES	1.00	LS	$	35,500.00	$	35,000.00
201-01	REMOVAL AND DISPOSAL OF BRUSH & TREES	1.00	LS	$	12,000.00	$	12,000.00
202-01	TRAIL & DRAINAGE EXCAVATION (UNCLASSIFIED)	14310.00	C.Y.	$	9.00	$	128,790.00
209-03.21	FILTER SOCK (12 INCH)	40.00	L.F.	$	2.86	$	1,144.00
209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	9325.00	L.F.	$	1.52	$	14,174.00
303-01	MINERAL AGGREGATE, TY A BASE, GRADING D	6475.66	TON	$	25.00	$	161,891.50
303-10.01	MINERAL AGGREGATE (SIZE 57)	462.54	TON	$	34.00	$	15,726.36
407-02.12	REMOVAL & DISPOSAL EXISTING ASPHALT PVMT	315.00	S.Y.	$	4.50	$	1,417.50
407-20.05	SAW CUTTING ASPHALT PAVEMENT	420.00	L.F.	$	1.86	$	781.20
411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	1280.18	TON	$	110.00	$	140,820.00
502-08	PRE-ROLLING	14500.00	S.Y.	$	2.00	$	29,000.00
604-07.01	RETAINING WALL	5550.00	F.F.	$	40.00	$	222,000.00
701-01.01	CONCRETE SIDEWALK (4 ")	770.00	S.F.	$	4.58	$	3,526.60
701-02.03	CONCRETE CURB RAMP	960.00	S.F.	$	14.92	$	14,323.20
702-01.02	CONCRETE CURB	100.00	L.F.	$	20.00	$	2,000.00
702-03	CONCRETE COMBINED CURB & GUTTER	11.66	C.Y.	$	309.01	$	3,603.05
716-02.09	PLASTIC PAVEMENT MARKING (CROSS-WALK)	408.00	L.F.	$	6.91	$	2,819.28
716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	104.00	L.F.	$	9.41	$	978.64
716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	2.00	EACH	$	113.55	$	227.10
716-03.08	PLASTIC WORD PAVEMENT MARKING (PED-XING)	3.00	EACH	$	150.00	$	450.00
716-08.01	REMOVAL OF PAVEMENT MARKING LINE	180.00	L.F.	$	0.42	$	75.60
716-08.05	REMOVAL OF PAVEMENT MARKING (STOP LINE)	104.00	L.F.	$	3.86	$	401.44
716-08.06	REMOVAL OF PAVEMENT MARKING (TURN LANE ARROW)	2.00	EACH	$	57.85	$	115.70
716-13.01	SPRAY THERMO PAVEMENT MARKING (60 mil) (4IN LINE)	0.08	L.M.	$	1,745.82	$	131.00
716-13.04	SPRAY THERMO PAVEMENT MARKING (60 mil) (4IN DOTTED LINE)	3650.00	L.F.	$	1.00	$	3,650.00
716-50.01	ROADWAY CLEANING FOR PAVEMENT MARKING	1.78	L.M.	$	41.88	$	74.55
717-01	MOBILIZATION	1.00	LS	$	50,000.00	$	50,000.00
720-41.25	REWORK OF CONTROLLER	1.00	EACH	$	3,800.00	$	3,800.00
730-26.02	PEDESTRIAN PUSHBUTTON WITH 12" SIGN	8.00	EACH	$	600.00	$	4,800.00
730-26.05	COUNTDOWN PEDESTRAIN SIGNAL	8.00	EACH	$	668.35	$	5,346.00
	SIGNAGE PACKAGE	1.00	L.S.	$	30,000.00	$	30,000.00
	TRAIL HEAD DEVELOPMENT	2.00	EACH	$	40,000.00	$	80,000.00
					TOTAL	$	*969,066.72*
					CONTINGENCY (10%)	$	96,906.67
					GRAND TOTAL	$	*1,065,973.39*
	BRIDGE UNDERPASS	1.00	L.S.	$	500,000.00	$	500,000.00
	GRAND TOTAL WITH UNDERPASS					$	*1,565,973.39*

Section 1B

ITEM	DESCRIPTION	QUANTITY	UNIT		COST		TOTAL
105-01	CONSTRUCTION STAKES, LINES AND GRADES	1.00	LS	$	35,500.00	$	35,000.00
201-01	REMOVAL AND DISPOSAL OF BRUSH & TREES	1.00	LS	$	12,000.00	$	12,000.00
202-01	TRAIL & DRAINAGE EXCAVATION (UNCLASSIFIED)	12048.00	C.Y.	$	9.00	$	108,432.00
209-03.21	FILTER SOCK (12 INCH)	350.00	L.F.	$	2.86	$	1,001.00
209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	7186.00	L.F.	$	1.52	$	10,922.72
303-01	MINERAL AGGREGATE, TY A BASE, GRADING D	5029.45	TON	$	25.00	$	125,736.25
303-10.01	MINERAL AGGREGATE (SIZE 57)	462.54	TON	$	34.00	$	122,162.00
407-20.05	SAW CUTTING ASPHALT PAVEMENT	420.00	L.F.	$	1.86	$	781.20
411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	1280.18	TON	$	110.00	$	109,362.00
502-08	PRE-ROLLING	11261.65	S.Y.	$	2.00	$	22,523.30
604-07.01	RETAINING WALL	5100.00	F.F.	$	40.00	$	204,000.00
701-01.01	CONCRETE SIDEWALK (4 ")	650.00	S.F.	$	4.58	$	2,977.00
701-02.03	CONCRETE CURB RAMP	240.00	S.F.	$	14.92	$	3,580.80
702-01.02	CONCRETE CURB	100.00	L.F.	$	20.00	$	2,000.00
702-03	CONCRETE COMBINED CURB & GUTTER	6.00	C.Y.	$	309.01	$	1,854.06
716-02.09	PLASTIC PAVEMENT MARKING (CROSS-WALK)	200.00	L.F.	$	6.91	$	1,382.00
716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	50.00	L.F.	$	9.41	$	470.50
716-03.08	PLASTIC WORD PAVEMENT MARKING (PED-XING)	6.00	EACH	$	150.00	$	900.00
716-13.01	SPRAY THERMO PAVEMENT MARKING (60 mil) (4IN LINE)	0.08	L.M.	$	1,745.82	$	139.70
716-13.04	SPRAY THERMO PAVEMENT MARKING (60 mil) (4IN DOTTED LINE)	2874.40	L.F.	$	1.00	$	2,874.40
716-50.01	ROADWAY CLEANING FOR PAVEMENT MARKING	1.35	L.M.	$	41.88	$	56.54
717-01	MOBILIZATION	1.00	LS	$	50,000.00	$	50,000.00
720-41.25	REWORK OF CONTROLLER	1.00	EACH	$	3,800.00	$	3,800.00
730-05.01	ELECTRICAL SERVICE CONNECTION	1.00	EACH	$	1,909.00	$	1,909.00
730-16.03	CONTROLLER (FLASHING BEACON)	4.00	EACH	$	825.00	$	3,300.00
730-21.10	STEEL STRAIN POLE (SIGNAL SUPPORT)	2.00	EACH	$	10,597.00	$	21,194.00
730-24.01	FOUNDATION (SIGNAL SUPPORT)	2.00	EACH	$	3,200.00	$	6,400.00
730-26.02	PEDESTRIAN PUSHBUTTON WITH 12" SIGN	2.00	EACH	$	600.00	$	1,200.00
730-26.05	COUNTDOWN PEDESTRAIN SIGNAL	2.00	EACH	$	668.35	$	1,336.70
	SIGNAGE PACKAGE	1.00	L.S.	$	30,000.00	$	30,000.00
	TRAIL HEAD DEVELOPMENT	1.00	EACH	$	40,000.00	$	40,000.00
					TOTAL	$	*927,295.17*
					CONTINGENCY (10%)	$	92,729.52
	AT GRADE "HAWK" SYSTEM CROSSWALK & ROAD IMPROVEMENTS	1.00	L.S.	$	350,000.00	$	350,000.00
	GRAND TOTAL WITH "HAWK" SYSTEM					$	*1,370,024.69*
	TUNNEL UNDERPASS	1.00	L.S.	$	1,000,000.00	$	1,000,000.00
	GRAND TOTAL WITH TUNNEL					$	*2,020,024.69*