CHAPTER 6:

Recommendations



Project Prioritization

MVRPC staff reviewed the current MVRPC Long Range Transportation Plan, the Miami Valley Bike Plan Update 2015, an extensive set of local plan documents, public input, and conducted additional planning analyses to develop a master list of projects for consideration for inclusion in the AT Plan. In total, the project list included over 170 potential bike, pedestrian or transit access projects across all counties in the MVRPC planning area. The full list of considered projects can be found in the Appendix on page 113.

Staff worked with the AT Plan Steering Committee to refine the project list and, more significantly, to develop a scoring matrix to rank and prioritize projects within the plan. The Steering Committee considered a list of fifteen factors for consideration of each project, and had an opportunity to add or delete factors from the final list. Then further, the Steering Committee considered alternative schemes for weighting the factors, based on different areas of emphasis, such as equity, safety, or connectivity. The committee provided valuable feedback, adding and modifying factors. The Steering Committee developed consensus that the vision and goals would be best served with an emphasis on equity and safety in the weighting of factors. The resulting ranking rubric is presented in the table on page 81.

The factors listed are areas for which every project considered was rated on a Yes/No providing different weight scales for each factor. The next column shows the weighting scheme used to prioritize the projects. There are many Connectivity factors, so they were given low weight each. The fewer Equity and Safety factors are given higher weight. Safety plus Equity represent more than two-thirds of the available points in this approach.

Every project was scored on the basis of all factors and then a rank score was calculated based on the weighting scheme. The ranked scores resulting from the rubric were again shared with the Steering Committee members as an opportunity to review the outcome of the matrix and to discuss if adjustments were needed. The complete scoring table for every project by county is available in the Appendix on page 113.

Priority Projects by County

The results from the scoring methodology were then re-shared with communities in each county which would be the necessary project sponsors for the projects. The purpose of this activity was to learn from the communities whether these high scoring projects were projects they would have the interest and capacity to develop and apply for funding (to MVRPC and other programs). This was an effort to increase the likelihood that the priority projects would proceed to implementation.

The tables in this chapter reflect the top projects prioritized from the complete project prioritization process by county. The tables also provide a project description, source of the project and a simple cost estimate. Cost estimates were developed with assistance from the Ohio Department of Transportation.

Project Prioritization Method:

	Factors	Weight	Notes
Drs	A. Contributes to the Long Range plan regional bike- ways network	1	Can only get point for A or B, not both.
	B. Connects to the regional bikeways network	1	Can only get point for A or B, not both.
	C. On fixed or flex transit route	1	Can only get point for C or D, not both.
	D. Connects to fixed or flex transit route (last mile connections)	1	Can only get point for C or D, not both.
icto	E. On the MVRPC regional roadway network	1	
vity Fa	F. Crosses the Urbanized Area boundary (rural-urban connection)	1	
Connectiv	G. Along State or US Bike Route	1	In the Region most of these routes are on the Miami Valley Trails (<i>i.e.</i> already built). The exceptions are State Route 36 across northern Miami County, Wolf Creek Trail gap, and GMR trail north from Piqua to- ward Shelby County.
	H. In a local plan	2	
	I1. In WBO High Demand area (4) I2. In WBO High Demand area (3)	1 0.5	Full point in highest demand area; half point for next highest demand area. Can get both points.
	J. Multi-jurisdictional	1	
y S	K. Addresses high Pedestrian Crash Risk Assessment location	2	
Safet Facto	L. Addresses high LTS location – improves LTS score	3	
	M. Addresses High Bike Ped Crash location	3	
Ors	N1. In WBO High Need area (4) N2. In WBO High Need area (3)	3 1.5	3 points in highest need area; 1.5 points for next highest need area. Can get both points.
-act	O. Is both a bike and pedestrian project	3	
ity F	P. Project addresses an ADA deficiency	3	
Equ	Q. Housing density within 0.5 miles of project	3	Will determine median density. If area near project is above median, project will receive points.

Cost Assumptions:

To develop project cost estimates, the cost factors below were used to calculate material costs for these facilities. Each road crossing for sidewalk or sidepath was assumed to be a one-leg intersection. The total material costs were multiplied by a factor of 2.436 to account for maintenance of traffic, erosion control, clearing and grubbing, landscaping, drainage, environmental review, utility relocation, mobilization, survey and staking, engineering design and a 30 percent contingency. Long term maintenance is not included in these estimates. The resulting cost estimates are for planning purposes only, and should not be relied upon for project funding applications. Detailed engineering cost estimates must be developed as these projects are undertaken.

Item	Cost	Unit	Source
Asphalt Sidepath – 12'	\$226,707	Mile	Greene County MTP (2021)
4' concrete walk	\$15.78	SqFt (design assumption is 5' wide)	ODOT award data for District 7 & 8, 2021
Intersection – One Leg	\$7,860	Each	Greene County MTP (2021)
Intersection – Two Leg	\$15,720	Each	Greene County MTP (2021)
Pedestrian Signal – One Leg	\$5,878	Each	Greene County MTP (2021)
4' Bike Lane Line	\$2,800	Mile	ODOT bid data 2021
Bike lane symbol	\$355	Each (assume 20 per mile)	ODOT bid data 2021
Sharrow marking	\$395	Each (assume 20 per mile)	ODOT bid data 2021
Green pavement for bike lanes	\$17.85	Square foot	ODOT bid data 2021
Bike box	\$4,890	Each	ODOT bid data 2021

Streetscape Projects:

Past "streetscape" projects (funded through Transportation Alternative funds) were researched to develop an average cost per mile. The types of elements included in the projects include curb bump outs, landscaping, intersection re-alignments, lighting, benches, sign posts, brick pavers, sidewalk widening, street trees and tree grates, bus stops, trash receptacles, bike racks, and wayfinding signs. The average of these projects is \$2,430,000 per mile. This figure was derived from the streetscape projects in the table below.

Const Year	City	Road	Limits	Length (Miles)	Coi (So	nstruct Id)	No Co	on- nstruct	Тс	otal	Co M	ost Per ile
2007	Tipp City	State Route 571	Tippecanoe Dr to Hyatt St.	0.35	\$	1,056,494	\$	161,000	\$	1,217,494	\$	3,478,554
2011	Tipp City	State Route 571	Intersections of Tippecanoe, Garber and Hyatt	0.15	\$	546,761	\$	1,000	\$	547,761	\$	3,651,740
2014	Kettering	E. Stroop Rd	East of Shroyer to west of Royal Oak	0.13	\$	738,418	\$	10,000	\$	748,418	\$	5,757,063
2014	Xenia	W. Main St.	S. Church to S. King	0.22	\$	321,000	\$	10,000	\$	331,000	\$	1,504,545
2014	Dayton	Watervliet	Mundale to Bellaire	0.4	\$	296,000	\$	36,000	\$	332,000	\$	830,000
2016	Piqua	N. Main	Greene to North St.	0.07	\$	425,000	\$	75,000	\$	500,000	\$	7,142,857
2016	Fairborn	Main St.	Pleasant Ave to Dayton Dr.	0.19	\$	560,000	\$	60,000	\$	620,000	\$	3,263,158
2017	Beavercreek	Dayton- Xenia Rd.	Ken Klare to W. Lynn	0.18	\$	274,000	\$	98,000	\$	372,000	\$	2,066,667
2018	Dayton	Troy St.	SR4 to Leo	0.75	\$	435,000	\$	26,000	\$	461,000	\$	614,667
2019	Dayton	W. Third St.	P.L. Dunbar to orchard	0.57	\$	374,000	\$	30,000	\$	404,000	\$	708,772

ATPID	Communities	Description	Modes	Details	Cost estimate
GRE56	Xenia	REACH Xenia	Bike & Pedestrian	Widen bike/pedestrian path on Upper Bellbrook Road from S. Progress to Colorado Dr, bike lanes/ sharrows/path on Colorado and Bellbrook Avenue, connecting to Little Miami Scenic Trail	\$5,879,585 (Source: Xenia RAISE grant application)
GRE03	Beavercreek	Indian Ripple Sidewalks/ Sidepath	Bike & Pedestrian	Complete Sidewalks along Indian Ripple Road from Narrows Reserve to The Greene (intermittent)	\$2,421,413
GRE18	Greene County	Fairborn to Yellow Springs	Bike & Pedestrian	Shared use path/sidepath along Yellow Springs Fairfield Rd from Fairborn corp limit to Yellow Springs corp limit	\$2,430,000 (Source: Greene County Master Trail Plan)
GRE45, GRE46	Xenia	Streetscape in Xenia	Pedestrian	9 suggested crosswalk improvements, transit stop improvements, and signage	Estimate to be developed with further project scoping
GRE09	Bellbrook	Wilmington Pike Sidepath South	Bike & Pedestrian	New SUP/Sidepath from Ambridge Ln to Alex Bell, with crossing at Bellemeade	\$281,367

ATPID	Communities	Description	Modes	Details	Cost estimate
GRE02	Beavercreek	Bellbrook-Fairborn	Bike & Pedestrian	Sidepath along Fairfield Rd from Jonathan to Seejay; Old Mill to Lawson	\$682,200
GRE11, GRE12, GRE13	Fairborn	Complete sidewalks in Greene CATS flex route flagging areas in Fairborn	Pedestrian	Complete sidewalks in Greene CATS flex route flagging areas in Fairborn: Funderberg Rd from Hamilton to Rice; Colonel Glenn from Funderberg to Kauffman; Kauffman Ave from Colonel Glenn to Montgomery	\$1,572,230
GRE38	Xenia	Xenia-Jamestown Connector	Bike	Intersection re-design and Bike lanes from Xenia Station hub to X-J Connector across 68 along Washington Street	\$2,770,000 (Source: City of Xenia)
GRE26	Greene County	Trebein Rd Sidepath	Bike & Pedestrian	Sidepath/shared use path along Trebein Road, including access to Glen Thompson Reserve	\$6,301,806 (Source: GCMTP)
GRE39	Xenia	Dayton-Xenia Road in Xenia from Progress to Richard to Church	Bike & Pedestrian	Add Sidepath in Greene CATS flex route flagging areas Progress to Richard, Bike lanes and Sidewalk Richard to Church	\$771,771



Figure 30: Greene County Priority Projects Map

Miami County Priority Projects:

ATPID	Communities	Description	Modes	Details	Cost estimate
MIA18	Tipp City	Tipp City Bikeways	Bike & Pedestrian	Bikeways along Evanston, 25-A, SR 571, and Kessler-Cowlesville connecting residential areas to Great Miami River Trail	\$3,832,790
MIA13	Piqua	RR Bridge Improvements in Piqua	Bike & Pedestrian	New decking, railing and accessible access on west end of RR Bridge along Ohio-to-Indiana Trail in Piqua	Deck: \$735,258 (source: City of Piqua) ADA access: \$864,742 (source: City of Piqua)
MIA24	Miami County Engineer	Carriage Hills Connector	Bike	Connect Carriage Hills with New Carlisle via widened shoulders on 202, Singer, Palmer, 571, Dayton-Brandt, and SUP on former RR ROW	\$5,086,326
MIA02, MIA03	Miami County Park District	Ohio-to-Indiana Trail	Bike & Pedestrian	Follow the Conrail ROW westward from Spiker Road to North McMaken Road then proceed northward to Ingle Road; on Ingle Road proceed west and then southerly along Ingle Road to its most southeasterly point; then commencing at that point in a southwesterly direction along the Covington Tributary to the Conrail ROW; then proceeding west along the Conrail ROW to Range Line Road; then on Range Line Road proceed northward to Covington Bradford Road; then on Covington Bradford Road proceed west to the Village of Bradford. Shared use path from High St, Covington then east on railroad right-of- way to Piqua	\$4,979,644

Miami County Priority Projects:

ATPID	Communities	Description	Modes	Details	Cost estimate
MIA06	Miami County Park District	Laura-Troy Connector	Bike & Pedestrian	Shared use path along SR 55 from Laura to Troy	\$7,202,730
MIA14	Piqua	North Sunset Drive	Pedestrian	Extend sidewalk and add crosswalk & curb ramps at Alpha & Sunset Drive	\$476,257
MIA05, MIA25	Piqua	GMR Trail/ Roadside Park Bridge	Bike & Pedestrian	Bridge across canal feeder stream into Johnston Farm & Indian Agency property; North from Piqua/Johnston Farm to Shelby County Line	\$456,557 (source: 2050 LRTP) \$1,151,276 (ATP)
MIA22	West Milton	West Milton School Campus to Downtown	Bike	Bike route on local streets between Milton Union School campus to downtown West Milton	\$48,111
MIA12	Piqua	Piqua Bike Hub	Bike & Pedestrian	Trailhead and trail user services hub in Piqua	\$875,000
MIA21	Troy	McKaig Avenue	Bike & Pedestrian	Sidepaths along McKaig Avenue from Dorset to Stanfield	\$2,537,116





Figure 31: Miami County Priority Projects Map

Montgomery County Priority Projects:

ATPID	Communities	Description	Modes	Details	Cost estimate
MOT48, MOT59	Miami Township, Montgomery County Engineer, Miamisburg, West Carrollton, Moraine	SR 741 Bike/Ped Facilities	Bike & Pedestrian	Continuous sidewalk from Ferndown to South Dixie Ave on both sides of the road. 8' or 10' width on one side of road. Ped facility is priority where width cannot accommodate a bike facility	\$6,457,543
MOT41	Huber Heights	Brandt Pike Improvements	Bike & Pedestrian	Intersection geometry fixes, improved signals, crosswalks, mid-block crossings, pedestrian- oriented lighting, 2-way cycle track with road diet and enhanced transit stop amenities	Estimate to be developed with further project scoping
MOT61	Five Rivers MetroParks, West Carrollton, Miami Township, Washington Township, Montgomery County Engineer, Centerville-Washington Park District, Centerville	Great Miami River-Centerville Connector	Bike	Route/shared use path from West Carrollton to Bellbrook via Cox Arboretum, Yankee Park, Grant Park Pleasant Hill Park	\$3,516,412 (assumes 3.33 miles of sidepath, 3.09 miles of shared roadway and 2 miles of Shared use path in parks)
MOT81	Dayton	Fifth/Burkhardt Safety Enhancements	Bike & Pedestrian	Traffic calming or other safety enhancements along this corridor	Estimate to be developed with further project scoping
MOT32	Five Rivers, Trotwood	Wolf Creek Trail	Bike & Pedestrian	Shared use path from Hickorydale Park to Wolf Creek Trail terminus in Trotwood	\$5,767,616 (source: FRMP)

ATPID	Communities	Description	Modes	Details	Cost estimate
MOT34	Five Rivers MetroParks	Stillwater River Trail	Bike & Pedestrian	From existing trail on Shoup Mill Road to Grossnickle Park	\$13,602,880 (source: FRMP)
MOT95	Clayton, Montgomery County Engineer, Brookville	Westbrook Road Sidepath	Bike & Pedestrian	Sidepaths along Westbrook Road and Dog Leg Road from the Wolf Creek Trail to the Stillwater River Trail	\$4,882,921
MOT17	Dayton	Traffic Calming on Third in Dayton	Bike & Pedestrian	Traffic calming enhancements from Keowee to Linden on Third Street, including a protected bike lane	\$1,596,169
MOT27	Dayton	Traffic Calming On Philadelphia	Bike & Pedestrian	Traffic calming enhancements on Philadelphia from James H. McGee to N. Main	\$8,899,729
MOT54	Harrison Township, Montgomery County Engineer, Clayton, Englewood	North Main Street Sidewalks	Pedestrian	Complete sidewalks along SR 48, North Main Street from Shiloh Springs to Sweet Potato Ridge	\$5,536,330 (assumes 10,871 missing feet on west side, 17,934 missing feet on east side)
MOT62	Englewood, Five Rivers	Old National Road Trail	Bike & Pedestrian	Shared use path/sidepath from Englewood MPO to Centennial Park in Englewood	\$600,134
MOT14	Dayton	The Flight Line	Bike & Pedestrian	Shared use path along railroad right-of-way from Creekside Trail to Fourth St in Dayton	\$4,033,820 (source: City of Dayton)

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Figure 32: Montgomery County Priority Projects Map

Warren County Priority Projects:

ATPID	Communities	Description	Modes	Details	Cost estimate
WAR08 MOT84	Springboro	Springboro Central Greenway	Bike & Pedestrian	Running SW to NE in City of Springboro connection from Great Miami River Trail (via Franklin) to Great-Little Trail	\$3,749,967
WAR04	Franklin	Great Miami Little Miami Connector	Bike & Pedestrian	Shared use path along SR 123 and Clear Creek from downtown Franklin to west side of I-75	\$1,360,973 (source: LRTP)
WAR02	Springboro	SR 73 in Springboro	Bike & Pedestrian	Sidewalks and bikeways along SR 73 (assumes 4,678 feet of 8' side path and 3,118 feet of 5' sidewalk)	\$2,038,141
WAR05	Springboro	Great Miami Little Miami Connector	Bike & Pedestrian	Shared use path along south side of Clear Creek Park between Clear Creek and Lower Springboro Rd	\$680,487 (source: LRTP)
WAR06	Warren County	Great Miami Little Miami Connector	Bike	Widen shoulders on Lower Springboro Rd from proposed Clearcreek Trail to US 42	\$2,984,977 (source: LRTP)

Figure 33: Warren County Priority Projects Map

Regional Bikeways

The AT Plan has developed eleven updates to the recommended regional bikeways network for the MVRPC planning area. These changes were developed from new or updated alignments in local plan documents, consultations with member jurisdictions, plus plan review by MVRPC staff.

The most significant regional change is to recommend separated bicycle facilities. Past MVRPC bikeway recommendations have been neutral as to facility type so that as projects develop the advantages and disadvantages of various facility designs could be considered. With this AT Plan, MVRPC recognizes multiple forms of input that indicate strong preference for separated facilities to accommodate bicycle travel. Shared use paths, sidepaths, protected cycle tracks and protected bike lanes consistently are preferred in surveys of the public. Such facilities are preferred in recent local planning across the Region, and are now preferred in the Regional plan as well.

Facilities with less (or no) separation remain in the planning and design toolbox. Facilities such as ordinary striped bike lanes, widened shoulders, wide outside lanes, sharrow markings and signed routes have applicability, particularly along routes already demonstrated as low stress for cycling. However, these facility types are unlikely to be perceived by the majority of the public to significantly improve comfort or safety on a high stress roadway, and are of little utility on LTS3 or LTS4 roadways. Separated facilities are more likely to garner increased use and return on investment as a component of complete streets projects, particularly along regional network roadways.

Therefore, the descriptions for the proposed regional bikeways routes, particularly in rural areas of the region have been updated to indicate separated facilities, where applicable. This can be seen, for example in the south and east portions of Greene County, where the facility type was updated to match that of the Greene County Master Trails Plan. Similar facility type updates were made for routes in western Montgomery County and western Miami County.

This AT Plan also updates the alignment of some regional routes to reflect public input and local planning. Examples include:

- » In Greene County, route selection from Fairborn to Yellow Springs, Yellow Springs to Clifton and Clifton to Cedarville has been updated to match priorities expressed in the Greene County Master Trails Plan.
- » Trebein Road from Yellow Springs-Fairfield Road to the Creekside Trail: this route has been added to the regional bikeways network based on its inclusion in the Greene County Trails Master Plan and input from the public. This project is the top priority of the Greene County Master Trails Plan.

- » The North-South route through Centerville and Washington Township to connect the Iron Horse Trail to the Great-Little Trail: this route was updated to align with recent planning discussions with the jurisdictions.
- » Springboro Central Greenway: this route developed by the City of Springboro includes connections to the City of Franklin and the Great Miami River Trail to the west and the Great-Little Trail to the north to the regional bikeway network. As this creates a new trail-to-trail connection this route was added to the regional bikeway network in consultation with the affected jurisdictions.
- » Stillwater Trail gap between Shoup Road and Englewood MetroPark: the alignment of this project has been updated to reflect planning and property acquisitions conducted by Five Rivers MetroParks.
- » Additional route in Western Montgomery County: a route to connect the municipalities of Brookville, New Lebanon, Farmersville, and Germantown. Added based on consultation with the affected jurisdictions and the Montgomery County Engineer's Office.
- » Ohio-to-Indiana Trail in Northern Miami County: this route was updated to align with the Northern Miami County Trail Report developed by Miami County Park District in 2017.
- » Cardinal Trail: this route alignment is no longer supported by stakeholders in Miami County. Internet searches for the route were unsuccessful. The Cardinal Trail has been removed from the Regional Bike Routes and replaced with Ohio State Bicycle Route 36. State bicycle routes have been developed by ODOT to connect all cities within the state with populations of 50,000 or greater.

Programs and Policies

For communities

- » As required by law, Communities must conduct an American's with Disabilities Act (ADA) Self Evaluation of its current services, policies, and practices, and the effects thereof, that do not or may not meet the requirements of the ADA and, to the extent modification of any such services, policies, and practices is required, the public entity shall proceed to make the necessary modifications.
- » Communities with fifty or more employees are required and communities with fewer than fifty employees are recommended to develop an ADA Transition Plan setting forth steps necessary to achieve program accessibility, including active transportation infrastructure.
- » Communities are strongly encouraged to develop local Compete Streets Policies to ensure that an inclusive approach that addresses the needs of non-motorized uses of transportation facilities is used for all community projects – not just the ones seeking MVRPC-attributable funds.
- » Safe Routes to School Travel Plans and local Active Transportation Plans are an excellent way to envision your community through a new lens. Projects can contribute to a safer, more walkable and bike-friendly community. Such projects may also be incorporated into larger regional plans and enables projects to become eligible for specific funding opportunities through ODOT. ODOT and MVRPC can provide technical assistance to communities developing such plans to enhance the active transportation environment for their residents.

Figure 34: Proposed Regional Bikeways Map

» Communities are strongly encouraged to develop a sidewalk maintenance program to ensure ADA compliance, regular inspection, and timely maintenance of pedestrian facilities within their boundaries.

For MVRPC

- » MVRPC should prioritize complete streets designs in projects on streets with LTS3 or LTS4, or high crash priority. Exceptions to the Complete Streets policy on such roads should be rare.
- » MVRPC should consider periodic funding programs for retrofitting transit accessibility, bicycle and pedestrian facilities into roads, modeled after the very successful "Simple Repaving Program" offered periodically.
- » MVRPC should review the Project Evaluation System for "Bikeways" projects and update the application, as needed, to address bicycle, pedestrian and transit access ("Active Transportation") projects holistically.
- » MVRPC should develop a "Complete Streets Priority Plan" in compliance with US DOT requirements once such requirements are developed. Such plan will serve as an opportunity to consider updates to the Regional Complete Streets Policy, adopted in 2011.
- » MVRPC should monitor national-level incentives or requirements to develop a regional systemic safety plan, often known as a "Vision Zero" plan, and be prepared to engage member jurisdictions and advocates on effective and applicable strategies to reduce bicycle and pedestrian injuries and fatalities to zero over time.

