

White Lick Creek Greenway & Vandalia Trail Scoping Report

January 2022



**White Lick Creek &
Vandalia Trail Alliance**
www.wlcvtla.org



- Indy Park
- School
- Indy Greenways or INDNR Trail Plan



**White Lick Creek
Greenway Study Area**
Vandalia Trail Study Area



The next generation is already in training for the White Lick Creek Greenway and Vandalia Trail [at the 2020 Airport Loop Bike Ride]

White Lick Creek Greenway & Vandalia Trail Scoping Report

January 24, 2022

The White Lick Creek and Vandalia Trail Alliance

Acknowledgments

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Input meetings were held with the White Lick Creek Greenway & Vandalia Trail Alliance [WLCVTA] and its consulting partners on a regular basis to provide input and guidance on detailed trail routes, associated connections and enhancements, proposed right-of-way improvements, preliminary details of the route and important contextual issues.

Draft copies of the Report were distributed to the WLCVTA steering committee and their comments were incorporated before public distribution of the final Report.

Scope of Study

The White Lick Creek & Vandalia Trail Alliance Inc. [WLCVTA] and its Consulting Partners, the National Road Heritage Trail Inc. [NRHT] and City-County Councillor Jared Evans, undertook this Scoping Report with support from [Indy Gateway Inc.](#), a nonprofit organization dedicated to stabilization and rejuvenation of the Indianapolis west side.

The goal of the Report is to examine the [Indy Greenways Full Circle Master Plan](#) recommendations for the White Lick Creek Greenway and Vandalia Trail to visualize feasible routes, implementation opportunities and barriers and associated conceptual level implementation costs for the detail study areas.

This resulting report was developed by field investigation, photo documentation, GIS base mapping, and property ownership research with input and comment from a knowledgeable stakeholder committee familiar with local destinations, landmarks and conditions.

SUMMARY OF FINDINGS

White Lick Creek Greenway Study Area

4.3 miles | Concept Level Cost Estimate: \$6M

Plainfield Vandalia Trailhead on US 40 north along the East Fork White Lick Creek corridor to the Cloverleaf Conservation Area on Rockville Road

Vandalia Trail

6.8 miles | Concept Level Cost Estimate: \$7.6M

Plainfield Vandalia Trailhead on US 40 along the historic Vandalia rail corridor to the Eagle Creek Greenway at Tibbs Avenue

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Project Need and Purpose

White Lick Creek Greenway [4.3 miles]

Purpose: The proposed White Lick Creek Greenway is categorized as a *natural greenway* in the Indy Greenways Master Plan, although it is evolving as a hybrid of that and the *suburban greenway* design guideline.

The master plan points out that greenway trails of any typology, particularly when they achieve critical connectivity within the larger network of regional trails, provide quality of life benefits to the neighborhoods and districts they engage beyond property value:

“There are other benefits from the construction of a residential or natural feature trail beyond property value increases of existing development. One of which is the potential to increase the general desirability of the adjacent properties ...” Unmentioned are more recent concepts of: *well-being* and *sense of community* that trail networks are well-known to foster.

Need: the East Fork White Lick Creek region is an under-served area between two major spokes of the State Visionary Trail plan; the National Road Heritage Trail and B&O Trail. The Indy Greenways *Full Circle Greenway Master Plan* addresses that gap by proposing a connecting corridor along the East Fork of the White Lick Creek. This study examines a segment of the Indy Greenways master plan between US 40 (Washington Street) and US 36 (Rockville Road). A future phase will connect it north to the B&O Trail.

Vandalia Trail [6.8 miles]

Purpose: The proposed Marion County Vandalia Trail is classified as a *city center connection* in the Indy Greenways Master Plan. The study area is a component of the National Road Heritage Trail linking downtown Indianapolis across the state of Indiana. It would share the now-completed Plainfield Trails trailhead at Raceway Road with the White Lick Creek Greenway as a common origin, the Vandalia being a spoke and White Lick Creek being a connector between spokes ... an important interdependency towards a complete regional network.

The Vandalia Trail, as a segment of the National Road Heritage Trail, is designated a State Visionary Trail, connecting the state of Indiana to Ohio on the east and Illinois on the west.

Need: the section of Vandalia Trail addressed in this report is the missing link between its current east terminus at Raceway Road and its connection to downtown Indianapolis via the existing Indy Greenway system. The Pennsy Trail is the eastern section of the National Road Heritage Trail and is complete in Marion County. The Pennsy Trail is also in the process of being extended east to the state line by the many in-between jurisdictions. Going west from Plainfield many sections of the National Road Heritage Trail have been constructed or are in development. This cross-state trail needs to be continuous to achieve full realization of its many benefits. This segment, once completed, will connect to the major crossroads of the state greenway hub, the City of Indianapolis.

Connectivity Map

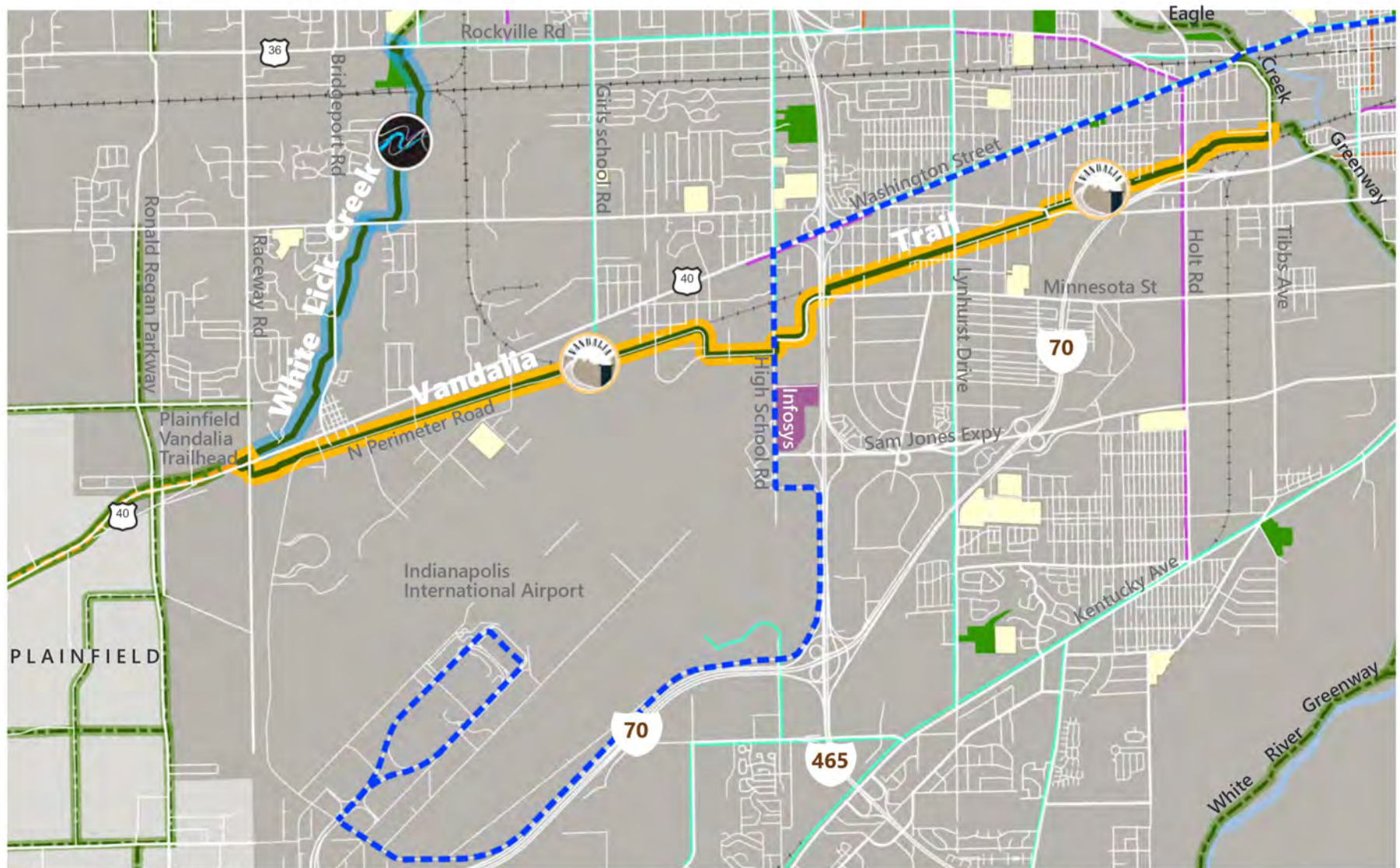
The Connectivity Map shown below illustrates the critical connections the White Lick Creek Greenway and Vandalia Trail provide.

The study area of the White Lick Creek Greenway connects the employment and retail destinations of Rockville Road with the Airport employment center. In between are numerous neighborhoods that will gain important access to those destinations without requiring a car.

On the south, White Lick Creek Greenway connects to the Plainfield Vandalia Trailhead at Raceway Road and the cross-state route of the Vandalia Trail. A Bridgeport Village resident could utilize the connection between Vandalia Trail and White Lick Creek Greenway to travel on the future Blue Line rapid bus line by biking to the stop on High School Road or can travel by bike further to connect to the Eagle Creek Greenway and/or the Town of Plainfield. In addition to the Blue Line there may be an opportunity for some interface with a possible Amtrak connection to the Airport on its Indianapolis/Chicago route.

On the north, White Lick Creek Greenway connects to a proposed shared-use path along Rockville Road that travels east to Lynhurst Drive.

The Indiana Department of Transportation [INDOT] is currently planning to widen US 36 (Rockville Road). White Lick Creek Greenway stakeholders are engaging with INDOT to incorporate greenway considerations into project planning. Integration between the two facilities will eliminate barriers to greenway users while maintaining the US 36 thoroughfare connectivity function.



Connectivity Map



Indy Park
School

IndyGo Blue Line as of 9/20/21
Indy Greenways or INDNR Trail Plan

Bikelane Plan
Shared-Use Path
Neighborway Plan



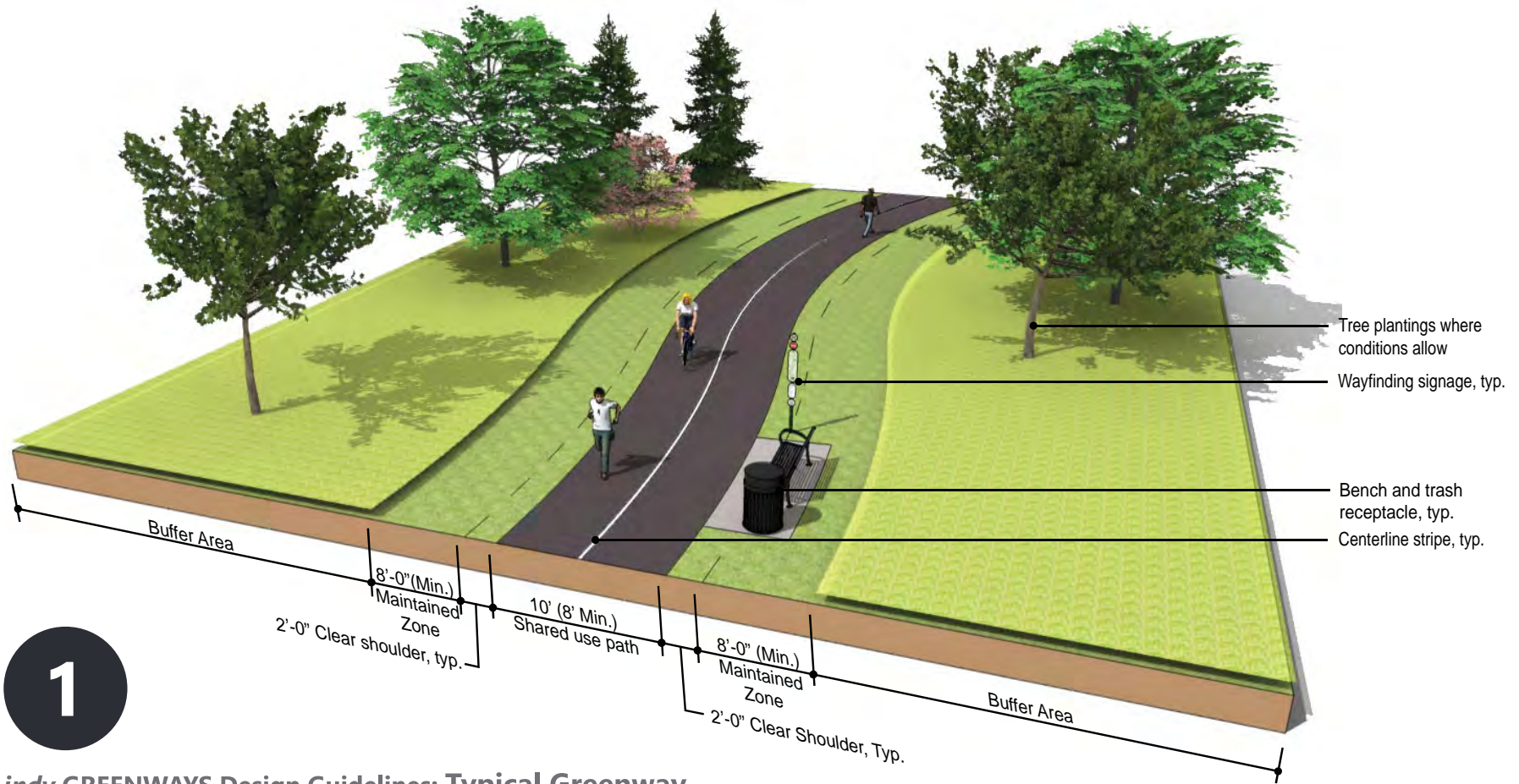
**White Lick Creek
Greenway Study Area**
Vandalia Trail Study Area

Design Guidelines & Standards

The following pages are the applicable **Design Guidelines** from the *2014-2024 Indy Greenways Full Circle Master Plan* that represent the range of conditions encountered along the White Lick Creek Greenway and Vandalia Trail corridors. These typical trail guidelines need to be adapted to site conditions such as available right-of-way width, adjacent land uses, vehicular traffic, utilities, topography, railroad traffic, and environmental concerns.

The *Indy Greenways Design Standards*, summarized below, provide a level of consistency across the connecting trail systems:

	AASHTO	ADA	PROPOSED INDY GREENWAYS STANDARD
Minimum width- Shared-use Path	8' Minimum	4' Min. (one way)	10' wide- typical trail section
	11-14' Optimum	5' Min. (two way)	8' wide- sidepaths, where context dictates, low user counts
			12' wide- high user count areas
Maximum Longitudinal Slope	5% (1:20)	5% (1:20)	5% (1:20)
Maximum Cross Slope	1% (1:100) Recom.	1% (1:100) Recom.	1% (1:100) Recom.
	2% (1:50) Max.	2% (1:50) Max.	2% (1:50) Max.
Clear Zone	2' Minimum		2' Minimum
	3' Optimum		3' Optimum
Minimum Vertical Clearance	8' Minimum		8' Minimum
	10' Optimum		10' Optimum
Minimum centerline curve radii (18 mph design speed)	60'		95'
Guardrail height	42"/48"	30" or greater	48" standard height (54" where conditions warrant additional protection)
Seperation from Vehicle Lanes	5' (or barrier rail)		5' (or barrier rail)



1

indy GREENWAYS Design Guidelines: Typical Greenway

Description:

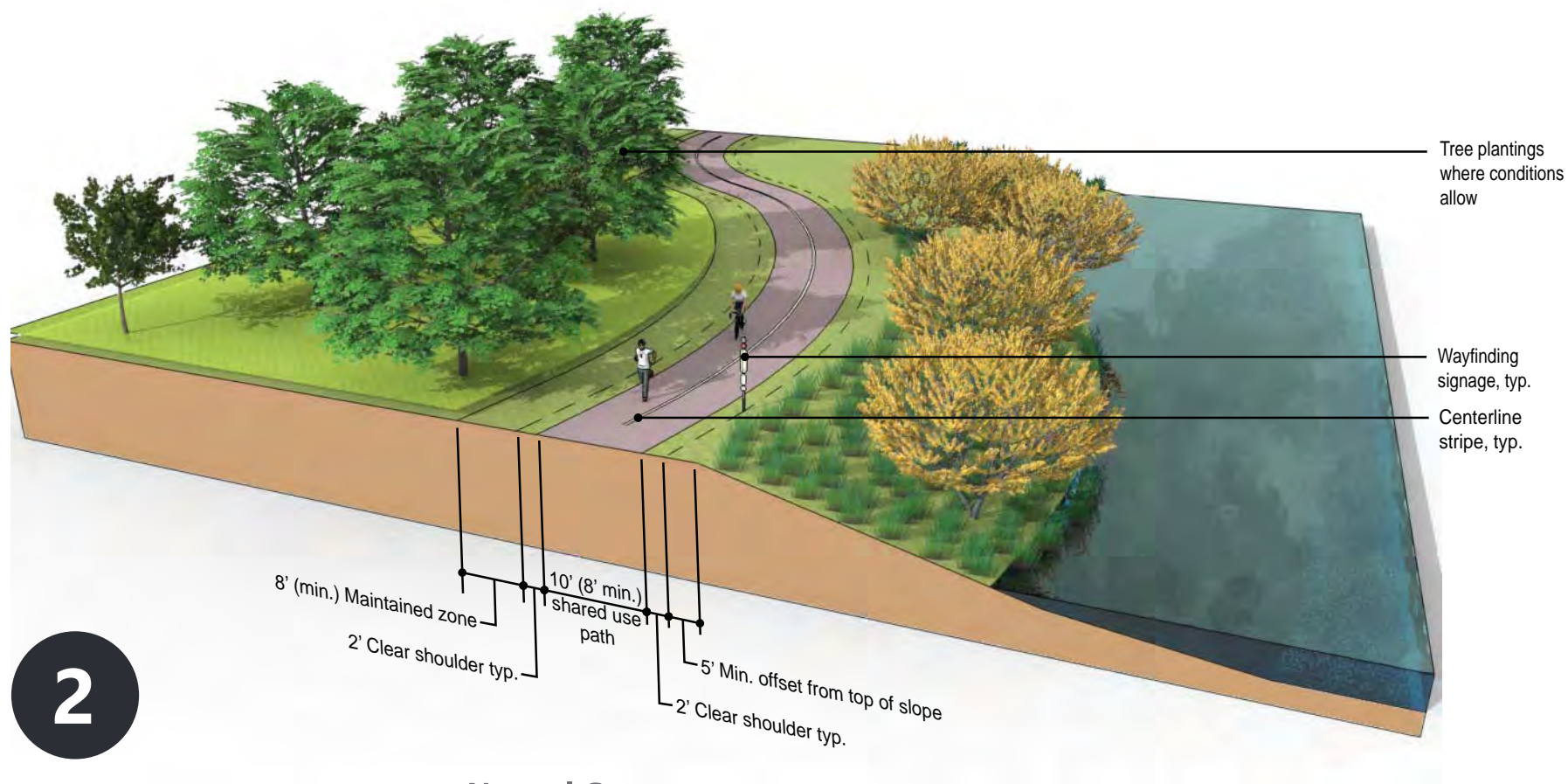
A linear park with a shared-use path in a dedicated right-of-way, identification, signage and site enhancements unique to the White Lick Creek and Vandalia Trail greenways.

Cost Basis:

White Lick Creek Greenway: 10' min. paved trail width
Vandalia Trail: 12' min. paved trail width

Applicability:

- Where a 30-40 foot corridor is available to meet linear park criteria
- Off-road areas of the both White Lick Creek Greenway and Vandalia Trail including potential conservation corridors



indy GREENWAYS Design Guidelines: Natural Greenway

Description:

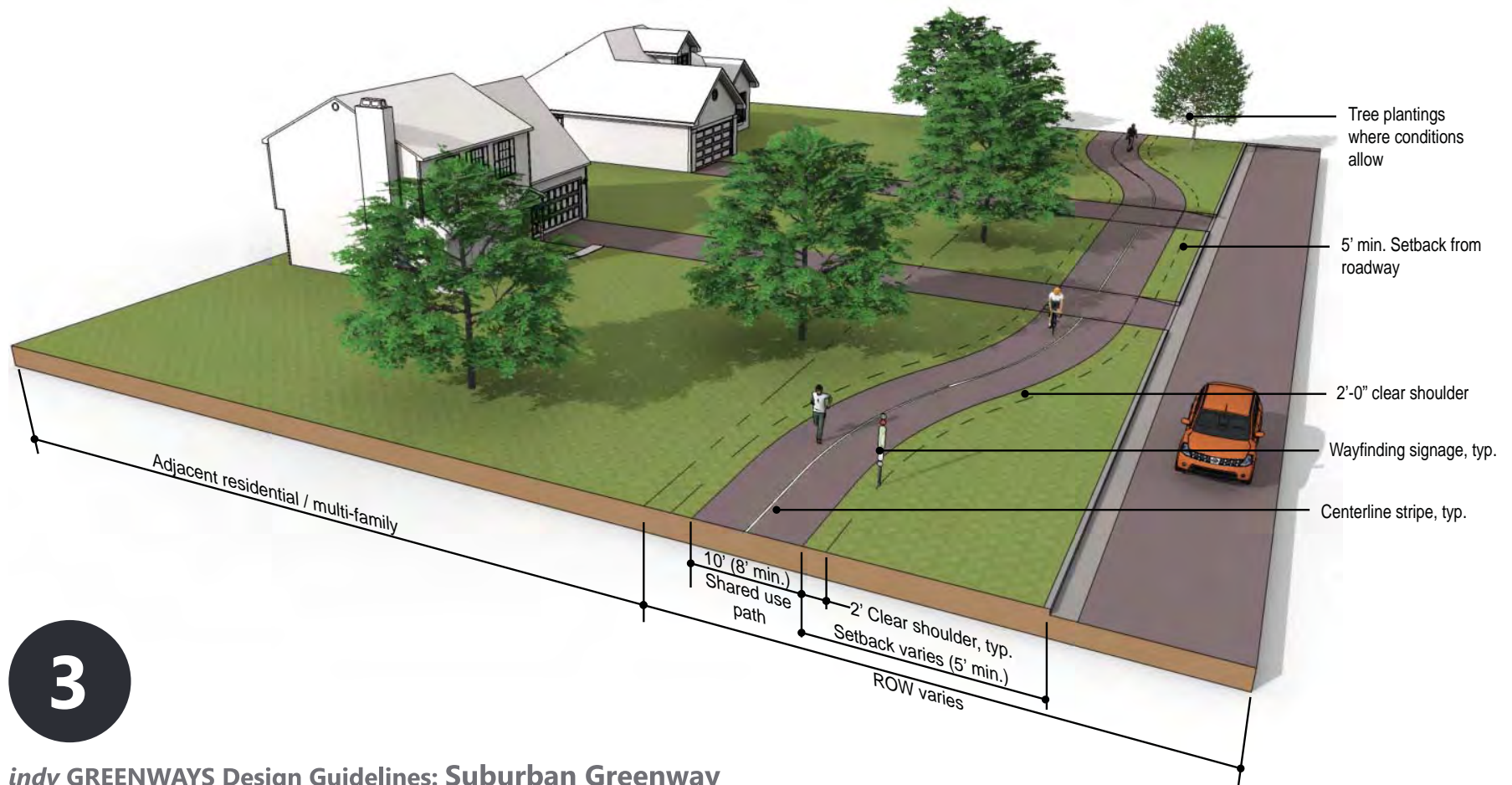
The meandering natural greenway follows creeks and streams within non-wetland areas while preserving the natural character, riverine habitat.

Cost Basis:

May require boardwalks/bridges and over-looks to minimize habitat impacts.

Applicability:

- Along the White Lick Creek corridor and conservation areas



3

indy GREENWAYS Design Guidelines: Suburban Greenway

Description:

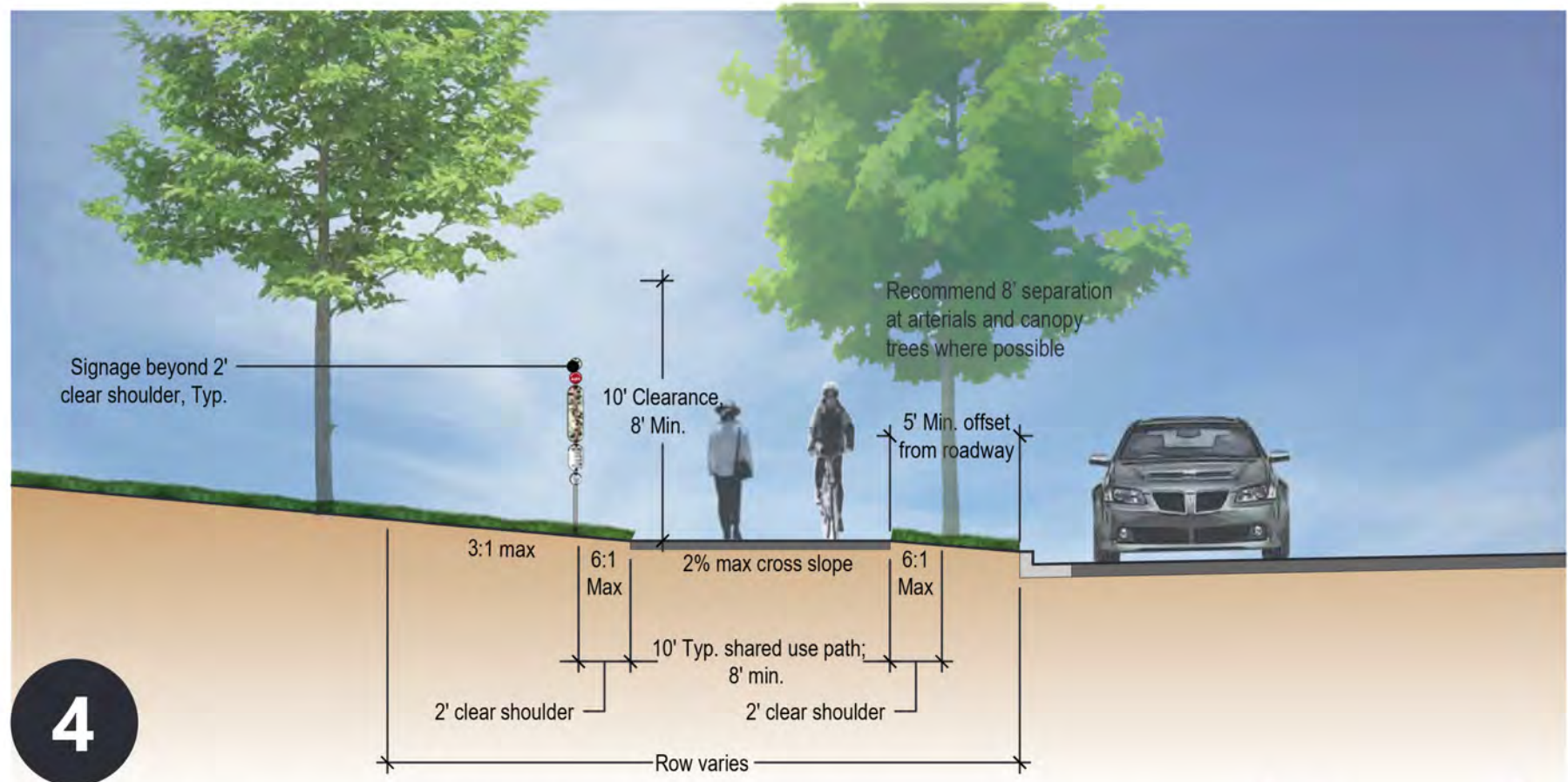
Extension of the greenway standards and characteristics within existing street right-of-way.

Cost Basis:

Similar to basic Greenway costs where acquisition is not required.

Applicability:

- Bridgeport Road
- Sections of Airport Perimeter Road
- Morris Street
- Rockville Road
- Washington Street where necessary for continuity



4

indy GREENWAYS Design Guidelines: Within Street Right-of-Way

Description:

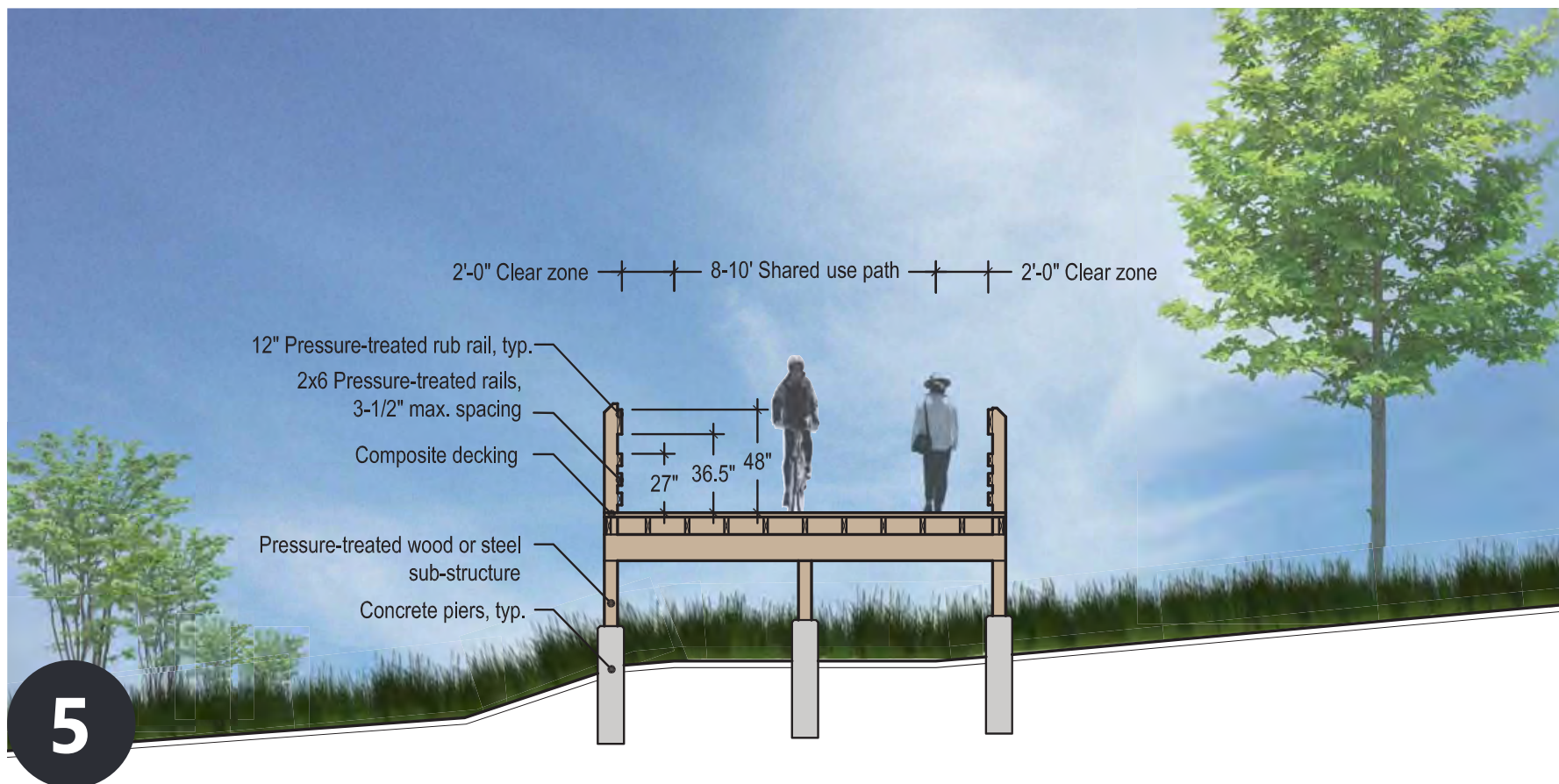
Where limited right-of-way creates close proximity to faster moving and higher volumes of traffic.

Cost Basis:

Basic greenway cost unless acquisition is required to achieve minimum buffer.

Applicability:

- Morris Street
- US 36 (Rockville Road)
- Airport Perimeter Road
- US 40 link to signalized intersections



indy GREENWAYS Design Guidelines: Sensitive Environments/Floodways

Description:

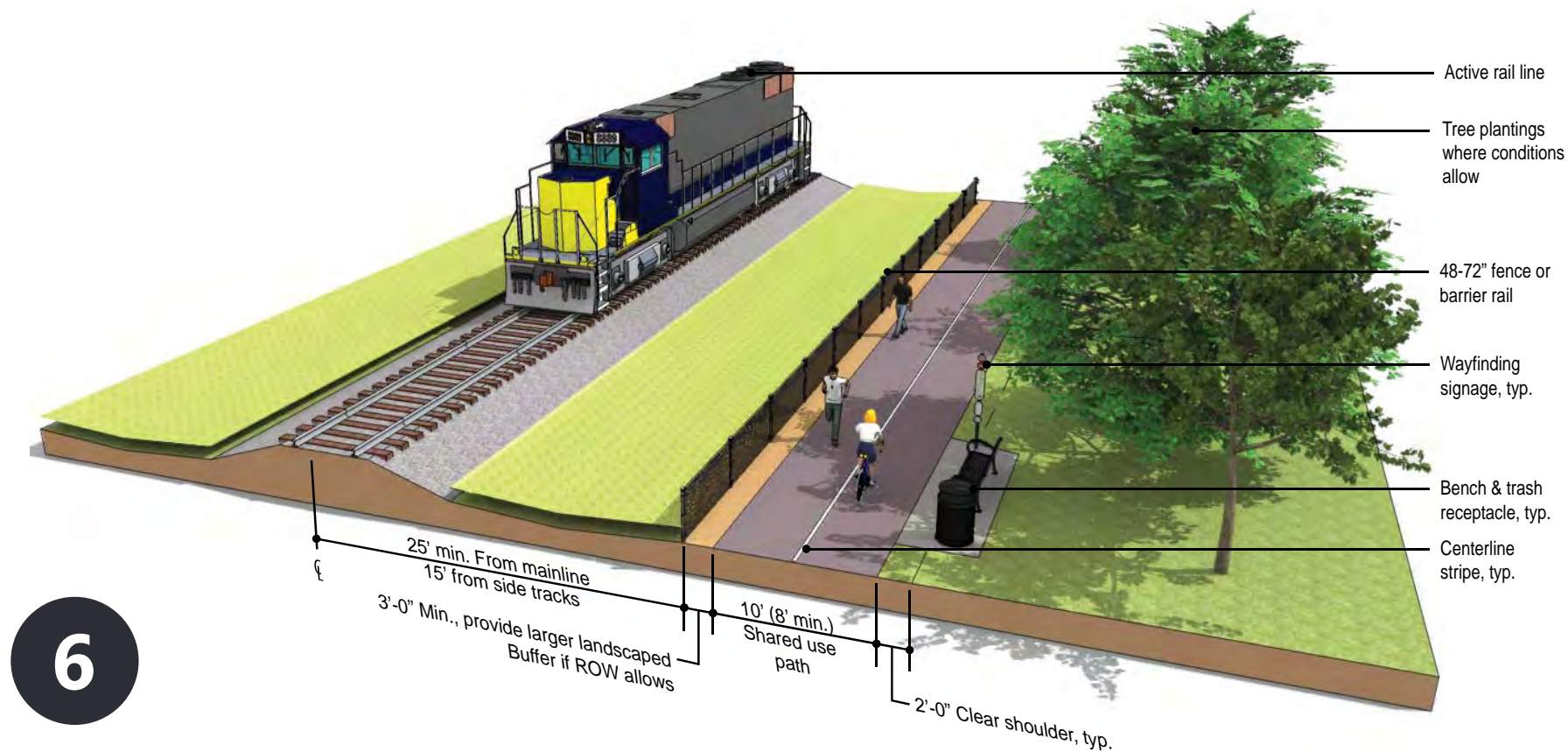
Steep slopes, wetlands, and/or floodways with sensitive habitat, regulatory or drainage issues may require the use of boardwalk sections.

Cost Basis:

Adds approx. 25% to typical base costs but life cycle costs and maintenance reduced. In most cases less costly than a bridge structure where there is adjacent emergency access for vehicle use.

Applicability:

- Floodway and wetland areas along the White Lick Creek stream corridor.
- Conservation areas where proximity to water features is desirable.
- Isolated locations along Vandalia Trail.



6

indy GREENWAYS Design Guidelines: Adjacent to Active Rail Line

Description:

Where the trail alignment is adjacent to the existing railroad right-of-way.

Cost Basis:

Basic Greenway cost plus extra cost for safety fencing and protective canopies under active rail lines.

Applicability:

- Along segments of Vandalia Trail.



Mapping White Lick Creek Greenway



The following GIS-level maps have been developed to analyze trail corridor land use, ownership patterns, topographical and hydrological constraints. The resulting mapping illustrates a proposed alignment for costing purposes with several alternative alignments that can be considered during design development and property acquisition processes. The details of the White Lick Creek Greenway from the Plainfield Trailhead on Washington Street north to Morris Street are outlined in this section within three maps.

Note that the maps are rotated to maximize their coverage area as illustrated in the Key Map to the left. The maps are on the odd pages with accompany narrative above the map on the even pages.

The Photo Documentation, beginning on page 19 and Concept Level Implementation Costs, beginning on page 25 follow.

White Lick Creek Greenway WLC1 Narrative

Both the White Lick Creek Greenway and the Marion County section of the Vandalia Trail begin at the recently constructed Plainfield Vandalia trailhead at US 40 and Raceway Road [the Hendricks County/Marion County line]. The trailhead is the eastern terminus of the nearly fully developed Vandalia Trail in Plainfield. Its construction included reconfiguring the US 40/Raceway Road intersection to create a signalized bicycle/pedestrian friendly crosswalk with a landscaped mid-crossing refuge. That crossing will serve Vandalia Trail users continuing east into Marion County along the proposed route south of US 40.

White Lick Creek Greenway proceeds from the trailhead eastward along *Old Washington Street*, a 1000-foot long no-outlet, low-volume street remnant. That street can easily accommodate a protected shared use path within its right-of-way per *Design Guideline 4*.

The greenway trail continues east/northeast along the north side of the creek's wetland/floodway on a raised and cleared power-line easement per *Design Guideline 2/Natural Greenway*. In some instances a boardwalk, per *Design Guideline 5: Sensitive Environments/Floodways*, will be utilized to minimize floodway impacts.

A pedestrian bridge or boardwalk over the creek is proposed midway along this section at the platted but not constructed 35-foot wide Raymond Street right-of-way. The bridge will provide greenway access to and from Bridgeport Village by landing at the Bridgeport Road/ Porter Street/Mellen Road intersection where a planned city sidewalk project paralleling Bridge-

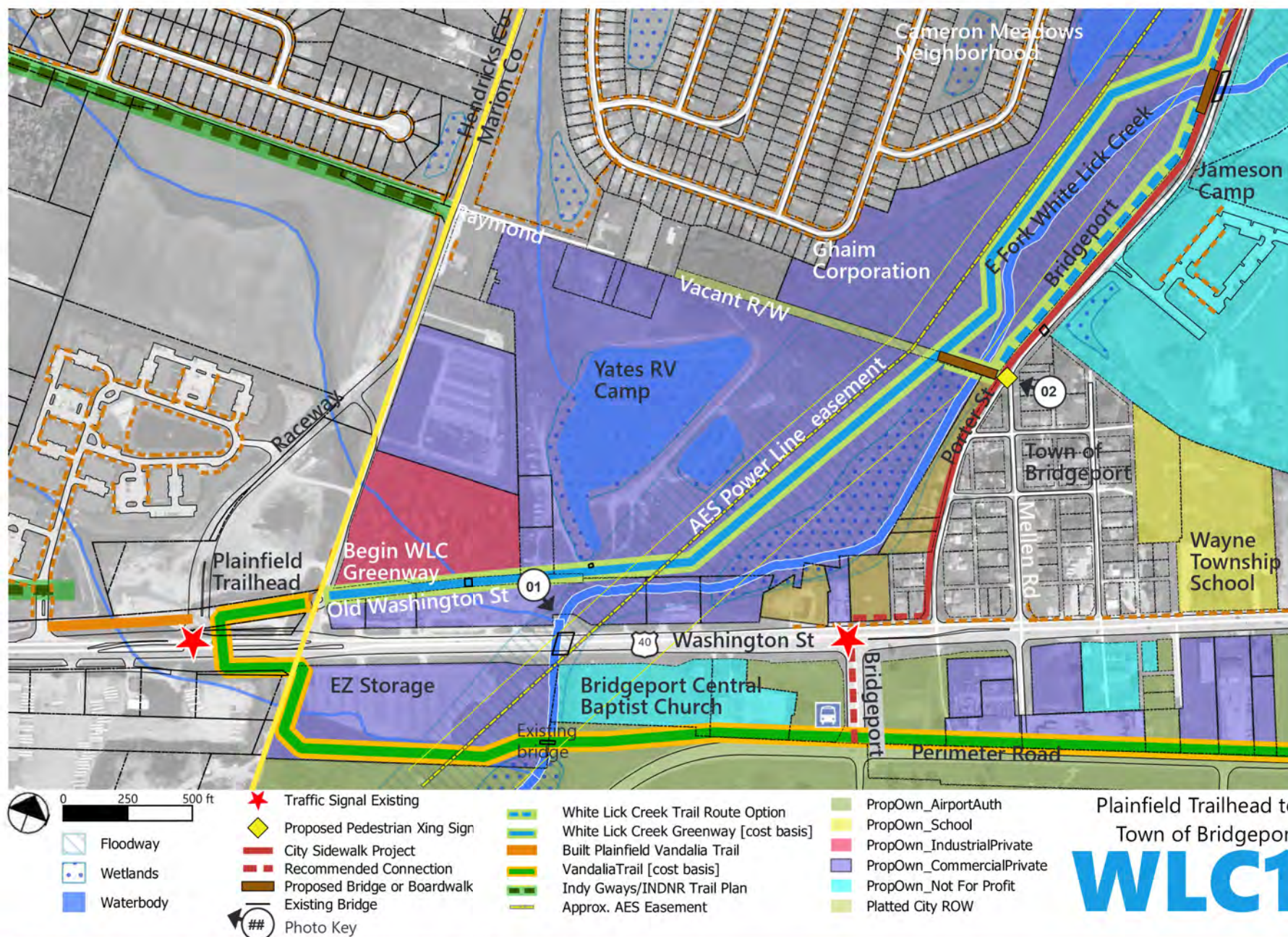
port road north and south of that point could include protected pedestrian crosswalks and other needed safety improvements at this complex intersection [[> see Endnote 1, page 18.](#)]

The primary White Lick Creek Greenway continues north from the bridge along the creek's left bank [west side] into what had been the Cameron Meadows planned unit development common space. That 25+ acre area has recently been sold and rezoned to C-3. It will require further research to determine the status of covenants typically attached to planned unit development open space as well as conversations with the current owner about development plans. Other constraints to greenway development here include: the AES utility easement, the perpetual drainage easement of the creek itself, and the detention pond.

Implementation Strategies could include:

- 1 Utilizing the AES power line easement for the preferred route; or
- 2 Shifting the trail to the 40-foot sidewalk easement along Bridgeport Road which will be accessed by the pedestrian bridge along the Raymond Street right-of-way. This option will require a new pedestrian bridge beside the Bridgeport Road bridge over the creek. This should be planned in conjunction with the Bridgeport Road sidewalk project such that bicycle/pedestrian continuity is considered [Design Guideline 3].

From there the greenway aligns with existing and proposed sidewalks, as discussed in the Map 2 narrative.



Plainfield Trailhead to
Town of Bridgeport
WLC1

White Lick Creek Greenway WLC2 Narrative

Map 2 describes the proposed route northward from the Bridgeport Road bridge over East Fork White Lick Creek to the lift station north of Morris Street and onto the Ecobat property.

The greenway follows the 40-foot wide sidewalk easement adjacent to the Bridgeport Road right-of-way, from the bridge to the Newchurch Boulevard subdivision entry, passing by the pond.

The greenway then crosses Bridgeport Road to rejoin the wooded edge of the wetland area on Jameson Camp property along the creek. It passes adjacent to the Cameron Meadows pond.

The bicycle/pedestrian crossing of Bridgeport Road could take one of several forms:

- 1 *All-way stop* at the Newchurch Boulevard/Bridgeport Road intersection with median-centered crosswalk. Least costly and arguably safest for all modes of travel.
- 2 *Pedestrian Hybrid Beacon* centered on the Newchurch Boulevard median, pedestrian actuated and with vehicle detection. A unique application but one with precedents.
- 3 *Pedestrian Hybrid Beacon* south of and separated from the Newchurch Boulevard intersection.

Alternatives 1 & 2 have greater potential for traffic calming of a long stretch of Bridgeport Road that induces high vehicle speeds, including removal of acceleration/deceleration lanes and passing blisters. Each alternative requires traffic engineering study, compliance with thoroughfare standards, and neighborhood input.

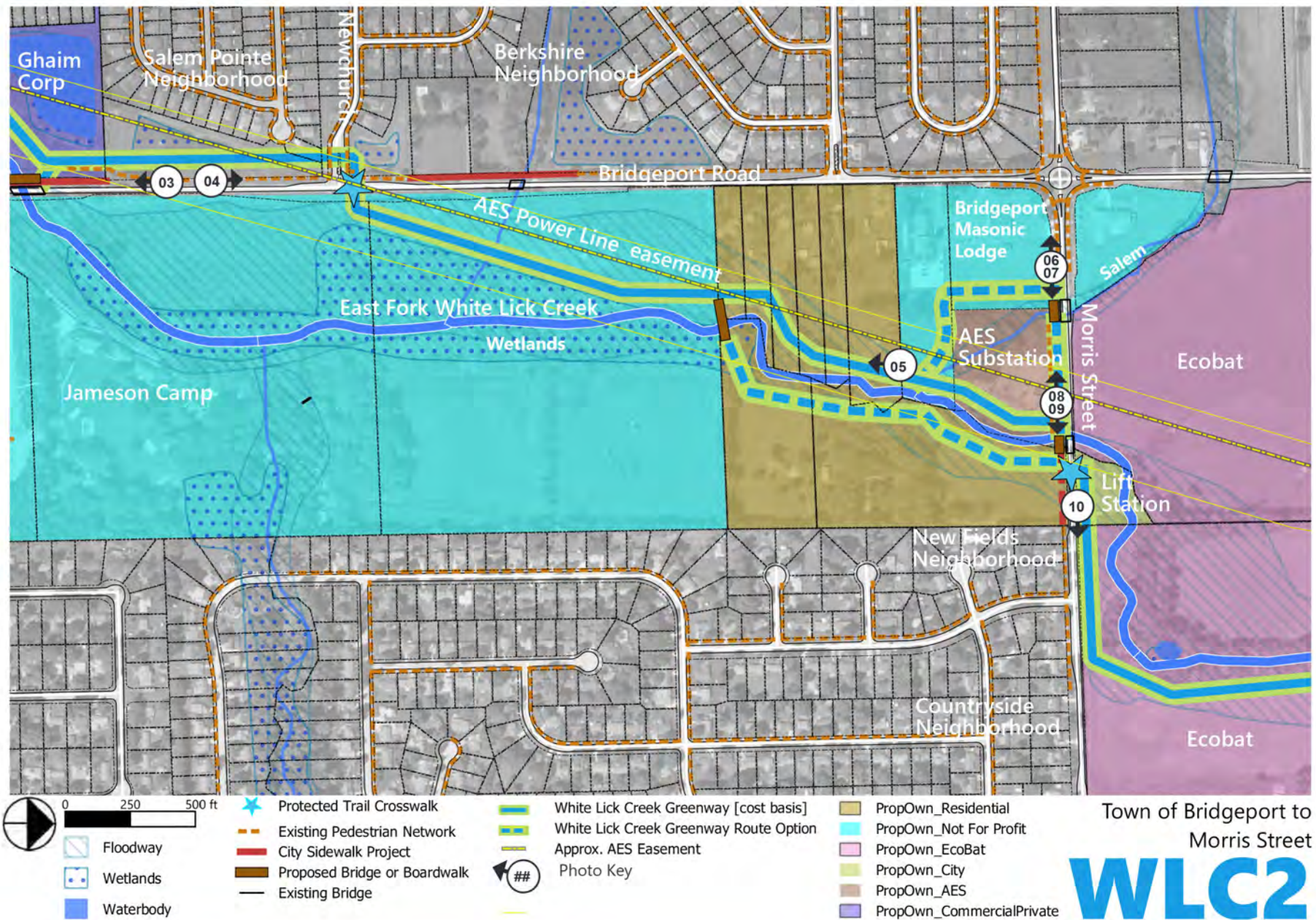
After crossing Bridgeport Road, the greenway follows the wooded

edge of the East Fork of the White Lick Creek north, avoiding wetlands (Design Guideline 2). Consideration to elevate the path or increased maintenance after flooding events will be necessary where there are floodway considerations. Jameson Camp has indicated in previous conversations that permission to use their property will require their Board's approval. Greenway advocates are hopeful for approval since the greenway would be located away from camp activities on the other side of the creek.

Once the greenway leaves Jameson Camp property, agreement with several single-family property owners and nonprofit organizations at the Morris Street intersection to sell or grant an easement will be required to follow the creek corridor. The properties appear to be platted to the center line of the creek, which is in a perpetual drainage easement. There is a generous buffer between the homes and the greenway path because of the AES easement.

Greenway advocates hope to reach agreement to provide trailhead parking at the Masonic Lodge parking lot. A link to existing sidewalks along Morris Street can be provided by providing a parallel boardwalk or bridge (Design Guideline 5) to cross Salem and White Lick creeks since the existing road bridges are too narrow for a protected path. A greenway connection to the New Fields neighborhood sidewalk is recommended.

It is also recommended that the bicycle/pedestrian crossing of Morris Street be protected by a protected trail crosswalk near the City/CEG lift station property. The greenway would then follow the north side of Morris Street before heading north along the east edge of the woods along the creek.



White Lick Creek Greenway WLC3 Narrative

The third and last section of this phase of the proposed East Fork White Lick Creek Greenway project, between Morris Street and US 36/Rockville Road, is both an opportunity and a challenge to the vision of greenway engagement with a pristine water course within the otherwise built-out urban area of Indianapolis.

The Opportunity: Threading a nearly mile-long trail along the wooded floodway fringe of a rippling undulating creek dotted with majestic sycamore trees and rich diversity of flora and fauna — a classic wildlife corridor — bordered by farm fields rather than subdivisions. The adjacent property is mostly owned by a single entity with a stated commitment to environmental values. [[see Endnote 2, page 18.](#)]

The Challenge: The owner, Ecobat, is a multi-national corporate operator of a nearby EPA-regulated secondary lead smelter plant with unrevealed plans for the overall property amid that industry's rapidly growing/evolving marketplace. Background regarding this tract and its owner, and strategies to create a partnership for this reach of the creek can be reviewed in the endnotes. If this route cannot be secured, the only viable alternative is along Bridgeport Road north to Rockville Road— doable but uninspiring in its disassociation from its namesake creek.

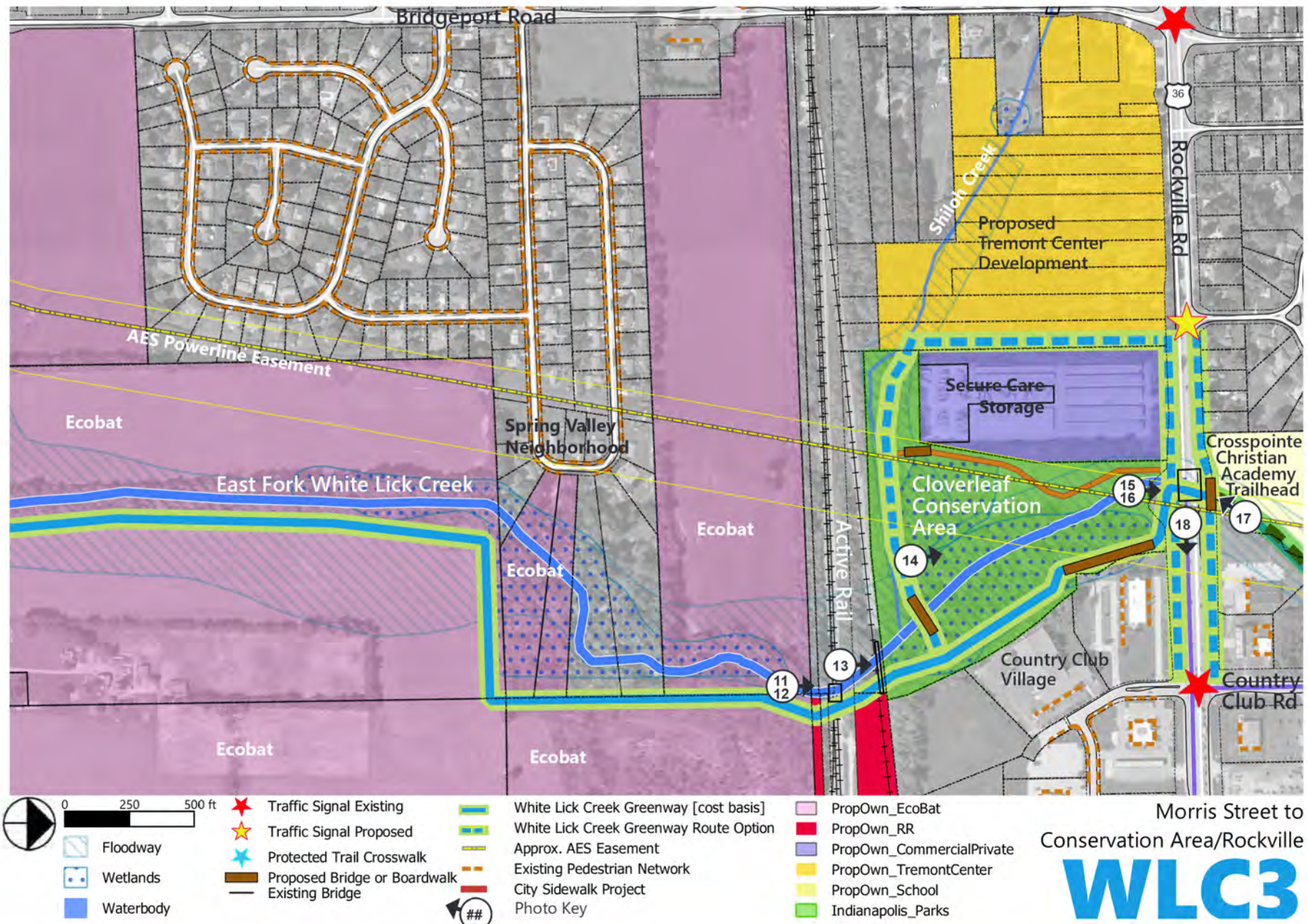
Ecobat's north boundary is formed by a major CSX rail corridor. The preferred trail route follows the creek through the Ecobat property towards the *Cloverleaf Conservation Area* destination, passing under two CSX RR bridges. One is a low concrete structure that appears to have sufficient headroom and hydrological interface with the creek to form an underpass for the trail. The

second is a dramatic high structure requiring a protective canopy over the trail to shield it from potential debris from above. The greenway route across the rail corridor is feasible but will entail lengthy CSX design review and permitting as well a DNR review of the trail's hydrological impacts.

The *Cloverleaf Conservation Area* emerges immediately north of the railroad, revealing a birdwatcher paradise of pond and wetlands. The major design challenge will be to sensitively engage this area without compromising its intrinsic qualities. Thus much of the trail will conform to Design Guideline 5 with boardwalks and observation blinds. Its long range stewardship will be coveted by a number of environmental organizations.

Two opportunities for continuing across US 36 are proposed. One heads west along Shiloh Creek past a self-storage facility then north to US 36 where the developer of the proposed Tremont Center mixed-use development is seeking INDOT approval of a signalized entry drive with protected trail crosswalk. A second opportunity is to continue the trail north through the conservation area to a trail along US 36 (Design Guideline 4) to the Country Club Road signalized intersection, with the addition of a pedestrian crosswalk. It would then head west along the north right-of-way to a terminus trailhead at Crosspointe Christian Academy which has expressed interest in partnering with the WLCVT Association.

Yet another possibility is an underpass at the US 36 bridge as discussed in the photo documentation. It requires INDOT permitting and further hydrological investigation for feasibility.



Endnotes

Endnote 1 > Bridgeport Village Link to the Airport

A recommended improvement — beyond the scope of either the Vandalia or White Lick Creek projects — is to create a bicycle/pedestrian linkage from the Bridgeport Road/Porter Street intersection to the airport district's North Perimeter Road.

Porter Street — a primary collector extension of Bridgeport Road to US 40 — would convert to a traffic-calmed local street, a *Complete Street*. The primary collector designation would shift to Mellen Road which, unlike Porter Street, is not constrained by a US 40 median. Full application of primary collector thoroughfare standards [curbs, parking indents, etc.] to that segment would create a traffic calming effect as well as make the overall transition more attractive to Bridgeport Village residents.

There is sufficient right-of-way along the north side of US 40 for a protected shared use path from either or both Porter and Mellen to the Bridgeport Road/US 40 signalized intersection, where a crosswalk similar to that of the new Raceway Road intersection would be added. An INDOT/City joint intersection study would be a requisite step towards realizing the potential benefits of this direct connection between the sizable population north of US 40 and the airport employment district's bicycle/pedestrian demand.

Endnote 2 > Major corridor landowner: ECOBAT Resources

A nearly mile-long section of the proposed White Lick Creek greenway proposed by the *Full Circle Master Plan* follows the creek between Morris Street and the east/west CSX corridor to the north. That property is owned by Ecobat Resources, a unit of Quexco, a Dallas-based multinational holding company. Que-

metco Inc., an operating company of Ecobat, runs its Indianapolis smelter located one-half mile east of the creek. The smelter processes and recycles lead-acid batteries, a highly regulated industry.

Ecobat has been acquiring residential properties and vacant parcels with residential development potential that surround its plant [see Maps WLC 2-3]. The apparent intent is to reduce risk of EPA sanctions for both historic and potential air and water quality impacts, and to remove risk/liabilities associated with human contact to residual soil contamination. Lead and arsenic products of lead smelting are highly toxic thus highly regulated and monitored by the EPA. Creating a large buffer area for EPA-mandated emissions monitoring is therefore logical.

Another consideration is that permitting for plant expansion would be facilitated if a large buffer is in place. This is significant since permitting a new site for a lead smelter operation in a metropolitan area — where the demand-logistics of battery recycling is high — is extremely difficult if not impossible. That demand is predicted to grow given new emphasis on electrification in response to global climate change. New technologies such as lithium-ion automotive batteries that will enter the recycling stream within the next 10 years could be Ecobat's future-proofing land-bank consideration.

Strategy for acquisition/easement at Ecobat property:

- a Inform IDEM [EPA's compliance agency in Indiana] of the 2014-2024 *Indy Greenway Full Circle Master Plan's* identification of the East Fork White Lick Creek as a Greenway Corridor.

Endnotes

Seek IDEM input regarding any pertinent compliance issues relative to the greenway's half-mile distance from the smelter.

- b Contact Ecobat Resources at the community engagement corporate level [Dallas HQ] with an informed and targeted prospectus for the proposed greenway location. Stress its potential to create a positive image for a critical industry that has invested heavily in successful environmental compliance measures and whose business model is based on the circular economy principle. Reference Quexco's commitment to the Davos Agenda as a partner member of the World Economic Forum

Contact Information:

Ecobat Resources Corporate Headquarters:

433 East Las Colinas Boulevard Suite 900, Irving, Texas, USA 75039

<https://ecobat.com/contact-us/>

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Photo Documentation

White Lick Creek Greenway



Photographs on the following pages are keyed to their locations on the White Lick Creek Greenway alignment maps WLC1 through WLC3 [from south to north] to provide context for those maps as well as for the narrative that accompanies each mapped section.

The images have been schematically diagrammed and/or annotated to show how the trail interfaces with each unique trail condition, providing orientation for the more detailed narrative accompanying the maps. The design character of each trail section can then be derived from the illustrative typologies and technical design guidelines section of the *Indy Greenways Full Circle Master Plan 2014-2034* which is summarized in Section 3 of this report.



East Fork White Lick Creek at the Cloverdale Conservation Area viewed south from the US 36 (Rockville Road) bridge



The proposed White Lick Creek Greenway and Vandalia Trail share the recently constructed Plainfield Trails Trailhead at Raceway Road and US 40. Vandalia Trail will utilize the new crosswalk to

access its route south of US 40. The White Lick Creek Greenway heads east within the right-of-way of Old Washington Street, a no outlet, low-volume street, and follows the creek north.



White Lick Creek flows south under high-volume Washington Street/US 40. The bridge does not have sufficient headroom for an otherwise desirable trail link to the proposed Vandalia Trail.



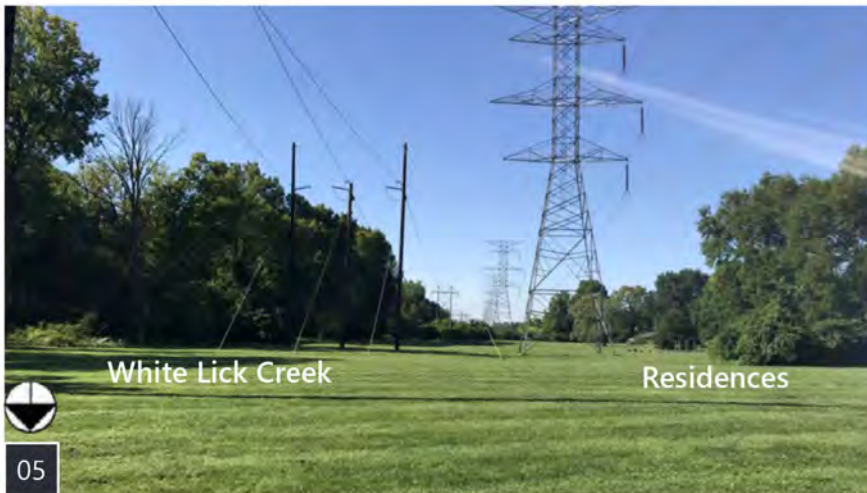
Looking north at the Mellen/Porter/Bridgeport Rd intersection. A boardwalk/bridge is proposed between here and the White Lick Creek Greenway as a neighborhood link to the trail.



Looking south on Bridgeport Road at its convergence with the utility easement and the existing sidewalk at the Ghaim Corporation/Cameron Meadows commons.



Looking north on Bridgeport Road. The greenway would replace the existing sidewalk and cross Bridgeport Road to follow the creek/utility easement north to Morris Street.



The general characteristic of the greenway between Bridgeport Road and Morris Street. It requires procuring a conservation easement or purchase at the back of several residential parcels.



Completing the connection between the Morris/Bridgeport roundabout and Countryside Subdivision, with boardwalk creek crossings, will provide balanced access to the Greenway.



Image 07: Morris Street has discontinuous segments of sidewalk that would connect to the White Lick Creek Greenway.



Image 08: The AES Substation walk would be replaced with Design Guidelines 3 and 4 within this wide setback, and cross Salem and White Lick Creeks with Design Guideline 5 boardwalks.



Image 09: Looking west on Morris Street at the White Lick Creek bridge, which is too narrow to accommodate the Greenway. Design Guideline 5 boardwalk would cross the creek on the south side.



Image 10: The Countryside Subdivision has a fronting sidewalk along Morris Street that would be connected to the White Lick Creek Greenway.



The South Rail Bridge has side chambers that can accommodate a raised boardwalk (to minimize flooding) for the trail route. CSX permits will be required for all trail underpass proposals.



Each South Rail Bridge side chamber has ample head room to accommodate the White Lick Creek Greenway connection to the Conservation Area.



A protection canopy will be needed to shield Greenway users from potential debris, but the North Rail Trestle Bridge has ample head room and width to accommodate the trail.



A hiking trail spur is proposed from the main White Lick Creek Greenway to allow users to enjoy the scenic pond in the Cloverleaf Conservation Area.



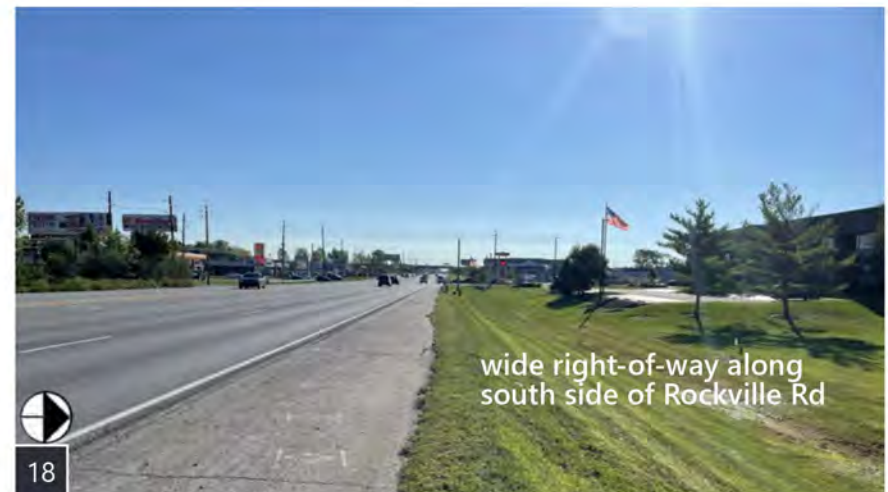
INDOT is currently studying whether the bridge will be reconstructed to accommodate the Rockville Road project which is an opportunity to consider it as a greenway underpass to the north.



The bridge side chambers may have sufficient head room to serve as a US 36 underpass. It will require a floodway study to establish feasibility and INDOT permitting.



Looking south, the greenway would go through the west chamber to access a potential trailhead at the school as a first phase project terminus.



An option to the US 36 bridge underpass is a shared-use path along the south side of Rockville to access an existing Country Club Rd signal and a proposed signal at Tremont Center.



Probable Costs White Lick Creek Greenway



The following probable costs have been developed at the conceptual level to guide funding and scope decisions.

Segments 1 & 2 as shown on the map to the left represent the project budget segments. Segment 1 provides a construction and land acquisition budget from the Plainfield Trailhead to Morris Street. Segment 2 provides a construction and land acquisition budget from Morris Street to the north side of Rockville Road.

A key to success will be to ensure near-term investments accommodate and incrementally contribute towards realization of the larger Greenway vision.

WHITE LICK CREEK GREENWAY**Segment 1: from Plainfield Trailhead on Washington Street north to Morris Street****Length: 1.93 miles**

Segment 1

White Lick Creek Greenway

SUMMARY

Construction [with additional 15% contingency for current Supply Chain issues]				\$2,930,477.00
Land Acquisition				\$720,551.57
RECOMMENDED WLC SEGMENT 1 PROJECT BUDGET				\$3,651,028.57

CONSTRUCTION ESTIMATE DETAIL

Item	Description	Qty	Unit	Price	Cost	Subtotal	Total
1	Construction Engineering (4% of construction cost)	1.0	LS		\$61,943.04		
2	Mobilization and Demobilization (3.5% of construction cost)	1.0	LS		\$54,200.16		
3	Clearing Right-of-Way	1.0	LS		\$61,943.04		
4	Maintenance of Traffic	1.0	LS		\$15,000.00		
5	Erosion Control Budget	10,178.0	LF	\$4.00	\$40,712.00		
6	Misc. Drainage	1.0	LS		\$23,228.64		
7	Linear Grading (4% of construction cost)	1.0	LS		\$61,943.04		
8	Old Washington Street rehab for protected urban trail	1,015.0	LF	\$200.00	\$203,000.00		
9	HMA for Trail	2,226.5	TON	\$91.00	\$202,611.50		
10	Asphalt for Tack Coat (1,085 GAL - 0.1 app rate)	5.0	TON	\$600.00	\$3,000.00		
11	Geogrid Type 1B	11,308.9	SYS	\$5.75	\$65,026.11		
12	Subgrade Treatment, Type V	2,827.2	SYS	\$17.00	\$48,062.78		
13	Compacted No. 53 Stone (1801.5 CY)	2,500.0	TON	\$32.00	\$80,000.00		
14	Elevated Boardwalk (16' wide) Bridgeport/WLC	225.0	LF	\$500.00	\$112,500.00		
15	Elevated Boardwalk (16' wide) Morris/SalemCreek	80.0	LF	\$500.00	\$40,000.00		
16	Elevated Boardwalk (16' wide) Morris/WLC	110.0	LF	\$500.00	\$55,000.00		
17	Trail Crossing Nodes	7.0	Each	\$8,600.00	\$60,200.00		
18	Stablized Turf clear zone	6,785.3	SYS	\$7.50	\$50,890.00		
19	911 Sign (at 0.2 mile interval - line of sight)	19.0	Each	\$90.00	\$1,710.00		
20	Sign Post, Square Type 1 Reinforced Anchor Base	11.0	Each	\$300.00	\$3,300.00		
21	LED Enhanced Crossing Sign	1.0	Each	\$2,100.00	\$2,100.00		
22	Solar Power Beacon Assembly	4.0	Each	\$10,000.00	\$40,000.00		
23	Pedestrian Hybrid Beacon	4.0	Each	\$67,500.00	\$270,000.00		
24	Pedestrian Signal Head, Countdown, 18 IN.	8.0	Each	\$625.00	\$5,000.00		
25	Pedestrian Push Button, Non-APS	8.0	Each	\$350.00	\$2,800.00		
26	Controller Cabinet, P1	4.0	Each	\$1,650.00	\$6,600.00		
27	Wildflower Seeding	22,617.8	SYS	\$3.25	\$73,507.78		
28	Landscape Planting Allowance	1.0	LS	\$25,000.00	\$25,000.00		

Segment 1

White Lick Creek Greenway

29	Bench - every half mile alternate sides	8.0	Each	\$3,000.00	\$24,000.00		
30	PCCP 4" (Bench Pad)	128.0	SYS	\$50.00	\$6,400.00		
31	Pathway, Curb Ramp Type C, modified	112.0	SYS	\$200.00	\$22,400.00		
32	Regulatory Signage	1.0	LS	\$3,500.00	\$3,500.00		
33	Trail Centerline Stripe, 4"	10,178.0	LFT	\$1.20	\$12,213.60		
34	Line, Epoxy, Solid White, 4" Crosswalk	120.0	LFT	\$1.00	\$120.00		
35	Transverse Markings, Thermoplastic, Solid, Stop Bar, 24"	100.0	LFT	\$8.00	\$800.00		
36	Transverse Markings, Epoxy, Solid, White, Parallel Crosswalk Line, 8"	2,520.0	LFT	\$0.75	\$1,890.00		
37	Subtotal Construction Budget [normal]					\$1,740,601.69	
38	15% Contingency current Supply Chain Impact					\$348,120.34	
39	Subtotal Construction Budget [Covid-19]					\$2,088,722.02	
40	20% Contingency for Unknowns (Concept Level Estimate)					\$313,308.30	
41	TOTAL ESTIMATED CONSTRUCTION BUDGET					\$2,402,030.33	
42	PE [Environmental, Design & Engineering] Fees (12%)					\$288,243.64	
43	CE [Construction Administration] Fees (10%)					\$240,203.03	
TOTAL WLC SEGMENT 1 PROBABLE CONSTRUCTION COST							\$2,930,477.00

Construction Assumptions: 10 ft wide paved trail

3.25" asphalt on
6" compacted aggregate No. 53 stone on
Subgrade Treatment Type V (3" of stone) on
Geogrid Type 1B

Notes

- 1 Project Budget based on GIS level of accuracy. Topographic survey, design, and engineering required for more accurate cost projections.
- 2 Budget prepared Fall 2021
- 3 Details about City sidewalk project for Bridgeport Road not available. May alter plan recommendations and cost.

Segment 1

White Lick Creek Greenway

Land Acquisition Detail (Primary Route)		Parcel #	Land Cost Estimate		Land Services Estimate		Total
1	Yates	9044448					
2	Ghaim Corporation	9057735					
3	Jameson Camp	9009318					
4	Jameson Camp	9009317					
5	Residential	9043750					
6	Residential	9047373					
7	Residential	9047372					
8	Residential	9047371					
9	Residential	9046900					
10	Residential	9046970					
11	Bridgeport United Methodist Church	9037973					
12	Bridgeport Masonic Lodge	9032861					
13	Indianapolis Power & Light	9041261					
	20% Contingency for Unknowns		\$106,101.93		\$13,990.00		
	SUBTOTAL		\$636,611.57		\$83,940.00		
TOTAL WLC SEGMENT 1 PROBABLE LAND ACQUISITION COST							\$720,551.57

Notes

- 1 Assumes fee simple purchase from each owner listed above
- 2 Project budget reduces if property owner chooses to donate or grant an easement

WHITE LICK CREEK GREENWAY

Segment 2: from Morris Street to north side of Rockville Road

Length: 1.42 miles

Segment 2

White Lick Creek Greenway

SUMMARY

Construction [with additional 15% contingency for current Supply Chain impacts]				\$1,776,049.97
Land Acquisition				\$532,090.85
RECOMMENDED WLC SEGMENT 2 PROJECT BUDGET				\$2,308,140.82

CONSTRUCTION ESTIMATE DETAIL

Item	Description	Qty	Unit	Price	Cost	Subtotal	Total
1	Construction Engineering (4% of construction cost)	1.0	LS		\$36,870.48		
2	Mobilization and Demobilization (3.5% of construction cost)	1.0	LS		\$32,261.67		
3	Clearing Right-of-Way	1.0	LS		\$36,870.48		
4	Maintenance of Traffic	1.0	LS		\$15,000.00		
5	Erosion Control Budget		LF	\$4.00	\$0.00		
6	Misc. Drainage	1.0	LS		\$13,826.43		
7	Linear Grading (4% of construction cost)	1.0	LS		\$36,870.48		
8	HMA for Trail	1,645.0	TON	\$91.00	\$149,695.00		
9	Asphalt for Tack Coat (1,085 GAL - 0.1 app rate)	3.5	TON	\$600.00	\$2,100.00		
10	Geogrid Type 1B	8,351.1	SYS	\$5.75	\$48,018.89		
11	Subgrade Treatment, Type V	2,087.8	SYS	\$17.00	\$35,492.22		
12	Compacted No. 53 Stone (1801.5 CY)	1,930.0	TON	\$32.00	\$61,760.00		
13	Elevated Boardwalk (16' wide) Conservation Area	230.0	LF	\$500.00	\$115,000.00		
14	South Railroad Bridge Boardwalk	135.0	LF	\$500.00	\$67,500.00		
15	North Railroad Bridge Boardwalk	200.0	LF	\$500.00	\$100,000.00		
16	North Railroad Bridge Protection Canopy	200.0	LF	\$500.00	\$100,000.00		
17	Trail Crossing Nodes	6.0	Each	\$8,600.00	\$51,600.00		
18	Stablized Turf clear zone	5,010.7	SYS	\$7.50	\$37,580.00		
19	911 Sign (at 0.2 mile interval - line of sight)	14.0	Each	\$90.00	\$1,260.00		
20	Sign Post, Square Type 1 Reinforced Anchor Base	7.0	Each	\$300.00	\$2,100.00		
21	Pedestrian Signal Head, Countdown, 18 IN.	2.0	Each	\$625.00	\$1,250.00		
22	Pedestrian Push Button, Non-APS	2.0	Each	\$350.00	\$700.00		
23	Controller Cabinet, P1	2.0	Each	\$1,650.00	\$3,300.00		
24	Wildflower Seeding	16,702.2	SYS	\$3.25	\$54,282.22		
25	Landscape Planting Allowance	1.0	LS	\$20,000.00	\$20,000.00		
26	Bench - every half mile alternate sides	4.0	Each	\$3,000.00	\$12,000.00		
27	PCCP 4" (Bench Pad)	64.0	SYS	\$50.00	\$3,200.00		
28	Pathway, Curb Ramp Type C, modified	21.4	SYS	\$200.00	\$4,280.00		

Segment 2

White Lick Creek Greenway

29	Regulatory Signage	1.0	LS	\$2,500.00	\$2,500.00		
30	Trail Centerline Stripe, 4"	7,516.0	LFT	\$1.20	\$9,019.20		
31	Line, Epoxy, Solid White, 4" Crosswalk	200.0	LFT	\$1.00	\$200.00		
32	Transverse Markings, Epoxy, Solid, White, Parallel Crosswalk Line, 8"	500.0	LFT	\$0.75	\$375.00		
33	Subtotal Construction Budget [normal]					\$1,054,912.07	
34	15% Contingency current Supply Chain Impacts					\$210,982.41	
35	Subtotal Construction Budget [Covid-19]					\$1,265,894.49	
36	20% Contingency for Unknowns (Concept Level Estimate)					\$189,884.17	
37	TOTAL ESTIMATED CONSTRUCTION BUDGET					\$1,455,778.66	
38	PE [Environmental, Design & Engineering] Fees (12%)					\$174,693.44	
39	CE [Construction Administration] Fees (10%)					\$145,577.87	
TOTAL WLC SEGMENT 2 PROBABLE CONSTRUCTION COST							\$1,776,049.97

Construction Assumptions: 10 ft wide paved trail

3.25" asphalt on
 6" compacted aggregate No. 53 stone on
 Subgrade Treatment Type V (3" of stone) on
 Geogrid Type 1B

Notes

- 1 Project Budget based on GIS level of accuracy. Topographic survey, design, and engineering required for more accurate cost projections.
- 2 Budget prepared Fall 2021

Land Acquisition Detail (Primary Route)		Parcel #	Land Cost Estimate		Land Services Estimate		Total
1	Eco-Bat Indiana LLC	9000444					
2	Eco-Bat Indiana LLC	9047863					
	20% Contingency for Unknowns		\$86,271.81		\$2,410.00		
	SUBTOTAL		\$517,630.85		\$14,460.00		
TOTAL SEGMENT WLC 2 PROBABLE LAND ACQUISITION COST							\$532,090.85

Notes

- 1 Assumes fee simple purchase from each owner listed above
- 2 Project budget reduces if property owner chooses to donate or grant an easement



Mapping / Vandalia Trail

The following GIS-level maps have been developed to analyze trail corridor land use and ownership patterns, and topographical and hydrological constraints. The resulting mapping illustrates a proposed alignment for costing purposes with several alternative alignments that can be considered during design development and property acquisition processes. The details of the Vandalia

Trail from the Plainfield Vandalia Trailhead east to the Eagle Creek Greenway are outlined in this section within eight maps.

Note that the maps are rotated to maximize their coverage area as illustrated in the Key Map above.

Vandalia Trail Map VT1 Narrative

This section of the Vandalia Trail is a component of the *Indiana National Road Heritage Trail* which follows the Indiana section of the [Historic National Road \(US 40\) Scenic Byway](#), between St. Louis and Baltimore, often utilizing abandoned sections of the Vandalia and Pennsylvania railroad corridors.

The one-hundred-sixty mile [National Road Heritage Trail](#) is designated a *State Visionary Trail* by the Indiana Department of Natural Resources. Many segments have been constructed, including the Pennsy Trail on the east side of Indianapolis and Vandalia Trail in Hendricks County.

This Marion County Vandalia Trail study addresses an important gap in the system. Beginning at the Plainfield Vandalia Trailhead at the intersection of Raceway Road and US 40, the Marion/Hendricks

County Line, it connects the constructed Vandalia Trail in Hendricks County to the *Eagle Creek Greenway* and the *Indianapolis Greenway* systems' connection to the *Pennsy Trail*.

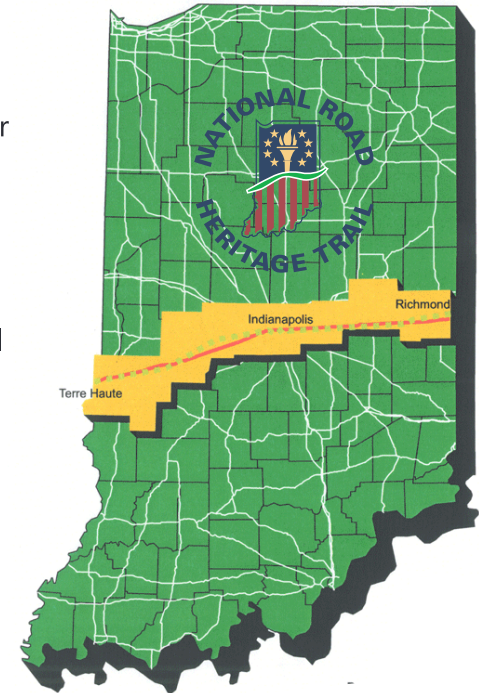
Map VT1 and its keyed photographs indicate the route from the Plainfield Vandalia Trailhead on the north side of US 40 to the former Vandalia RR corridor south of US 40 utilizing a new crosswalk constructed by Plainfield Trails for that purpose. It will continue east over the former RR bridge crossing of the East Fork White Lick Creek engaging a wetland habitat within the Indianapolis Airport property.

The Vandalia Trail then follows the North Perimeter Road's alignment with the abandoned RR corridor per Design Guideline 04. Since the North Perimeter Road is mostly controlled by the Indianapolis Airport Authority, it would be a nec-

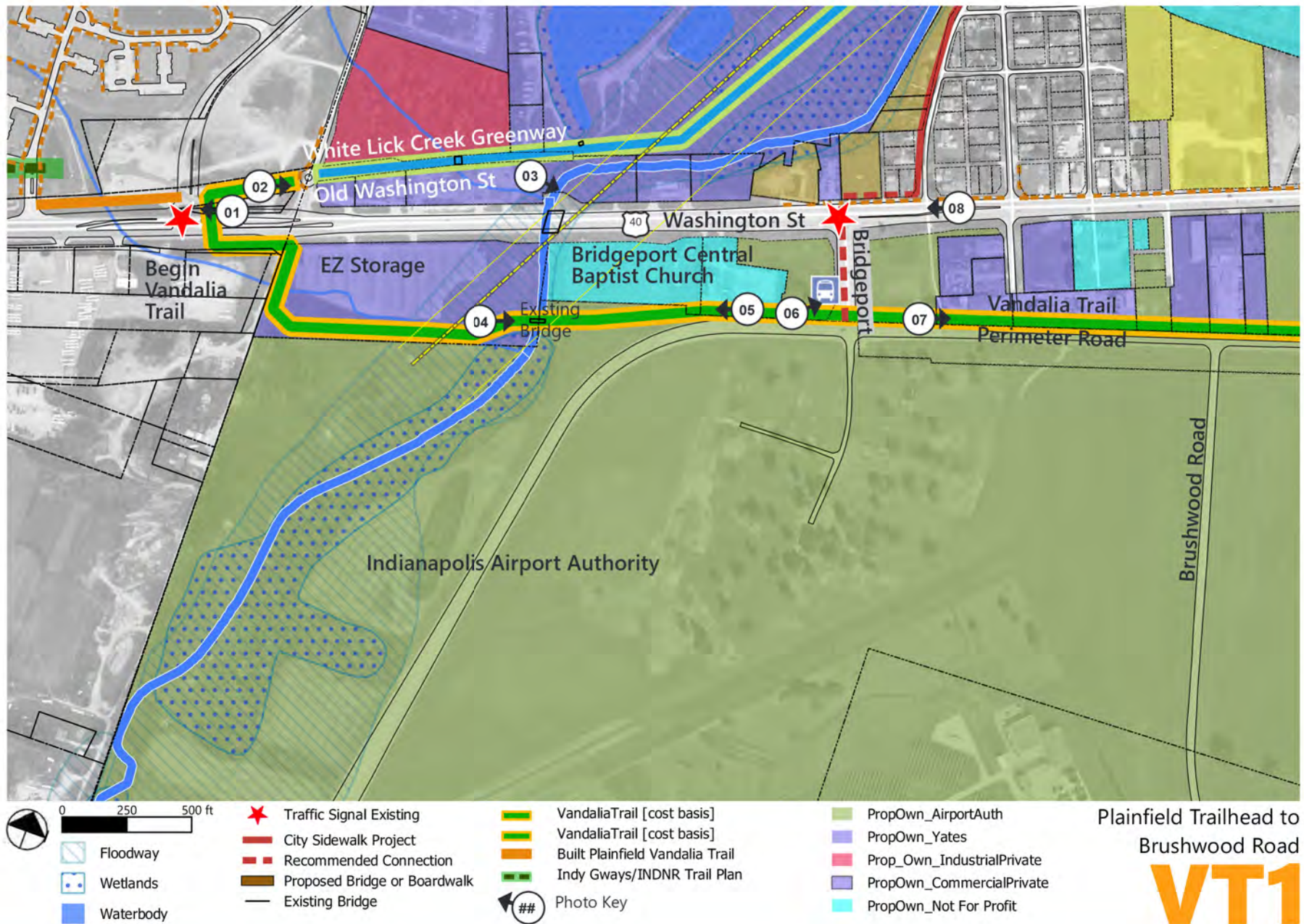
essary partner to trail development. The trail supports the Airport's [World Connect](#) economic development master plan objectives and its development may qualify for TIF District infrastructure funding. The *Infosys* trail section is an example of the economic development attraction of trail connectivity.

As the TIF District properties are developed, the City typically requires dedicated trail ROW along parcel frontage.

This study recommends a Bridgeport Road link between Vandalia Trail and the White Lick Creek Greenway. Although beyond the scope of this project it would provide a direct connection to the large population north of US 40. See photos 06 & 08. [[see Endnote 1, page 18.](#)]



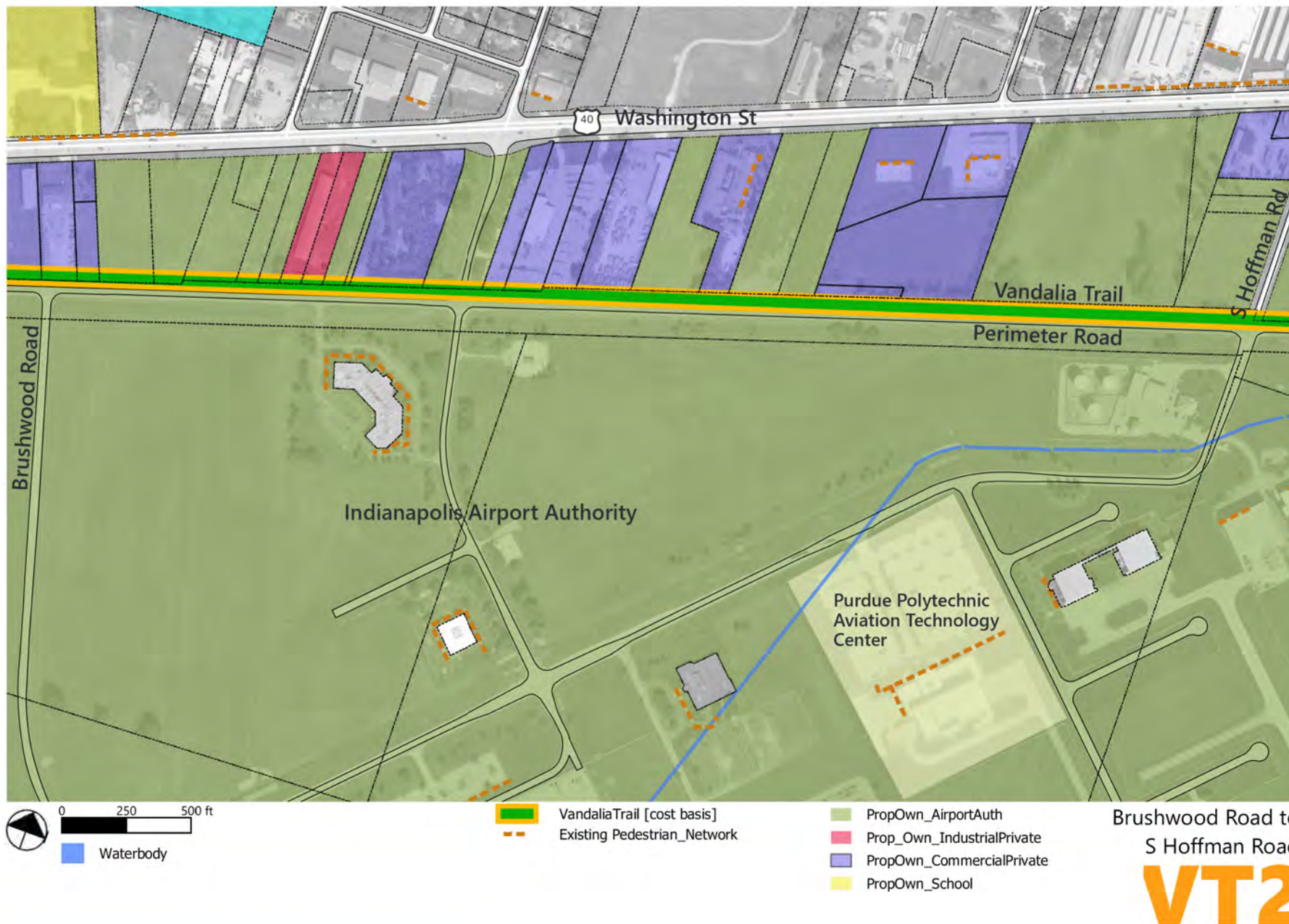
[National Road Heritage Trail](#)



Vandalia Trail Map VT2 Narrative

Map VT2 is the extension of the Vandalia Trail along Perimeter Road. It illustrates the extent of the parcels controlled by the Indianapolis Airport Authority as part of its [World Connect](#) economic development master plan. Those would be served well by the trail's presence for employee access and their front door image.

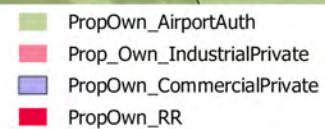
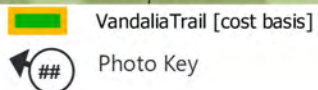
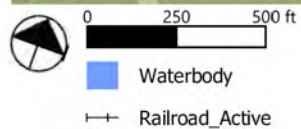
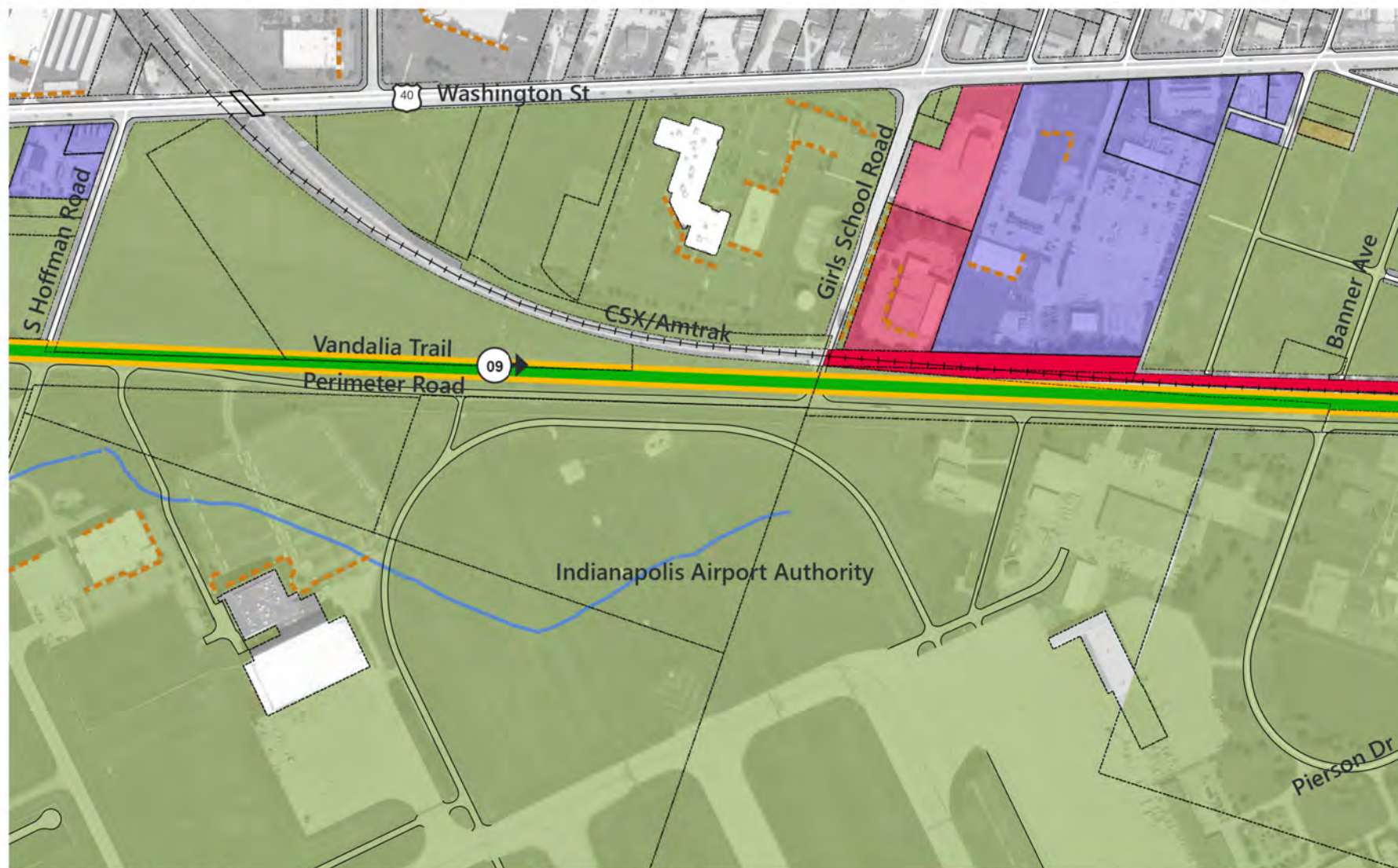
Construction is straightforward once an agreement with the Airport Authority is reached. It would follow the general requirements of Design Guidelines 4 and 6. The trail cross section will need to consider the optimum relationship to the several varying road cross sections ranging from two-lane with curb and gutter to three-lane with shoulder and swale.



Vandalia Trail Map VT3 Narrative

Vandalia Trail continues past South Hoffman Road along North Perimeter Road where it parallels the CSX RR corridor beginning at Girls School Road.

This segment would be constructed as a combination of Design Guidelines 4 and 6. There appears to be sufficient separation between the active rail lines and the trail in conformance with Guideline 6.



S Hoffman Road to
Banner Ave/Pierson Dr

VT3

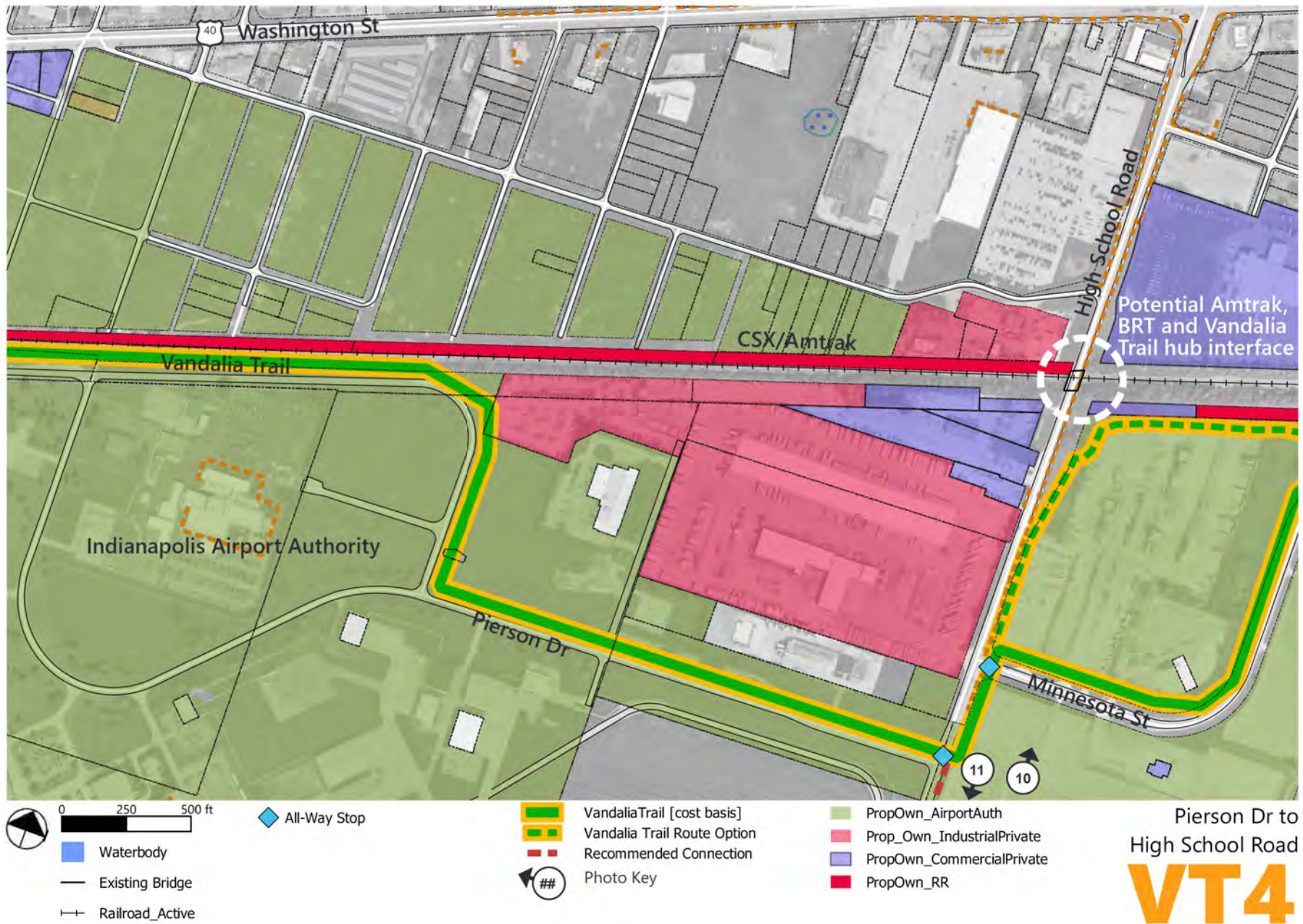
Vandalia Trail Map VT4 Narrative

The Vandalia Trail turns south from North Perimeter Road to Pierson Drive to minimize acquisition but mostly to maintain its visibility as part of the Airport [World Connect](#) district.

It continues east on Pierson Drive to High School Road where it would be joined by an extension of a partially constructed trail from the *Infosys* campus and its proposed Blue Line BRT station. It then heads north to Minnesota Street and its I-465 underpass. An alternative continues north on High School past Minnesota Street to a RR corridor adjacency before passing through the same underpass.

Either route will require at least two protected crosswalks. Since the Airport district streets are generally two-lanes, all-way stops are preferred at crosswalk locations. If, however those intersections are widened to four-lanes, some variant of signalization is recommended.

It should be noted that future plans for Amtrak's Indianapolis/Chicago corridor consider a possible airport station. Constructing an Amtrak [or commuter rail] spur directly to the terminal is likely. If that proves unfeasible, an alternative would be to co-locate a Blue Line BRT and Amtrak stop at their present intersection at the High School Road bridge over the CSX tracks, providing a connection with the Vandalia Trail as well.



Vandalia Trail Map VT5 Narrative

There is sufficient width for the trail under the I-465 bridge over Minnesota Street following Design Guideline 4. Curbing will be required as well as a minor lane adjustment.

The trail then heads north to rejoin its preferred adjacency to the rail corridor with minor acquisition. It then follows a vacant street right-of-way up to several commercial parcels under common ownership, which will require partial acquisition or easement.

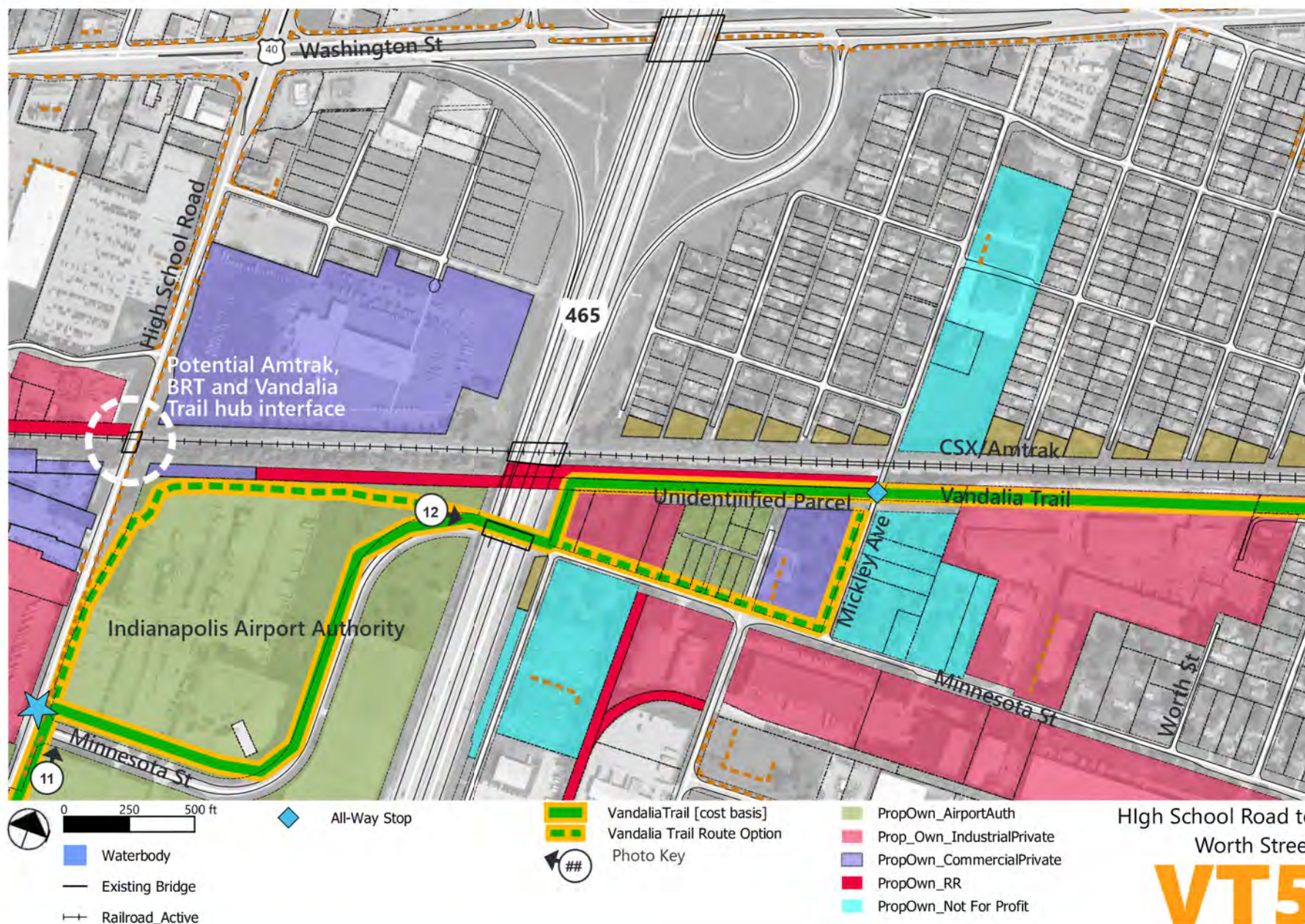
When visiting the site in this area, it appeared desirable to keep the trail on the apparent abandoned rail corridor under Interstate 465 adjacent to the active rail line. The possibility of the trail sharing that rail underpass will require further study of the status of the multiple active and abandoned rail corridors.

There is a possibility that one of two unused and possibly abandoned non-CSX rail parcels there could be acquired instead. Determination of their status will require extensive title research in advance of negotiation for either acquisition or an easement agreement.

An alternative for part of this route is to continue along Minnesota Street to Mickley Avenue before heading north to RR corridor adjacency. That alignment would avoid concerns about a Mickley Avenue's protected crossing's proximity to rail crossing gates at the surface level tracks.

East of Mickley the same considerations of partial acquisition of the large industrial parcel's underutilized back-lot, or more ideal use of apparently abandoned rail corridor, will be determined by

deeper title research and negotiation. Using the route adjacent to the rail corridor is preferred to continuing along Minnesota with its narrow right of way between Mickley and Worth, its many driveway interruptions east of Worth, and its divergence from the principal Vandalia corridor.

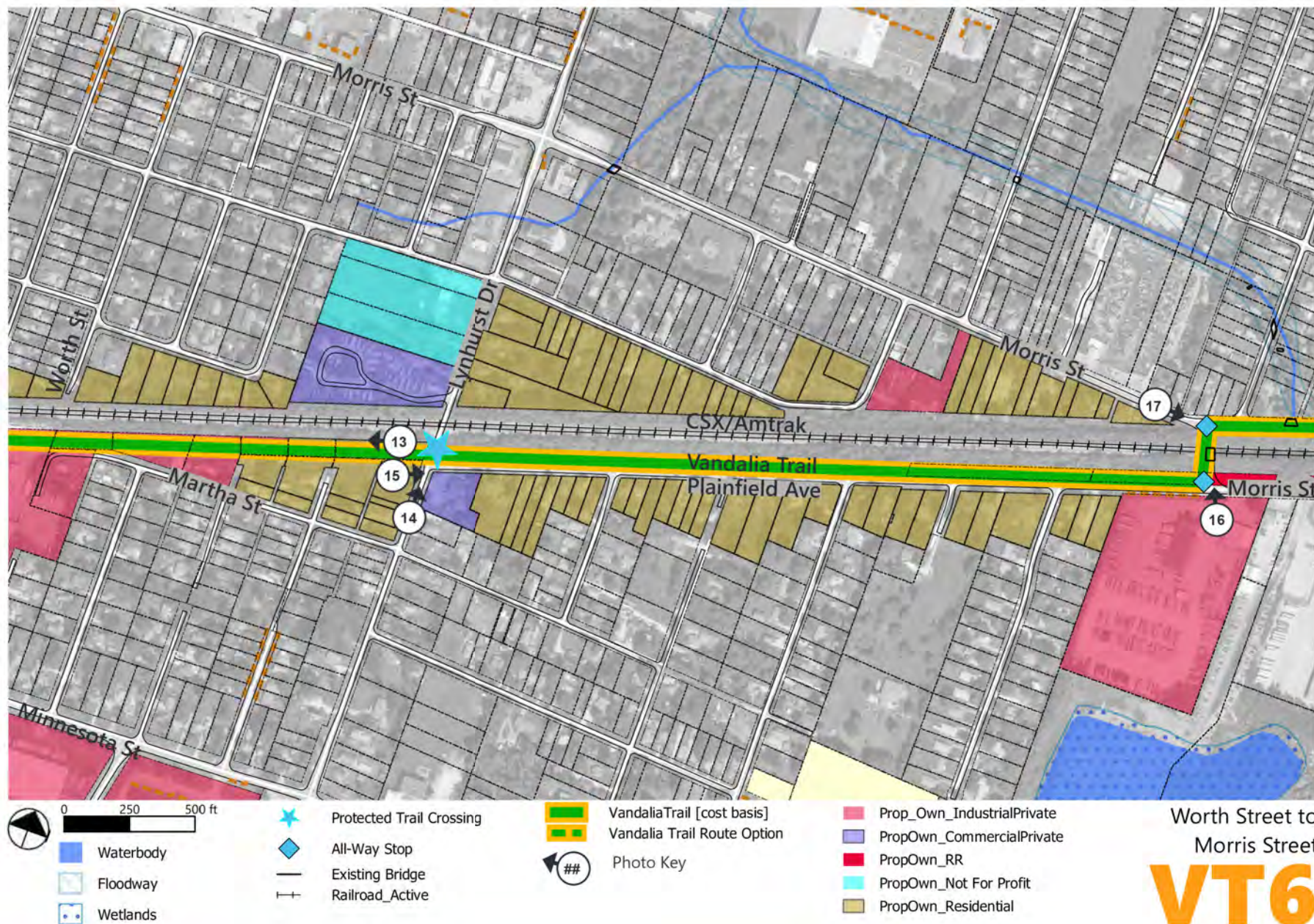


Vandalia Trail Map VT6 Narrative

The quarter mile distance of the proposed route from the industrial park west of Worth Street to Lynhurst Drive will require whole or partial acquisition of six mostly vacant parcels, some of which are in common ownership. As in the preceding section there is some possibility of acquisition of one or two possibly abandoned former rail segments that would reduce the need for those parcels. There are no other reasonable alternatives for trail continuity.

The trail continues past Lynhurst Drive along the north side of Plainfield Avenue eastward to the Morris Street underpass of the rail corridor. The Lynhurst Drive tee intersection with Plainfield Avenue is recommended to receive an all-way stop and crosswalk. Plainfield Avenue's north right-of-way line is coincident with an 1,800-foot long unused former CSX siding area. See photos 14 and 15. Acquisition of both the siding area and 1,400-feet of former Indiana Railroad parcels is a high-priority for a quality trail. If unsuccessful, a minimal facility could still be developed per Design Guideline 4 within existing right-of-way by travel lane adjustments southward.

The existing Morris Street rail corridor underpass is deficient in both width and vertical clearance. Its reconstruction to thoroughfare standards, that would allow two travel lanes and a protected trail, is recommended as the preferred alternative to an expensive tunnel-based underpass serving only the trail. See photo 16, page 55 and photo 17, page 56.

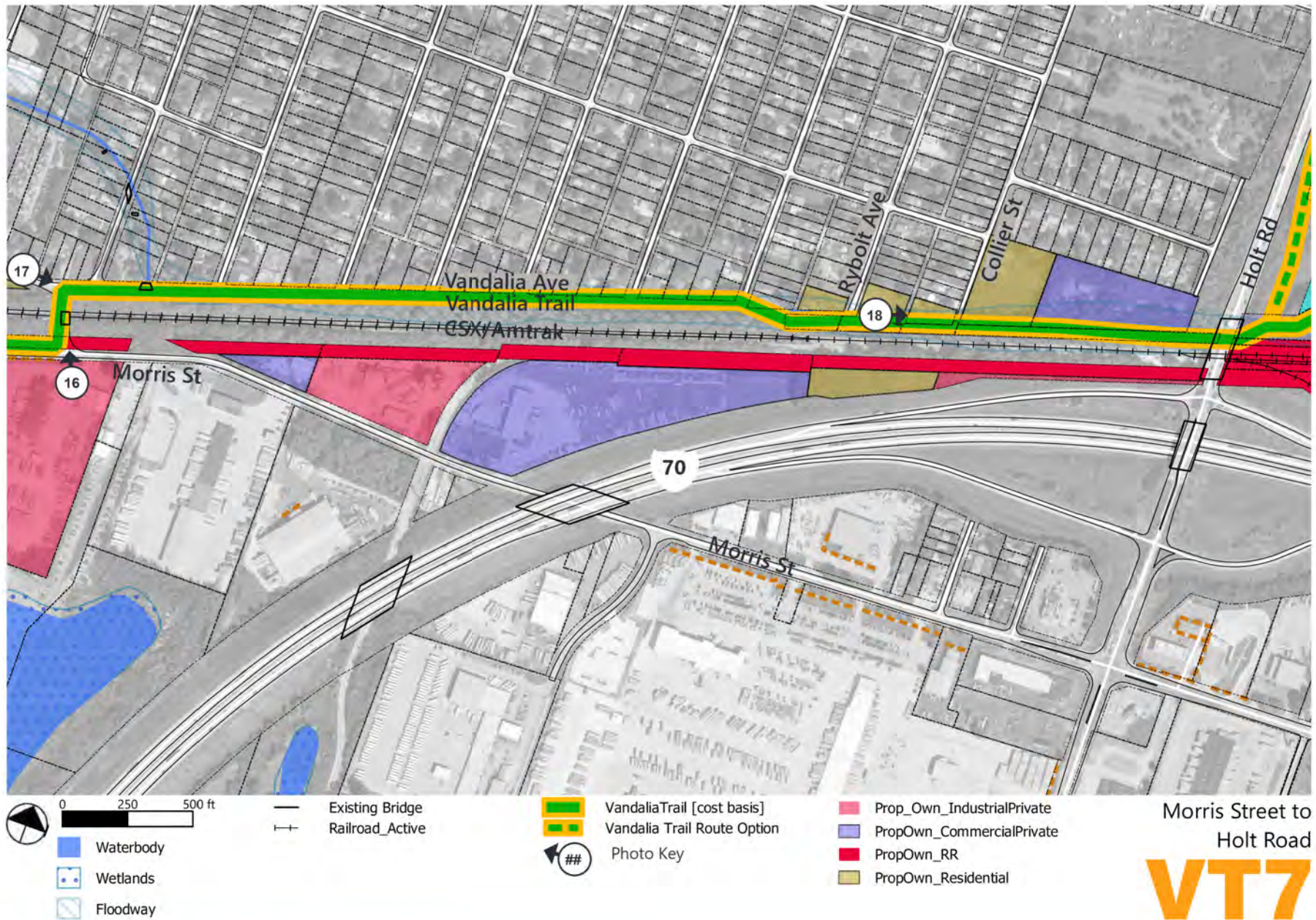


Vandalia Trail Map VT7 Narrative

The trail continues on the north side of the corridor following Vandalia Avenue to avoid the complex land use patterns between Interstate 70 and the abandoned rail corridor on the south, and to provide trail access to the multiple West Indy neighborhoods between the rail corridor and Washington Street.

The trail is proposed to be routed on the south side of Vandalia Avenue and adjacent to the north side of the active rail corridor, to avoid the many driveways and cross streets on its north side. Given the limited right-of-way along Vandalia Avenue's south side, interrupted by power poles, an additional 15-feet of right-of-way appears to be needed for this 2,800-foot long (one-half mile) section. That right-of-way between Morris Street and Rybolt Avenue is owned by CSX and is extra wide to accommodate a meandering drainage course at the toe of its embankment. An easement in which the drainage course is piped and the embankment toe stabilized would allow full trail development per photo 18 with no impact to the functional CSX corridor.

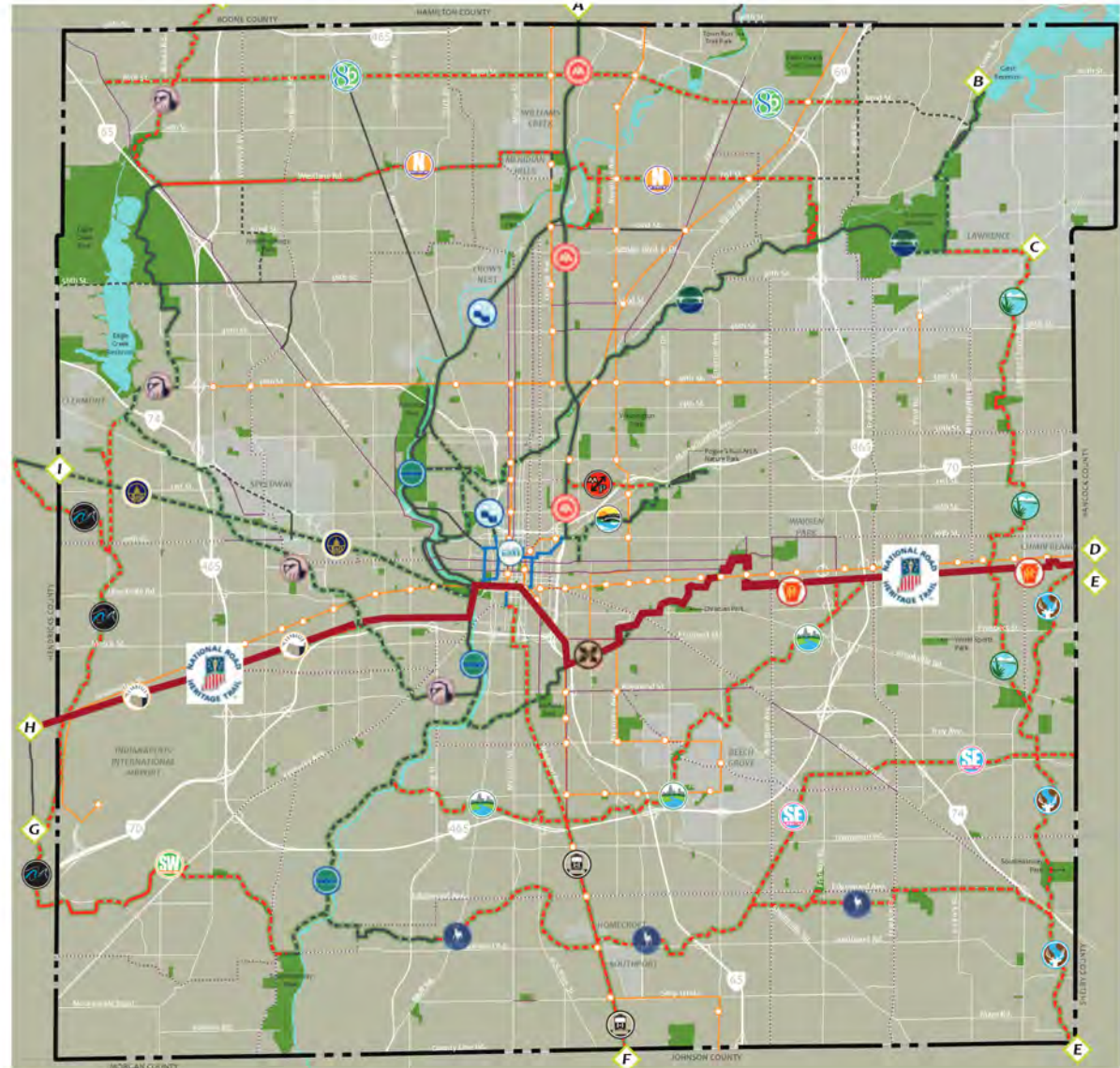
The remaining 1,670-feet between Rybolt Avenue and the Holt Road underpass consists of four un-buildable commercial parcels in common ownership. Their acquisition, combined with the CSX easement described above, would result in a consistent trail cross section between Morris Street and Holt Road that encompasses the drainage course up to the rail embankment toe. This appears to be a very achievable strategy.



Vandalia Trail Map VT8 Narrative

The trail continues eastward under the Holt Road bridge onto a 14.5 acre agricultural parcel on the north side of the active CSX rail corridor and south of the American Legion Post. The heavily wooded parcel appears to have sufficient space for trail construction along the wetland edge with one 300-foot section of boardwalk. A forty-foot wide corridor is recommended for acquisition or easement. This site would be a remarkable conservation area if funds were available to purchase it outright. This section terminates the Vandalia Trail where it meets the Eagle Creek Greenway on the east side of Tibbs Avenue.

Trail users seeking to continue on the National Road Heritage Trail east of Tibbs would join the Eagle Creek Greenway briefly and then continue on one of several links to the Indy Greenway system that connect to the Indianapolis Cultural Trail, downtown, Fountain Square and Pleasant Run Trail. From there it would continue east on the Pennsy Trail, part of the cross-state route parallel to the historic US 40 scenic byway corridor. Thus Vandalia Trail has national significance. It marks Indianapolis as the crossroads of American Trails.



National Road Heritage Trail
an Indiana Visionary Trail