
BICYCLE AND PEDESTRIAN MASTER PLAN

Prepared for:
City of Lawrence, Indiana
Department of Public Works



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ACKNOWLEDGEMENT

The City of Lawrence would like to acknowledge this project was funded in part by the Federal Highway Administration (FHWA) through planning funds administered locally by the Indianapolis Metropolitan Planning Organization (MPO).

INTRODUCTION

This report is the product of a bicycle and pedestrian infrastructure improvement study conducted by United Consulting for the City of Lawrence, Department of Public Works. The primary purpose of this study was to identify corridor locations lacking pedestrian accessible facilities such as sidewalks, bike lanes, and multi-use trails. Apertures in existing pedestrian infrastructure were identified through a means of desktop review, public input, and field reconnaissance. Recommendations regarding location, project justification, connectivity, safety, existing land use, preliminary design constraints, environmental impacts, and public involvement have been provided for each of the identified segments.

The information contained in this report provides the basis from which the City of Lawrence can prioritize segments in need of pedestrian infrastructure improvements as conflicting desires and necessities weigh on the local decision making process. Additionally, this report provides the City of Lawrence with fundamental information essential to defining a detailed project scope if, and when, a particular segment is selected for development, once design engineering is initiated.

The identified locations were selected based upon existing conditions and current lack of pedestrian infrastructure which compromises public safety and community connectivity. Through providing adequate pedestrian facilities where they are deficient or absent altogether, the City of Lawrence can relieve pressure on residents of the community who rely on such networks as their primary means of travel, while also providing additional opportunities for recreation and leisure activity for the community as a whole.

The goal of this study was to identify locations in need of pedestrian infrastructure improvements, given consideration to location, project justification, connectivity, safety, existing land use, preliminary design constraints, environmental impacts, and public involvement. From a planning perspective, this report provides the initial basis required to draw comparison between the risks and benefits of each segment identified herein.

The proposed scope of this study identifies general areas where infrastructure deficiencies exist or where improvements are needed. Specific details such as the exact orientation or design layout proposed for these locations will not be discussed. Additionally, the type of improvements, such as sidewalks, bike lanes, or multi-use trails, will be determined later during the project design phase.

INTRODUCTION

This report has been divided into three sections:

Section I documents the planning process followed for development of the Bike and Pedestrian Master Plan for the City of Lawrence.

Section II discusses the public involvement process and analyzes results of the public survey distributed to residents of Lawrence. Relevant findings and consistent trends observed throughout results of the survey are discussed and summarized.

Section III contains details for each identified segment including location, project justification, connectivity, safety, existing land use, preliminary design constraints, environmental impacts, and public involvement.

Graphical representation including ground-level photography of infrastructure deficiencies has been included as Appendix A.

SECTION I

SUMMARY OF PLANNING PROCESS

SECTION I – SUMMARY OF PLANNING PROCESS

As stated in the **INTRODUCTION**, the primary purpose of this study was to identify corridor locations lacking pedestrian accessible amenities such as sidewalks, bike lanes, and multi-use trails. This section outlines the planning process followed for the Bicycle and Pedestrian Master Plan prepared for the City of Lawrence, Department of Public Works.

SUMMARY OF PLANNING PROCESS:

The initial task of this study was to identify and evaluate the extent of existing pedestrian infrastructure within the City of Lawrence, Indiana. A desktop review coupled with field reconnaissance and discussions with city officials were completed to establish and verify the presence or absence of such infrastructure. Twenty (20) locations were identified during this process and were determined to need pedestrian infrastructure improvements.

A desktop investigation consisting of Geographical Information Systems (GIS) data analysis, city-wide comprehensive plan review, Indianapolis Metropolitan Planning Organization (MPO) 2035 Long Range Transportation Plan review, Indiana Department of Transportation (INDOT) Functional Classification System Map review, aerial photography examinations, and discussions with city officials were conducted to garner an understanding of pedestrian infrastructure within Lawrence. Through this desktop investigation, we were able to determine and locate existing facilities and were able to identify where gaps exist.

Field reconnaissance and on-site verification of existing or absent resources was conducted to determine the state of pedestrian infrastructure within the City of Lawrence. Photographs were collected, documenting the conditions observed first-hand throughout the community. These photographs can be found in Appendix A. Through field reconnaissance, we were able to witness the conditions experienced by cyclists and pedestrians on the city's infrastructure.

The secondary task of this study was to gauge public interest and support for bicycle and pedestrian infrastructure improvements within the City of Lawrence, Indiana. A public survey was developed to quantify the need for such improvements in relation to community values. The survey was passed along to the City of Lawrence, Department of Public Works, and notice of the survey was included with the monthly water/sewer bill, mailed to all Lawrence residences during the months of December 2017 and January 2018. Residents were encouraged to complete an online survey through notice in the Lawrence Lift Newsletter. A copy of the public survey has been provided in Appendix B.

SECTION I – SUMMARY OF PLANNING PROCESS

The third task of this study was the development of an Engineer's Report which provides a more comprehensive view of the identified projects. One Engineer's Report has been developed for three of the highest rated segments identified out of the planning and public involvement processes. A copy of the Engineer's Report has been provided in Appendix E.

The detailed Engineer's Report will provide:

1. Typical Sections
2. Plan View Exhibits
3. INDOT – Criteria Level One Analysis
4. Detailed Quantity Calculations
5. Construction Cost Estimates
6. Total Estimated Project Budget
7. Project Description
8. Project Development Schedule
9. Existing Ground Photography

SECTION II

PUBLIC INVOLVEMENT

SECTION II – PUBLIC INVOLVEMENT

Results of the public survey distributed to residents of Lawrence are discussed in this section. The public survey was open and available for community feedback from December 1, 2017 until February 12, 2018. A total of 745 responses were received during this period, with several additional comments and letters of interest being mailed directly to United Consulting. The results of this survey were compiled and presented to the City of Lawrence during a Public Information Meeting on February 8, 2018.

The public information meeting regarding the development of the Bicycle and Pedestrian Master Plan was held at the Lawrence City Government Office, within the Public Assembly Room on February 8, 2018 at 5:00 P.M. Results of the preliminary GIS desktop review as well as findings of the public survey were presented to attendees, and afterwards the floor was opened for public comment. A copy of the presentation can be seen in Appendix D, Pages D1 – D11.

Public comments received as a part of the public input process were compiled with survey results and analyzed by United Consulting. A copy of the Compiled Survey Results has been provided in Appendix C. The findings presented in the subsequent section of this report allows for the City of Lawrence to establish priority for the segments they would like to see designed and implemented.

In general, the public survey had a high response rate, with useful feedback provided from the community. The majority of respondents were highly educated, attaining a Bachelor's Degrees or higher level of education. Respondents were also well compensated, with the majority of responses coming from high income households averaging over \$100,000 a year.

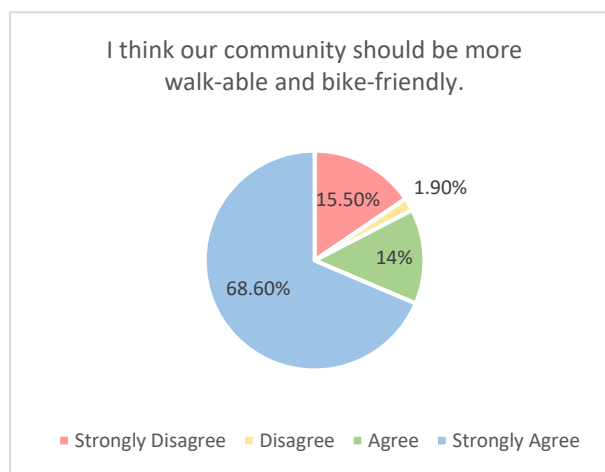
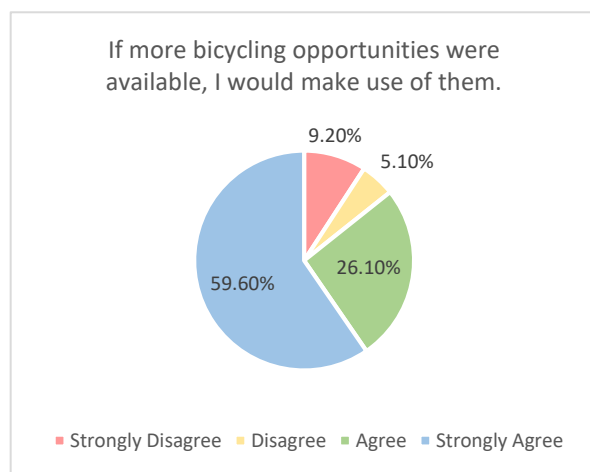
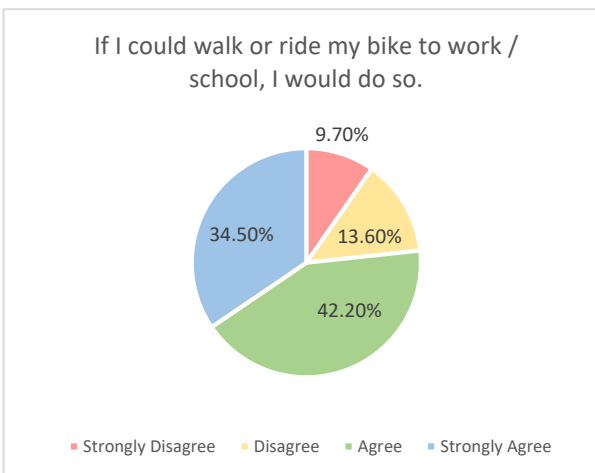
An overwhelming sense of support for pedestrian and bicycling facility improvements was indicated from results of the survey. Over 80% of respondents were in favor of some form of pedestrian and bicycling infrastructure improvements, whether those be sidewalks, multi-use paths, or shared bike lanes. Public comments received as a result of the public survey and during the Public Information Meeting indicated that multi-use paths were highly desired. The public expressed the advantage of these paths over sidewalks as they are wider, support a greater range of needs, and allow for greater opportunity of connectivity among neighborhoods in the community. Multi-use paths separated from the roadway also provide increased safety for pedestrians and cyclists which have expressed apprehension in using sidewalks along busier roadways.

SECTION II – PUBLIC INVOLVEMENT

The following responses highlight the most notable themes pulled from the public survey. Two major trends became apparent in evaluating results: a low number of walking and biking opportunities which contrasted with a high desire to commute by foot or bicycle, and an imperative need for improved safety features among pedestrian and bicycling infrastructure.

Only 11% of respondents indicated that they currently walk or bike to work / school. Of these, 45% spend at least 30 minutes on their commute, and 68% must travel at least 2 miles. These results indicate that walking and biking is not only a leisurely activity, but also a necessity for many residents of Lawrence (Appendix C, C5 – C6).

Over 75% of respondents indicated that if they could walk or bike to work / school, they would do so. Additionally, over 85% of respondents would make use of enhanced bicycling opportunities if they were available. It was also expressed that Lawrence is currently not as walk-able or bike-friendly as it could be, with more than 80% of survey respondents indicating that these features should be improved. The primary reasoning behind not walking or biking were the existing traffic conditions. Just over 75% of



respondents cited too much traffic and unsafe conditions as the prominent factor deterring them from walking and biking more often. (Appendix C, C10). The provision of additional pedestrian and bicycling opportunities as well as improved safety conditions along these facilities is needed within the City of Lawrence, as indicated by results of the public survey. For further details regarding contents and results of the public survey distributed to Lawrence residents, see the Compiled Survey Results in Appendix C.

SECTION II – PUBLIC INVOLVEMENT

A second public information meeting was held to present a draft version of the Bicycle and Pedestrian Master Plan to the public and residents of the Lawrence community. This public meeting was held at the Lawrence City Government Office, within the Public Assembly Room on April 12, 2018 at 5:00 P.M. A summary of the initial planning process, an overview of the public involvement efforts to date, and a review of the project improvement recommendations were presented to the public during this meeting. A copy of the presentation has been provided in Appendix D, D12 – D23. The goal of this presentation was to introduce findings of the draft Bicycle and Pedestrian Master Plan to the public in order to illicit further input and involvement from the community. The draft document was made available for a comment period of 30 days via the City of Lawrence website. Several comments were received following the presentation (Appendix D, D24 – D29). Responses were provided to the comments to address questions posed by the public. A copy of these responses has been provided in Appendix D, D30.

Through a combination of the planning process, the public involvement efforts, and coordination with City officials, three locations (Lee Road, East 63rd Street, and Oaklondon Road) were selected for a more detailed review of the potential for bicycle and pedestrian infrastructure improvements. These locations have been more thoroughly discussed within the Engineer's Report provided in Appendix E.

SECTION III

SEGMENT RECOMMENDATIONS

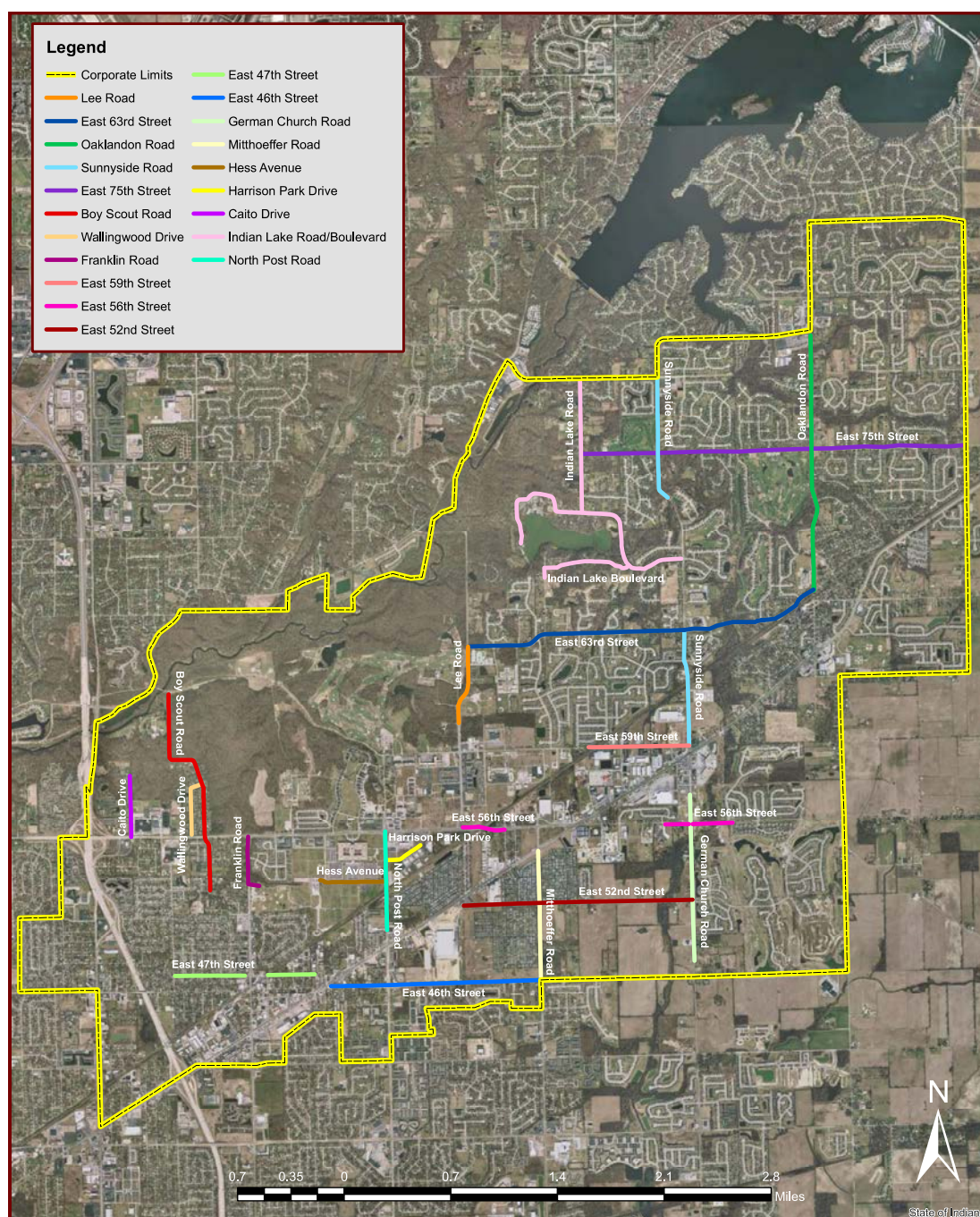
SECTION III – SEGMENT RECOMMENDATIONS

This section provides the following information for each proposed project segment where pedestrian infrastructure improvements are recommended:

- I. **Location** – General project location within the City of Lawrence, including the approximate length of the proposed project segment improvements.
- II. **Project Justification** – Reasoning behind selection of each identified project segment, including relevant public input and comments regarding deficiencies in accessibility experienced by the users.
- III. **Connectivity** – Access to currently existing infrastructure such as sidewalks, trails, bus stops, schools, businesses, parks, places of work, places of worship, etc., which will be provided, supplemented, or enhanced by the proposed project segment improvements.
- IV. **Safety** – Improvements to existing safety features and conditions along the proposed project segment, including public input and comments regarding deficiencies in relation to pedestrian safety from vehicular traffic along the roadways.
- V. **Existing Land Use** – The existing land uses immediately surrounding the proposed project segment, including the benefits or risks involved with introducing pedestrian accessibility.
- VI. **Preliminary Design Constraints** – Possible difficulties or issues to be encountered during the engineering and design process based upon a GIS desktop review and field reconnaissance. These findings may change during actual development of the identified segment.
- VII. **Environmental Impacts** – Possible disruptions to project design in regards to environmental issues such as streams, wetlands, floodplains, hazardous material sites, etc.
- VIII. **Public Involvement** – General summary of comments and feedback provided from residents as a result of the public survey distributed to Lawrence residents as well as the public information meeting held as a means of introducing the purpose of this Master Plan.

SECTION III – SEGMENT RECOMMENDATIONS

A map showing locations of the 20 identified project segments has been provided below. This graphic was included with the Public Survey distributed to Lawrence residents. A summary of each proposed project segment follows.



SECTION III – SEGMENT RECOMMENDATIONS

Top 20 Identified Segments in need of Pedestrian Infrastructure

Lee Road – East 59th Street to East 63rd Street
East 63rd Street – Lee Road to Oaklandon Road
Oaklandon Road – East 63rd Street (Verdin Street) to Fox Road
Sunnyside Road – Pendleton Pike to Fox Road
East 75th Street – Indian Lake Road to Carroll Road
Boy Scout Road – East 53rd Street to Fall Creek Road
Wallingwood Drive – East 56th Street to Boy Scout Road
Franklin Road – East 56th Street to Harmon Way
East 59th Street – Sunnyside Road to Letterman Avenue
East 56th Street – High Timber Lane to Poindexter Drive
East 52nd Street – German Church Road to Pendleton Pike
East 47th Street – Richardt Avenue to Industrial Parkway
East 46th Street – Mitthoeffer Road to Pendleton Pike
German Church Road – East 46th Street to Alicia Way
Mitthoeffer Road – East 46th Street to Pendleton Pike
Hess Avenue – North Post Road to Herbert Lord Road
Harrison Park Drive – East 56th Street to North Post Road
Caito Drive – East 56th Street to Courthouse Drive
Indian Lake Road / Boulevard – Sunnyside Road to East 79th Street
North Post Road – Pendleton Pike to East 56th Street

SECTION III – SEGMENT RECOMMENDATIONS

Lee Road: East 59th Street to East 63rd Street

I. LOCATION:

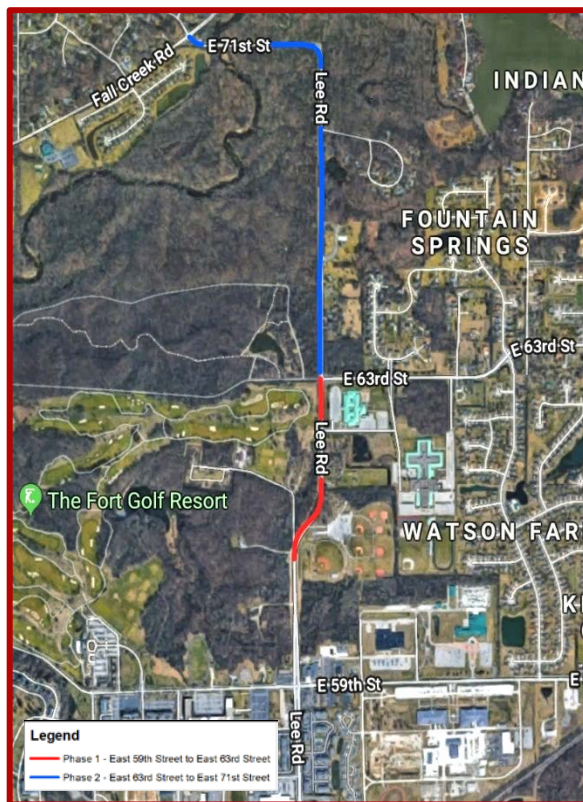
The proposed Lee Road project segment is situated near the center of the City of Lawrence, extending north from the existing multi-use trail or sidewalk, which each end approximately 0.29 mile north of East 59th Street, to East 63rd Street, for a total segment length of 0.29 mile. It is expected that this segment will be constructed in two phases, extending first to East 63rd Street and later being extended to East 71st Street to converge with the Fall Creek Trail. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A2 – A3.

II. PROJECT JUSTIFICATION:

Justification for this identified project segment stems primarily from the need for accessibility and improved safety in this location. Currently, individuals living north of East 59th Street do not have a pedestrian route leading them to Fort Benjamin Harrison and Fort Harrison State Park. Additionally, public input identified the need for bike accessible facilities along this corridor, as bikers and vehicles struggle to share the pavement.

III. CONNECTIVITY:

Through development of this identified segment, pedestrian connectivity will be provided to Fort Harrison State Park for individuals living north of East 59th Street, while pedestrian access to Forest Glen Elementary School, Fall Creek Valley Middle School, Ivy Tech Community College, and Lee Road Park will be established for surrounding neighborhoods and pedestrian traffic. The potential extension of this segment to East 71st Street in the future will allow for connectivity with the Fall Creek Trail, providing access to the



Lee Road Project Segment (Blue line shows possible future extension)

City of Lawrence for Geist residents living north of the city limits.

IV. SAFETY:

The issue of public safety for traveling pedestrians and bikers is a prominent factor influencing the need for pedestrian infrastructure improvements at this location. Lee Road is regularly used for travel by bikers, which are forced to share the road with vehicular traffic, causing dangerous conditions as vehicles attempt to pass while the reversed curve and horizontal alignment of Lee Road create hazardous blind spots. Public comments received as a result of the public survey expressed concern over the safety of bikers along this corridor. It was noted that bikers are often not seen until it is too late. Several comments state that bike-friendly infrastructure along this route will be “life-changing”. Providing a separate path for

SECTION III – SEGMENT RECOMMENDATIONS

pedestrians and bikers will help to prevent the conflict with vehicular traffic. In addition, school children wishing to use the Lee Road Park will now have a safe route to travel.

V. EXISTING LAND USE:

The existing land uses surrounding the proposed project area consist primarily of suburban residential, as well as state-owned park, golf course, and school properties. These land uses will benefit from the addition of pedestrian infrastructure, which will draw individuals to these locations. However, the increase in pedestrian traffic will warrant additional crosswalks at signalized intersections.

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review include the presence of overhead utilities and possible limitations of available right-of-way for development of a multi-use trail. Conflict with state-owned park property will also present challenges to design as ecologically sensitive areas may need to be avoided. A further constraint to design will be the presence of a gated eastern entrance to Fort Harrison State Park, which is kept closed for security reasons. Constructing a trail immediately next to this existing park entrance, without providing access through to Fort Harrison State Park, could spark community controversy over the proposed project segment's purpose and design.

VII. ENVIRONMENTAL IMPACTS:

One unnamed tributary is located within the proposed project area, approximately 0.08 mile north of East 59th Street. Ecologically sensitive areas exist within the boundaries of the Fort Harrison State Park as well. Defining the extent of these areas will be necessary prior to initiating design of the East 71st Street extension in order to maximize avoidance measures. Field

reconnaissance revealed a potential wetland area. This area is not listed within the National Wetlands Inventory, however, “do not mow or spray” signs were observed bordering this potentially monitored wetland area.

VIII. PUBLIC INVOLVEMENT:

Comments regarding the closed off eastern park entrance to Fort Harrison State Park were expressed during the Public Information Meeting held February 8, 2018 by several residents. Residents have expressed desire to have this entrance openly accessible. However, the Indiana Department of Natural Resources does not currently have the ability to maintain this entrance. Ideas have been proposed to allow this entrance to be open without a loss in park revenue, yet nothing has been agreed upon. If this segment is selected for development, this topic will continue to be an issue.

SECTION III – SEGMENT RECOMMENDATIONS

East 63rd Street: Lee Road to Oaklandon Road

I. LOCATION:

The proposed East 63rd Street project segment is located near the center of the City of Lawrence, extending from the existing sidewalk on the north side of East 63rd Street by Lee Road, east to Oaklandon Road where East 63rd Street becomes Verdin Street, for a total project segment length of 2.37 miles. It is expected that this segment will be constructed in at least two phases, first extending from East 63rd Street to Sunnyside Road, with the remainder completed as funding permits. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A3 – A4.

II. PROJECT JUSTIFICATION:

Justification for this identified segment stems from the need for safer facilities in the proximity of Forest Glen Elementary School and Fall Creek Valley Middle School. The existing sidewalks in this area are only present on the north side of East 63rd Street,

opposite of the schools. Additionally, development of this segment will be a direct link in bringing citizens to the downtown Fort Benjamin Harrison area of Lawrence.

III. CONNECTIVITY:

Through development of this identified segment, gaps in existing sidewalks along East 63rd Street will be remedied, allowing for a fully unified path. Pedestrian connectivity will be provided to Forest Glen Elementary School, Fall Creek Valley Middle School, and Sunnyside Elementary. Additionally, pedestrian access to the 'Waggin Tails' dog bark park, a popular pedestrian destination, will be achieved through development of this segment.

IV. SAFETY:

The issue of public safety in this location, particularly in terms of traveling school children, is of substantial importance. The existing sidewalk only covers the north half of East 63rd Street, opposite of the school



East 63rd Street Project Segment

SECTION III – SEGMENT RECOMMENDATIONS

buildings, and ends abruptly less than a quarter mile east of the schools. Pedestrians of all ages are then left to traverse homeowner properties where the sidewalk ends, resulting in muddy paths through otherwise manicured lawns.

V. EXISTING LAND USE:

The existing land use surrounding the proposed project area is predominantly residential. Through providing pedestrian accessible infrastructure along the corridor of East 63rd Street, not only will walkability be brought to Forest Glen Elementary, Sunnyside Elementary, and Fall Creek Valley Middle School as a reasonable option, but leisurely activity and recreation will be provided for countless citizens along the corridor who currently lack access to any continuous pedestrian route.

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review include the presence of overhead utilities and the amount of existing sidewalk along East 63rd Street. Sidewalks are present along portions of East 63rd Street, but with numerous gaps. The question of whether to fill in these gaps with new sidewalks, or remove the existing sidewalk and construct a new multi-use trail will be an issue. The public has expressed a need for multi-use paths, but available time and funding will ultimately play a major role in the decision. Constraints in the form of environmental impacts exist along this corridor as well. Indian Creek and an unnamed tributary (UNT) of Indian Creek flow beneath East 63rd Street, which will result in the need for bridge rehabilitations to facilitate pedestrian passage, or the construction of separate pedestrian bridges to span the waterways.

VII. ENVIRONMENTAL IMPACTS:

Two waterways were identified within the proposed project area. Indian Creek and a UNT of Indian Creek cross the identified project segment. Currently, the East 63rd Street Bridges spanning Indian Creek and the UNT of Indian Creek do not exhibit pedestrian accessible facilities. If this project segment is selected for development, pedestrian features at these crossings will be necessary. Bridge rehabilitations to include these features could be completed, or separate pedestrian accessible structures could be constructed over the waterways.

VIII. PUBLIC INVOLVEMENT:

As with the proposed Lee Road project segment, this project could result in community discussions regarding the eastern Fort Harrison State Park entrance if not somehow addressed.

SECTION III – SEGMENT RECOMMENDATIONS

Oaklandon Road – East 63rd Street (Verdin Street) to Fox Road

I. LOCATION:

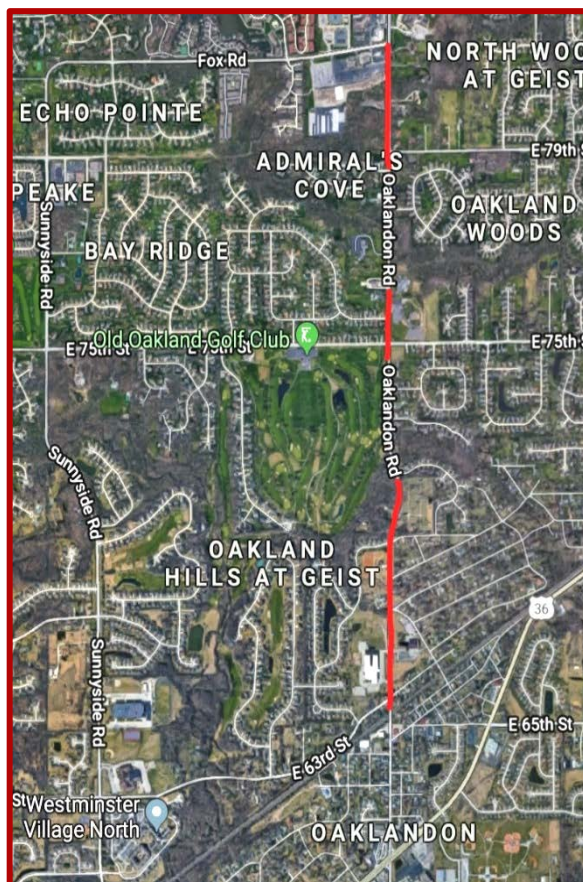
The proposed Oaklandon Road project segment is situated in the northeastern portion of the City of Lawrence, extending from the sidewalk on the southwest corner of Verdin Street (East 63rd Street), north to Fox Road, for a segment length of approximately 1.72 miles. It is expected that this segment will be constructed in phases. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A5 – A6.

II. PROJECT JUSTIFICATION:

Justification for this identified segment stems from the public input process. Among the public survey distributed to Lawrence residents, the Oaklandon Road corridor was the most consistently identified segment where citizens were interested in seeing pedestrian infrastructure implemented. The combination of a very busy and very narrow roadway such as Oaklandon Road does not function well as a pedestrian path or bicycling route. It was expressed by the community that a multi-use trail along this corridor will serve the greatest range of needs in the area.

III. CONNECTIVITY:

Through development of this identified segment, pedestrian connectivity to the Amy Beverland Elementary School, St. Simon Apostle School, Oaklandon Elementary School, and Holy Cross Lutheran School will be provided for those individuals living in northern Lawrence. The opportunity of connecting with the Fall Creek trails will also become a possibility if this segment was developed. This will prove a valuable connection as Geist residents will see Lawrence as a walkable destination. Additionally, if the Lee Road and East 63rd



Oaklandon Road Project Segment

Street project segments are developed, this addition will provide a direct route to Fort Benjamin Harrison for the residents of northern Lawrence.

IV. SAFETY:

The topic of public safety along this corridor becomes an issue when the idea of a bike-lane is proposed. This narrow and busy roadway is not a practical candidate for a shared bicycle lane, yet pedestrians want to cycle along this roadway. Oaklandon Road also features steep hills and blind curves, further accentuating the dangerous conditions for cyclists and pedestrians. Implementing a multi-use path or trail in this location, separate from the roadway, will ensure public safety while also providing leisurely, recreational opportunities which

SECTION III – SEGMENT RECOMMENDATIONS

are currently absent from this portion of the city. Providing this pedestrian infrastructure can also help to promote healthier lifestyles.

V. EXISTING LAND USE:

The existing land use surrounding the proposed project area is primarily residential, with one cemetery, one golf course, one elementary school, and one shopping plaza adjacent to the corridor. Providing pedestrian accessibility along this segment will be beneficial to all who live in the area, as there are currently no sidewalks or trails which extend between neighborhoods. Results of the public survey showed that residents feel as if each neighborhood is isolated to itself.

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review include the presence of overhead utilities, limited available right-of-way, topographical constraints such as steep gradients, and relative proximity of the Oaklandon Cemetery and Old Oaklandon Golf Club. The potential need for coordination of this improvement with the CSX railroad may pose challenges to design. The Oaklandon Cemetery exhibits headstones and grave plots approximately 20 feet east of Oaklandon Road. Steep gradients along the Oaklandon Road project segment will require fill material to be placed or grading as a means of reducing the gradient. In addition, three creeks flow through the proposed project corridor, which brings up the issue of separate pedestrian crossings or structure rehabilitations to accommodate these features. The issue of the Regal Cleaners / Geist Centre Voluntary Remediation Program (VRP) located at 11643 Fox Road, on the southwest corner of the intersection between Oaklandon Road and Fox Road, will also pose challenges for design, as a deed restriction

limits the extent of excavation activities that can occur within the boundaries of that land parcel.

VII. ENVIRONMENTAL IMPACTS:

Three waterways were identified within the proposed project area. The Dry Branch, Middle Fork Dry Branch, and the India Branch cross the proposed project segment. Bridging these aquatic features will add to design time and project cost. The presence of the Regal Cleaners / Geist Centre VRP and the proximity of the historic Oaklandon Cemetery were identified adjacent to the proposed project. Additional investigation may be required to determine the impacts to this project.

VIII. PUBLIC INVOLVEMENT:

It is reasonable to assume that some community interest might present itself due to the proximity of the Oaklandon Cemetery. The Oaklandon Road project corridor was by far the most highly desired location mentioned for pedestrian infrastructure improvements as indicated by results of the public survey. Residents wish to bike and walk along this corridor as a means of necessity as well leisurely activity. It was stated there is currently no safe pedestrian route that connects with Pendleton Pike.

SECTION III – SEGMENT RECOMMENDATIONS

Sunnyside Road – Pendleton Pike to Fox Road

I. LOCATION:

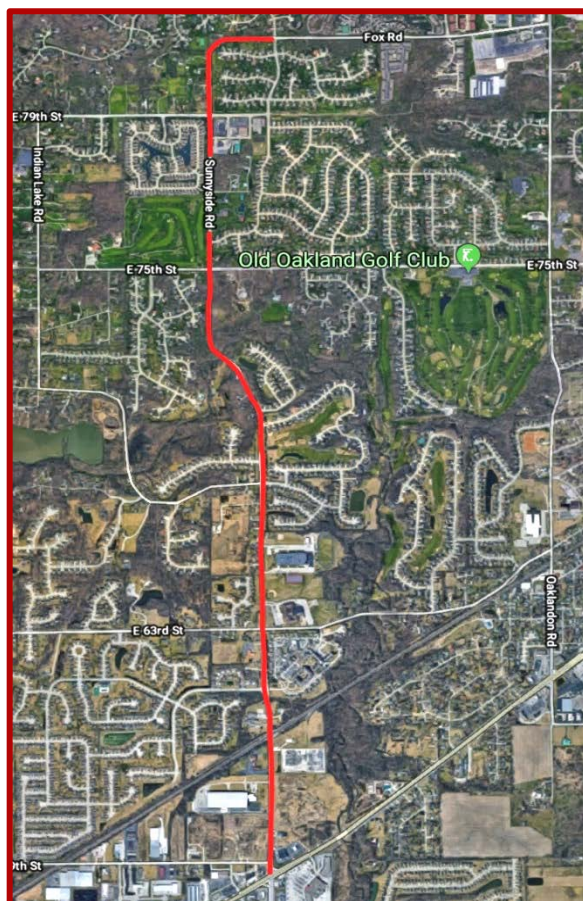
The proposed Sunnyside Road project segment is located in the north east-central portion of the City of Lawrence, extending from Pendleton Pike to Fox Road, for an approximate segment length of 2.75 miles. It is anticipated that this project will be constructed in phases. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A6 – A7.

II. PROJECT JUSTIFICATION:

Justification for this identified project segment stems from the public input process. Among the public survey distributed to Lawrence residents, the Sunnyside Road segment was the second most desirable route identified. The lack of pedestrian accessible infrastructure, in combination with the large volume of residences nearby, makes this route appealing for northern Lawrence residents. Providing pedestrian access to the plaza at East 79th Street and Sunnyside Road will also offer a convenient walking route to several shops and businesses.

III. CONNECTIVITY:

Through development of this identified segment, residents of northern Lawrence will have pedestrian access to the shops, businesses, and grocery stores along Pendleton Pike, as well as to Sunnyside Elementary School, several places of worship, and the plaza at the intersection of East 79th Street and Sunnyside Road. In general, this route connects many neighborhoods in northern Lawrence which currently lack inter-neighborhood pedestrian infrastructure. The development of this identified segment will allow for greater walking and cycling opportunities aside from



Sunnyside Road Project Segment

those within the neighborhoods alone. If the Lee Road and East 63rd Street project segments are developed, this addition will provide a direct route to Fort Benjamin Harrison for the residents of northern Lawrence.

IV. SAFETY:

Public safety along this proposed project segment is compromised by the gaps in existing sidewalks. Where sidewalks end due to densely vegetated or forested areas, pedestrians and cyclists are left to walk alongside or within the narrow roadway, in proximity to vehicular traffic with a 40 mile per hour speed limit. Through constructing a multi-use trail, or filling in the missing sidewalk connections, public safety along

SECTION III – SEGMENT RECOMMENDATIONS

this identified segment will be greatly improved.

V. EXISTING LAND USE:

The existing land use surrounding the proposed project area is predominantly residential. The large neighborhoods along Sunnyside Road will benefit from the increased leisure and recreational opportunities as well as the enhanced connectivity provided by the proposed pedestrian infrastructure improvements.

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review include the presence of overhead utilities and the amount of existing sidewalk along Sunnyside Road. Sidewalks are present along portions of Sunnyside Road, but with numerous gaps. The question of whether to fill in these gaps with new sidewalks, or remove the existing sidewalk and construct a new multi-use trail is an issue. The public expressed a desire for multi-use paths, but available funding will ultimately play a decisive role, especially considering the length of this proposed project segment. Constraints in the form of environmental features exist along this corridor as well. Indian Creek and a UNT of Indian Creek flow beneath Sunnyside Road. This results in the need for bridge rehabilitations to facilitate pedestrian passage, or the construction of separate pedestrian bridges to span these waterways. A further constraint to design will be limited available right-of-way along Sunnyside Road in relation to the Indian Lake Country Club, which features a golf course less than 15 feet from the edge of Sunnyside Road.

VII. ENVIRONMENTAL IMPACTS:

Two waterways were identified within the proposed project area. Indian Creek and a UNT of Indian Creek cross within the

proposed project segment. A historic cemetery was also identified along the corridor, east of Sunnyside Road, approximately 0.14 mile south of East 75th Street. This historic site may impact project design. The presence of a VRP site with land use restrictions, located at 10930 East 59th Street, as well as the presence of two leaking underground storage tanks located at 6002 Sunnyside Road and 5979 Sunnyside Road, were identified near the southern limits of the project. Additional investigation may be required to determine the impact posed to this project.

VIII. PUBLIC INVOLVEMENT:

Results of the public survey identified Sunnyside Road as the second most desirable segment for pedestrian infrastructure improvements. It was stated there is currently no safe pedestrian route that connects with Pendleton Pike.

SECTION III – SEGMENT RECOMMENDATIONS

East 75th Street - Indian Lake Road to Carroll Road

I. LOCATION:

The proposed East 75th Street project segment is situated in the northeast quadrant of the City of Lawrence, extending from Indian Lake Road to Carroll Road for an approximate segment length of 2.52 miles. It is expected that this segment will be constructed in several phases, due to its relatively long length. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A8 – A9.

II. PROJECT JUSTIFICATION:

Justification for this identified segment stems from the public safety issue associated with the busy and narrow roadway used frequently by pedestrians and cyclists, coupled with the absence of pedestrian accessible infrastructure. Currently, sidewalks exist within the neighborhoods along East 75th Street, but stop abruptly once reaching East 75th Street, providing no connectivity between neighborhoods. Citizens can safely walk

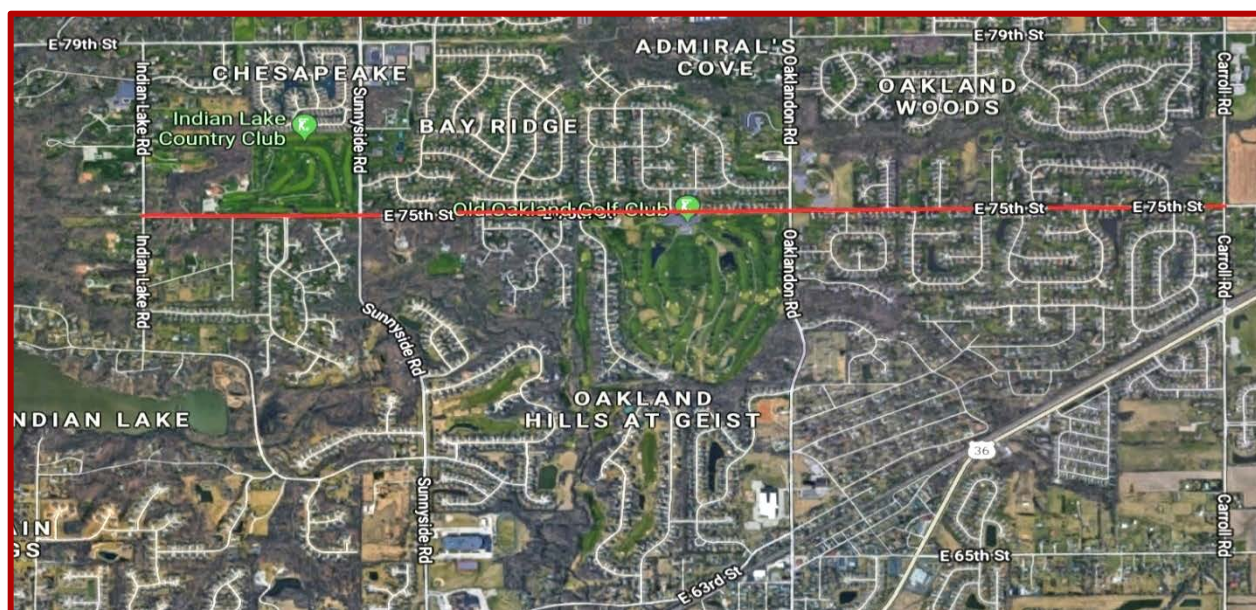
around their individual neighborhoods, but attempting to travel anywhere else by foot or bike is an everyday challenge.

III. CONNECTIVITY:

Aforementioned in terms of project justification, neighborhood connectivity is highly desired along this proposed project segment. Allowing for leisurely activity which expands beyond one isolated neighborhood is fundamental for this identified segment. Through connecting neighborhoods, we are connecting area residents, and fostering a sense of inclusiveness. Through development of this segment, in addition to the Sunnyside Road, East 63rd Street, and Lee Road segments, a direct route to the downtown Fort Benjamin Harrison area for northern Lawrence residents can be achieved.

IV. SAFETY:

Safety is a major concern along this identified segment. East 75th Street is extremely narrow, with a 40 mile per hour



East 75th Street Project Segment

SECTION III – SEGMENT RECOMMENDATIONS

speed limit. These circumstances make cycling and walking along this roadway dangerous, especially considering the number of neighborhoods and residences surrounding the corridor. Results of the public survey revealed that residents are afraid to ride their bikes along East 75th Street. Through the provision of pedestrian accessibility and bicycle friendly infrastructure along the East 75th Street project segment, public safety can be improved immensely.

V. EXISTING LAND USE:

The existing land use surrounding the proposed project segment is primarily residential. The high volume of families and neighborhoods along this corridor will benefit greatly from a pedestrian path safe from vehicular traffic. The majority of these neighborhoods feature sidewalks which end abruptly once meeting East 75th Street. This results in pedestrians either turning around and walking back down the same path, or veering off the prepared path and walking alongside the roadway, risking their safety.

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review include the presence of overhead utilities and limited available right-of-way along the East 75th Street project segment. Several steep gradients adjacent to East 75th Street, sloping away from the roadway, are present along the identified segment as well, potentially posing a challenge to design. Available right-of-way may warrant the need for mid-block crossings along this segment.

VII. ENVIRONMENTAL IMPACTS:

One wetland area was observed near the proposed project area. The wetland fringe of a freshwater pond, associated with the Indian Lake Country Club, lies approximately 50 feet north of the proposed

project segment. Densely vegetated areas are located along the East 75th Street project segment. Constructing a trail in this location may require tree clearing.

VIII. PUBLIC INVOLVEMENT:

The need for pedestrian accessible infrastructure in this area was determined through results of the public survey, which place this route among the most highly desired for improvement. The public expressed concern over the relatively narrow width of East 75th Street which leaves very little room for pedestrian and cycling to comeingle.

SECTION III – SEGMENT RECOMMENDATIONS

Boy Scout Road - East 53rd Street to Fall Creek Road

I. LOCATION:

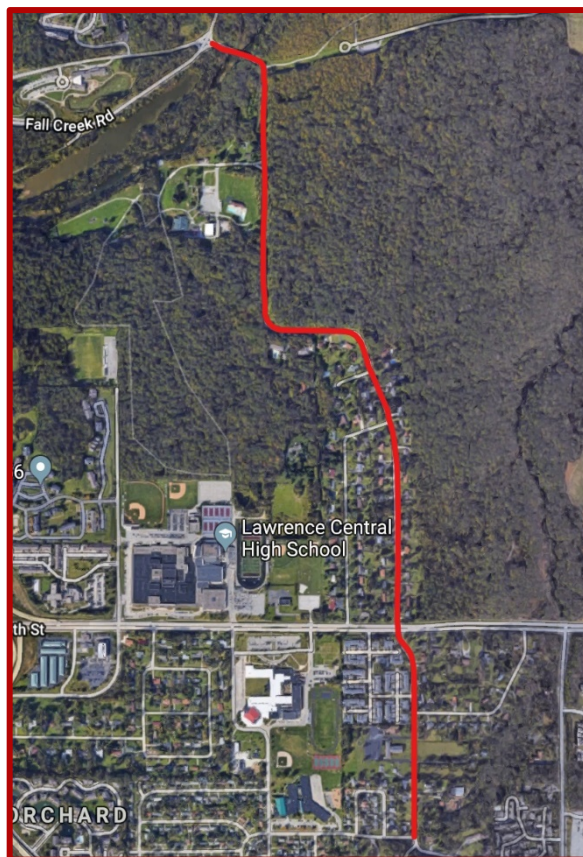
The proposed Boy Scout Road segment is located in the northwest quadrant of Lawrence, extending from East 53rd Street to Fall Creek Road, for an approximate project length of 1.57 miles. This segment is expected to be constructed in several phases due to its relatively long length. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A9 – A10.

II. PROJECT JUSTIFICATION:

Justification for this identified project segment stems from the compromised safety of the public as a result of absent pedestrian amenities. Boy Scout Road is frequently used by students at Lawrence Central High School and Belzer Middle School for track and cross-country training sessions. The narrow roadway, which features several blind curves, creates hazardous conditions for these students and pedestrians. North of East 56th Street, Boy Scout Road runs through a small and quiet neighborhood where many families reside. The existing traffic conditions and lack of pedestrian accessible facilities prevents these families from enjoying their neighborhood as they are worried for the safety of their children.

III. CONNECTIVITY:

Through development of this identified segment, pedestrian connectivity to Fort Harrison State Park, the Fall Creek Trail, and the downtown Fort Benjamin Harrison area of Lawrence will be achieved. The western entrance to Fort Harrison State Park abuts Boy Scout Road to the east, while the Fall Creek Trail lies at the western end of Boy Scout Road. Development of this segment will also allow students living



Boy Scout Road Project Segment

in the neighborhoods south of East 56th Street the opportunity to walk to Lawrence Central High School, Belzer Middle School, and Harrison Hill Elementary School.

IV. SAFETY:

The issue of public safety along the proposed Boy Scout Road project segment is an important topic to address for this location. Students from Lawrence Central High School and Belzer Middle School utilize this roadway on a regular basis during their track and cross-country training sessions. The current lack of pedestrian features, such as sidewalks, bike lanes, or multi-use trails puts these students at risk as traffic speeds down the winding road which has limited sight-distance in areas where sharp curves are located.

SECTION III – SEGMENT RECOMMENDATIONS

V. EXISTING LAND USE:

The existing land use surrounding the proposed project segment is predominantly residential, with several schools and parks located adjacent to the corridor. The neighborhoods along this segment can benefit greatly from the construction of pedestrian amenities which will provide connectivity to recreational facilities as well as improve public safety through the separation of vehicular and pedestrian traffic.

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review include homeowner backlash, presence of old-growth trees and landscaping, severe drainage issues, and potentially limited available right-of-way. Through the public survey, it was expressed by many homeowners along this corridor that a trail or sidewalk feature was not desirable. Reasons for opposition include assumed increases in crime rates, as well as exacerbated drainage issues. The presence of numerous large trees and landscaping features will also present challenges to design, requiring removal or avoidance of such features. The issue of limited available right-of-way is a concern which will influence the need for mid-block crossings as a part of this project. Homeowner opposition is likely to be the most difficult challenge to address. Installing a sidewalk or trail along this corridor will only compound the drainage issue if systems are not installed to alleviate the problem.

VII. ENVIRONMENTAL IMPACTS:

One waterway was identified within the proposed project area. Fall Creek crosses the proposed project segment. A large number of trees exist on either side of Boy Scout Road. Development of a multi-use

path or sidewalk in this location will require some tree clearing. The existing drainage issue is also an environmental concern for design.

VIII. PUBLIC INVOLVEMENT:

Strong public opinion surrounds this identified project segment. As determined through results of the public involvement process, roughly half of the residents along Boy Scout Road are in fierce opposition of the proposed project, while roughly half are heavily in favor of it. Residents opposed to this project have predicted an increase in crime rates along this corridor, as homeowners believe a multi-use path or trail will allow more pedestrian traffic the opportunity to vandalize properties. Additionally, the existing drainage issue is believed to be made worse by the introduction of more asphalt in combination with the removal of trees, and homeowners are worried they will be left to deal with an issue even worse than what they are experiencing now. Those in favor of the project feel that a multi-use path or trail will deter crime rates along the corridor, as more families and individuals are using the trail for recreational purposes, making suspicious activity all the more obvious. Improving public safety along this corridor is the primary reasoning held by those in favor of the project. The narrow roadway has gotten much busier in recent years. Families are worried their children are in danger when near the roadway, and therefore do not regularly allow them to play in or adjacent to Boy Scout Road. These families are then left without biking or walking opportunities within their neighborhood, and must drive to access such facilities.

SECTION III – SEGMENT RECOMMENDATIONS

Wallingwood Drive – East 56th Street to Wallingwood Drive

I. LOCATION:

The proposed Wallingwood Drive project segment is located in the northwest quadrant of the City of Lawrence, extending from East 56th Street north to Boy Scout Road, for an approximate segment length of 0.39 mile. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A11 – A12.

II. PROJECT JUSTIFICATION:

Justification for this identified project segment stems from the jeopardized public safety issue resulting from the absence of pedestrian infrastructure. As with Boy Scout Road, Wallingwood Drive is frequently used by the students of Lawrence Central High School and Belzer Middle School as a track and field route for cross-country training sessions. Students are not in as much risk running down Wallingwood Drive, as it does not feature the blind curves and hills that Boy Scout Road does, but safety is still an issue for these young athletes.

III. CONNECTIVITY:

Development of the Wallingwood Drive project segment will accentuate pedestrian connectivity to Lawrence Central High School and Belzer Middle School. Pedestrian access to the downtown Fort Benjamin Harrison area of Lawrence will also be achieved through the Wallingwood Drives connection with East 56th Street.

IV. SAFETY:

As previously stated, students utilizing Wallingwood Drive for cross-country training are at risk of being hit by vehicular traffic. However, Wallingwood Drive is not as busy as Boy Scout Road. Nevertheless, the absence of pedestrian infrastructure puts



Wallingwood Drive Project Segment

families and children living along Wallingwood Drive at risk.

V. EXISTING LAND USE:

Existing land use surrounding the proposed project segment is predominantly residential with several schools and parks nearby. Residents living along the identified project segment will benefit from the addition of pedestrian infrastructure in this location which will allow connectivity to these schools and parks, while providing safety from vehicular traffic.

SECTION III – SEGMENT RECOMMENDATIONS

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review include the flooding and ponding water issue associated with the Boy Scout Road drainage conditions. Storm water drains were never installed within this neighborhood and as a result water remains stagnant in the yards of homeowners before slowly percolating into the soil. As with the Boy Scout Road project segment, several homeowners along Wallingwood Drive have expressed concern over this issue being worsened by the proposed infrastructure additions.

VII. ENVIRONMENTAL IMPACTS:

No major environmental concerns are apparent along this identified project segment. No waterways were identified within the proposed project area. A small stretch of dense vegetation lies immediately adjacent to the roadway on the eastern side, however, these species appear to be *Lonicera maackii* (Amur Honeysuckle), an invasive species not native to Indiana.

VIII. PUBLIC INVOLVEMENT:

This identified project segment is somewhat controversial due to the existing drainage issues as a result of absent storm water systems. Public opinions, both in support of and opposed to, this project were expressed by homeowners during the Public Information Meeting held at the Lawrence City Government Office in the Public Assembly Room on February 8, 2018.

SECTION III – SEGMENT RECOMMENDATIONS

Franklin Road – East 56th Street to Harmon Way

I. LOCATION:

The proposed Franklin Road project segment is located in the western portion of Lawrence, extending from East 56th Street south to Harmon Way for an approximate segment length of 0.30 mile. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A12 – A13.

II. PROJECT JUSTIFICATION:

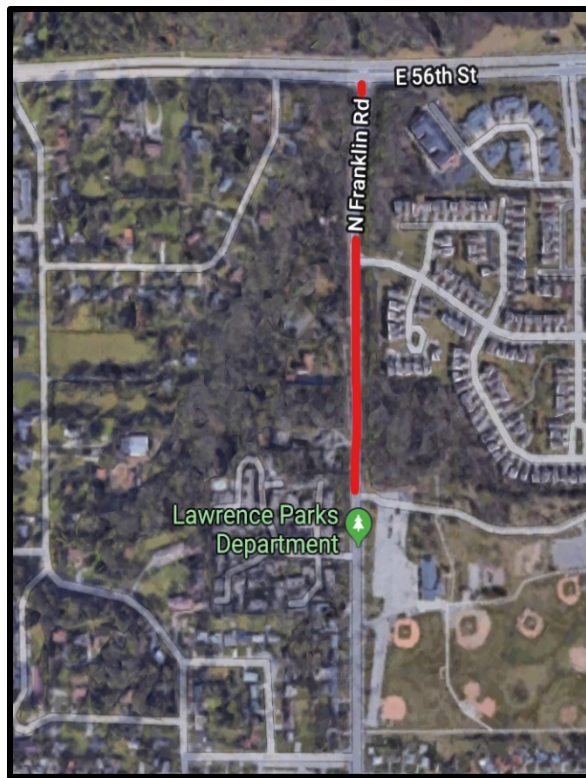
Justification for this identified project segment stems from the loss of connectivity brought on by the sidewalk leading north which ends at Harmon Way. Extending this segment north to East 56th Street will provide more fluid connectivity to the Lawrence Activity Center, allowing citizens north and south of the area better access to the activity center.

III. CONNECTIVITY:

Enhancing connectivity to the Lawrence Activity Center is a primary goal of this project segment. By providing a route from the north, students from Lawrence Central High School and Belzer Middle School will have a more direct route to and from the activity center. In addition, citizens wishing to reach the downtown Fort Benjamin Harrison area of Lawrence will have better pedestrian access by way of East 56th Street, as the existing sidewalk along Franklin Road ends before reaching East 56th Street.

IV. SAFETY:

Safety conditions along Franklin Road will be improved by extending the existing sidewalk north to East 56th Street. The dead-end sidewalk forces citizens to walk alongside or within the roadway, impacting public safety. Citizens walking or cycling to



Franklin Road Project Segment

the Lawrence Activity Center will be better protected from vehicular traffic with the extension of this sidewalk.

V. EXISTING LAND USE:

Existing land use surrounding the proposed project segment is predominantly residential with several parks nearby. Lawrence residents living in this area will benefit from improved access to these parks as recreational opportunities will be greatly enhanced through the extension of the existing pedestrian infrastructure.

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review consist of the presence of densely vegetated areas along the east and west sides of Franklin Road, limited available right-of-way, and the presence of an UNT of Lawrence Creek.

SECTION III – SEGMENT RECOMMENDATIONS

The presence of the UNT of Lawrence Creek which flows parallel to Franklin Road to the east before crossing the proposed project segment may impact design.

VII. ENVIRONMENTAL IMPACTS:

One waterway was identified within the proposed project area. An UNT to Lawrence Creek crosses the proposed project segment. Densely vegetated areas adjacent to Franklin Road may potentially require tree clearing for construction.

VIII. PUBLIC INVOLVEMENT:

No feedback or public comment regarding this route was received as a result of the public survey or during the February 8, 2018 Public Information Meeting.

*A portion of Franklin Road, extending from East 47th Street to Pendleton Pike, including Sarnia Street, is expected to receive infrastructure updates, including sidewalk construction, as a part of a federal project independent from this Master Plan.

SECTION III – SEGMENT RECOMMENDATIONS

East 59th Street - Sunnyside Road to Lettermen Avenue

I. LOCATION:

The proposed East 59th Street project segment is located in the center of Lawrence, extending from Sunnyside Road to Lettermen Avenue, for an approximate segment length of 0.95 mile. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A14 – A15.

II. PROJECT JUSTIFICATION:

Justification for this identified project segment stems from the need for pedestrian access to businesses along Pendleton Pike. Currently, the Kensington Commons and Watson Farms communities lack pedestrian accessibility to Pendleton Pike, as the railroad corridor creates a barrier deterring walkability, with the existing trail abruptly ending at the railroad crossing of East 59th Street. Enhancing this existing infrastructure will improve pedestrian access to restaurants, businesses, and grocery stores

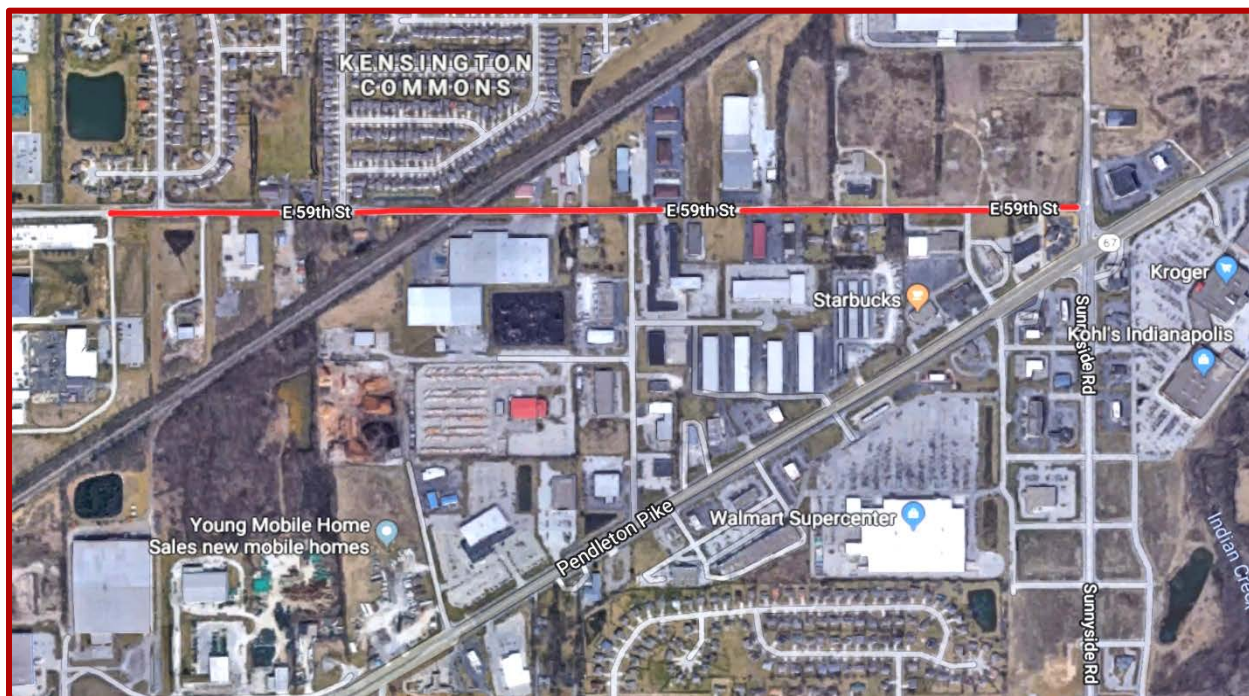
near the Pendleton Pike and Sunnyside Road intersection.

III. CONNECTIVITY:

Connectivity to restaurants, businesses, grocery stores, and shopping areas near the intersection of Pendleton Pike and Sunnyside Road will be provided through the development of this identified project segment. Several large neighborhoods, Kensington Commons and Watson Farms, are currently detached from this area as existing pedestrian infrastructure ends before reaching Sunnyside Road.

IV. SAFETY:

Public safety will be improved along East 59th Street with the addition of this proposed pedestrian infrastructure, as pedestrians and cyclists will be separated from vehicular traffic. East 59th Street is a narrow roadway which is regularly occupied by automobiles. Those wishing to walk this corridor must



East 59th Street Project Segment

SECTION III – SEGMENT RECOMMENDATIONS

walk in the grass alongside the roadway or risk being hit by motorists. This risk to public safety can be greatly reduced through the development of this improvement.

public survey or during the February 8, 2018 Public Information Meeting.

V. EXISTING LAND USE:

The existing land uses surrounding the proposed project segment are commercial, industrial, and residential. The large neighborhoods of Kensington Commons and Watson Farms lie to the northwest of the corridor, with numerous businesses located to the southeast of the corridor near the intersection of Pendleton Pike and Sunnyside Road.

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review consist of limited available right-of-way. Coordinating this improvement with the CSX railroad may pose challenges. The presence of Osborn Ditch adjacent to the proposed project segment may also pose a concern to design.

VII. ENVIRONMENTAL IMPACTS:

One waterway was identified adjacent to the proposed project area. Osborn Ditch lies adjacent to the project segment to the north. Further investigation will need to be conducted to determine if this waterway poses a concern for design. The presence of a VRP with land use restrictions, located at 10930 East 59th Street, as well as two leaking underground storage tanks located at 10601 East 59th Street, and 10950 Pendleton Pike, also pose impacts to the project. Additional investigation may be required to determine the impacts posed to this project.

VIII. PUBLIC INVOLVEMENT:

No feedback or public comment regarding this route was received as a result of the

SECTION III – SEGMENT RECOMMENDATIONS

East 56th Street - High Timber Lane to Poindexter Drive

I. LOCATION:

The proposed East 56th Street project segment is located in the southeast quadrant of the City of Lawrence, extending from High Timber Lane to Poindexter Drive for an approximate segment length of 0.82 mile. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A15 – A16.

II. PROJECT JUSTIFICATION:

Justification for this identified project segment stems from the inconsistency with existing pedestrian infrastructure along East 56th Street. Sidewalks are located along East 56th Street in various locations, extending for variable distances and ending abruptly without functional connections. Through development of this identified segment, fluid and continuous connectivity of pedestrian accessible infrastructure along East 56th Street can be achieved.

III. CONNECTIVITY:

Development of this identified project segment will provide connectivity to the shops, businesses, and grocery stores along Pendleton Pike for Lawrence residents living south of East 56th Street and east of Sunnyside Road. The neighborhoods of Winding Ridge, Spring Run, and Wynfield will benefit greatly from enhanced pedestrian access to Pendleton Pike.

IV. SAFETY:

Public safety along East 56th Street is compromised by the numerous gaps in existing sidewalk amenities. These sidewalk gaps force pedestrians to walk alongside or within the roadway, causing unsafe conditions for pedestrians, cyclists, and motorists which must stop and avoid these travelers.



East 56th Street Project Segment

SECTION III – SEGMENT RECOMMENDATIONS

V. EXISTING LAND USE:

The existing land uses surrounding the proposed project segment are residential and commercial. The large neighborhoods of Winding Ridge and Spring Run lie to the east of the segment, with Wynfield bordering East 56th Street to the north. Pendleton Pike lies west of the identified project segment, with grocery stores such as Aldi, Walmart, and Kroger located along Pendleton Pike to the north.

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review consist of the presence of overhead utilities and Indian Creek crossing within the proposed project corridor. The existing bridge spanning East 56th Street over Indian Creek currently does not have any pedestrian features. Potential bridge rehabilitation to provide these pedestrian amenities, or the construction of a separate pedestrian bridge spanning Indian Creek will need to be included as a part of this proposed project segment. Bridge rehabilitation or construction of a separate pedestrian accessible bridge will require some of tree clearing to prepare the area for construction.

VII. ENVIRONMENTAL IMPACTS:

One waterway was identified within the proposed project area. Indian Creek crosses the proposed project segment. The addition of accessible features to accommodate pedestrians and cyclists in this area will be necessary as a part of this project. Construction of these pedestrian features will require tree clearing.

VIII. PUBLIC INVOLVEMENT:

No feedback or public comment regarding this identified route was received as a result of the public survey or during the February 8, 2018 Public Information Meeting.

SECTION III – SEGMENT RECOMMENDATIONS

East 52nd Street – German Church Road to Pendleton Pike

I. LOCATION:

The proposed East 52nd Street project segment is located in the southeast quadrant of Lawrence, extending from German Church Road to Pendleton Pike, for an approximate segment length of 1.54 miles. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A17 – A18.

II. PROJECT JUSTIFICATION:

Justification for this identified project segment stems from the lack of pedestrian accessible facilities in this area of the city. The communities of Winding Ridge, Briarwood, Greenbriar, and Quail Creek all currently lack pedestrian connectivity to the Pendleton Pike corridor.

III. CONNECTIVITY:

Through development of this identified project segment, pedestrian connectivity to many businesses, restaurants, and grocery stores will be provided for the Winding

Ridge, Briarwood, Greenbriar, and Quail Creek neighborhoods.

IV. SAFETY

Public safety along the East 52nd Street corridor will be improved by adding the proposed pedestrian infrastructure. No facilities separating pedestrians and cyclists from motorists currently exist along East 52nd Street. Additionally, East 52nd Street is narrow throughout the project corridor, which forces pedestrians to walk alongside or within the roadway.

V. EXISTING LAND USE:

Existing land uses surrounding the proposed project segment include agricultural, commercial, and residential. The neighborhoods of Winding Ridge, Briarwood, Greenbriar, and Quail Creek are all located adjacent to the project corridor, with several large agricultural fields located north and south of East 52nd Street. Commercial land uses exist to the west of the project segment, along Pendleton Pike.



East 52nd Street Project Segment

SECTION III – SEGMENT RECOMMENDATIONS

Several manufacturing businesses as well as auto-dealers are located in this area.

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review consist of the presence of overhead utilities, limited available right-of-way and the location of Indian Creek which crosses the identified project segment. Agricultural fields along East 52nd Street abut the roadway. Potential conversion of farmland may be required for installation of pedestrian features along the easternmost portion of this project segment. The existing bridge spanning Indian Creek along East 52nd Street has pedestrian accessible sidewalks on both the north and south sides of the bridge.

VII. ENVIRONMENTAL IMPACTS:

One waterway was identified within the proposed project area. Indian Creek crosses the proposed project segment. The project may cause a conversion of farmland into a transportation use.

VIII. PUBLIC INVOLVEMENT:

No feedback or public comment regarding this route was received as a result of the public survey or during the February 8, 2018 Public Information Meeting.

SECTION III – SEGMENT RECOMMENDATIONS

East 47th Street – Richardt Avenue to Industrial Parkway

I. LOCATION:

The proposed East 47th Street project segment is located in the southwest quadrant of the City of Lawrence, extending from Richardt Avenue to Industrial Parkway, for an approximate segment length of 0.94 mile. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A18 – A19.

II. PROJECT JUSTIFICATION:

Justification for this identified project segment stems from the absence of sidewalk along East 47th Street. The adjacent streets from East 45th Street to East 54th Street all have pedestrian accessible sidewalks installed. However, East 47th Street lacks this feature. Development of this proposed project segment will contribute to the overall connectivity of Lawrence by providing sidewalks where they are currently missing.

III. CONNECTIVITY:

Through development of this identified project segment, pedestrian connectivity

from East 47th Street to the neighboring roads of Richardt Avenue and Franklin Road will be achieved. The connectivity of Lawrence's neighborhoods is a focal point for this identified project segment.

IV. SAFETY:

Public safety along East 47th Street will be improved through development of this project segment. Since East 47th Street does not have many stop signs to slow traffic, cars often travel at speeds greater than what is permitted. Children living within these neighborhoods are put at risk as a result of these conditions, and providing sidewalks along this route can help to alleviate this public safety issue.

V. EXISTING LAND USE:

The existing land use surrounding the proposed project segment is predominantly residential with some industrial properties located towards the eastern end of the segment. Families living along East 47th Street will benefit from the increased safety and connectivity resulting from this project.



East 47th Street Project Segment

SECTION III – SEGMENT RECOMMENDATIONS

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review include the presence of overhead utilities and the presence of several old-growth trees along the East 47th Street corridor. Removing these large trees could provoke community backlash. Additionally, homes located along East 47th Street are extremely close to the roadway, posing challenges for design.

VII. ENVIRONMENTAL IMPACTS:

No waterways were identified within the proposed project area. The removal of old-growth trees along the proposed project corridor could cause backlash from area residents.

VIII. PUBLIC INVOLVEMENT:

No feedback or public comment regarding this route was received as a result of the public survey or during the February 8, 2018 Public Information Meeting.

SECTION III – SEGMENT RECOMMENDATIONS

East 46th Street - Mitthoeffer Road to Pendleton Pike

I. LOCATION:

The proposed East 46th Street project segment is located along the southern limits of Lawrence, extending from Mitthoeffer Road to Pendleton Pike, for an approximate segment length of 1.40 miles. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A20 – A21.

II. PROJECT JUSTIFICATION:

Justification for this identified project segment stems from the lack of pedestrian accessible infrastructure in this part of the City. Sidewalks are only present along East 46th Street from Beauvoir Drive to Peachwood Court, and are currently not providing any functional connections.

III. CONNECTIVITY:

Connectivity to Pendleton Pike and Post Road for southern Lawrence residents living along East 46th Street can be achieved through the development of this identified

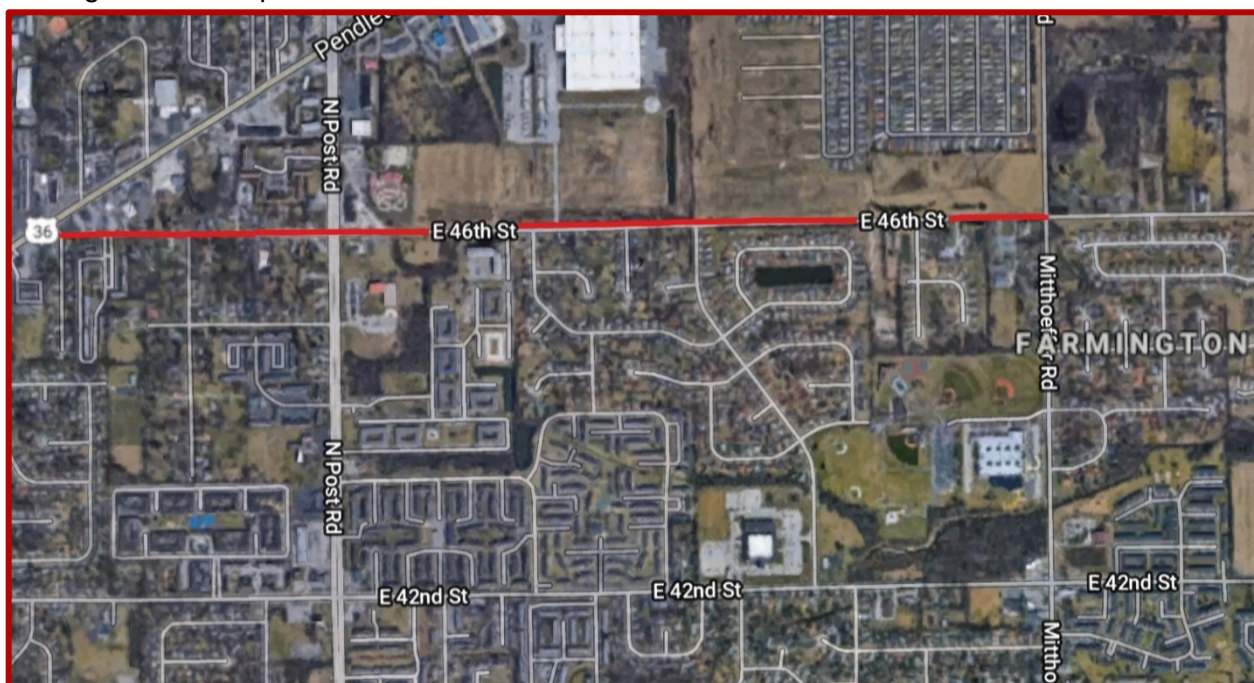
project segment. The Forest Glen neighborhood, as well as several large apartment complexes will benefit from the proposed pedestrian infrastructure additions. This direct connection to Pendleton Pike opens up the opportunity to walk or cycle to many businesses, shops, and grocery stores along the Pendleton Pike corridor.

IV. SAFETY:

Pedestrian safety along East 46th Street will be enhanced by the proposed facility additions. It is currently a challenge for citizens to walk or cycle down East 46th Street as the narrow roadway must be shared with vehicular traffic, forcing pedestrians to walk alongside or within the roadway and compromising their safety.

V. EXISTING LAND USE:

The existing land use surrounding the proposed project segment is primarily residential. Several places of worship and



East 46th Street Project Segment

SECTION III – SEGMENT RECOMMENDATIONS

recreational baseball diamonds are located just south of the project corridor.

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review include the presence of overhead utilities, limited available right-of-way, and the presence of a roadside ditch along the northeastern section of the proposed segment. This roadside ditch may require additional separation from the roadway. Several areas of dense vegetation lie adjacent to the proposed project segment as well. Tree clearing in these areas may be needed prior to construction.

VII. ENVIRONMENTAL IMPACTS:

The presence of an institutional control site with an environmental restrictive covenant on the property exists on the northeast corner of the intersection between East 46th Street and North Post Road, at 4609 North Post Road. A leaking underground storage tank is adjacent to this site, located at 4607 North Post Road. Additional investigation may be required to determine the impact posed to this project. The presence of a roadside ditch along the northeast section of the corridor could also warrant additional separation from the roadway.

VIII. PUBLIC INVOLVEMENT:

No feedback or public comment regarding this route was received as a result of the public survey or during the February 8, 2018 Public Information Meeting.

SECTION III – SEGMENT RECOMMENDATIONS

German Church Road – East 46th Street to Alicia Way

I. LOCATION:

The proposed German Church Road project segment is located in the southeast quadrant of the City of Lawrence, extending from East 46th Street north to Alicia Way, just south of Pendleton Pike. The proposed project segment will have a length of approximately 1.27 miles. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A21 – A22.

II. PROJECT JUSTIFICATION:

Justification for this identified project segment stems from the lack of pedestrian accessible facilities in this area of the city. Sidewalks exist along the entrance to the Winding Ridge community, but they end abruptly. Sidewalks installed at the new German Church Road and East 46th Street roundabout also do not yet lead to anything. These existing gaps can be filled and extended north to provide pedestrian access to Pendleton Pike.

III. CONNECTIVITY:

Pedestrian connectivity to the Pendleton Pike area can be achieved through the development of this identified project segment. The Winding Ridge and Spring Run neighborhoods currently do not have pedestrian facilities providing connectivity to the shops, businesses, and grocery stores along the Pendleton Pike corridor.

IV. SAFETY:

Pedestrian safety along German Church Road will be improved as a part of this project. German Church Road is a narrow roadway, which narrows even further along the bridge spanning Indian Creek. Several public comments received as a result of the public survey described traversing this



German Church Road Project Segment

bridge on a bicycle as “life-threatening” due to the extremely limited amount of space shared by bicycles and motorists. Other public comments stated that they do not, and will not, ride a bike down German Church Road due to this dangerous condition along the bridge, even while wearing a fluorescent safety vest. Addressing this safety issue through the development of the proposed pedestrian infrastructure will improve bicycling opportunities for many individuals living along German Church Road.

V. EXISTING LAND USE:

The existing land uses surrounding the proposed project segment consist of residential, agricultural, and urban

SECTION III – SEGMENT RECOMMENDATIONS

commercial. The neighborhoods of Winding Ridge and Spring Run are located adjacent to the project corridor to the east.

Agricultural fields lie to the west abutting German Church Road, with urban and commercial land uses occupying the land north along the Pendleton Pike corridor.

nearly been hit by passing automobiles due to the narrow width of the roadway.

Increasing safety and connectivity along this street are high priorities for those living in the area.

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review include the presence of Indian Creek which crosses the proposed project segment. The bridge spanning Indian Creek currently does not have any pedestrian accessible features and is extremely narrow. This bridge will require rehabilitation to facilitate pedestrian passage if a separate pedestrian bridge cannot be built. Dense vegetation lies on both east and west sides of the bridge, meaning that tree clearing will likely be necessary in order to construct a new bridge or rehabilitate the existing structure.

VII. ENVIRONMENTAL IMPACTS:

Two waterways were identified within the proposed project area. Indian Creek and a UNT of Indian Creek cross the proposed project segment. Impacts to Indian Creek and tree clearing along the riparian corridor are anticipated as a result of this project. A sidewalk exists spanning the UNT of Indian Creek. In addition to waterways, the retention ponds located at the entrance to the Winding Ridge neighborhood are listed as excavated wetlands and may need to be avoided.

VIII. PUBLIC INVOLVEMENT:

Public comments received as a result of the public survey have expressed support regarding this project. Many Lawrence residents wish for this segment to be among the first to receive pedestrian infrastructure improvements. It was expressed that many individuals walking along this roadway have

SECTION III – SEGMENT RECOMMENDATIONS

Mitthoeffer Road – East 46th Street to Pendleton Pike

I. LOCATION:

The proposed Mitthoeffer Road project segment is located in south-central Lawrence, extending from East 46th Street north to Pendleton Pike. The length of this proposed segment will be approximately 0.85 mile. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A23 – A24.

II. PROJECT JUSTIFICATION:

Justification for the identified project segment stems from the absence of pedestrian accessible infrastructure in this part of the City. Mitthoeffer Road does not have any pedestrian or cycling friendly features, such as sidewalks, bike lanes, or multi-use trails. Three large mobile home communities, Briarwood, Greenbriar, and Quail Creek, all exist along the proposed project segment and will benefit greatly from improved pedestrian access.

III. CONNECTIVITY:

Pedestrian access to Pendleton Pike for the three mobile home communities along Mitthoeffer Road will be provided through the development of this project. These communities will have walking and bicycling access to restaurants, businesses, and grocery stores along Pendleton Pike. The Farmington neighborhood just south of East 46th Street along Mitthoeffer Road will also benefit from the proposed pedestrian infrastructure improvements.

IV. SAFETY:

Safety along the Mitthoeffer Road corridor will be greatly enhanced as a result of this project's development. Mitthoeffer Road is a narrow roadway which forces pedestrians to walk alongside or within the roadway as



Mitthoeffer Road Project Segment

vehicular traffic passes. Bikers utilizing Mitthoeffer Road are at an even greater risk as there are no streetlights along Mitthoeffer Road, compromising public safety as pedestrians, cyclists, and motorists struggle to share the narrow roadway.

V. EXISTING LAND USE:

Existing land uses surrounding the proposed project segment consist of agricultural, commercial, and residential. The Briarwood and Greenbriar communities are located to the west of Mitthoeffer Road, with the Quail Creek and Farmington communities to the northeast and southeast. Agricultural fields lie east of Mitthoeffer Road, and commercial uses occupy land to the north along the Pendleton Pike corridor.

SECTION III – SEGMENT RECOMMENDATIONS

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review include the presence of overhead utilities, limited available right-of-way along Mitthoeffer Road, and the presence of a freshwater pond located to the east of Mitthoeffer Road. The Greenbriar community has homes located within 20 feet of the roadway, making installation of new sidewalk or multi-use trail a challenge. The freshwater pond east of Mitthoeffer Road appears to be situated roughly 50 feet from the roadway, however, dense vegetation and a tributary of the pond cover the area extending south to East 46th Street.

VII. ENVIRONMENTAL IMPACTS:

One waterway and one freshwater pond were identified within the proposed project area. The presence of a freshwater pond approximately 50 feet east of the proposed project segment and a tributary extending south from the pond will create issues for project design.

VIII. PUBLIC INVOLVEMENT:

No feedback or public comment was received regarding this route as a result of the public survey or during the February 8, 2018 Public Information Meeting. However, the proximity of the proposed segment to homes within the Greenbriar community could spark conversation over the location and path of the identified segment.

SECTION III – SEGMENT RECOMMENDATIONS

Hess Avenue – Post Road to Herbert Lord Road

I. LOCATION:

The proposed Hess Avenue project segment is located in south-central Lawrence, extending from Post Road to Herbert Lord Road for an approximate segment length of 0.40 mile. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A24 – A25.

II. PROJECT JUSTIFICATION:

Justification for this identified project segment stems from the lack of pedestrian accessible infrastructure in this location. The sidewalks along Post Road end shortly after reaching Hess Avenue. This street acts as the eastern entrance to the Lawrence Activity Center and Soccer Complex. On weekends and evenings during summer, this area is visited by people and families watching sporting events. For those individuals without vehicles or for those living nearby which

choose to walk to the activity center, the addition of this pedestrian infrastructure will save time by reducing travel delays, and alleviate traffic congestion associated with these events.

III. CONNECTIVITY:

Connectivity to the Lawrence Activity Center for individuals wishing to walk or bicycle to the destination will be enhanced by the development of this identified segment.

IV. SAFETY:

Safety along Hess Avenue will be improved as fewer pedestrians will be walking within the roadway. In addition, traffic congestion will be alleviated as pedestrian and vehicular traffic will be separated. Safety for families coming in and out of the Lawrence Activity Center will also see improvements to delayed wait times resulting from pedestrians interfering with the flow of traffic along the roadway during peak periods.



Hess Avenue Project Segment

SECTION III – SEGMENT RECOMMENDATIONS

V. EXISTING LAND USE:

public survey or during the February 8, 2018 Public Information Meeting.

The existing land uses surrounding the proposed project area consist of residential, recreational, and commercial. The Post Acres Mobile Home Park is located east of the segment, with Brigadier Apartments located south. Recreational areas within the Lawrence Activity Center lie west, southwest, and south of the identified project segment. Commercial land uses are located to the north and northeast along the East 56th Street corridor.

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review include a row of American Sycamore trees located along the south side of Hess Road. Another notable constraint will be the fact that many individuals coming to view soccer matches at the Lawrence Activity Center park along the south side of Hess Road in the grass between the Sycamore trees to get a closer spot, as the designated parking lots for the facility quickly reach capacity. Cars could potentially continue parking here, lining up alongside the roadway and restricting access to the proposed pedestrian infrastructure. Determining whether it is justifiable to install pedestrian infrastructure along this segment which experiences a large number of automobiles parking along the roadway may become a topic of conversation.

VII. ENVIRONMENTAL IMPACTS:

A treeline consisting of American Sycamore lies south, adjacent to the proposed project segment. Proximity of these trees to proposed construction activities may influence project design.

VIII. PUBLIC INVOLVEMENT:

No public feedback or comment regarding this route was received as a result of the

SECTION III – SEGMENT RECOMMENDATIONS

Harrison Park Drive – East 56th Street to North Post Road

I. LOCATION:

The proposed Harrison Park Drive project segment is located in south-central Lawrence, extending from East 56th Street to North Post Road, for an approximate segment length of 0.33 mile. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A26 – A27.

II. PROJECT JUSTIFICATION:

The Harrison Park Drive corridor currently has a small amount of pedestrian accessible infrastructure. It is believed that this area will continue to be developed, and in doing so sidewalks will be extended along the corridor. Several restaurants, banks, and other businesses are located within the business park north of Harrison Park Drive and will benefit from increased pedestrian traffic.

III. CONNECTIVITY:

Currently, the Harrison Park Drive sidewalks end before establishing any usable connections. By completing this route, likely after development opportunities have been decided, North Post Road and East 56th Street will have an improved connection which bypasses the existing signalized intersection.

IV. SAFETY:

Safety along Harrison Park Drive will be improved through the addition of pedestrian accessible infrastructure as walkers and cyclists will be separated from vehicular traffic. Additionally, those wishing to avoid walking near the intersection of East 56th Street and North Post Road can take the Harrison Park Drive segment and travel east along East 56th Street.



Harrison Park Drive Project Segment

V. EXISTING LAND USE:

The existing land uses surrounding the proposed project segment consist of commercial, residential, and recreational uses. The Harrison Park business plaza north of the proposed segment includes restaurants, banks, and other businesses. The Post Acres Mobile Home Park is located south of the segment, while the Harrison Community Park lies to the east, with the Lawrence Activity Center located west of the identified segment, on the west side of North Post Road.

VI. PRELIMINARY DESIGN CONSTRAINTS:

No preliminary design constraints impacting development of the proposed project segment were identified through the GIS desktop review.

SECTION III – SEGMENT RECOMMENDATIONS

VII. ENVIRONMENTAL MPACTS:

No environmental constraints impacting development of the proposed project segment were identified through the GIS desktop review.

VIII. PUBLIC INVOLVEMENT:

No feedback or public comment was received regarding this route as a result of the public survey or during the February 8, 2018 Public Information Meeting.

SECTION III – SEGMENT RECOMMENDATIONS

Caito Drive – East 56th Street to Courthouse Drive

I. LOCATION:

The proposed Caito Drive project segment is located in western Lawrence, extending from East 56th Street, north to Courthouse Drive. This segment was initially expected to extend further north to the soccer field south of Camp Belzer. However, field reconnaissance revealed a gated entrance to this area which prevents thru-traffic from reaching the soccer field. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A27 – A28.

II. PROJECT JUSTIFICATION:

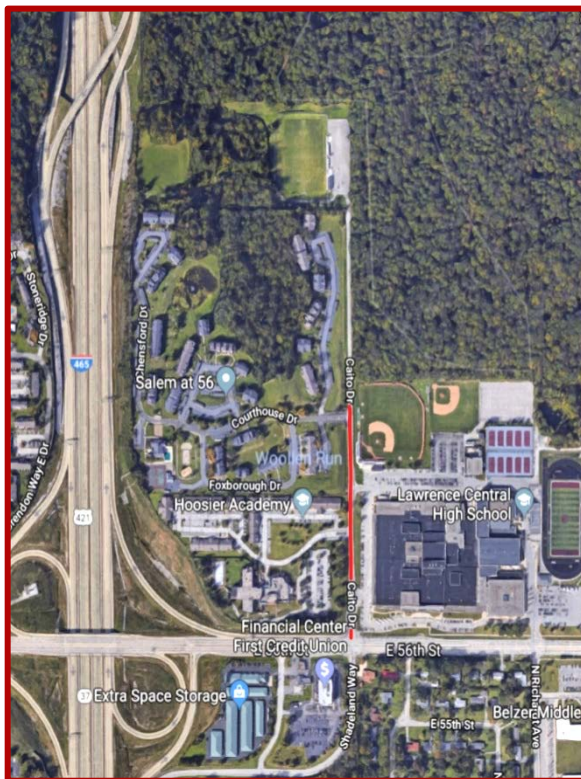
Justification for this project stems from the absence of pedestrian amenities along the Caito Drive corridor. Residents of the Salem at 56 apartment complex and the students at Lawrence Central High School wanting to walk or bike to East 56th Street are forced to travel within the roadway next to vehicles, or alongside the roadway in the grass.

III. CONNECTIVITY:

Pedestrian connectivity to East 56th Street for the residents of the Salem at 56 apartment complex and the students at the Lawrence Central High School will be improved through development of this identified project segment. It was initially thought that pedestrian connectivity to the soccer field located north of Caito Drive will be provided by the addition of this project segment. However, field reconnaissance revealed that a gated entrance barring pedestrian access to the soccer field was present.

IV. SAFETY:

Safety for students walking down this roadway before and after school will be improved through the addition of pedestrian



Caito Drive Project Segment

infrastructure, separating pedestrians from vehicular traffic.

V. EXISTING LAND USE:

The existing land uses surrounding the proposed project segment include residential, recreational, and institutional. The apartment complex of Salem at 56 lies west of the project segment, with a residential neighborhood located to the south. Recreational land including the soccer field and Camp Belzer are both located north of the segment. Forested land lies to the east of the segment, with Lawrence Central High School also located to the east.

VI. PRELIMINARY DESIGN CONSTRAINTS:

No preliminary design constraints impacting development of the proposed project

SECTION III – SEGMENT RECOMMENDATIONS

segment were identified through the GIS desktop review.

VII. ENVIRONMENTAL IMPACTS:

No environmental constraints impacting development of the proposed project segment were identified through the GIS desktop review.

VIII. PUBLIC INVOLVEMENT:

No feedback or public comment was received regarding this segment as a result of the public survey or during the February 8, 2018 Public Information Meeting.

SECTION III – SEGMENT RECOMMENDATIONS

Indian Lake Road / Boulevard – Sunnyside Road to East 79th Street

I. LOCATION:

The proposed Indian Lake Road / Boulevard project segment is located in north-central Lawrence, extending from Sunnyside Road to East 79th Street (following Indian Lake Boulevard North to Indian Lake Road). This segment will encompass the Indian Lake neighborhood which lacks pedestrian accessible amenities. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A29 – A30.

II. PROJECT JUSTIFICATION:

Justification for the identified project segment stems from the absence of pedestrian accessible infrastructure in this neighborhood. Field reconnaissance revealed residents walking their dogs within the roadway, forcing them into neighboring yards and properties when vehicles approach. Runners and cyclists were also observed utilizing the roadway in the presence of vehicular traffic, sharing the roadway and inciting dangerous conditions when more than one automobile made attempts to pass.

III. CONNECTIVITY:

Development of this identified project segment will contribute to the overall connectivity of the Lawrence community. In particular, the existing sidewalks within the southern Indian Lake neighborhood, which lead to East 63rd street, will be extended throughout the northern neighborhood, providing a connection with East 79th Street. Intra-neighborhood connectivity is the primary goal of this project segment.

IV. SAFETY:

Safety for the residents living within the Indian Lake neighborhoods will be improved



Indian Lake Boulevard Project Segment

with the development of this identified project segment. Currently, individuals are left to walk, run, and cycle within the roadways alongside vehicular traffic. The neighborhoods surrounding Indian Lake contain winding roads and steep hills, preventing line of sight between pedestrians and fast traveling automobiles. As a result, the safety of pedestrians and cyclists is compromised.

V. EXISTING LAND USE:

The existing land uses surrounding the proposed project segment are residential and recreational. Neighborhoods lie north and south of Indian Lake. Indian Lake provides recreational opportunities in this location.

SECTION III – SEGMENT RECOMMENDATIONS

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints identified through the GIS desktop review include the presence of overhead utilities, steep gradients, waterway crossings, and the potential for tree-clearing. Numerous steep hills are located within the Indian Lake neighborhoods. These slopes may pose concern for design. Indian Creek and an UNT of Indian Creek cross within the identified project segments. Pedestrian features exist along the bridge spanning Indian Creek, yet only along the east side. The bridge spanning the UNT of Indian Creek does not exhibit pedestrian features and will require some form of rehabilitation to provide these features, or will otherwise require the construction of a separate pedestrian bridge to span the waterway. Densely wooded areas lie along the proposed project segment. It is expected that tree clearing may be necessary to construct pedestrian accessible infrastructure throughout these neighborhoods.

VII. ENVIRONMENTAL IMPACTS:

Two waterways were identified within the proposed project area. Indian Creek and a UNT of Indian Creek cross the proposed project segment. The presence of two wetlands were also identified adjacent to the proposed project segment. The potential for tree clearing and the presence of two waterway crossings pose environmental concerns for these identified project segments.

VIII. PUBLIC INVOLVEMENT:

No feedback or public comment was received regarding this segment as a result of the public survey or during the February 8, 2018 Public Information Meeting.

SECTION III – SEGMENT RECOMMENDATIONS

Post Road – Pendleton Pike to East 56th Street

I. LOCATION:

The proposed Post Road project segment is located in central Lawrence, extending north from Pendleton Pike to East 56th Street for an approximate segment length of 0.72 mile. Photographs documenting site conditions observed during field reconnaissance can be found in Appendix A, Pages A30 – A31.

II. PROJECT JUSTIFICATION:

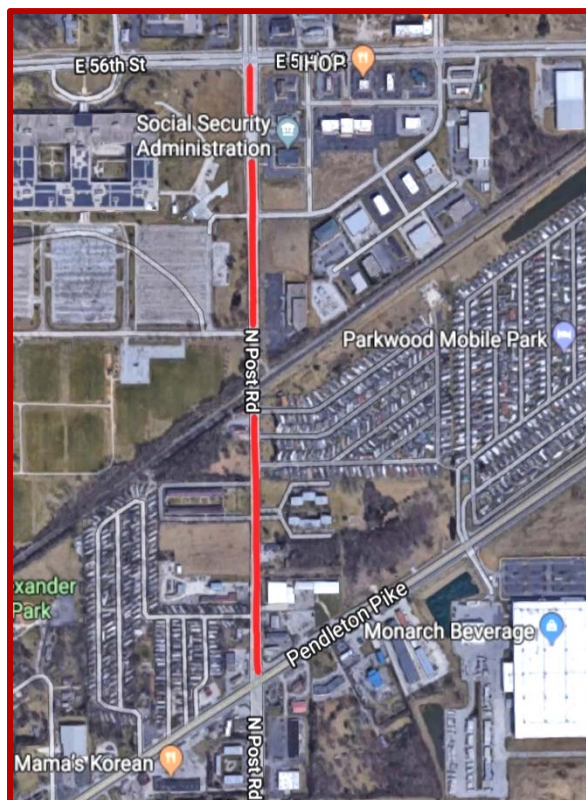
Justification for this project stems from the incomplete pedestrian infrastructure located along this corridor. Sidewalks exist along Post Road, yet end abruptly without fully defined connections. Members of the Lawrence community walk and cycle down Post Road on a daily basis and are forced to walk and cycle alongside or within the roadway in these areas where sidewalks end.

III. CONNECTIVITY:

Connectivity for those living in southern Lawrence will be improved through the implementation of this project. Pedestrian access to East 56th Street and Fort Benjamin Harrison will be achieved for those living south of Pendleton Pike, while access to Pendleton Pike will be achieved for those living north. Providing this connection is fundamental to the goal of bringing Lawrence residents to Fort Benjamin Harrison.

IV. SAFETY:

Safety for pedestrians and cyclists traveling Post Road will be greatly enhanced through this additional pedestrian infrastructure. Post Road is used by many pedestrians every day for the purpose of getting to work, school, grocery stores, banks, and parks. Pedestrians are left to walk in the grass



Post Road Project Segment

alongside the roadway in areas where sidewalk connectivity is incomplete. The heavy flow of traffic along North Post Road coupled with the intermittent sidewalks poses a challenge for cyclists and pedestrians.

V. EXISTING LAND USE:

The existing land uses surrounding the proposed project segment are residential, commercial, and recreational. Two mobile home parks and two apartment complexes are located adjacent to this corridor. Commercial properties lie south of the proposed segment at the intersection of Post Road and Pendleton Pike, with recreational areas such as the Lawrence Activity Center located northwest of the identified segment.

SECTION III – SEGMENT RECOMMENDATIONS

VI. PRELIMINARY DESIGN CONSTRAINTS:

Preliminary design constraints include the presence of overhead utilities and limited available right-of-way. Coordinating this improvement with the CSX railroad may pose challenges.

VII. ENVIRONMENTAL IMPACTS:

A leaking underground storage tank was identified adjacent to the proposed project segment on the northwest corner of the intersection between North Post Road and Pendleton Pike at 8990 North Post Road. Additional investigation may be required to determine the impact posed to this project.

VIII. PUBLIC INVOLVEMENT:

No feedback or public comment was received in regards to this segment as a result of the public survey or during the February 8, 2018 Public Information Meeting.

INDEX TO APPENDICES

Appendix A A1 - A31

(Site Photographs)

Appendix B B1 - B11

(Sample Public Survey)

Appendix C C1 - C25

(Compiled Survey Results)

Appendix D D1 – D30

(Public Outreach Efforts)

Public Information Meeting Presentation – February 8, 2018

Draft Master Plan Presentation – April 12, 2018

Public Input Following Draft Master Plan Presentation

Responses to Public Input Following Draft Master Plan Presentation

Appendix E E1 – E232

(Engineer’s Report)

APPENDIX A

SITE PHOTOGRAPHS

This is an aerial map of a residential area in the State of Indiana. A yellow boundary outlines a specific region. Within and around this boundary, 59 numbered locations are marked. The numbers are distributed as follows:

- 1: Near the center, south of location 3.
- 2: Near the center, west of location 1.
- 3: Near the center, north of location 1.
- 4: Near the center, west of location 2.
- 5: Near the center, east of location 4.
- 6: Near the center, north of location 4.
- 7: Near the center, east of location 5.
- 8: Near the center, east of location 7.
- 9: Near the center, east of location 8.
- 10: Near the center, east of location 7.
- 11: Near the center, east of location 10.
- 12: Near the center, east of location 11.
- 13: Near the center, north of location 13.
- 14: Near the center, north of location 13.
- 15: Near the center, north of location 14.
- 16: Near the center, west of location 19.
- 17: Near the center, west of location 16.
- 18: Near the center, west of location 16.
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- 57: Near the center, west of location 16.
- 58: Near the center, west of location 16.
- 59: Near the center, west of location 16.

The map includes a north arrow in the bottom right corner and a scale bar below it. The scale bar indicates distances in feet (0 to 1000) and miles (0 to 1). The map also shows various street names, including E 96TH ST, E 94TH ST, E 92TH ST, E 90TH ST, E 88TH ST, E 86TH ST, E 84TH ST, E 82ND ST, E 80TH ST, E 78TH ST, E 76TH ST, E 74TH ST, E 72TH ST, E 70TH ST, E 68TH ST, E 66TH ST, E 64TH ST, E 62ND ST, E 60TH ST, E 58TH ST, E 56TH ST, E 54TH ST, E 52ND ST, E 50TH ST, E 48TH ST, E 46TH ST, E 44TH ST, E 42ND ST, E 40TH ST, E 38TH ST, E 36TH ST, E 34TH ST, E 32ND ST, E 30TH ST, E 28TH ST, E 26TH ST, E 24TH ST, E 22ND ST, E 20TH ST, E 18TH ST, E 16TH ST, E 14TH ST, E 12TH ST, E 10TH ST, E 8TH ST, E 6TH ST, E 4TH ST, E 2ND ST, E 1ST ST, E 3RD ST, E 5TH ST, E 7TH ST, E 9TH ST, E 11TH ST, E 13TH ST, E 15TH ST, E 17TH ST, E 19TH ST, E 21ST, E 23RD, E 25TH, E 27TH, E 29TH, E 31ST, E 33RD, E 35TH, E 37TH, E 39TH, E 41ST, E 43RD, E 45TH, E 47TH, E 49TH, E 51ST, E 53RD, E 55TH, E 57TH, E 59TH, E 61ST, E 63RD, E 65TH, E 67TH, E 69TH, E 71ST, E 73RD, E 75TH, E 77TH, E 79TH, E 81ST, E 83RD, E 85TH, E 87TH, E 89TH, E 91ST, E 93RD, E 95TH, E 97TH, E 99TH, E 101ST, E 103RD, E 105TH, E 107TH, E 109TH, E 111ST, E 113RD, E 115TH, E 117TH, E 119TH, E 121ST, E 123RD, E 125TH, E 127TH, E 129TH, E 131ST, E 133RD, E 135TH, E 137TH, E 139TH, E 141ST, E 143RD, E 145TH, E 147TH, E 149TH, E 151ST, E 153RD, E 155TH, E 157TH, E 159TH, E 161ST, E 163RD, E 165TH, E 167TH, E 169TH, E 171ST, E 173RD, E 175TH, E 177TH, E 179TH, E 181ST, E 183RD, E 185TH, E 187TH, E 189TH, E 191ST, E 193RD, E 195TH, E 197TH, E 199TH, E 201ST, E 203RD, E 205TH, E 207TH, E 209TH, E 211ST, E 213RD, E 215TH, E 217TH, E 219TH, E 221ST, E 223RD, E 225TH, E 227TH, E 229TH, E 231ST, E 233RD, E 235TH, E 237TH, E 239TH, E 241ST, E 243RD, E 245TH, E 247TH, E 249TH, E 251ST, E 253RD, E 255TH, E 257TH, E 259TH, E 261ST, E 263RD, E 265TH, E 267TH, E 269TH, E 271ST, E 273RD, E 275TH, E 277TH, E 279TH, E 281ST, E 283RD, E 285TH, E 287TH, E 289TH, E 291ST, E 293RD, E 295TH, E 297TH, E 299TH, E 301ST, E 303RD, E 305TH, E 307TH, E 309TH, E 311ST, E 313RD, E 315TH, E 317TH, E 319TH, E 321ST, E 323RD, E 325TH, E 327TH, E 329TH, E 331ST, E 333RD, E 335TH, E 337TH, E 339TH, E 341ST, E 343RD, E 345TH, E 347TH, E 349TH, E 351ST, E 353RD, E 355TH, E 357TH, E 359TH, E 361ST, E 363RD, E 365TH, E 367TH, E 369TH, E 371ST, E 373RD, E 375TH, E 377TH, E 379TH, E 381ST, E 383RD, E 385TH, E 387TH, E 389TH, E 391ST, E 393RD, E 395TH, E 397TH, E 399TH, E 401ST, E 403RD, E 405TH, E 407TH, E 409TH, E 411ST, E 413RD, E 415TH, E 417TH, E 419TH, E 421ST, E 423RD, E 425TH, E 427TH, E 429TH, E 431ST, E 433RD, E 435TH, E 437TH, E 439TH, E 441ST, E 443RD, E 445TH, E 447TH, E 449TH, E 451ST, E 453RD, E 455TH, E 457TH, E 459TH, E 461ST, E 463RD, E 465TH, E 467TH, E 469TH, E 471ST, E 473RD, E 475TH, E 477TH, E 479TH, E 481ST, E 483RD, E 485TH, E 487TH, E 489TH, E 491ST, E 493RD, E 495TH, E 497TH, E 499TH, E 501ST, E 503RD, E 505TH, E 507TH, E 509TH, E 511ST, E 513RD, E 515TH, E 517TH, E 519TH, E 521ST, E 523RD, E 525TH, E 527TH, E 529TH, E 531ST, E 533RD, E 535TH, E 537TH, E 539TH, E 541ST, E 543RD, E 545TH, E 547TH, E 549TH, E 551ST, E 553RD, E 555TH, E 557TH, E 559TH, E 561ST, E 563RD, E 565TH, E 567TH, E 569TH, E 571ST, E 573RD, E 575TH, E 577TH, E 579TH, E 581ST, E 583RD, E 585TH, E 587TH, E 589TH, E 591ST, E 593RD, E 595TH, E 597TH, E 599TH, E 601ST, E 603RD, E 605TH, E 607TH, E 609TH, E 611ST, E 613RD, E 615TH, E 617TH, E 619TH, E 621ST, E 623RD, E 625TH, E 627TH, E 629TH, E 631ST, E 633RD, E 635TH, E 637TH, E 639TH, E 641ST, E 643RD, E 645TH, E 647TH, E 649TH, E 651ST, E 653RD, E 655TH, E 657TH, E 659TH, E 661ST, E 663RD, E 665TH, E 667TH, E 669TH, E 671ST, E 673RD, E 675TH, E 677TH, E 679TH, E 681ST, E 683RD, E 685TH, E 687TH, E 689TH, E 691ST, E 693RD, E 695TH, E 697TH, E 699TH, E 701ST, E 703RD, E 705TH, E 707TH, E 709TH, E 711ST, E 713RD, E 715TH, E 717TH, E 719TH, E 721ST, E 723RD, E 725TH, E 727TH, E 729

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Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #1: Lee Road - Looking northeast toward sidewalk terminus on east side of Lee Road.



Photograph #2: Lee Road - Looking northeast from end of existing multi-use trail on west side of Lee Road.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #3: Lee Road – Looking south along west side of Lee Road, bordering Fort Harrison State Park.



Photograph #4: East 63rd Street – Looking west toward sidewalk terminus on south side of East 63rd Street.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #5: East 63rd Street – Looking west toward sidewalk terminus on north side of East 63rd Street.



Photograph #6: East 63rd Street – Looking northwest toward sidewalk terminus at intersection with Winona Drive.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #7: Oaklandon Road – Looking north at sidewalk terminus on east side of Oaklandon Road.



Photograph #8: Oaklandon Road – Looking north toward Oaklandon Cemetery bordering Oaklandon Road to the east.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #9: Oaklandon Road – Looking south toward sidewalk terminus at intersection with Camfield Drive.



Photograph #10: Sunnyside Road – Looking north toward sidewalk terminus adjacent to Sunnyside Elementary School.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #11: Sunnyside Road – Looking south toward intersection with Pendleton Pike.



Photograph #12: Sunnyside Road – Looking northeast toward sidewalk terminus at Oakland Hills neighborhood.

Bike and Pedestrian Master Plan
Lawrence, Indiana



Photograph #13: East 75th Street – Looking east toward fenceline along Indian Lake Country Club.



Photograph #14: East 75th Street – Looking southeast toward sidewalk terminus at Oakland Hills neighborhood.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #15: East 75th Street – Looking west toward sidewalk terminus at FoxPointe neighborhood.



Photograph #16: Boy Scout Road – Looking east at sidewalk terminus at intersection with East 56th Street.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #17: Boy Scout Road – Looking east toward individual on Boy Scout Road Bridge spanning Fall Creek.



Photograph #18: Boy Scout Road – Looking north toward sidewalk terminus on east side of Boy Scout Road.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #19: Wallingwood Drive – Looking west toward sidewalks along East 56th Street.



Photograph #20: Wallingwood Drive – Looking north toward roadside ditches along Wallingwood Drive.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #21: Wallingwood Drive – Looking north toward area of vegetation along east side of Wallingwood Drive.



Photograph #22: Franklin Road – Looking north toward sidewalk terminus on west side of Franklin Road.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #23: Franklin Road – Looking west toward sidewalk along East 56th Street.



Photograph #24: Franklin Road – Looking north toward intersection with East 56th Street.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #25: East 59th Street – Looking east along East 59th Street corridor toward Sunnyside Road.



Photograph #26: East 59th Street – Looking west along East 59th Street corridor, towards location of Osborn Ditch.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #27: East 59th Street – Looking west toward East 59th Street from Sunnyside Road.

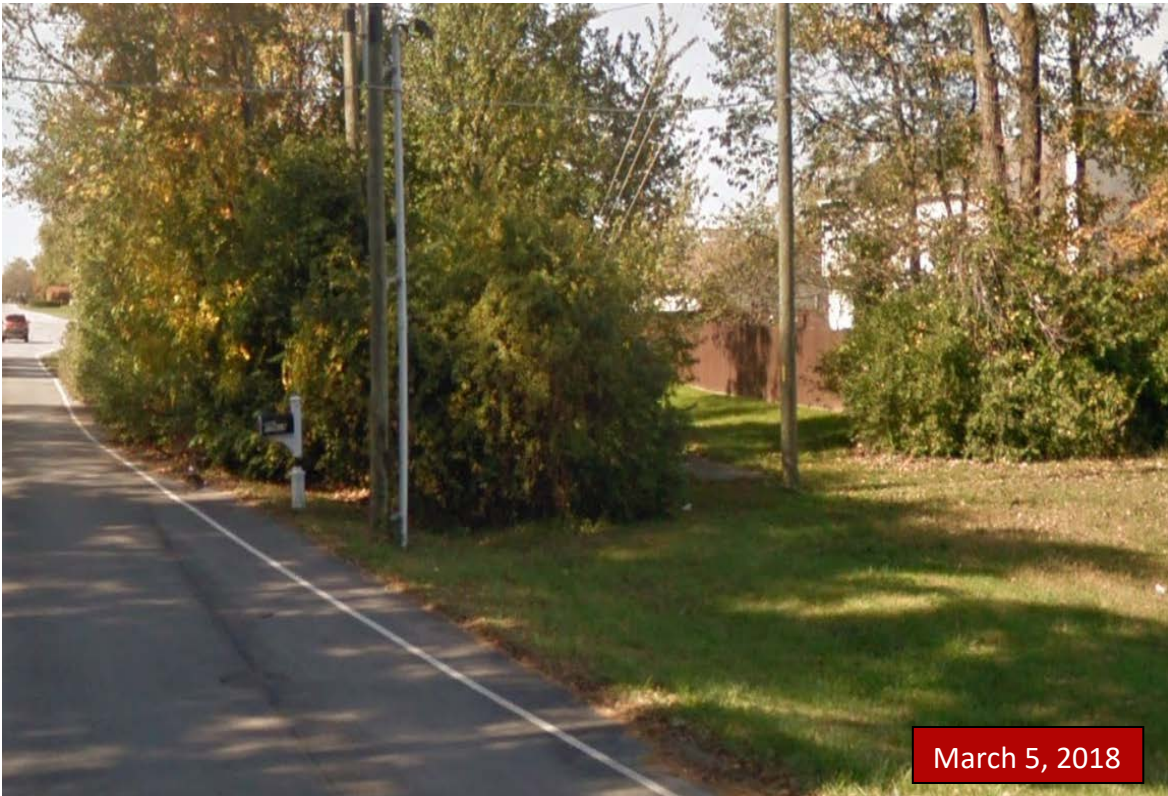


Photograph #28: East 56th Street – Looking southeast toward sidewalk terminus at intersection with Lee Road.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #29: East 56th Street – Looking north toward sidewalk terminus east of the Wynfield subdivision's western entrance.



Photograph #30: East 56th Street – Looking northwest toward sidewalk terminus east of Wynfield subdivision's eastern entrance.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #31: East 52nd Street – Looking east toward sidewalk terminus at East 52nd Street.



Photograph #32: East 52nd Street – Looking east along East 52th Street corridor, towards limited right-of-way.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #33: East 52nd Street – Looking east along East 52nd Street corridor.



Photograph #34: East 47th Street – Looking east along East 47th Street, towards sidewalk terminus and pedestrian.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #35: East 47th Street – Looking west along East 47th Street corridor.



Photograph #36: East 47th Street – Looking southeast toward sidewalk terminus at intersection with Richardt Avenue.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #37: East 46th Street – Looking north toward Pendleton Pike and sidewalk terminus



Photograph #38: East 46th Street – Looking southwest toward sidewalk terminus at Forest Glen neighborhood entrance.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #39: East 46th Street – Looking west toward sidewalk terminus west of Heritage Place Apartments.



Photograph #40: German Church Road – Looking south toward narrow bridge spanning Indian Creek.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #41: German Church Road – Looking south toward sidewalk terminus north of Winding Ridge.



Photograph #42: German Church Road – Looking south toward sidewalk terminus north of East 46th Street.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #43: Mitthoeffer Road – Looking north along limited right-of-way east of Greenbriar mobile home park.



Photograph # 44: Mitthoeffer Road – Looking south along limited right-of-way east of Greenbriar mobile home park.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #45: Mitthoeffer Road – Looking south along Mitthoeffer Road corridor and limited right-of-way.



Photograph #46: Hess Avenue – Looking southwest toward sidewalk terminus at intersection with North Post Road.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #47: Hess Avenue – Looking west toward Hess Avenue corridor and pedestrian user.



Photograph #48: Hess Avenue – Looking west toward sidewalk terminus at intersection with North Post Road.

Bike and Pedestrian Master Plan Lawrence, Indiana



March 5, 2018

Photograph #49: Harrison Park Drive – Looking east toward sites of future development along Harrison Park Drive.



March 5, 2018

Photograph #50: Harrison Park Drive – Looking east toward sites of future development along Harrison Park Drive.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #51: Harrison Park Drive – Looking west toward sidewalk terminus along Harrison Park Drive.



Photograph #52: Caito Drive – Looking west toward sidewalk terminus along East 56th Street.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #53: Caito Drive – Looking south along Caito Drive corridor towards East 56th Street.



Photograph #54: Caito Drive – Looking north along Caito Drive corridor.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #55: Indian Lake Road/Boulevard – Looking south towards sidewalk terminus along Indian Lake Road.



Photograph #56: Indian Lake Road/Boulevard – Looking east toward pedestrian on Indian Lake Boulevard.

Bike and Pedestrian Master Plan Lawrence, Indiana

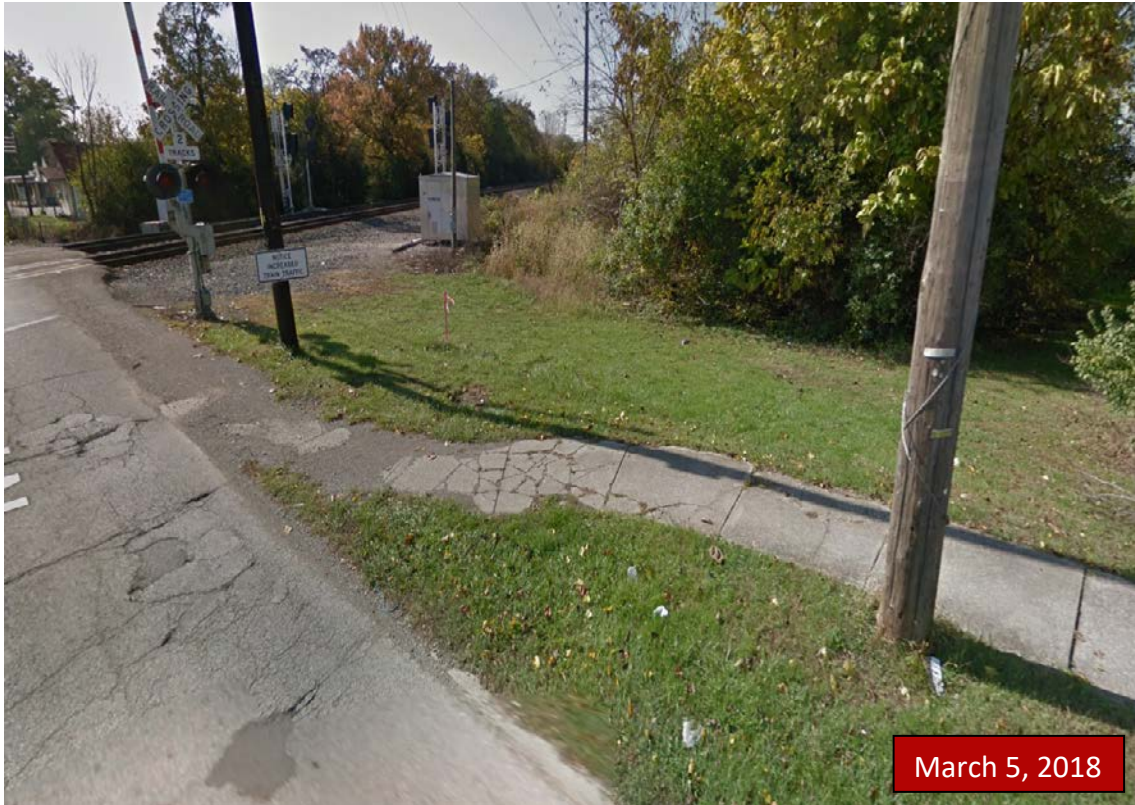


Photograph #57: Indian Lake Boulevard – Looking south toward pedestrian on Indian Lake Boulevard.



Photograph #58: North Post Road – Looking north towards sidewalk terminus along east side of North Post Road.

Bike and Pedestrian Master Plan Lawrence, Indiana



Photograph #59: North Post Road – Looking southwest toward sidewalk terminus along west side of North Post Road.



Photograph #60: North Post Road – Looking north along the North Post Road corridor.

APPENDIX B

SAMPLE PUBLIC SURVEY

City of Lawrence, IN - Department of Public Works

Bicycle and Pedestrian Master Plan Development

Created for the City of Lawrence, Indiana



In Partnership with United Consulting



The City of Lawrence intends to develop a pedestrian and bicycling plan in order to target and improve infrastructure resources while providing more opportunities for healthy living.

Survey participation is completely voluntary. You can refuse to answer any question at any time. Your responses will remain anonymous.

City of Lawrence, IN - Department of Public Works

Demographics:

Please provide some information to help us get to know you.

Age:

- ☐ < 18
- ☐ 19-24
- ☐ 25-34
- ☐ 35-44
- ☐ 45-54
- ☐ 55-64
- ☐ 65+
- ☐ Prefer not to answer

Education:

- ☐ None
- ☐ Highschool Diploma / GED
- ☐ Trade / Technical Training
- ☐ Associates Degree
- ☐ Bachelors Degree
- ☐ Master's Degree
- ☐ Ph.D.
- ☐ Prefer not to answer

Gender:

Choose ▼

Are you a Lawrence resident?

- ☐ Yes
- ☐ No

How many individuals live in your household?

- ☐ 1-2
- ☐ 3-4
- ☐ 5-6
- ☐ 6+

What is your approximate level of income?

- ☐ < \$20,000
- ☐ \$25,000 - \$45,000
- ☐ \$50,000 - \$70,000
- ☐ \$75,000 - \$95,000
- ☐ \$100,000+
- ☐ Prefer not to answer

City of Lawrence, IN - Department of Public Works

Community Engagement:

Tell us about yourself.

Do you regularly walk or bicycle to work / school?

- ☐ Yes
- ☐ No

If yes, how long does it take?

- ☐ 5-10 minutes
- ☐ 15-30 minutes
- ☐ 30 minutes - 1 hour

If yes, how far must you travel?

- ☐ < 1 mile
- ☐ 1-2 miles
- ☐ 2+ miles

If I could walk or ride my bike to work / school, I would do so.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

If available, how frequently would you use the following:

	Never	Sometimes	Often	Everyday
Roadway Bike Lanes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sidewalks leading to Parks and Schools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Walking / Bicycling Trail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bike Racks / Locks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

City of Lawrence, IN - Department of Public Works

Let Us Know:

Do you have a working motor vehicle in your household?

- ☐ Yes
- ☐ No

Do you have a bicycle in your household?

- ☐ Yes
- ☐ No

What is your primary means of transportation?

- ☐ Automobile / Motor Vehicle
- ☐ Bicycle
- ☐ Public Transportation / Bus
- ☐ Walk

I think our community should be more walk-able and bike-friendly.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

Do you walk for at least 10 minutes every week?

For recreation, exercise, to get from place to place, or for any other reason.

- ☐ Yes
- ☐ No

If not, what reason(s) stop you from walking more often?

If you answered yes, skip to the next question.

- ☐ Disability / Unable to
- ☐ Too much traffic / Not safe
- ☐ Other Transportation is faster
- ☐ I don't want to / don't enjoy it
- ☐ Other: _____

If more bicycling opportunities were available, I would make use of them.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

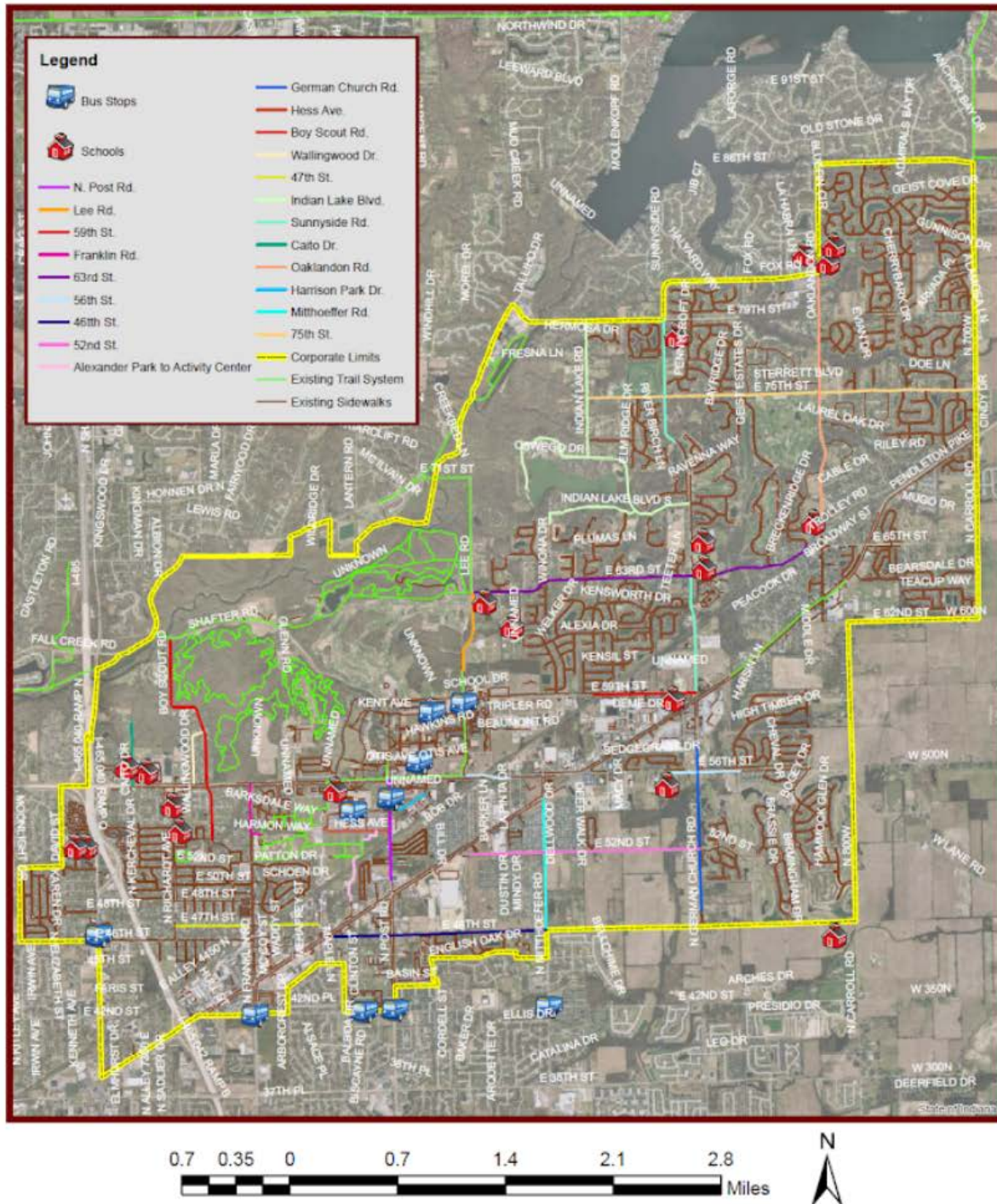
Rate your need for improved pedestrian and / or bicycling facilities.

	1	2	3	4	5	
Not Needed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Greatly Needed

If you had to rate the importance of pedestrian facility improvements, how would they be rated? (#1 being most important and #4 least important)

	1	2	3	4
Sidewalk Improvements / Additions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Roadway Improvements / Additions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bicycling Lanes / Paths	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Walking Trails / Paths	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Below is an image of the City of Lawrence with proposed pedestrian facilities highlighted. Would improving any of these suggested facilities be beneficial to you or your family? (Check whichever routes apply)



Your answer

City of Lawrence, IN - Department of Public Works

Tell us WHERE our community could benefit from improved recreational facilities!

Is there another location we have not identified that needs a sidewalk or trail?

Your answer

City of Lawrence, IN - Department of Public Works

Public Involvement:

Join us on February 8, 2018 at 5:00 p.m. to contribute your thoughts and ideas! A public information panel will be included during the Public Works meeting in February. This meeting will take place within the City Government Office in the Public Assembly Room. We look forward to your input!

APPENDIX C

COMPILED SURVEY RESULTS

City of Lawrence, IN - Department of Public Works

745 responses

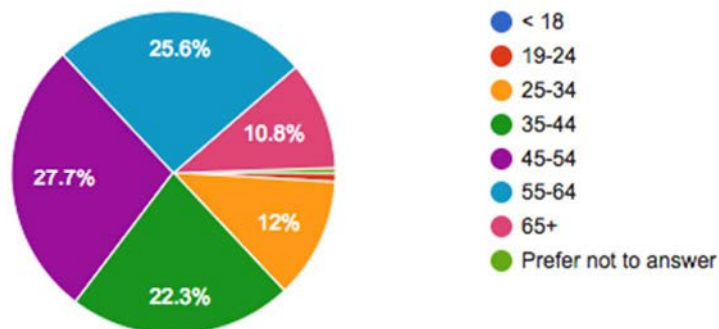
Bicycle and Pedestrian Master Plan Development

The City of Lawrence intends to develop a pedestrian and bicycling plan in order to target and improve infrastructure resources while providing more opportunities for healthy living.

Demographics:

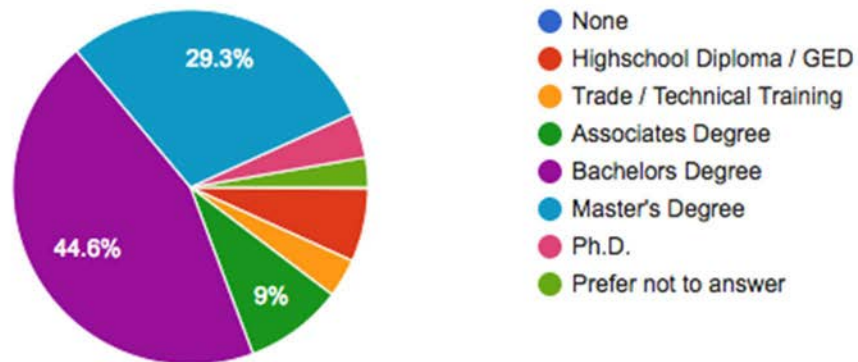
Age:

739 responses



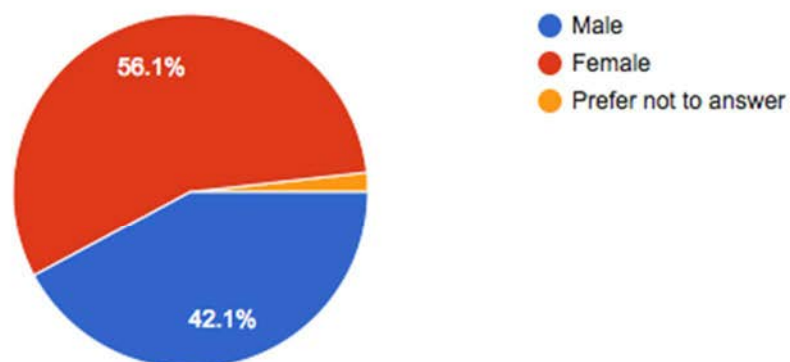
Education:

737 responses



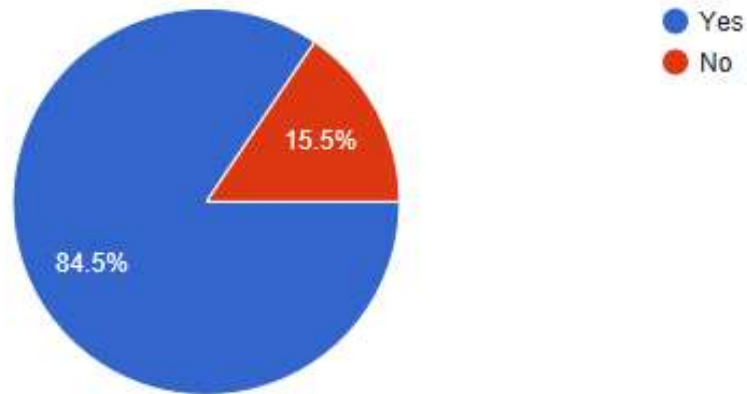
Gender:

679 responses



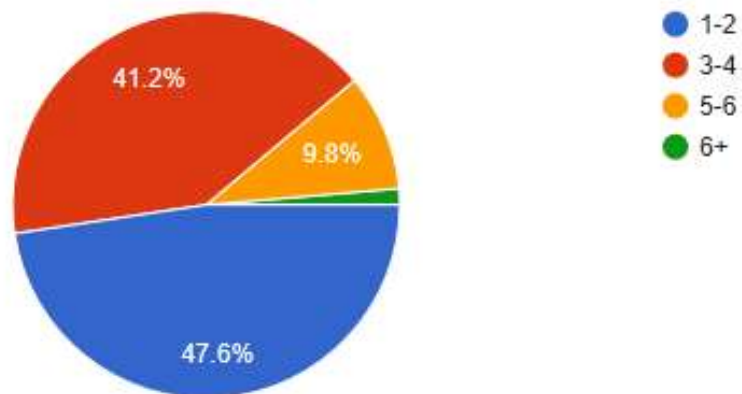
Are you a Lawrence resident?

734 responses



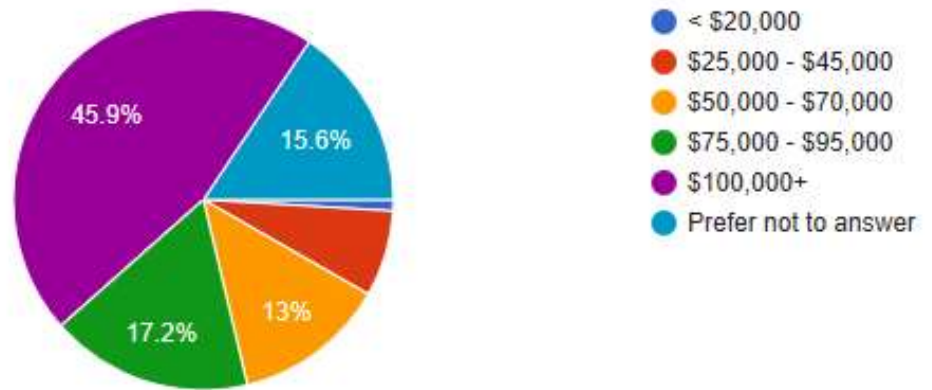
How many individuals live in your household?

737 responses



What is your approximate level of income?

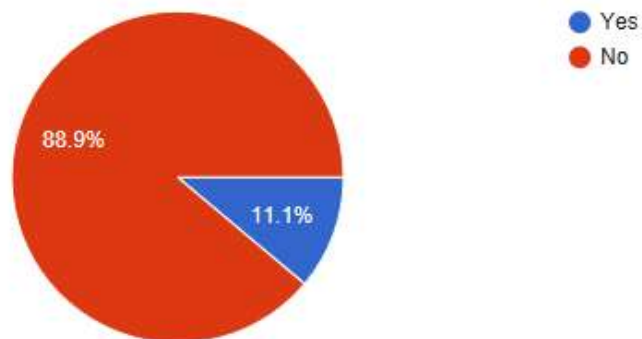
738 responses



Community Engagement:

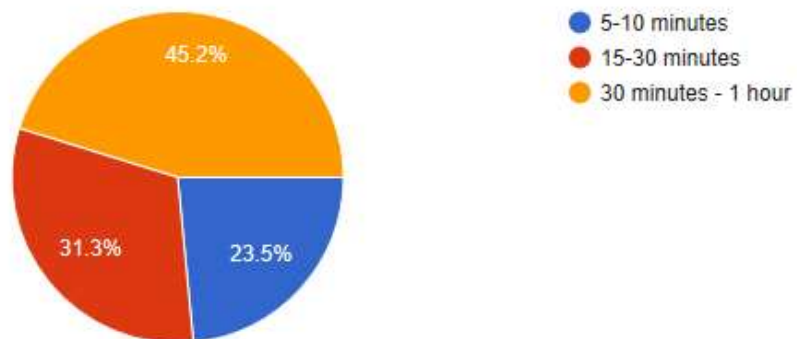
Do you regularly walk or bicycle to work / school?

737 responses



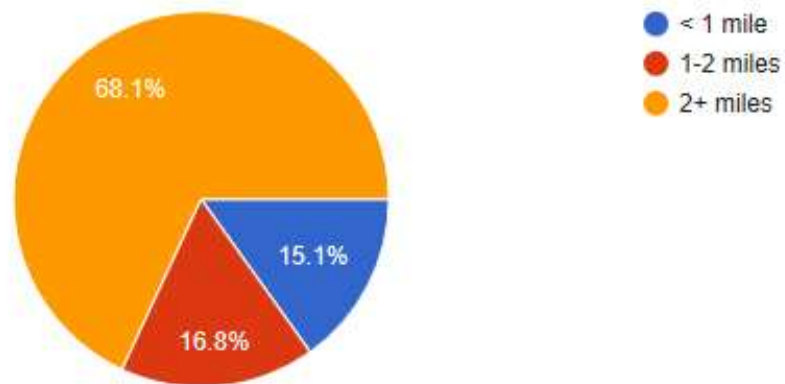
If yes, how long does it take?

115 responses



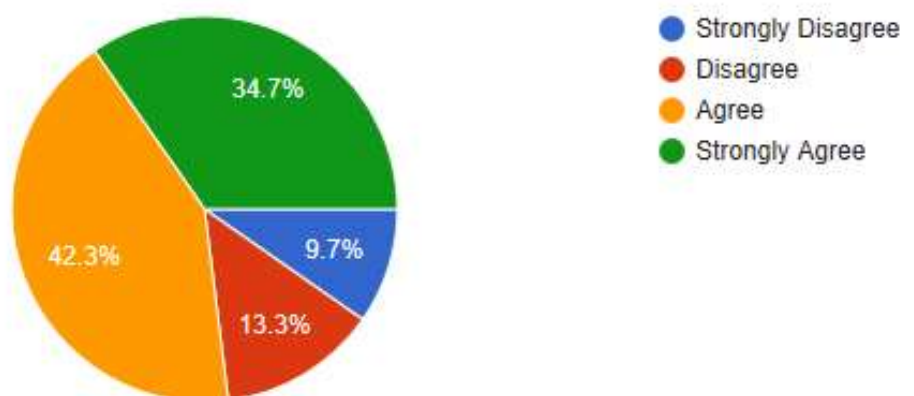
If yes, how far must you travel?

119 responses

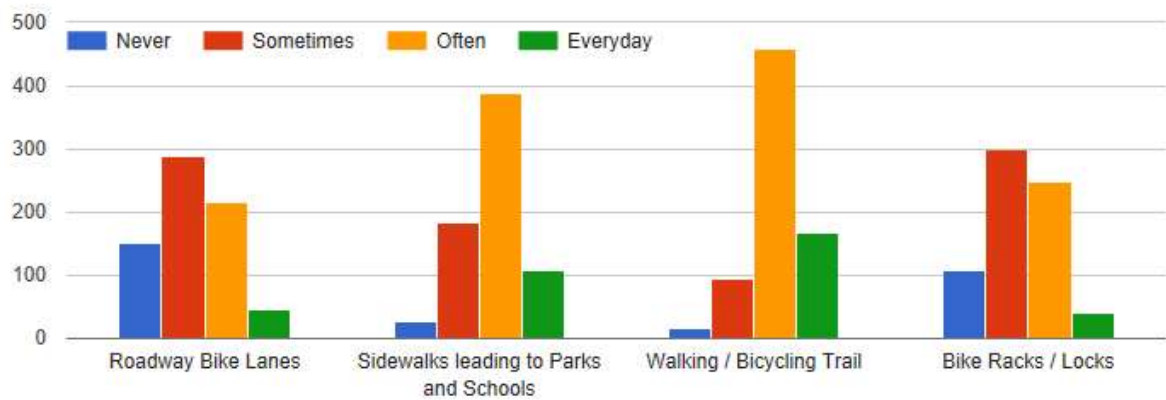


If I could walk or ride my bike to work / school, I would do so.

660 responses



If available, how frequently would you use the following:



Let Us Know:

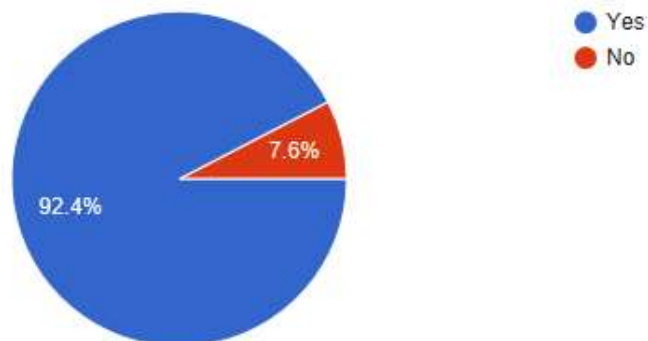
Do you have a working motor vehicle in your household?

738 responses



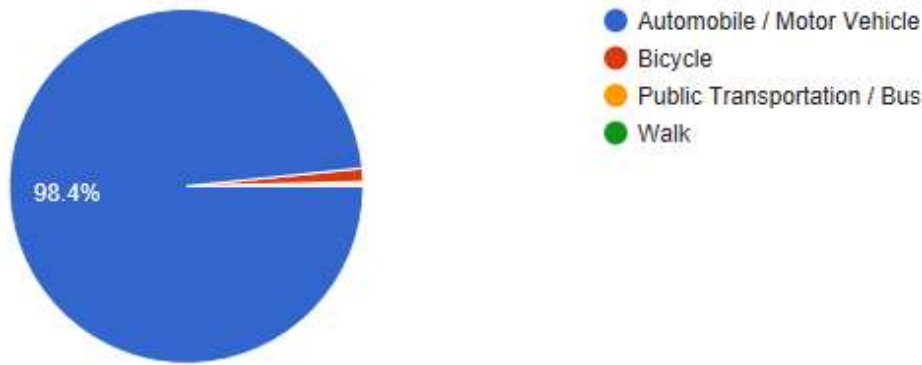
Do you have a bicycle in your household?

735 responses



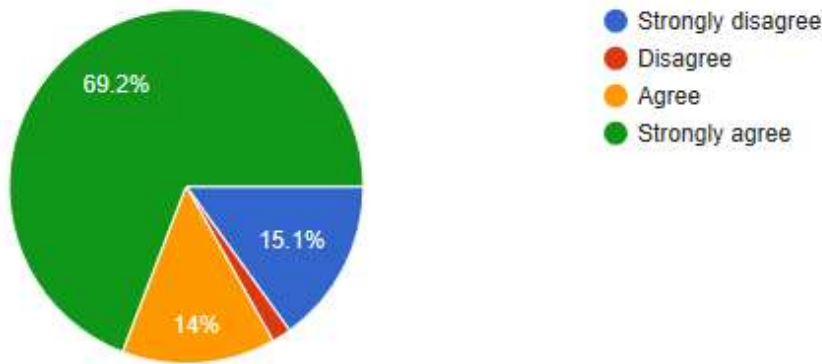
What is your primary means of transportation?

738 responses



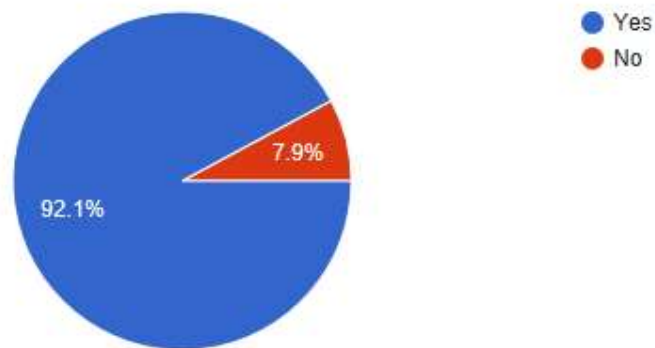
I think our community should be more walk-able and bike-friendly.

736 responses



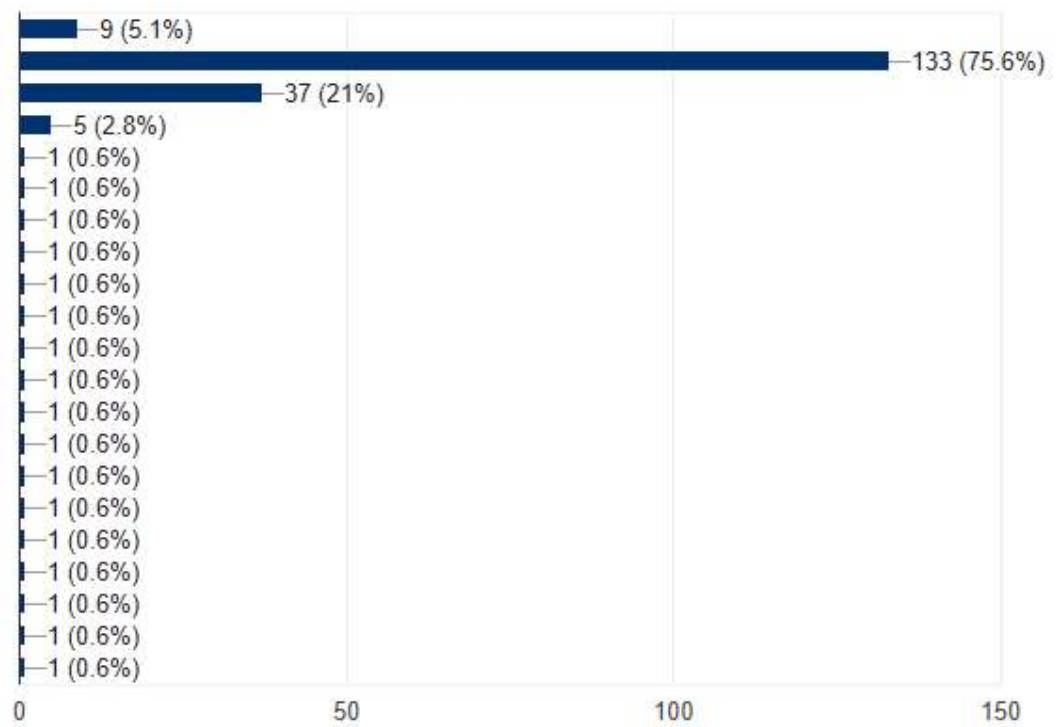
Do you walk for at least 10 minutes every week?

738 responses



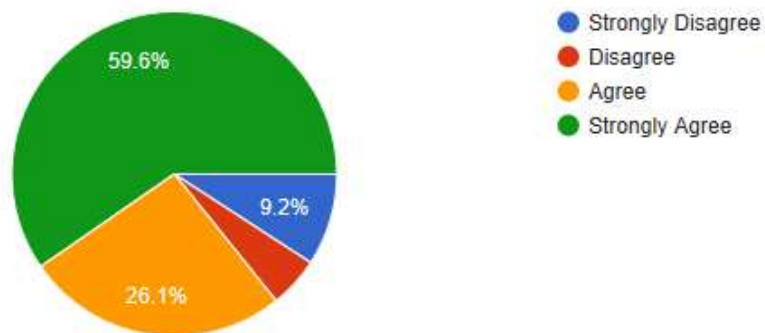
If not, what reason(s) stop you from walking more often?

176 responses



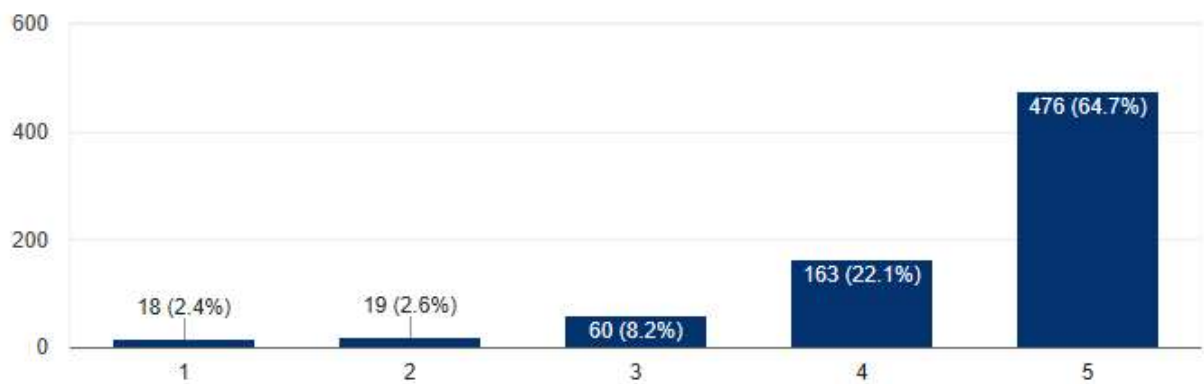
If more bicycling opportunities were available, I would make use of them.

731 responses

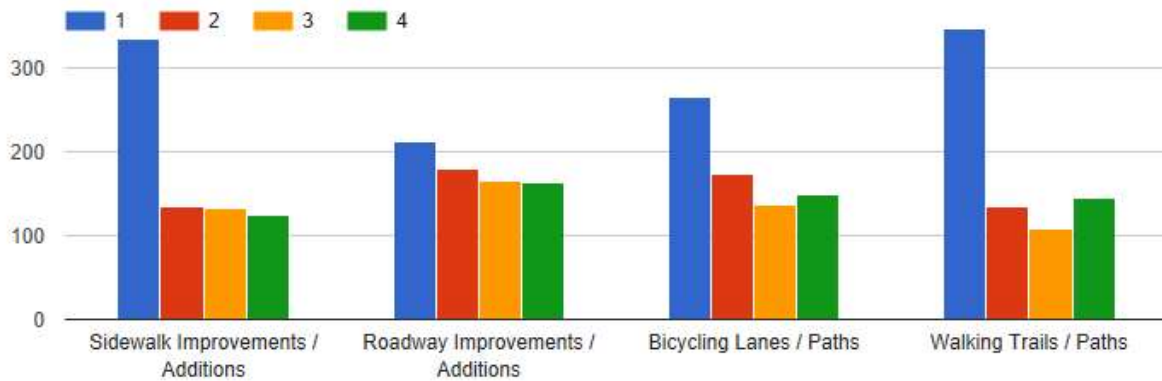


Rate your need for improved pedestrian and / or bicycling facilities.

736 responses



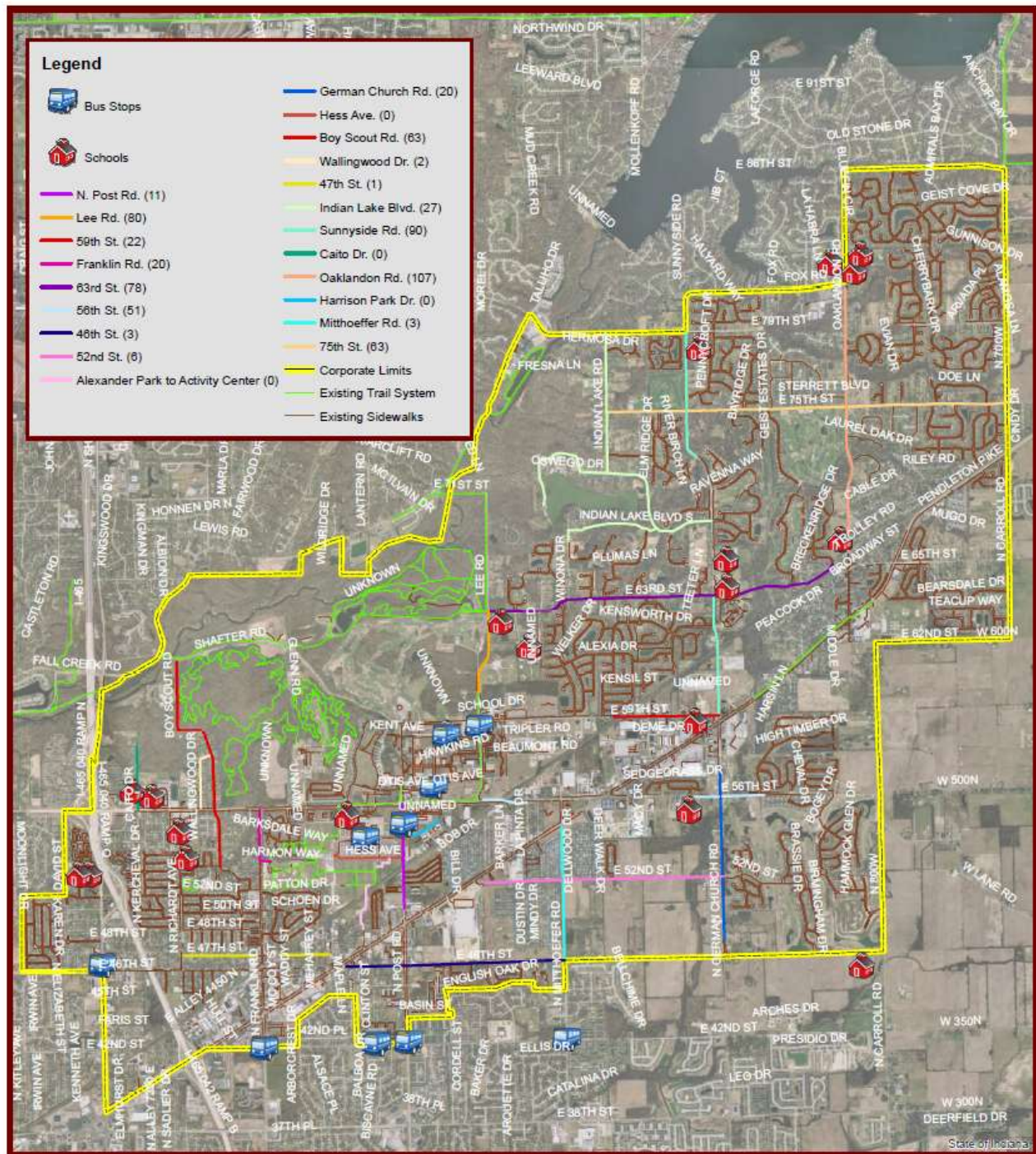
If you had to rate the importance of pedestrian facility improvements, how would they be rated? (#1 being most important and #4 least important)



City of Lawrence, IN - Department of Public Works

Tell us WHERE our community could benefit from improved recreational facilities!

Below is an image of the City of Lawrence with proposed pedestrian facilities highlighted. Would improving any of these suggested facilities be beneficial to you or your family? (Check whichever routes apply)



COMMENTS RECEIVED FROM RESPONDENTS DURING PUBLIC INVOLVEMENT FOR THE FOLLOWING QUESTION:

Would improving any of these facilities be beneficial to you or your family? Is there another location we have not identified that needs a sidewalk or trail?

56th from Franklin to boy scout rd, safe crossing of Pendleton Pike at 56th st., safe crossing of 465 at 56th street.

56th German Church to Carroll road and all of German Church from Sunnyside (in front of incrediplex to the 46th)

56th st

56th street

56th Street

56th street, German Church/Sunnyside

63rd

63rd st, lee rd, 75th st, oaklandon, sunny side, germanchurch,

63rd Street

63rd Street

63rd street

63rd Street

63rd Street to Lee Road to Fall Creek

63rd Street, Oaklandon Rd

75th Oaklandon to Fox

75th st and Oaklandon will be most important to me
75th st, oaklandon, 63rd st
75th stree. No sidewalk for a long path
75th Street
75th, Oaklandon, Carroll
79th from Fall Creek to Fox, Fox to Oaklandon, 86th to Carroll, Carroll toward 96th to existing sidewalk.
79th St
79th st east of fall creek to sunnyside
79th St.
79th stree and fox road
79th street between fall creek and sunnyside
79th Street East of Oaklandon Road
79th street from Sunnyside to fall creek
79th Street, Fox Road
79th. St. needs a sidewalk it is very dangerous
82/79 and Fall Creek area
86th Street
A continuation of the trail that ends at the Geist dam along fall creek road would be greatly appreciated.

A route on Fox Rd to Amy Beverland Elementary School
A trail along the old Shafter Road from Post, west into the state park. Sharing the road until you get to the sledding hill can be very risky for bicycles, walkers, and runners. A separated bicycle trail similar to those in other areas would be so much safer. This could connect the Fort Harrison Village completely through the state park, to the proposed Boy Scout Road trail and/or to the Fall Creek Greenway.
All
all around the reservoir, connect the shopping plazas, and get us attached to the best park in Indy (Fort Ben).
All of the above.
All of them!
All schools should be accessible via sidewalk to homes within a mile
Along Fall Creek from Briarcliff to hook up with path at Geist along Fall Creek
Along fox road - to allow ease of biking or walking to cvs, needlers plaza, school.
Along Sargent creek and 86th Street to Fall Creek
Any additions would be appreciated. Let's make the city more walkable.
Anything in the woods or in nature.
Around the outside of the state park - also connecting along Lee Rd from Fall Creek to the Y
Behind the Kroger at 79th and Fall Creek
Beige and light green along Indian Lake
Boy Scout Rd
Boy Scout rd,

boy scout rd, 56th st, 63d, 75th, sunnyside, lee rd
Boy Scout Road
Boy Scout Road
Boy Scout road
Cannot see map clearly - 56h st from Boy Scout to post
Can't interpret it
Can't read this map on my phone
cant view any boxes to check ?
Carroll rd
Carroll Road
Carroll road
Connect Fort Harrison Trace to Geist dam
Connecting to the ft Ben dog park
Connection from Lee rd 79th street trail to fall creek trail
Connectivity to rapid transit stops.
Corporate Limits
Couldn't tell from map on my phone
Don't know

E56th ST FROM Pendleton Pike to Mitthofer
Entrance into State Park from Lee Rd at 63rd St.
Fall Creek Rd
Fall creek road
Fort Harrison to Geist Dam
fox rd
Fox Rd to Sunnyside
Fox road to Oaklandon
From Indian Lakes to Ft Ben
From Oaklandon Road area up to the reservoir to take advantage of the businesses like Eddie's Puccini's Fireworks, etc.
Geist
Geist area is desparate for sidewalks
German Church (from 56 to Carroll Rd) needs side walks just trying to walk on that street on that mini bridge it's a life or death walk. I have a walking night vest and people still speed fast and nearly get hit and I see others that almost get hit. German Church that entire road need sidewalks too many people walk on that BUSY street daily. I'm so glad we got funding I really hope to see German Church get the first of the sidewalks
German Church, 52nd Street, 56th Street, Sunnyside Road
I can't tell. The map is too small

I strongly feel Lawrence needs to be more family friendly. I would love more parks (or have great park locatinos like Lee rd, that are lacking, be revamped with always accessible toilets, safer play surfaces, and even a splash pad to draw in more families in the summer so I'm not driving to Hamilton County every weekend instead. As far as trails - a trail to/near a better park would be huge. Families like and need trails. I would also love a monon-like trail from that area to Indianapolis. I see so many of these things in Fishers, Noblesville, Carmel an Westfield - and that's why Lawrence residents are leaving for those areas. Let's make Lawrence a place people move TO!

I would love if the ft ben state park would open up that already existing fenced entrance there at the intersection of lee rd and 63rd as a ped./nike entrance. I tried for a couple of years and talked to many people about this a few yrs ago and no one wanted to deal with it, basically the park said they would consider it if lawrence would installed a crossing signal, and lawrence said they would consider it if they thought the park would open up an entrance there. i can understand when the park said they wouldn't wante people coming in there all the time without paying, but to me the benefits would far outweigh this concern. The main benefit being, in my opinion, that students from forest glen elem. and school, and fall creek valley middle school would be able to walk over and into the park. In this day and age of electronics dominating childrens lives, as well as the huge problem of childhood obesity, opening up the park like this would have a huge impact i believe, as long as the schools use it. Also, think of how many lawrence residents east of the park there along 63rd would be able to walk or bike over to the park and enter there. they park could do like a yearly membership drive to made up for the people who wouldenter without paying, and the city could call it a helth invitiative. personally i see it as a winning situation for everyone, and there's just a fence there already. Heck the park could just put up a sign and that's it.

I'd like to see a complete trail/sidewalk around Gesit (would need cooperation between Lawrence, Indy, Fishers, McCordsville). Would like that trail to hook up with proposed Fall Creek Trail that could lead into Ft Ben Park.

improve access to Ft Ben from Fall Creek Trail at Shaffer Road for bicycles. It is dangerous to ride the sidewalk and the 90 degree curve makes it difficult to see cars coming

Indian Lake

indian lake road, 63rd street, Lee road, sunnyside

indian lake, lee road. Would like to get to grocery store safely on bike

Indian Lake, sunny side, corporate limits

Lantern and fall creek area. Connecting to the dog park would also be great!

Lee rd

Lee Rd and N Post Rd
lee rd boyscout road
Lee Rd. 56th St. Post 63rd
Lee Road
Lee Road - please extend it next to the park
Lee Road from 56th to Fall Creek, Fall Creek to 79th, 59th, 63rd
Lee Road, Sunnyside, 79th street east of Kroger - this community is NOT safely walkable / bikeable... Need grocery IN Ft Ben... and way to get to it.
Main stretch of Fox Road, would be nice to walk to the grocery store and shops
Maybe a little if there was a trail along Oaklandon. Many people walk on 79th and it is very dangerous because the road is so narrow.
more trails are needed
No
No that I know of
No, just Fall Creek Trail to Fort Ben
None listed. Would greatly use sidewalk along fox rd to Amy beverland school/cvs plaza areas.
Not Really
Not sure. Map really doesn't show anything going anywehre. Not fluid. Just a bunch of color and no defined "path"
Not that I see.

Oaklandon
oaklandon
Oaklandon
Oaklandon and 63rd
Oaklandon Rd
Oaklandon Rd and 75th St.
Oaklandon Rd Sunnyside Rd 75St
Oaklandon Rd, 63rd St, 75th St
Oaklandon rd.
Oaklandon Rd., Fox Rd., 75th St.
Oaklandon Road
Oaklandon road and 75th street.
Oaklandon Road from neighborhoods north of the playground to the playground would be wonderful. We would love to walk more than our little neighborhood.
Oaklandon road, paved walking/bike path from Oaklandon to Walgreens on Sunnyside off of 79th stree.
Oaklandon, 63rd and Sunnyside would help in my day to day.
Oaklandon, Sunnyside
Oaklandon, Sunnyside and Fox
Oaklandon, Sunnyside and Fox

On Carroll Rd between 75th and Pendleton Pike. No afe way to travel to South side of Pendleton Pike.
Open a north entrance to ft. ben. Could put a gated entry and make the yearly pass a swipe card to get in?
Please add Winona Drive! Really needs a sidewalk and it's very dark, so its needs Street Lights.
routes along 63rd street
Sargent road and fall creek north between 79th and 56
Sidewalk along 56th street over 465
Sidewalk along Fox Road from Neighborhoods to school/grocery shopping
Sidewalks along post road need to be maintained better
Sunnyside
Sunnyside rd
Sunnyside Rd, Indian Lake Rd, 75th
Sunnyside rd. to shopping centers, 59th st., Lee Rd., 63rd st.
Sunnyside Road
Sunnyside Road between 75th St. and 79th street
Sunnyside, Lee Rd, Oaklandon,
The Geist trail to Amy Beverland School
The neighborhood along Fall Creek (Harrison Run) that backs up to the fort...could there be a bridge installed that would allow bikers/walkers to get to the fort? There is already a sidwealk that leads back to the creek...but the creek is far too wide to cross without a bridge.

The water co ground adjacent to Lee road to link the greenways going up Fall Creek to Giest to Ft Harrison and the rest of the greenway system.
There is no sidewalk or paths on 79th or most of Sunnyside Rd. Can't believe this issue hasn't been resolved already.
There needs to be a way to access Fall Creek Trail as far out as possible. I live near 79th and Sunnyside and you can't from there. 79th isn't wide enough and even if you get down to Kroger where there is the trail system, it would be great if it connected to Fot Harrison. That addition would go a long way to improving the routes in this city.
This question does not make sense. It's hard to read and there is no ability to "check" whichever routes apply. I would like to see this detail better to responde appropriately. Even when I copied the image outside of my web browser to enlarge it, it was still a low quality image that was hard to distinguish to answer this question.
To Geist Lake Marina
Too difficult to read to answer.
We are at mud creek and 86TH. There are no safe sidewalks on mud creek or fall creek, or 82, or 86TH st
We live near Geist Lake (Feather Cove 1) and it's a shame that we cannot safely walk/run outside of our neighborhood. We are not connected to other trails. As we decide to move or stay in our current house, the lack of connected trails is a major reason we would look to move to Fishers or another area with these basic amenities.
We need trails where people live to the places people congregate - to Jockamo area - as this develops, create a way for people to get there by bike. Attract people from the downtown biking community to Lawrence by making it easy to get through the fort to community events in Lawrence. Put a grocery store in the Jockamo area so that people can ride to get groceries. I can't currently ride to any location safely on my bike for groceries except to the walmart market at 56th and Emerson. We can do better. In general, create pathways for kids to safely ride their bikes to school or to walk to school. This not only will create healthy lifestyles for young kids but also create a Lawrence community that cares about safety, health, and has a vision for a better Lawrence.
We used to live in Lawrence and it would have been a real asset!!!!
Would like a trail that connects the existing path around the reservoir
Yellow

Yes
yes
Yes -all
Yes all would
Yes from 79th and fall creek to 71st and Lee Rd
Yes if we could bike and run from 79th and fall creek to the monon it would be fantastic.
Yes those connecting geist area to Ft ben park.
Yes! We need space for bicycles and pedestrians and not necessarily together as the same lane. Indianapolis needs to become a bike and pedestrian friendly city, which will add to its many advantages socially. It would not only encourage people to move and exercise but also offers an alternative to those not willing to tak their car everywhere!
Yes, 79th Street from Carroll to Oaklandon. Many children and adults walk along 79th and it is very dangerous
Yes, a bike/walking path or trail is needed along fox road between Pennycroft Dr and Amy Beverland Elementary. There is no safe way to bike or walk to restaurants or shops near Murphy's Craffthouse. This would also allow us to cut thru the Admirals, take Carroll Rd to the bridge near the marina and connect to the Fall Creek Trail at Geist and head south west back toward the city
Yes, Bike lane on Lee Rd!!
Yes, especially in the Fort Harrison & Boy Scout Road area
Yes, german church
Yes, Oaklandon Road from 75th to Fox
Yes, sidewalk to FCVMS
Yes. Access needed from 79th/82nd up to the new trail on fall creek where the dam starts.

Yes. Would love safe way to bike to school and Ft. Ben.
?? That is the worst map I have ever tried to decipher.
Other (277)

City of Lawrence, IN - Department of Public Works

Public Involvement:

Join us on February 8, 2018 at 5:00 p.m. to contribute your thoughts and ideas! A public information panel will be included during the Public Works meeting in February. This meeting will take place within the City Government Office in the Public Assembly Room. We look forward to your input!

APPENDIX D

PUBLIC OUTREACH EFFORTS

CITY OF LAWRENCE, IN DEPARTMENT OF PUBLIC WORKS

Bicycle and Pedestrian Master Plan Development
Created for the City of Lawrence, Indiana



FUNDING:

- **Federal Funding: 80%**

(Use of FHWA Planning Funds administered through the local MPO)

- **Local Funding: 20%**



PROJECT PURPOSE:

- **Improve existing pedestrian and bicycling facilities**
 - Connect gaps between existing sidewalks and trails
 - Provide safe routes to work, school, recreational facilities, and leisurely activity areas
- **Provide new multi-use trails for the public**
 - Shared walking and bicycling paths
 - Provide for the wide-ranging needs of the public
 - Promote healthy lifestyles within the community



PROJECT SCOPE:

Focus on Three Main Goals:

Public Involvement

Identify the needs:

- What does the public need?
 - What needs to be improved?

Bike-Pedestrian Planning Effort

Evaluate the possibilities:

- Where are improvements needed most?
- What improvements are most important?

Detailed Engineer's Report

Analyze the outcome:

- Defines the highest priority projects.
- Compares the results and findings of the public involvement and planning efforts.

WHAT HAS BEEN ACCOMPLISHED:

- GIS Desktop Review:

- Looked at existing infrastructure resources
- (Bike/Pedestrian Facilities) – Sidewalks, Trails, Bike Lanes
- Gaps between existing infrastructure and neighborhoods

- Field Verification:

- Field checked the findings of desktop review
- Documented actual conditions seen in the community
- Observed challenges facing pedestrian/bicyclists first-hand

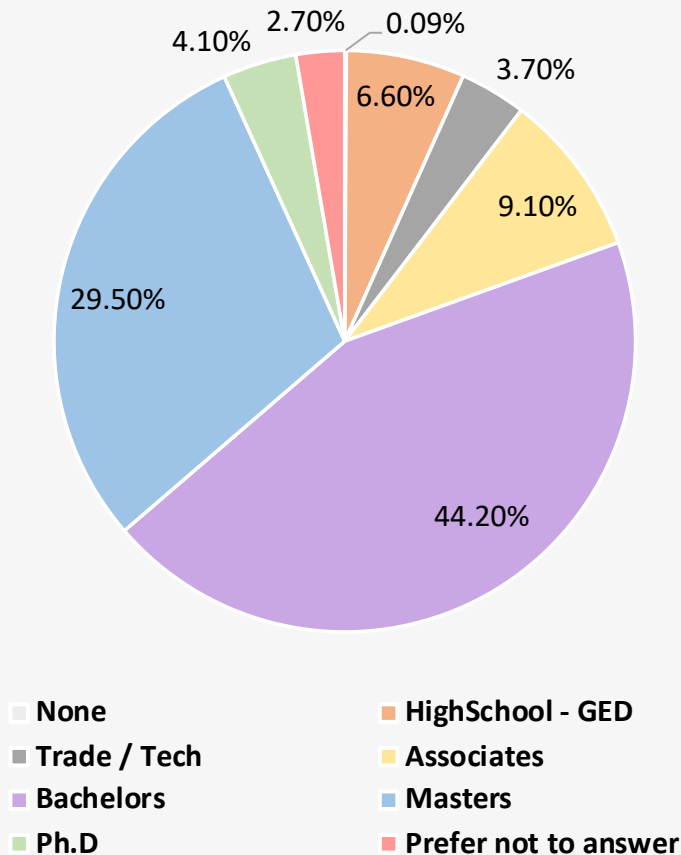
- Public Involvement:

- Online Survey and Tonight's Meeting
- Gauge Public Support, Ideas and Comments



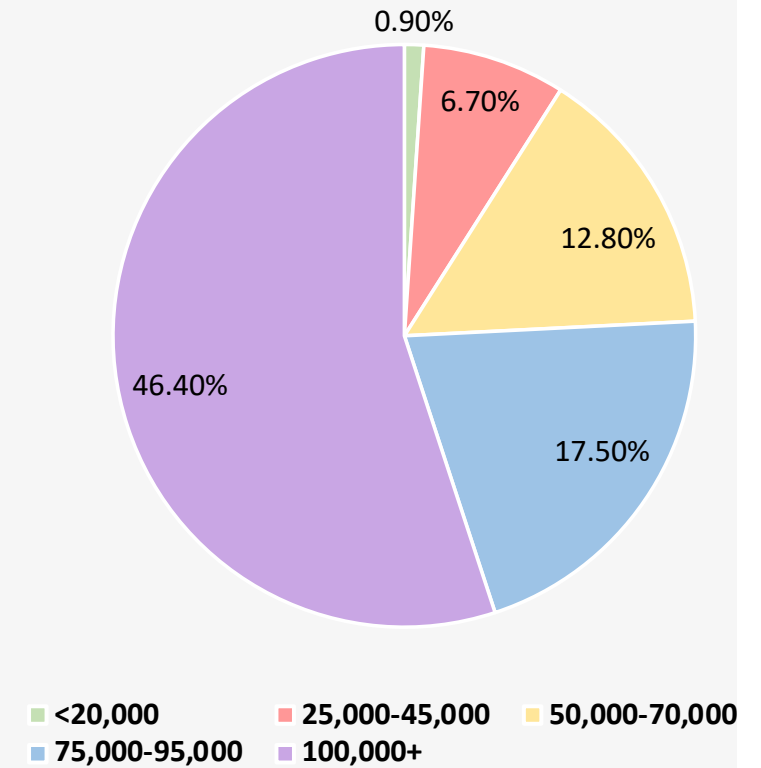
SURVEY RESULTS: PRELIMINARY FINDINGS

Education:



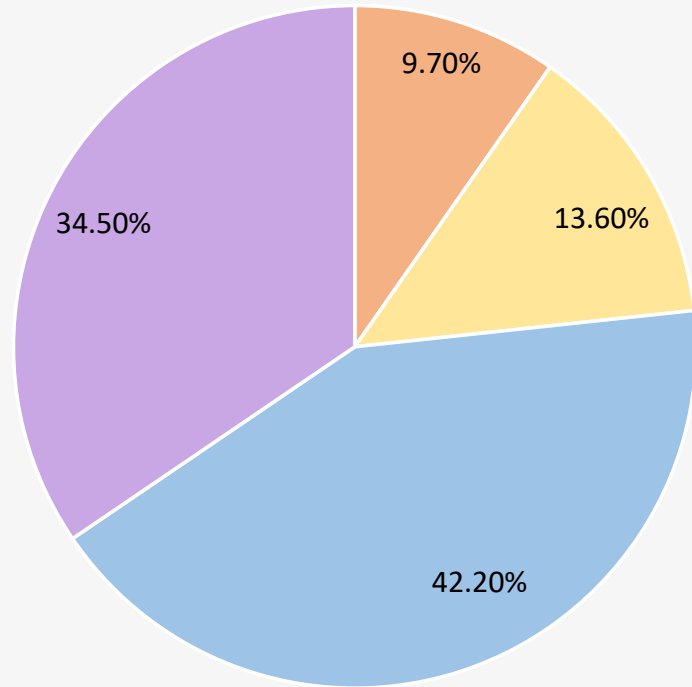
- **Good Response Rate:**
 - Over 700 Respondents
- **Showed overwhelming support for pedestrian/bicycling facility improvements:**
 - Nearly all respondents in favor of some form of pedestrian/bicycling infrastructure improvements
 - Sidewalks and walking trails most notable

Approx. Income



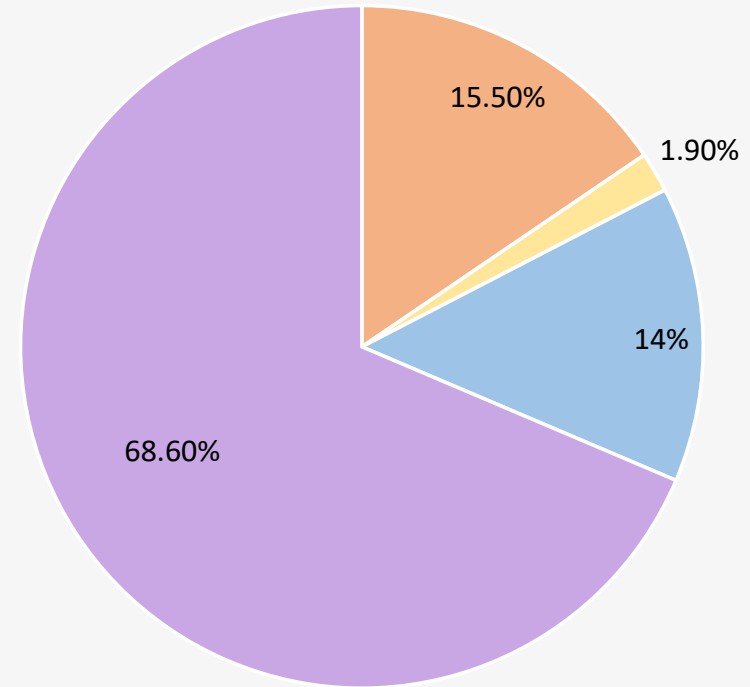
SURVEY RESULTS: PRELIMINARY FINDINGS CON'T

If I could walk or ride my bike to work / school, I would do so.



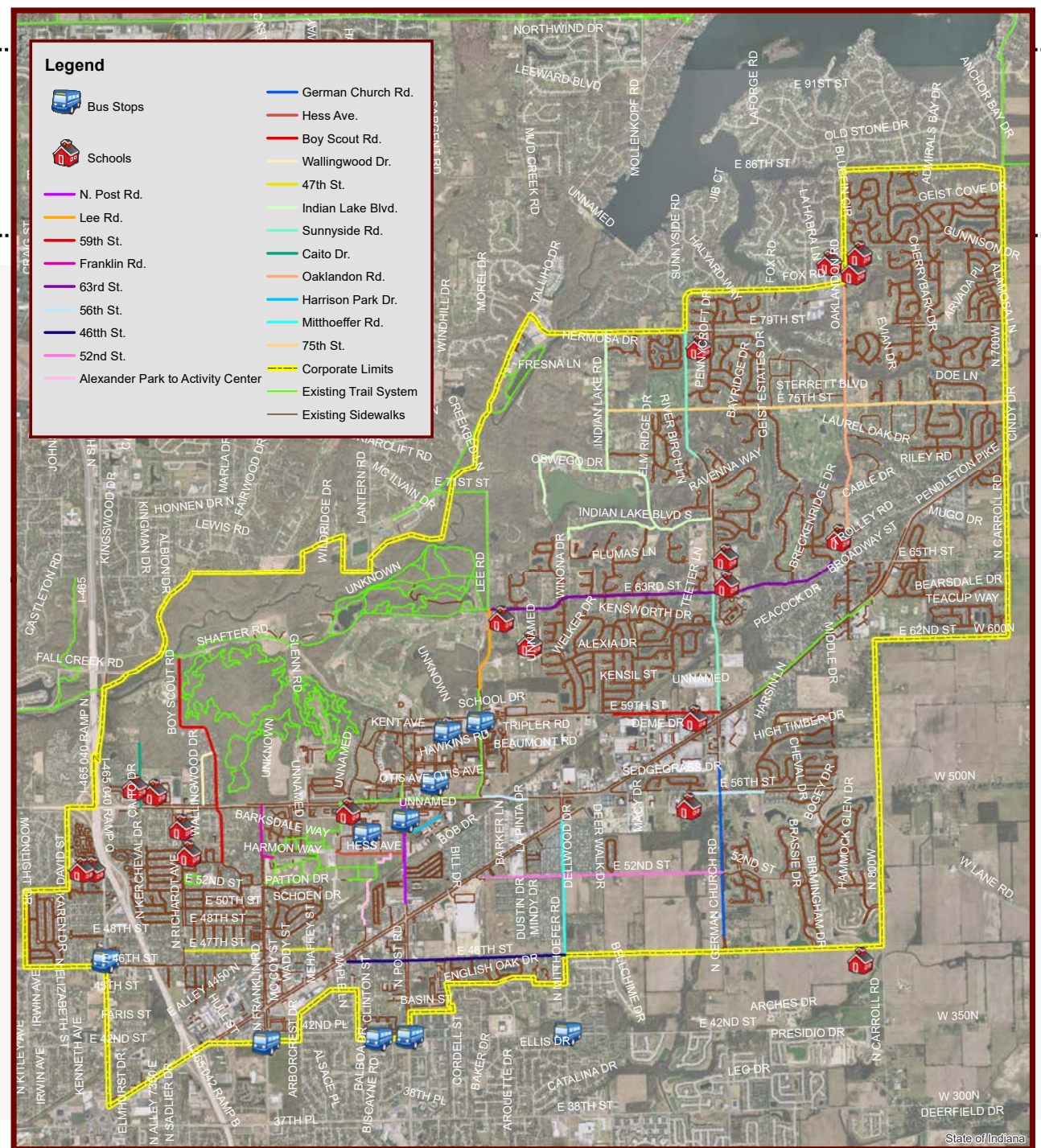
Strongly Disagree Disagree Agree Strongly Agree

I think our community should be more walkable and bike-friendly.

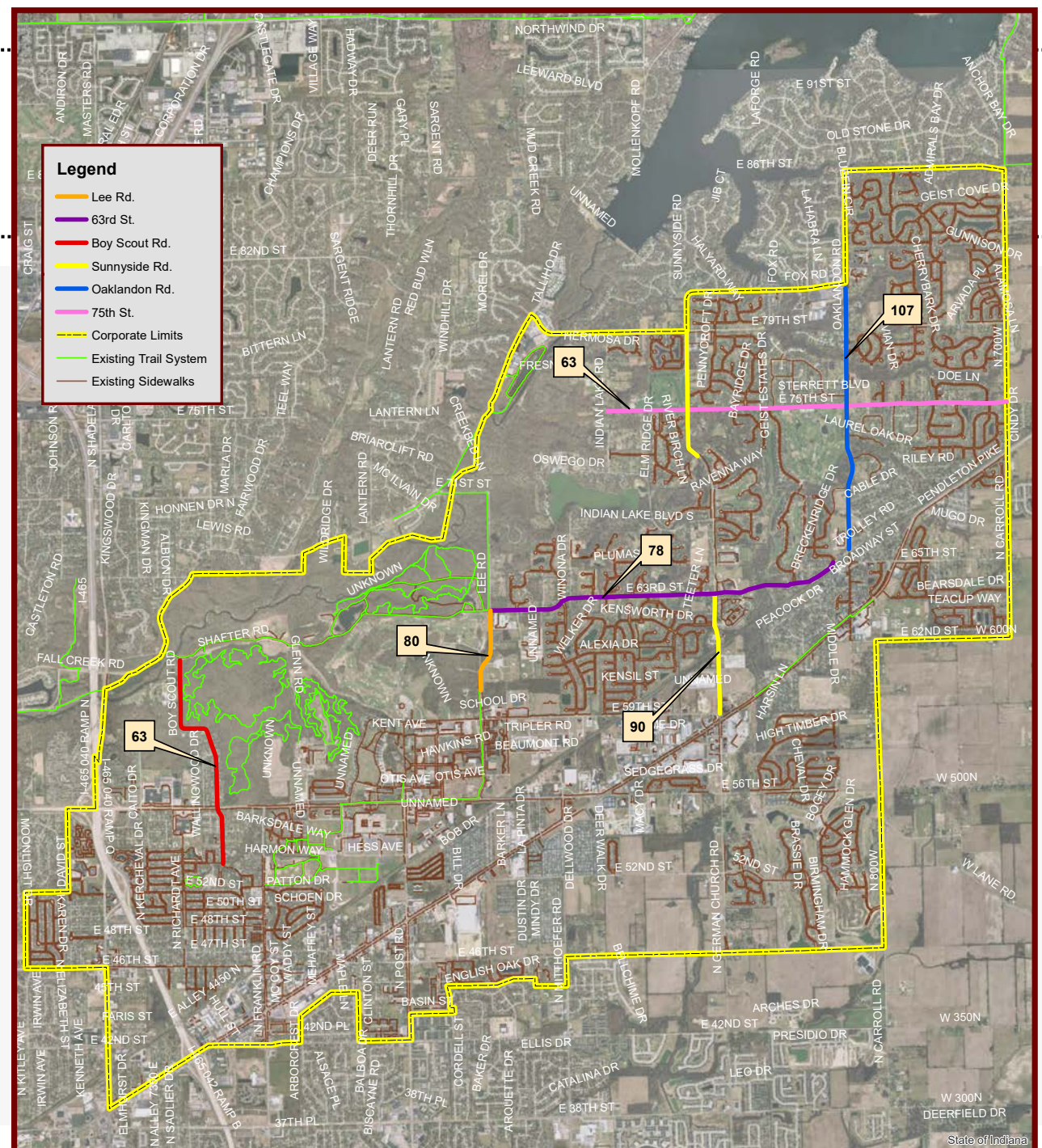


Strongly Disagree Disagree Agree Strongly Agree

PROPOSED ROUTES AND EXISTING FACILITIES



TOP PRIORITY ROUTES ACCORDING TO SURVEY RESULTS



WHAT'S NEXT?

- **Prepare a narrative for each of the identified corridors**
 - Discuss advantages and disadvantages to upgrading each corridor
- **Detailed Engineer's Report will be developed for each of the top three priority projects**
 - Project Plan Exhibits
 - Construction Cost-estimates
 - Project Budget
 - Project Development Schedules
 - Proposed additions and improvements



OPEN FORUM:

Tell us what you think!



CITY OF LAWRENCE, IN DEPARTMENT OF PUBLIC WORKS

Bicycle and Pedestrian Master Plan Development
Created for the City of Lawrence, Indiana



FUNDING:



- Federal Funding

(Use of FHWA Planning Funds administered through the local MPO)

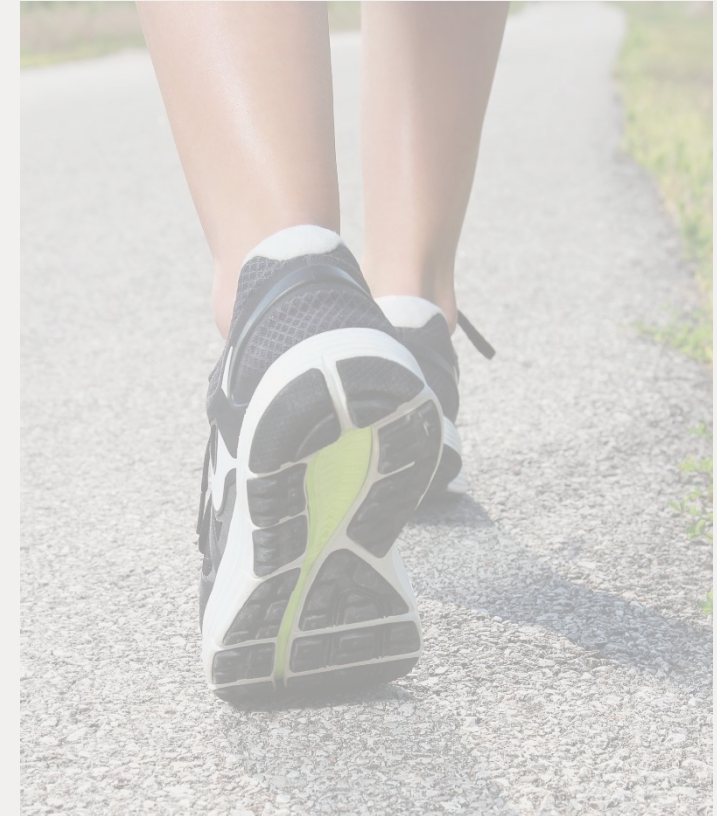


- Local Funding



PROJECT PURPOSE:

- **Enhance regional connectivity and accessibility**
 - Allow for connections to neighboring towns and cities
- **Improve existing pedestrian and bicycling facilities**
 - Connect gaps between existing sidewalks and trails
 - Provide safe routes to work, school, recreational facilities, and leisurely activity areas
- **Provide for the wide ranging needs of the public**
 - Pedestrian and bicycling access as a necessity as well as a leisure
- **Promote healthy lifestyles within Lawrence**



PROJECT SCOPE:

AREAS OF PROJECT EMPHASIS:

PLANNING PROCESS

Developing the Master Plan:

- Identify existing infrastructure.
- Identify where improvements are needed.



PUBLIC INVOLVEMENT

Surveying Public Interest:

- What does the public need?
- How will the public benefit?
- Gauge public opinion.



PROJECT RECOMMENDATIONS

Providing Project Framework:

- Discusses benefits and drawbacks to each identified project improvement.
- Identified improvements substantiated through public involvement, city coordination, and planning process.



WHAT HAS BEEN ACCOMPLISHED:

- GIS Desktop Review:

- Looked at existing infrastructure resources
- (Bike/Pedestrian Facilities) – Sidewalks, Trails, Bike Lanes
- Gaps between existing infrastructure and neighborhoods

- Field Verification:

- Field checked the findings of desktop review
- Documented actual conditions seen in the community
- Observed challenges facing pedestrian/bicyclists first-hand

- Public Involvement:

- Online Survey and February 8, 2018 Public Information Meeting
- Gauge Public Support, Ideas, and Comments



WHAT HAS BEEN ACCOMPLISHED CONT'D:

SINCE THE FEBRUARY 8, 2018 MEETING:

- Public Input Analysis:

- Assessed survey responses and comments received during the Public Information Meeting
- Generated an idea of public interest for the project and specific project segments
- Helped to narrow the focus from twenty locations to three

- Planning Effort:

- Developed a narrative for each of the identified improvements for inclusion with the Master Plan
- Detailed relevant criteria necessary for evaluating project improvements



IDENTIFIED IMPROVEMENTS:



- **LEE ROAD** – East 59th Street to East 63rd Street

- **EAST 63RD STREET** – Lee Road to Oaklandon Road

- **OAKLANDON ROAD** – East 63rd Street (Verdin Street) to Fox Road

- **SUNNYSIDE ROAD** – Pendleton Pike to Fox Road

- **EAST 75TH STREET** – Indian Lake Road to Carroll Road

- **BOY SCOUT ROAD** – East 53rd Street to Fall Creek Road

- **WALLINGWOOD DRIVE** – East 56th Street to Boy Scout Road

- **FRANKLIN ROAD** – East 56th Street to Harmon Way

- **EAST 59TH STREET** – Sunnyside Road to Letterman Avenue

- **EAST 56TH STREET** – High Timber Lane to Poindexter Drive

- **EAST 52ND STREET** – German Church Road to Pendleton Pike

- **EAST 47TH STREET** – Richardt Avenue to Industrial Parkway

- **EAST 46TH STREET** – Mitthoeffer Road to Pendleton Pike

- **GERMAN CHURCH ROAD** – East 46th Street to Alicia Way

- **MITTHOEFFER ROAD** – East 46th Street to Pendleton Pike

- **HESS AVENUE** – North Post Road to Herbert Lord Road

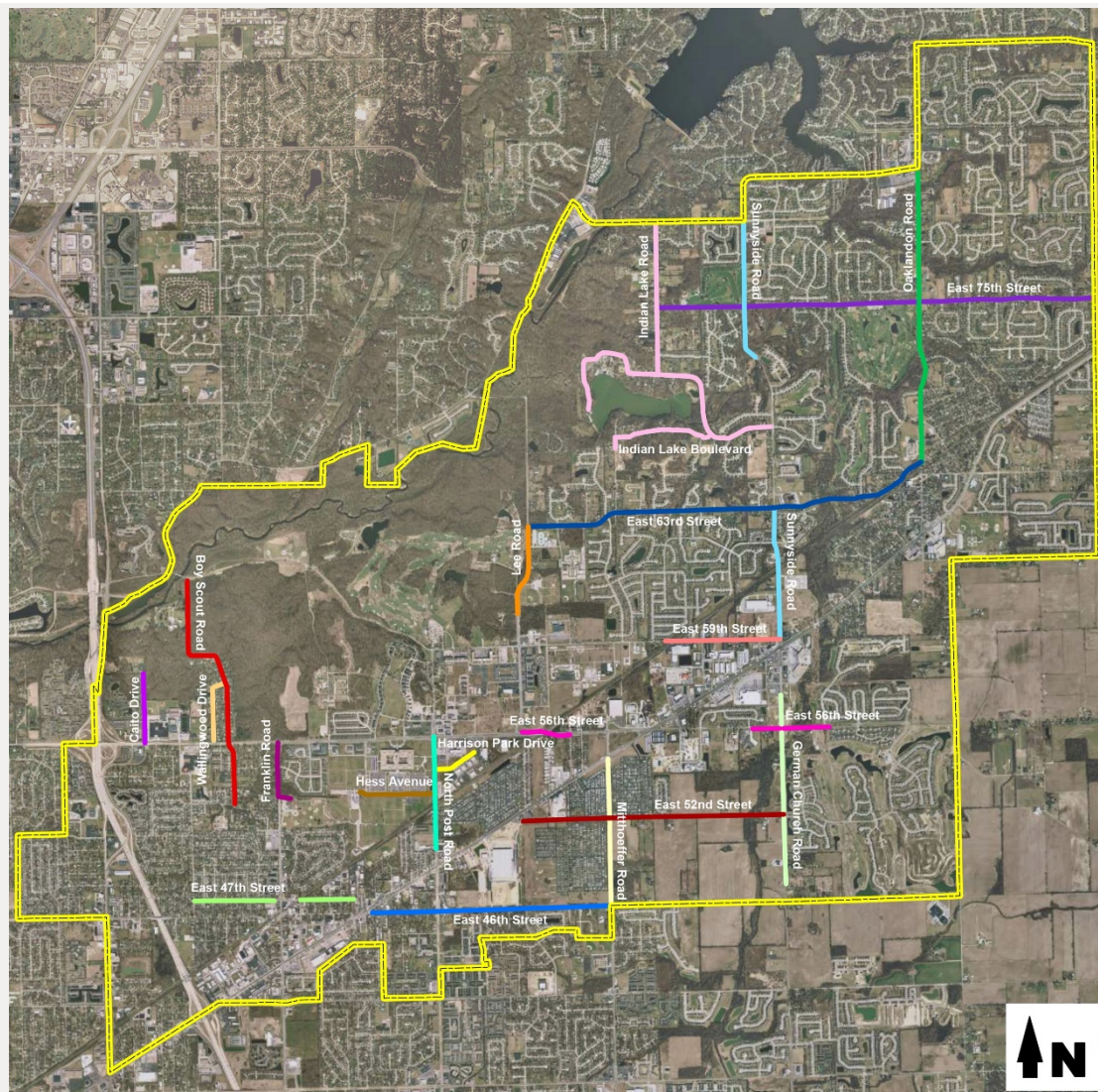
- **HARRISON PARK DRIVE** – East 56th Street to North Post Road

- **CAITO DRIVE** – East 56th Street to Courthouse Drive

- **INDIAN LAKE ROAD / BOULEVARD** – Sunnyside Road to East 79th Street

- **NORTH POST ROAD** – Pendleton Pike to East 56th Street

IDENTIFIED IMPROVEMENTS:



BICYCLE AND PEDESTRIAN MASTER PLAN

PROPOSED PROJECT SEGMENTS CITY OF LAWRENCE, IN

Legend

- | | |
|----------------------|----------------------------|
| --- Corporate Limits | East 47th Street |
| Lee Road | East 46th Street |
| East 63rd Street | German Church Road |
| Oaklandon Road | Mitthoeffer Road |
| Sunnyside Road | Hess Avenue |
| East 75th Street | Harrison Park Drive |
| Boy Scout Road | Caito Drive |
| Wallingwood Drive | Indian Lake Road/Boulevard |
| Franklin Road | North Post Road |
| East 59th Street | |
| East 56th Street | |
| East 52nd Street | |

BIKE AND PEDESTRIAN MASTER PLAN:

- **Discusses eight elements influencing the development of each identified improvement.**



The draft plan can be viewed at:

<http://www.cityoflawrence.org/>

**The draft plan will be available for public comment from
April 16, 2018 until May 18, 2018.**

The elements discussed include:

- I. Location
- II. Project Justification
- III. Connectivity
- IV. Safety
- V. Existing Land Use
- VI. Preliminary Design Constraints
- VII. Environmental Impacts
- VIII. Public Involvement



BIKE AND PEDESTRIAN MASTER PLAN:

- Through use of the Master Plan, the City of Lawrence has evaluated the identified project improvements.
- Engineer's Reports are being developed for three improvements.

THESE IMPROVEMENTS INCLUDE:

- LEE ROAD
- 63RD STREET
- OAKLANDON ROAD

ENGINEER'S REPORTS WILL DETAIL THE FOLLOWING INFORMATION:

1. Typical Sections
2. Plan View Exhibits
3. INDOT – Criteria Level One Analysis
4. Detailed Quantity Calculations
5. Construction Cost Estimates
6. Total Estimated Project Budget
7. Project Description
8. Project Development Schedule
9. Existing Ground Photography



ENGINEER'S REPORTS:

- **Project specific design details will be generated from these reports.**
- **The use of sidewalks, multi-use trails, and bike lanes will be examined.**
- **Project layouts and segment orientations will be discussed in detail.**
- **Project budget and schedule will be developed.**
- **Available funding will be a major factor behind the construction schedule for these projects.**
- **Construction of the first segment could begin as early as Spring 2019.**

***No final decisions regarding project implementation have been made.**



TO VIEW THE DRAFT MASTER PLAN...

DIRECT ANY THOUGHTS, COMMENTS, OR CONCERNS TO:

WILLIAM ANTHONY
LAWRENCE DEPARTMENT OF PUBLIC WORKS
Office: 317-545-5566
Email: Wanthony@CityofLawrence.org

DEVIN STETTLER, UNITED CONSULTING
Office: 317-895-2585
Email: DevinS@ucindy.com

The draft Master Plan will be available for public comment from
April 16, 2018 until May 18, 2018.



Navigate to the City's website at:

<http://www.cityoflawrence.org/>

Alternatively, Email Comments to

PublicComment@CityofLawrence.org



Grosskopf, Mark

From: Grosskopf, Mark
Sent: Wednesday, May 16, 2018 12:35 PM
To: 'publiccomment@cityoflawrence.org'
Subject: Pedestrian and Bicycle Plan
Attachments: bike path letter Collier 22Mar2018.docx; bike path attachment letters 22Mar2018.pdf

Regarding Bicycle-Pedestrian Master Plan: Boy Scout Road

I have read the Bicycle and Pedestrian Master Plan prepared by United Consulting and remain against a path being built along Boy Scout Road. I do not see a cost/benefit justification for such a path in terms of money and the negative impact on the neighborhood. In addition to concerns about worsening the drainage problem, there are numerous obstacles along Boy Scout Road in the form of utilities, landscaping, and terrain. Many residents along our street were drawn to this neighborhood because of the trees, landscaping and natural terrain. I cannot stress enough the importance of trees and shrubs in providing shade on hot days and general sound dampening. A bike/pedestrian path could and probably would decrease the quality of daily life along Boy Scout Road. A trail like the one on Post Road in the Fort would be like adding another traffic lane to an existing two lane road. Three, or heaven forbid four, traffic lanes through a quiet residential neighborhood is not the answer.

I do not see a need for a path or a sidewalk. Boy Scout Road is not that narrow for the type of road it is. It is not a thoroughfare. It is a neighborhood road with a 25 mph speed limit. I see bicyclists on our road frequently without problems. I myself bicycle on it without incident. I see pedestrians walk along the side of the road, as I do myself, without problems. Wallingwood Drive and another dead end street that have very little traffic are easily accessible for the few children that might play outside on their bikes. As a former cross country runner myself, having run along many roads, it is not a problem to run on the side of a road when a car comes, in the grass, where it is better for the knees and more like the terrain on which they compete. Many neighborhoods in Marion County do not have sidewalks. Not every road needs a sidewalk. If sidewalks are that important to a home buyer, there are also many other neighborhoods designed with them.

From the start, when I completed the survey, I took exception with the design of the survey. Many of the questions seemed to be leading to a desired response. When asked if I would ride my bike to work if I could, I answered yes. On occasion I would if I lived close enough, weather permitting. However, I work in downtown Indianapolis. I believe most people live prohibitively far from their work, and the convenience, protection, and usefulness of a car wins more times than not. The survey also seems to have been targeted to represent a population of pro-bike path people. Being blessed with an entire state park behind our neighborhood is not enough?? People feel compelled to confiscate the private property of others for their own convenience. Just as I am not focused on or vested in other neighborhoods in my response to this "Plan", because I do not know the specifics of their neighborhoods, I believe the answers to the survey would be different if the questions related to how much front yard and driveway, how many trees, and how much landscaping the respondents would be willing to give up in trade for a slab of asphalt or concrete. I believe painted bike lanes and a speed limit that is at least occasionally enforced is sufficient to deal with the issues of sharing the road.

Thank you for your consideration. I have attached a letter with attachments previously sent to the Mayor and other city representatives.

Mark Grosskopf
5805 Boy Scout Road

Subject: Public Comments Regarding Bicycle-Pedestrian Master Plan
From: Ellen McCain (emccain1@yahoo.com)
To: publiccomment@cityoflawrence.org;
Date: Wednesday, May 16, 2018 3:09 PM

Regarding Bicycle-Pedestrian Master Plan: Boy Scout Road

I have read the Bicycle and Pedestrian Master Plan prepared by United Consulting and remain against a path being built along Boy Scout Road. A bike/pedestrian path could and probably would decrease the quality of daily life along Boy Scout Road

Boy Scout Road is not that narrow for the type of road it is. It is not a thoroughfare. It is a neighborhood road with a 25 mph speed limit I believe enforcing the speed limit is sufficient to deal with the issues of sharing the road.

Thank you for your consideration. I have attached several documents previously submitted to the city explaining my position.

Ellen McCain
5805 Boy Scout Road
Indianapolis, IN 46226

Attachments

- Bike Path Master Plan Response emccain 16May2018.pdf (1.60MB)
- bike path letter Collier 16Jan2018 rev.pdf (193.49KB)
- letter from dnr feb2018.pdf (568.45KB)

Regarding Bicycle-Pedestrian Master Plan: Boy Scout Road

Response Date: May 17, 2018

I have read the Bicycle and Pedestrian Master Plan prepared by United Consulting and remain against a path being built along Boy Scout Road. My concerns are outlined in the attached letters to the Mayor of Lawrence. They include:

- Drainage on Boy Scout Road is terrible. After every moderate to large rain the yards have standing water. The area just north of Boy Scout Camp Belzer sometimes must be closed due to rain water running across the road. That did not happen until after another Lawrence City project changed the terrain in the grassy area between the woods and the road.
- Storm drain problems exist through all the older sections of Lawrence. A few weeks ago, I witnessed a water geyser coming out of a storm drain located on 53rd Street east of Harrison Hill elementary school. The storm drain is in the street in front of the old animal shelter and a property that I believe is still used to store City of Lawrence Public Works trucks. The solution to that geyser was putting a traffic cone next to it. Perhaps the problem has been fixed, but rain has been light since then and I cannot verify that.
- In general, maintenance of all water lines (sanitary sewer, storm sewer, and water service lines) has been neglected for many years. The mishandling of the Lawrence Water Utility management has caused financial problems for the city that residents will have to remedy by paying higher bills.
- Since I moved here in the 1980s, Lawrence government has shown a tendency toward short sighted planning. Contracts have been awarded to organizations who have reaped more financial reward than warranted based on the service they provide. The mismanagement of the Lawrence Water Utility was the most glaring example. I have no reason to believe that bike paths won't be installed without concern for the property on which they are installed or the effect on adjacent properties. Negative results will then become the problem of current and future residents.

I would also like to address the public interest survey methodology. The questions allowed limited response and did not provide any clues to the impact of the response. There was no indication that the cost for installing bike paths could impact tax dollars and/or the performance of other more vital city projects. At the public meetings it was suggested that the cost would be covered by a federal grant, then it turned out it would be funded by the City of Lawrence. Some of the people who answered "yes" to bike paths might not have done so if they realized it would impact their future tax payments and/or crucial city infrastructure project completion.

Finally, at the public meetings there were many indications that a bike path installed on Boy Scout Road would not be put there to serve the needs of residents of our street so much as to further the interests of businesses in the areas on 56th Street previously occupied by Fort Harrison operations, now being filled with restaurants. I had the impression that the hope is to encourage residents of Lake Charlevoix and other housing developments on Fall Creek Parkway to bike through my neighborhood to patronize those new businesses. There was also mention of luring residents of Fishers and other areas north to Lawrence to patronize the new businesses. Meanwhile the neighborhoods of old Lawrence (east of Post Road and south of 56th street) are neglected. The neighborhoods on Franklin Road between 56th and Pendleton Pike have lost Marsh and are no longer able to walk to buy groceries. I have seen people walk in the street because the sidewalks in those area are so broken down that several inches of water make them difficult to maneuver. Instead of trying to make Boy Scout Road some kind of public park for the surrounding areas, I would prefer to see money spent on the less wealthy, more vulnerable residents of the City of Lawrence.

Thank you for your consideration. I have attached a letter with attachments previously sent to the Mayor and other city representatives.

A handwritten signature in cursive script, appearing to read "Ellen McCain".

Ellen McCain
5805 Boy Scout Road
Lawrence, IN 46226

-----Original Message-----

From: Kat Thorson <aldau55@yahoo.com>

Sent: Wednesday, May 16, 2018 12:43 PM

To: Public Comment <publiccomment@cityoflawrence.org>

Subject: bike/pedestrian path specifically Lee Rd.

We live at 6471 Lee Rd and have for almost 32 years. We are excited about the bike/walk path, however, as with most things, the last we heard it will end at 63rd st. This gives access to the newest residents and we are once again the red headed step children of lawrence. By the time bureaucrats decide to actually do anything from 63rd North to Fall Creek, we will be too old to enjoy it!! Very disapointing and frustrating for those of us that have lived here the longest. Lee Rd past 63rd, the Trilobi neighborhood and points beyond would certainly enjoy a bike path as well. I have a fold up bike that have to DRIVE in my car to the fort to ride, as i am not going to ride on Fall Creek and/or Lee Rd into the Ft. We would love to be able to walk into the Ft for breakfast, to Triton, to the Farmers Markets etc, but as per usually, we have been forgotten.

My hope is that you find the extra money to extend the path to Fall Creek along Lee Rd. before I am in a wheelchair! Again very disapointing news for something we were soooo very excited about initially!

Thank you.

Kat Thorson

-----Original Message-----

From: Brian Hardman <briandhar@att.net>

Sent: Tuesday, May 08, 2018 9:43 AM

To: Public Comment <publiccomment@cityoflawrence.org>

Subject: bike - pedestrian master plan

I strongly agree that Lawrence needs to add sidewalks and bike lanes. After looking at the master plan, I have a question. Are the sidewalks to be added for a combination of pedestrian and bike use, or would separate bike lanes also be added?

Thanks,

Brian Hardman

Lawrence resident, cyclist and walker

Responses to Additional Public Comment

Following Draft Master Plan Presentation on April 12, 2018:

Questions related to the Bike and Pedestrian Master Plan have been answered below:

In Response to Mark Grosskopf:

Boy Scout Road was identified as a potential route in need of pedestrian infrastructure as it currently lacks any form of pedestrian facilities. The Boy Scout Road corridor borders the western pedestrian entrance to Fort Harrison State Park, but is inaccessible to pedestrians from Boy Scout Road to the south. Although identified as a location potentially worthy of a future project, there is no immediate plan that proposes advancing this improvement beyond the planning stage. If this potential project was selected for design the issue of storm water drainage along Boy Scout Road would be investigated further to identify the source of the problem and propose a solution. Neighborhood resident concerns over the presence of old-growth trees, landscaping features, limited right-of-way, and neighborhood perception have been identified and referenced within the Bike and Pedestrian Master Plan.

In Response to Ellen McCain:

Boy Scout Road was identified as a potential route in need of pedestrian infrastructure as it currently lacks any form of pedestrian facilities. The Boy Scout Road corridor borders the western pedestrian entrance to Fort Harrison State Park, but is inaccessible to pedestrians from Boy Scout Road to the south. Although identified as a location potentially worthy of a future project, there is no immediate plan that proposes advancing this improvement beyond the planning stage. The inclusion of pedestrian facilities in this location would serve the needs of the community as a vital connection. It is not the city's desire to target any particular neighborhood or street, but instead provide the greatest benefit of use to the greatest number of users. From the study's origin, a stated purpose for each of these proposed projects is to improve overall connectivity, not only for neighborhoods within Lawrence, but also for those wishing to visit Lawrence from nearby communities. The study itself was partially funded with federal dollars administered through the local metropolitan planning organization. Confusion between the source of funding for the study and future funding for any of the proposed projects was not intended.

In Response to Kat Thorson:

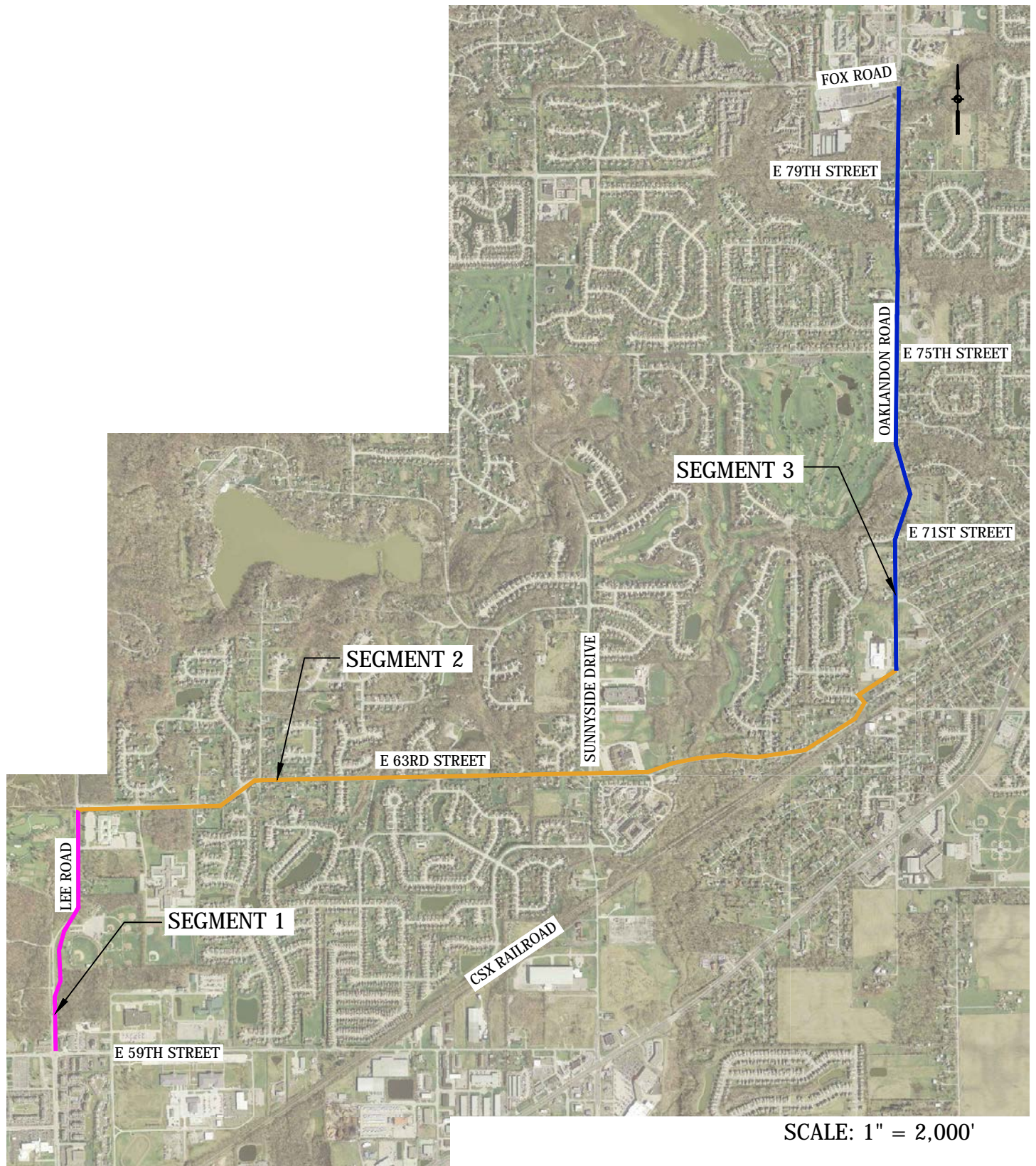
The extension of the proposed Lee Road path, from East 59th Street to East 63rd Street, north to East 71st Street, would provide an important connection for the residents living north of 63rd Street as well for the communities north of Lawrence. Providing this access to the existing Fall Creek Trail would also enhance regional connectivity and inclusiveness. It is desired to extend the path north to East 71st Street to link with the Fall Creek Trail, but at this time, extending the proposed multi-use trail east down 63rd Street to Oaklandon Road, and following Oaklandon Road north would serve the widest range of needs in the community while also providing benefit to the greatest number of residents.

In Response to Brian Hardman:

At this time, the Bike and Pedestrian Master Plan has identified 20 segments in need of some form of pedestrian infrastructure improvements. The preferred recommendation of sidewalks, bike lanes, and multi-use paths at each potential project location has not yet been decided. Due to unique challenges posed at each site, the exact treatment option will be decided during the design phase of each segment. It is anticipated that the infrastructure improvement to be installed will be for use by pedestrians and cyclists alike.

APPENDIX E

ENGINEER'S REPORT



1625 N. Post Road
 Indianapolis, Indiana 46219
 Phone (317) 895-2585
 Fax (317) 895-2596 www.ucindy.com

City of Lawrence
 Proposed Bike & Pedestrian Trails

PROJECT LOCATION MAP

City of Lawrence Pedestrian and Bicycle Path Engineer's Report

GENERAL:

The City of Lawrence has developed a Bicycle and Pedestrian Master Plan with the goal to create a network of paths throughout Lawrence providing connectivity, mobility, and safety to residents in and outside of the City limits. The larger mission is to connect metro Indianapolis, foster interest in downtown Lawrence, and promote healthier lifestyles through exercise. A Pedestrian and Bicycle Master Plan was conducted to determine the most suitable locations for pedestrian improvements accounting for: resident input; geographic feasibility; proximity to existing facilities; connectivity; safety needs; and more. This Engineer's Report addresses three of the top ranked segments. These three segments have been identified as providing the greatest match to the stipulated goals of the Master Plan. Segment 1 is Lee Road from East 59th Street to East 63rd Street, Segment 2 is East 63rd Street from Lee Road to Oaklandon Road, and Segment 3 is Oaklandon Road from East 63rd Street (Verdin Street) to Fox Road. The City of Indianapolis is currently planning an intersection improvement project at Fox Road and Oaklandon Road. This Engineer's Report has taken the separate improvement plan into consideration when outlining the work required for the proposed trail construction.

The proposed projects include 25,245 feet (4.78 miles) of bike and pedestrian paths along Lee Road, East 63rd Street, and Oaklandon Road. These projects also address gaps in existing sidewalk facilities for a total of 4,360 feet of new sidewalk, as well as installing ADA compliant ramps, pedestrian signals, additional signs, bridges and extending culverts when necessary. Refer to the enclosed Project Area Map for an overall view of the project areas.

Three bridge structures are discussed including East 63rd Street over Indian Creek, Oaklandon Road over India Branch, and Oaklandon Road over Dry Branch. Communication and coordination with Indianapolis DPW is needed to ensure future thoroughfare plans are taken into account and all required permits are obtained prior to construction adjacent to Indianapolis DPW owned structures.

These three segments match the goals and criteria of the Pedestrian and Bicycle Master Plan for recreational facilities in addition to providing connectivity between the Fort, local schools, churches, neighborhoods, and shopping districts. Design will be based on the Indiana Design Manual, the AASHTO Bicycle Facilities Guide, PROWAG standards, and City of Lawrence standards.

The City of Lawrence will provide 100% of the funding and the enclosed project budget reflects this. If federal funding will be pursued, additional costs will be necessary and this report and associated costs will require updating to account for additional services.

TOPOGRAPHIC SURVEY:

A topographic survey will be required for design purposes. The survey will include identification of property owners, existing right of way, existing utilities, drainage structures, topographic features, and establishment of survey control points. The following survey limits are proposed for each segment:

City of Lawrence
Pedestrian and Bicycle Path Engineer's Report

Alignment	Total Length
Lee Road	3,875 feet (0.73 mile)
East 63rd Street	12,850 feet (2.43 miles)
Oaklandon Road	9,050 feet (1.71 miles)
Breckenridge Drive/East 71 st Street	900 feet (0.17 mile)

Total Survey Length = 26,675 feet (5.05 miles)

GEOTECHNICAL EVALUATION:

Segment 1 – Lee Road

A geotechnical investigation will be required to determine suitability of in-situ soils within the project limits. The data collected through soil borings will evaluate the existing conditions in relation to drainage design, earthwork considerations, and subgrade treatment design.

Segment 2 – East 63rd Street

A geotechnical investigation will be required to determine suitability of in-situ soils within the project limits. The data collected through soil borings will evaluate the existing conditions in relation to drainage design, earthwork considerations, subgrade treatment and bridge foundation design.

Segment 3 – Oaklandon Road

A geotechnical investigation will be required to determine suitability of in-situ soils within the project limits. The data collected through soil borings will evaluate the existing conditions in relation to drainage design, earthwork considerations, subgrade treatment and bridge foundation design.

Formal geotechnical reports with recommendations will be included with the soil borings.

ENVIRONMENTAL FACTORS:

Segment 1 – Lee Road

Wetland and stream impacts – Drainage in the project area is directed by the natural topography of the landscape and is generally conveyed toward Fall Creek. This segment crosses two Unnamed Tributaries (UNT'S) to Fall Creek. Refer to enclosed project plan views for each stream location. The National Wetlands Inventory (NWI) map was reviewed for the presence of potential wetlands in the project area. No mapped NWI wetlands are located within or adjacent to the project area according to the McCordsville, IN Quadrangle NWI. A "Waters of the U.S. Report" will be completed to verify the accuracy of the NWI map.

Archaeological – The proposed project will result in the acquisition of undisturbed right-of-way. This project is locally funded. As a result, an Archaeological Records Review and Phase Ia Archaeological Survey will not be required to identify potentially significant cultural resources within the proposed project limits.

Historical – The surrounding land use on Lee Road consists of private single-family residences, a private veteran organization, golf course, State owned park, and City owned properties including a baseball field park, fire station, and elementary school. A cursory overview of the

City of Lawrence

Pedestrian and Bicycle Path Engineer's Report

project area was performed to determine the location of known historic resources. The Indiana Historic Sites and Structures Inventory was reviewed to determine the location of known historic resources or historic districts. No known historic properties are located within the general vicinity of the project.

Hazardous Materials – A recognized environmental condition (REC) is the presence or likely presence of any hazardous substance or petroleum product on a property or facility. A Red Flag Survey was conducted using the Indiana Geological Survey GIS. The Red Flag Survey revealed no hazardous material sites near the project limits.

IDEM 401 – This segment will require Section 401 Water Quality Certification from the Indiana Department of Environmental Management if construction extends below the ordinary high water mark of UNT to Fall Creek.

Army Corps 404 – This segment will require a Section 404 permit from the Louisville District, U.S. Army Corps of Engineers if construction extends below the ordinary high water mark of UNT to Fall Creek.

Rule 5 Permit – A Rule 5 Permit would be required for construction activities involving the disturbance of greater than one acre of land. During the development of the design for the proposed project, approval of erosion control techniques should be sought from the Marion County Soil and Water Conservation District.

Segment 2 – East 63rd Street

Wetland and stream impacts – Drainage in the project area is directed by the natural topography of the landscape and is generally conveyed toward Indian Creek. This segment crosses Indian Creek and three Unnamed Tributaries (UNT'S) to Indian Creek. Refer to enclosed project plan views for each stream location. The National Wetlands Inventory (NWI) map was reviewed for the presence of potential wetlands in the project area. No mapped NWI wetlands are located within or adjacent to the project area according to the McCordsville, IN Quadrangle NWI. A "Waters of the U.S. Report" will be completed to verify the accuracy of the NWI map.

Archaeological – The proposed project will result in the acquisition of undisturbed right-of-way. This project is locally funded. As a result, an Archaeological Records Review and Phase Ia Archaeological Survey will not be required to identify potentially significant cultural resources within the proposed project limits.

Historical – Land use along East 63rd Street is primarily single family homes. A cursory overview of the project area was performed to determine the location of known historic resources. The Indiana Historic Sites and Structures Inventory was reviewed to determine the location of known historic resources or historic districts. No known historic properties are located in the general vicinity of the project.

Hazardous Materials – A recognized environmental condition (REC) is the presence or likely presence of any hazardous substance or petroleum product on a property or facility. A Red Flag Survey was conducted using the Indiana Geological Survey GIS. The Red Flag Survey revealed no hazardous material sites near the project limits.

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IDEM 401 – This segment will require Section 401 Water Quality Certification from the Indiana Department of Environmental Management if construction extends below the ordinary high water mark of Indian Creek and the three UNT's to Indian Creek.

Army Corps 404 – This segment will require a Section 404 permit from the Louisville District, U.S. Army Corps of Engineers if construction extends below the ordinary high water mark of Indian Creek and the three UNT's to Indian Creek.

Construction in a Floodway Permit – A Construction in a Floodway Permit will be required from the Indiana Department of Natural Resources for Indian Creek. No detailed hydraulic analysis will be completed for the bridge. A non-modeling worksheet will be used to verify the waterway opening.

Rule 5 Permit – A Rule 5 Permit would be required for construction activities involving the disturbance of greater than one acre of land. During the development of the design for the proposed project, approval of erosion control techniques should be sought from the Marion County Soil and Water Conservation District.

Segment 3 – Oaklandon Road

Wetland and stream impacts – Drainage in the project area is directed by the natural topography of the landscape and is generally conveyed toward India Branch and Dry Branch. This segment crosses India Branch, Dry Branch, and Middle Fork Dry Branch. Refer to enclosed project plan views for each stream location. The National Wetlands Inventory (NWI) map was reviewed for the presence of potential wetlands in the project area. No mapped NWI wetlands are located within or adjacent to the project area according to the McCordsville, IN Quadrangle NWI. A "Waters of the U.S. Report" will be completed to verify the accuracy of the NWI map.

Archaeological – The proposed project will result in the acquisition of undisturbed right-of-way. This project is locally funded. As a result, an Archaeological Records Review and Phase Ia Archaeological Survey will not be required to identify potentially significant cultural resources within the proposed project limits.

Historical – A cursory overview of the project area was performed to determine the location of known historic resources. The *Indiana Historic Sites and Structures Inventory* was reviewed to determine the location of known historic resources or historic districts. No known historic properties are located in the general vicinity of the project.

Cemetery – Oaklandon Cemetery is located near the proposed project. State law (IC 14-21-1-26.5) requires that any person planning to disturb the ground within 100 feet of a burial ground or cemetery for the purpose of erecting, altering, or repairing a structure must submit a development plan that requires approval from the Mayor of the City of Lawrence.

Hazardous Materials – A recognized environmental condition (REC) is the presence or likely presence of any hazardous substance or petroleum product on a property or facility. A Red Flag Survey was conducted using the Indiana Geological Survey GIS. The Red Flag Survey revealed one hazardous material site (Leaking Underground Storage Tank) located in the northwest quadrant of Oaklandon Road and Fox Road. Construction of this project is not likely to affect this site.

City of Lawrence

Pedestrian and Bicycle Path Engineer's Report

IDEM 401 – This segment will require Section 401 Water Quality Certification from the Indiana Department of Environmental Management if construction extends below the ordinary high water mark of India Branch, Dry Branch, or Middle Fork Dry Branch.

Army Corps 404 – This segment will require a Section 404 permit from the Louisville District, U.S. Army Corps of Engineers if construction extends below the ordinary high water mark of India Branch, Dry Branch or UNT to Dry Branch.

Construction in a Floodway Permit – A Construction in a Floodway Permit will be required for India Branch, Dry Branch, and Middle Fork Dry Branch from the Indiana Department of Natural Resources for this segment. No detailed hydraulic analyses will be completed for the Indian Branch and Dry Branch bridges. Non-modeling worksheets will be used to verify the waterway openings. The Middle Fork Dry Branch small structure is expected to require an HY8 model.

Rule 5 Permit – A Rule 5 Permit would be required for construction activities involving the disturbance of greater than one acre of land. During the development of the design for the proposed project, approval of erosion control techniques should be sought from the Marion County Soil and Water Conservation District.

Asbestos – Indiana Air Rule (326 IAC 14-2-1 and 14-10) and U.S. Environmental Protection Agency (EPA), National Emission Standard for Hazardous Air Pollutants (NESHAP 40 CFR 61 Subpart M) states that structures being demolished or renovated must be inspected for the presence of friable and non-friable forms of asbestos prior to construction activities. As a result, the bridge over India Creek must be inspected for the presence of asbestos containing materials prior to the renovation. The contractor will be required to file a notice of demolition or renovation with the Indiana Department of Environmental Management.

EXISTING FACILITY:

Segment 1 – Lee Road

Lee Road is an urban two lane road with 12 foot lanes and narrow shoulders. It is classified as a major collector as listed in the INDOT Functional Classification Map. The segment extends between East 59th Street and East 63rd Street and is controlled at each end with signalized devices. An existing 10 foot wide path is located on the west side of Lee Road terminating 912 feet north of East 59th Street, but continuing as a dirt trail for an additional 614 feet. An existing sidewalk is located on the east side of the road and terminates 905 feet north of East 59th Street. There is no other pedestrian or bike path provided for the remainder of the segment. Lee Road is signed 35 mph. School zone speed limits are 25 mph when active.

Segment 2 – East 63rd Street

East 63rd Street is an urban two lane road with 12 foot lanes and narrow shoulders with intermittent curb and gutter. It is classified as a major collector as listed in the INDOT Functional Classification Map. This segment begins at the intersection with Lee Road and continues to Oaklandon Road. Several residential developments are present along this corridor with patches of sidewalk present to serve each subdivision. CSX owned railroad tracks are adjacent to the south side of the roadway from Smith Road to Breckenridge Drive. Sunnyside Elementary School is located on the northeast quadrant of the Sunnyside Road and East 63rd Street intersection. The posted speed limit on East 63rd Street is 35 mph and 25 mph in school zones during designated hours. There is a four-way stop at Winona Drive and Oaklandon Road, and

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Pedestrian and Bicycle Path Engineer's Report

signalized intersections at Lee Road and Sunnyside Road. These intersections will require upgrades to accommodate pedestrian crossings including ADA compliant pedestrian signals and push-buttons plus ADA compliant curb ramps and appropriate striping.

Segment 3 – Oaklandon Road

Oaklandon Road is an urban two lane road with 12 foot lanes and narrow shoulders with intermittent curb and gutter. It is classified as a major collector as listed in the INDOT Functional Classification Map. This segment begins at East 63rd Street/Verdin Road and ends at Fox Road. The posted speed limit is 25 mph during designated periods in school zones and 35 mph otherwise to East 75th Street. The posted speed limit is 40 mph from East 75th Street to Fox Road and 25 mph in school zones during designated hours. There is a small portion of existing sidewalk along Oaklandon Road, but for the most part sidewalk facilities are absent. A private cemetery is located along Oaklandon Road at the northeast corner of East 71st Street. A golf course is located along the west side of Oaklandon Road between Breckenridge Drive and East 75th Street. There is a 4-way stop at Oaklandon Road and East 75th Street and a 3-way stop at East 79th Street and Oaklandon Road and at Fox Road and Oaklandon Road.

EXISTING DRAINAGE:

Segment 1 – Lee Road

Drainage throughout the project limits is collected through roadside ditches or swales. Existing storm drainage patterns will be maintained. There is an existing unmapped wetland, wildlife type area adjacent to Lee Road north of East 59th Street. It is not shown as an official wetland according to the National Wetland Inventory, but is signed as "Do not mow". Storm structures along Lee Road consist of a pipe culvert over Fort Branch and shallow undeveloped roadside swales.

Preliminary study of the area using StreamStats reveals the drainage area and estimated peak flow for each structure. The drainage area for Fort Branch is approximate 0.57 square miles.

Segment 2 – East 63rd Street

East 63rd Street spans Indian Creek with an 135-foot three-span bridge and additionally crosses multiple ditches. These existing structures will require a thorough engineering assessment to determine what action will be the most appropriate considering adequate space is not currently available to accommodate the proposed bike and pedestrian path.

Preliminary study of the area using StreamStats reveals the drainage area and estimated peak flow for each structure. The drainage area for Indian Creek is approximate 20 square miles.

Segment 3 – Oaklandon Road

Oaklandon Road spans the Dry Branch, India Branch and Middle Fork Dry Branch. All three structures will require analysis regarding the need for widening to provide room for the proposed path. Dry Branch and India Branch structures will be designed as bridges. The culvert spanning Middle Fork Dry Branch is a small structure and will not require a hydraulic analysis.

Preliminary study of the area using StreamStats reveals the drainage area and estimated peak flow for each structure. The drainage area for India Branch is approximate 2.74 square miles.

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The Dry Branch drainage area is approximately 5 square miles. Middle Fork Dry Branch has a drainage basin size of 1.75 square miles.

UTILITIES:

Overhead utilities are located along both sides of Lee Road, East 63rd Street, and Oaklondon Road. Where possible, the pedestrian facilities will be rerouted to avoid significant above-ground utilities. Because no significant excavation will take place, excluding any necessary bridge, pipe or drainage structure work, no substantial utility relocation should be required to accommodate the proposed pedestrian path and roadside ditches. Timely coordination with all utility companies in the project area is essential to maintain an efficient and properly budgeted schedule. The proposed detailed topographic survey will help determine the location and type of all above-ground utilities. Coordination with the City is essential to ensure no utilities or maintenance requirements are compromised in the construction of each segment.

A cursory review of area utilities has been conducted to provide a conservative estimate for any necessary utility coordination. The proposed fees are presented with the stipulation that locate tickets and topographic survey are necessary to determine exact locations of all present facilities and all estimates assume work will be non-reimbursable.

Segment 1 – Lee Road

There is an electrical cabinet on the east side of Lee Road north of Lawrence Fire Station 40 and south of Forest Glen Elementary. Buried fiber optic or high pressure gas are also present along Lee Road. A water line travels along Lee Road and hydrants are present on both sides of the road.

Segment 2 – East 63rd Street

Communication lines are also present and additional information about existing underground fiber optics or gas lines will be gathered during the utility coordination phase and displayed on the topographic survey. Any utilities located within the vicinity of any proposed bridge work will be identified in the topographic survey and coordinated with the owners to prevent project delays or complications.

Segment 3 – Oaklondon Road

A lift station is located at the northeast corner of Oaklondon Road and East 71st Street. Water lines are presents and hydrants are located along both sides of the road. Communication lines are also present and additional information about existing underground fiber optics or gas lines will be gathered during the utility coordination phase and displayed on the topographic survey. Any utilities located within the vicinity of any proposed bridge work will be identified in the topographic survey and coordinated with the owners to prevent project delays or complications.

PROPOSED FACILITY:

Design will be based on the Indiana Design Manual, the AASHTO Bicycle Facilities Guide, PROWAG standards, and City of Lawrence standards. The roadway sections along Lee Road, East 63rd Street and Oaklondon Road will remain the same as no road work is proposed as part of these improvements. Existing sidewalk will be demolished where necessary to make way for the proposed 10 foot trail. Where existing sidewalk is to remain, gaps will be closed to provide needed connectivity to neighborhoods and crosswalks. A variable 15 foot buffer strip will be

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constructed to provide appropriate separation from motorists and to accommodate a proposed roadside ditch between the existing roadway and the proposed trail.

Segment 1 – Lee Road

No new sidewalk is proposed along Lee Road. The existing 905 feet of sidewalk will be removed and replaced with the proposed asphalt trail. The existing trail located on the west side of Lee Road from East 59th Street will remain in place. Existing gravel driveways along the path of the proposed trail or sidewalks will be paved back to the right of way limits. A planned pedestrian crossing on the south leg of Lee Road at East 63rd Street will require installation of pedestrian signals and potential modification to the existing signal timing. This crossing will connect the proposed pedestrian and bicycle path to the existing paths within Fort Harrison State Park.

A planned pedestrian crossing on the west leg and north leg at East 63rd Street and Sunnyside Road will require installation of pedestrian signals and potential modification to the existing signal timing. A traffic study will be needed at all pedestrian crossings to determine the appropriate modifications to existing signal cycles and signs. A comprehensive evaluation of existing signs and signals will be necessary to ensure full compliance with the Indiana Manual of Uniform Traffic Control Devices (IMUTCD). Due to potential difficulty getting buy-in from the State Park, the connection across Lee Road to the Fort Harrison State Park trails can be removed and added at a later date; if desired. Postponing this work would also save the cost of signal upgrades and a traffic study.

Segment 2 – East 63rd Street

The proposed path from Lee Road connects to the proposed East 63rd Street path at the southeast corner of Lee Road and East 63rd Street and continues east on the south side of East 63rd Street. Existing sidewalk along the north side of East 63rd Street will be connected with new sidewalk between Harrison Ridge Drive and Finch Drive. Existing sidewalk on the south side of the road will be removed between Pleasant Woods Lane and Tennison Way and replaced by the proposed pedestrian and bike trail. Installation of ADA compliant pedestrian curb ramps at the existing four-way stop at Winona Drive will allow pedestrians to safely cross the road, allow easy access to the trail and provide a safe route to school for children. Existing gravel driveways along the path of the proposed trail or sidewalks will be paved back to the right of way limits. The plan will shift the proposed trail to the north side of the road at Sunnyside Road providing connection to the existing northbound sidewalk. The current plan proposes diverging from East 63rd Street at Breckenridge Drive and running adjacent to the existing utility easement and Oaklandon Elementary School to its end at Oaklandon Road.

East 63rd Street over Indian Creek (Bridge #1)

The existing 135 foot long, three-span (43'-6", 45'-0", 43'-6") concrete I-Beam bridge carries East 63rd Street over Indian Creek will remain in place. A continuous, pre-stressed concrete box beam bridge with a span of 145 feet (50 feet, 45 feet, 50 feet) will be constructed adjacent to the east coping of the existing bridge, separated by an open joint. A 13 foot wide, composite concrete deck, with a 12 foot clear pathway for pedestrians will be constructed on the box beams. The substructure will consist of concrete caps on piles at the end bents and concrete wall piers on piles. The proposed superstructure is anticipated to consist of three adjacent box beams with a composite concrete deck. Pedestrian-height, steel handrail will be installed on

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both copings. The proposed end bents for the pedestrian bridge will be located in the ineffective flow area. The grade of the pedestrian trail will be set to maintain the existing low structure elevation of the roadway bridge. Modular block walls will be installed along the embankment approaches to provide slope support within the restricted right of way conditions.

Segment 3 – Oaklandon Road

Segment 3 begins where segment 2 ends at Oaklandon Elementary School. Pedestrian crossings have been planned to maximize service and connectivity to as many neighborhoods as possible while giving consideration to surrounding significant or sensitive parcels. Existing gravel driveways along the path of the proposed trail or sidewalks will be paved back to the right of way limits. The proposed segment is planned to end south of the Fox Road intersection due to a scheduled intersection update managed by the City of Indianapolis. This City of Indianapolis project will upgrade the traffic control to a 4-way signalized intersection with signaled pedestrian crossings on all four sides and updated ADA compliant curb ramps. Further coordination with the City of Indianapolis will be necessary.

A mid-block crossing is planned at Old Orchard Drive to provide connectivity to the Oaklandon Northeast development; at East 71st Street to avoid a cemetery; and at Laurel Oaks Drive to provide connectivity to multiple developments east of Oaklandon Road. A three-span bridge is located between East 75th Street and Camfield Drive crossing Dry Branch. The existing bridge does have a concrete sidewalk on the west side of the bridge deck, but this does not provide enough space to accommodate the proposed 10 foot trail on the east side of the deck. Therefore, widening will be required to provide the necessary space for the proposed path. A bridge structure spans India Branch on Oaklandon Road. This bridge will be lengthened to provide adequate spacing for pedestrian and vehicular traffic including the proposed five foot sidewalk and ten foot trail.

Oaklandon Road over India Branch (Bridge #2)

The headwalls and wing walls of the existing bridge carrying Oaklandon Road over India Branch will be removed to install extensions at both ends. The existing bridge will be extended 10 feet to the east to accommodate a new 5 foot sidewalk, and 15 feet to the west to accommodate a new 12 foot pedestrian path. New headwalls and wing-walls will be constructed at the ends of the widening on each side. Pedestrian-height, steel handrail will be installed along both headwalls. The proposed waterway opening will be maintained.

Oaklandon Road over Dry Branch (Bridge #3)

The existing 72 foot long, three-span (22 feet, 28 feet, 22 feet) concrete slab bridge carrying Oaklandon Road over Dry Branch will remain in place. A 13 foot wide, continuous reinforced concrete slab structure with an 84 foot span (3 at 28 feet each) and 12 foot clear pathway will be constructed for pedestrians on the east side of the existing bridge. The two structures will be separated by a 1 inch open joint. The proposed structure consists of a 16 inch thick continuous reinforced concrete slab superstructure with integral bent caps on piles. Pedestrian-height, steel handrail will be installed on both copings. The proposed end bents for the pedestrian bridge will be located in the ineffective flow area. The grade of the pedestrian trail will be set to maintain the existing low structure elevation of the roadway bridge. Modular block walls will be installed along the embankment approaches to provide slope support within the restricted right of way conditions.

PROPOSED DRAINAGE:

No significant impacts to existing drainage patterns are planned. Roadway sections will remain the same and roadside ditches will be installed where necessary to allow for runoff from the new trail. Drainage for the segments primarily consists of roadside swales with culverts running under the proposed trails to connect the various drainage flow paths and direct the storm water runoff to nearby streams and creeks. Existing drive culverts, and roadside ditches will be replaced in-kind. No detention is planned for any of the three proposed segments. Detention is therefore not included in any of the estimates, fees, or schedules provided herein.

Where construction is planned at small structures, further investigation will be required to determine what impacts on local drainage there will be. The following table lists the five small structures included in this study. The structures will be evaluated in accordance with City of Lawrence capacity and serviceability standards.

Structure # (Segment #)	Proposed Work
Small Structure #1 (Segment 1)	Extend Culvert
Small Structure #2 (Segment 2)	Extend Culvert
Small Structure #3 (Segment 2)	Relocate Earth Inlet and Realign Pipe
Small Structure #4 (Segment 2)	Extend Culvert
Small Structure #5 (Segment 3)	Extend Culvert

Segment 1 – Lee Road

Small Structure #1 on Lee Road covers the Fort Branch. The structure will require extension on the east side to accommodate the new 10 foot trail. According to FEMA published flood zone maps, this portion of Fort Branch does not have a studied floodway or 1% flood zone, but does have a 2% flood plain. An HY8 analysis will be performed to evaluate the effects of lengthening the structure.

Segment 2 – East 63rd Street

Small Structures #2 and #4 cover unnamed drainage ditches. Both structures will require extension to provide adequate space for the proposed 10 foot trail. An HY8 analysis will be performed to evaluate the effects of lengthening both structures. Small structure #3 consists of a crossing culvert connected to a storm sewer system that appears to connect two subdivision drainage systems. This storm sewer connection will require adjustment to accommodate the new trail.

Segment 3 – Oaklandon Road

Small Structure #5 over Middle Fork Dry Branch will require extension to the east to accommodate the new trail. An HY8 analysis will be performed to evaluate the effects of lengthening the structure.

MAINTENANCE OF TRAFFIC:

All roads will remain open during construction. Intermittent lane closures will be necessary to maintain adequately safe distance between motorists and construction activities, and for equipment staging. Bridge construction along East 63rd Street and Oaklandon Road may require

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additional maintenance of traffic plans to safely route motorists around construction activities. Where existing pedestrian facilities exist within the project limits a pedestrian maintenance of traffic plan will be required.

LIGHTING:

Following discussion with Bill Anthony with the City of Lawrence on June 7, 2018, lighting will be placed at locations where the proposed path crosses street approaches. At street crossings, lighting will be designed in accordance with the Illuminating Engineering Society's Lighting Handbook, specifically Figure 22-10 for sidewalks in intermediate areas. Lighting levels will be designed for an average of 0.6 footcandles and an average to minimum uniformity ratio of 6:1. Lighting will not be decorative but will be typical roadway type cobra-head lighting. Specifically, the following crossings will be illuminated:

Segment 1 – Lee Road

Lee Road Park, Forest Glenn Elementary School, and 63rd Street.

Segment 2 – East 63rd Street

Fall Creek Valley Middle School (2 approaches), Fountain Springs Boulevard/Twyckenham Drive, Winona Drive, Linkwood Circle, Tennison Way, Sunnyside Road, Royal Oakland Drive, Smith Road, and Breckenridge Drive.

Segment 3 – Oaklandon Road

Oaklandon Elementary School (2 approaches), Old Orchard Drive, Cable Drive, 71st Street/Breckenridge Drive, Laurel Oaks Drive, Golf Course Drive, 75th Street, Camfield Drive, and 79th Street.

LANDSCAPING:

Existing landscape features will be maintained where feasible, and no additional plantings will be added.

LAND ACQUISITION:

It is the intent of the design to limit the acquisition of land. Refer to the project plan maps for potentially impacted parcels. Parcel lines were taken from the Indiana University maintained Indiana Spatial Data Portal. Approximately 118 parcels may be impacted by the construction of all three segments. Items considered in the process of land acquisition are title research, right-of-way engineering, appraisals, second appraisals, and negotiations and buying with the property owner. Estimated land acquisition costs have been included in the project budget, but note these are exclusive of condemnation proceedings.

BIDDING:

Bidding services will be required. These include preparation of a contract booklet, coordinating the advertisement and issuance of plans and responding to questions during the bidding timeframe. It also includes issuing addendums, reviewing the bids and making a formal recommendation of the lowest responsible bidder. A pre-bid meeting is not anticipated for any of the segments in this project.

POST-BID DESIGN SERVICES:

Post-bid design services include work performed during construction following the bid. This work includes attending the pre-construction conference, attendance of up to 2 general meetings and 1 meeting for each bridge structure. Post-bid services also include responding to contractor questions and unforeseen conditions. Review of shop drawings for each bridge, the retaining walls, the small structures, the lighting equipment, and the signal equipment is included as well.

PROJECT SCHEDULES:

The schedules included herein are provided exclusively to show the duration to develop and bid each project segment. They all show starting in August of 2018. These schedules will be revised to reflect the order, individual Notices to Proceed, and bid dates based on Client funding and preferences. Regardless of the order of construction or bid date, the critical path will be land acquisition for all three segments. Please note these schedules are exclusive of condemnation proceedings. These schedules account for locally funded projects only. Federally funded projects will require substantially longer development schedules.

Segment 1 – Lee Road

Right of way acquisition and utility coordination will drive the schedule for this segment. The design of Segment 1 can be completed in 16 months following the issue of notice to proceed from the City.

Segment 2 – East 63rd Street

Bridge work is proposed along East 63rd Street at Indian Creek. Segment 2 is the longest of the three segments and will require the most land acquisition and most lead time to finish this task. Right of way acquisition, bridge work, and utility coordination will drive the schedule for this segment. Construction of Segment 2 will begin 25 months after the City issues a notice to proceed.

Segment 3 – Oaklandon Road

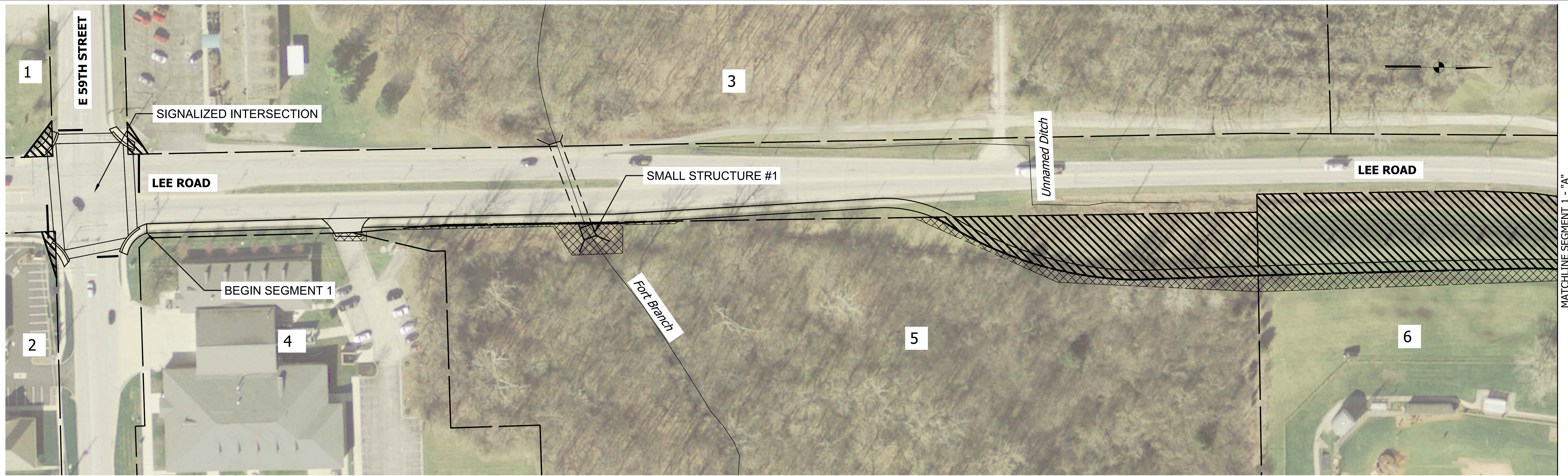
Bridge work is proposed along Oaklandon Road at Dry Branch and at India Branch. Right of way acquisition, bridge work, and utility coordination will drive the schedule for this segment. Construction of Segment 3 can start 19 months after notice of proceed orders are issued by the City.

PROJECT BUDGETS:

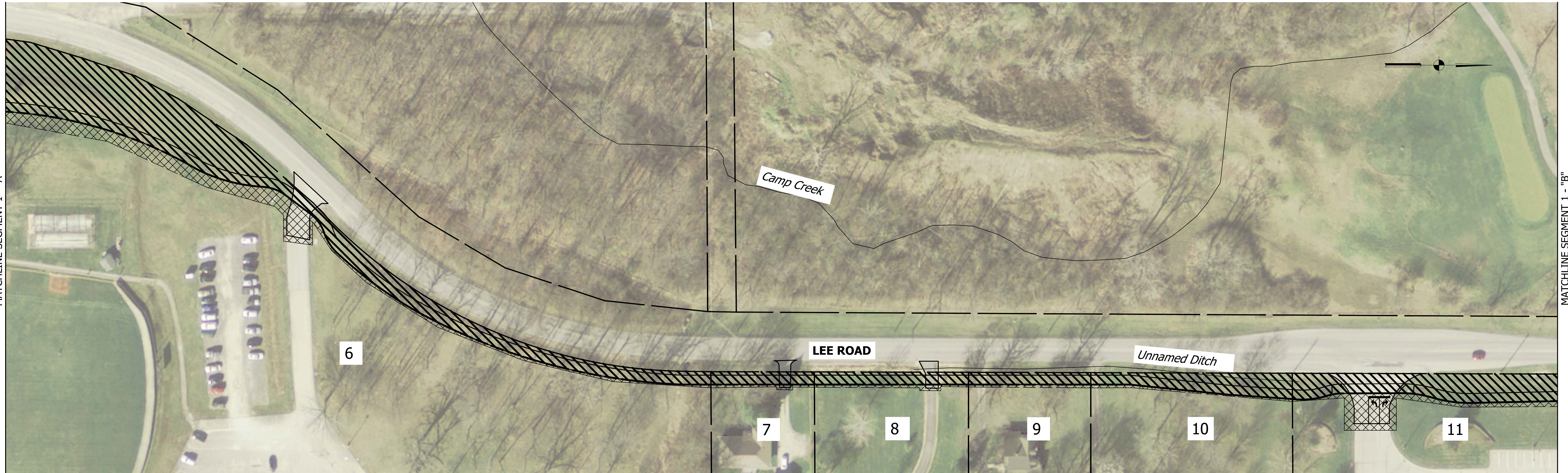
A detailed project cost estimate for each segment, including an Engineering Cost Summary and Construction Cost Summary, is tabulated based on our experience and current cost information. Project schedules are not tied to a specific letting date in this initial planning stage, but 2020 is used as the earliest possible construction year to account for inflation of 3% per year.

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MATCHLINE SEGMENT 1 - "A"



MATCHLINE SEGMENT 1 - "A"



MATCHLINE SEGMENT 1 - "B"



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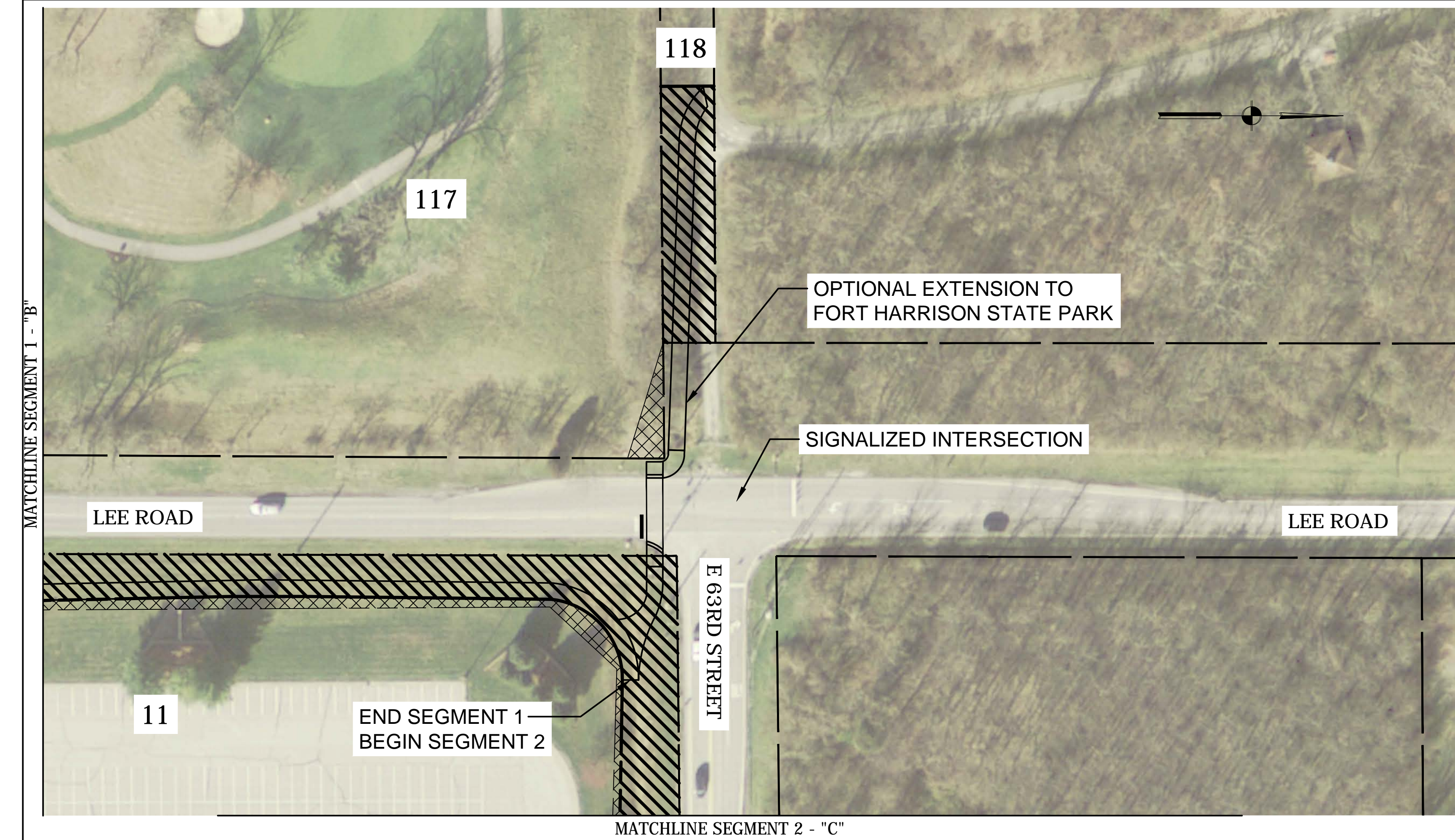
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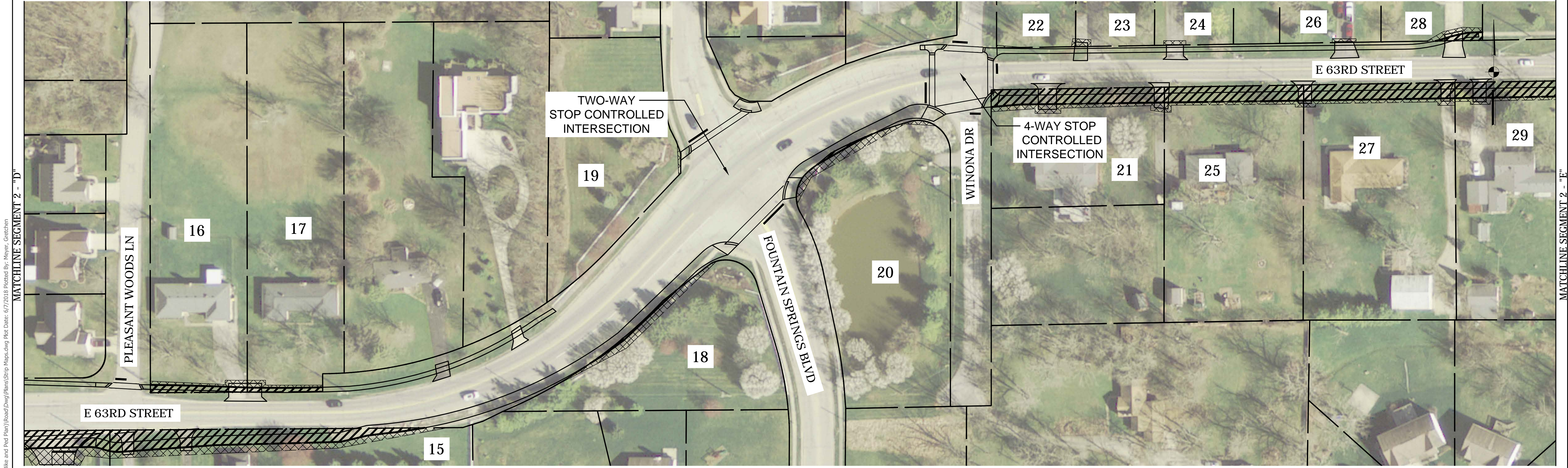
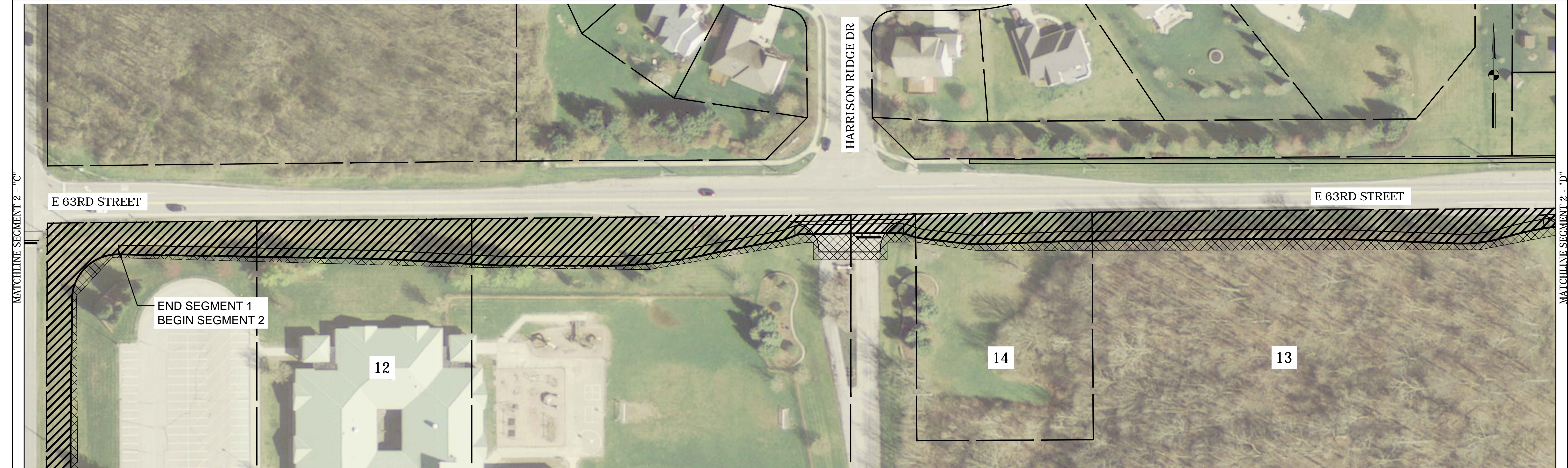
BIKE & PEDESTRIAN TRAIL - SEGMENT 1


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SURVEY BOOK #		SHEETS 1 of 11	
CONTRACT #		PROJECT 17-702	

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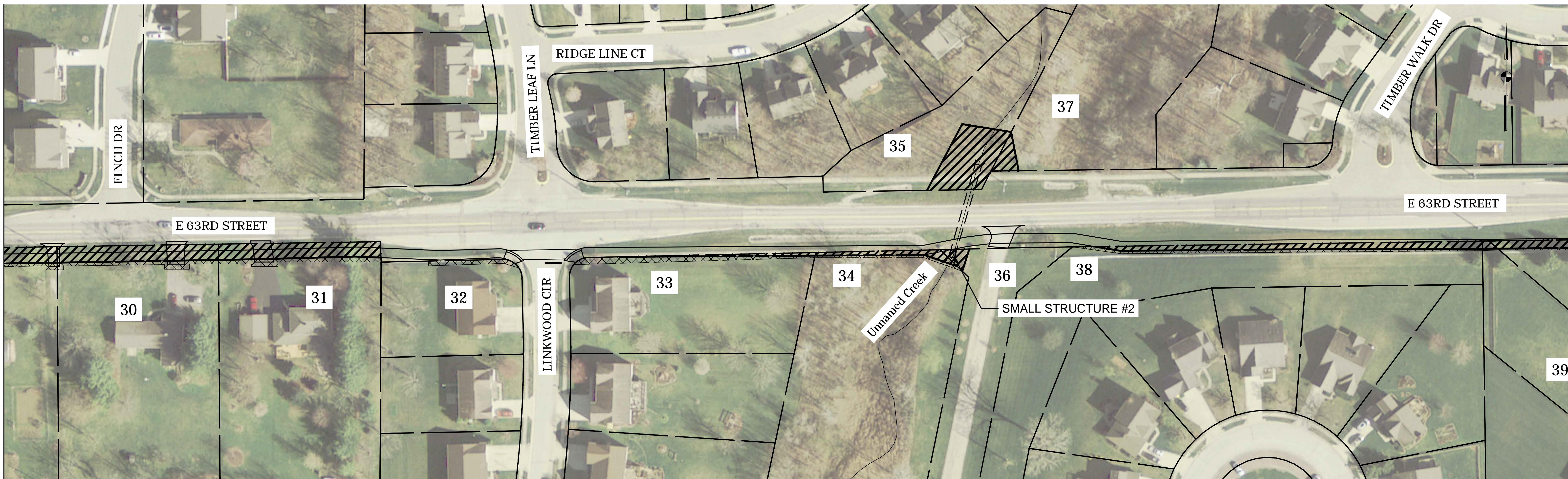


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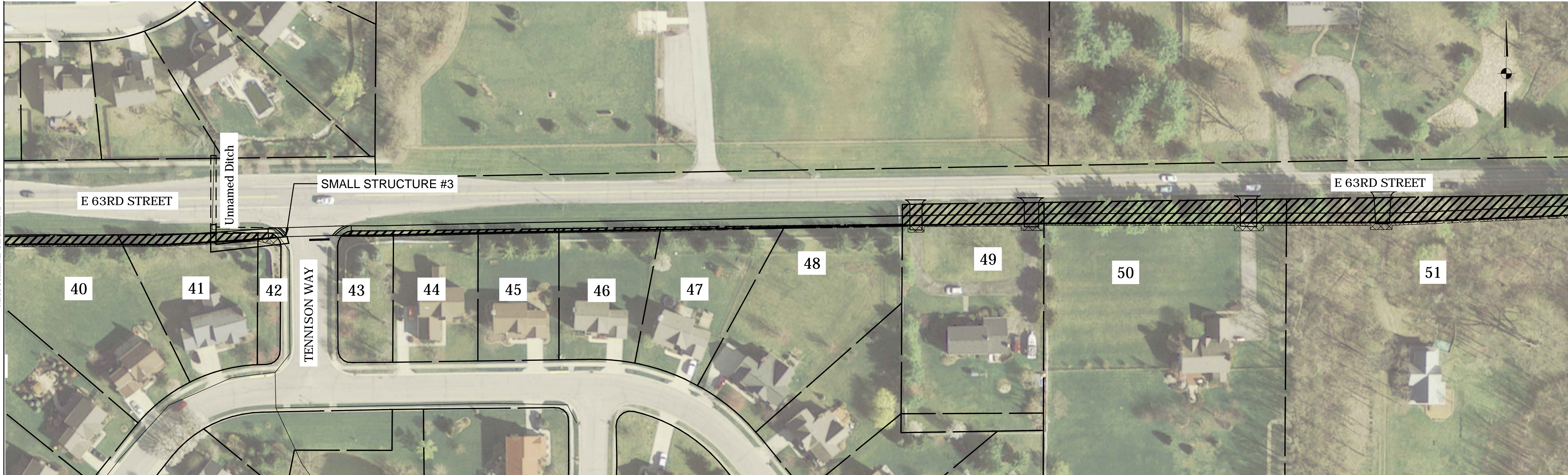
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MATCHLINE SEGMENT 2 - "F"



MATCHLINE SEGMENT 2 - "F"



MATCHLINE SEGMENT 2 - "G"



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BIKE & PEDESTRIAN TRAIL - SEGMENT 2

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SURVEY BOOK #	SHEETS 4 of 11		
CONTRACT #	PROJECT 17-702		

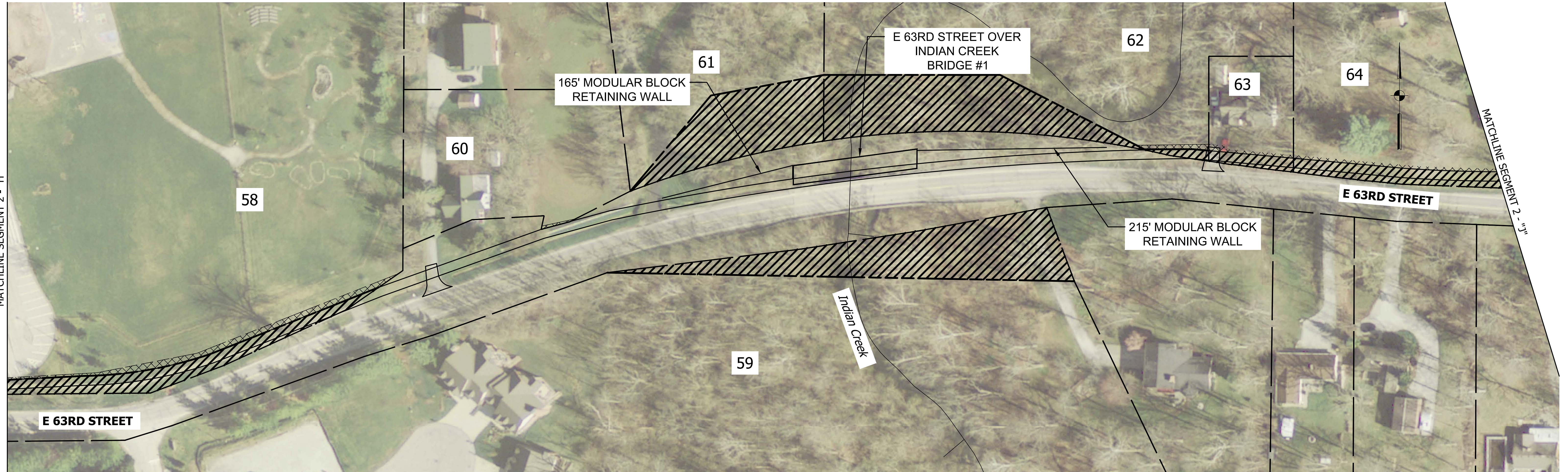
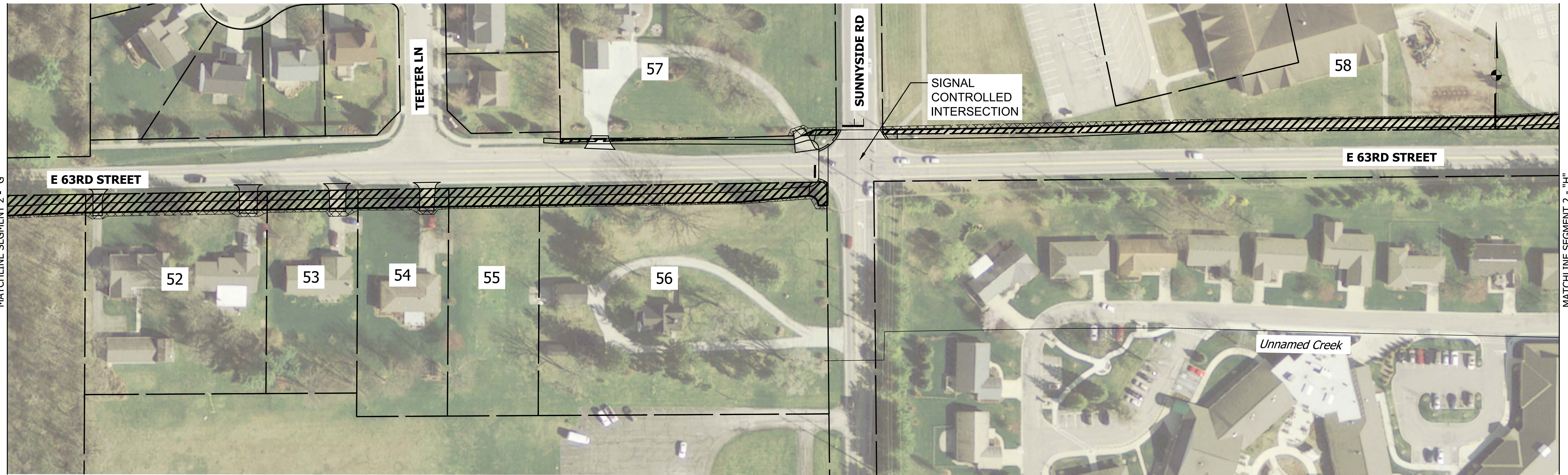
File Name: U:\17\17-702 (Lawrence Bike and Ped Plan)\Road\Draw\Plans\Strip Maps.dwg Plot Date: 6/11/2018 Plotted By: Meyer, Gretchen

MATCHLINE SEGMENT 2 - "G"

MATCHLINE SEGMENT 2 - "H"

MATCHLINE SEGMENT 2 - "H"

MATCHLINE SEGMENT 2 - "J"



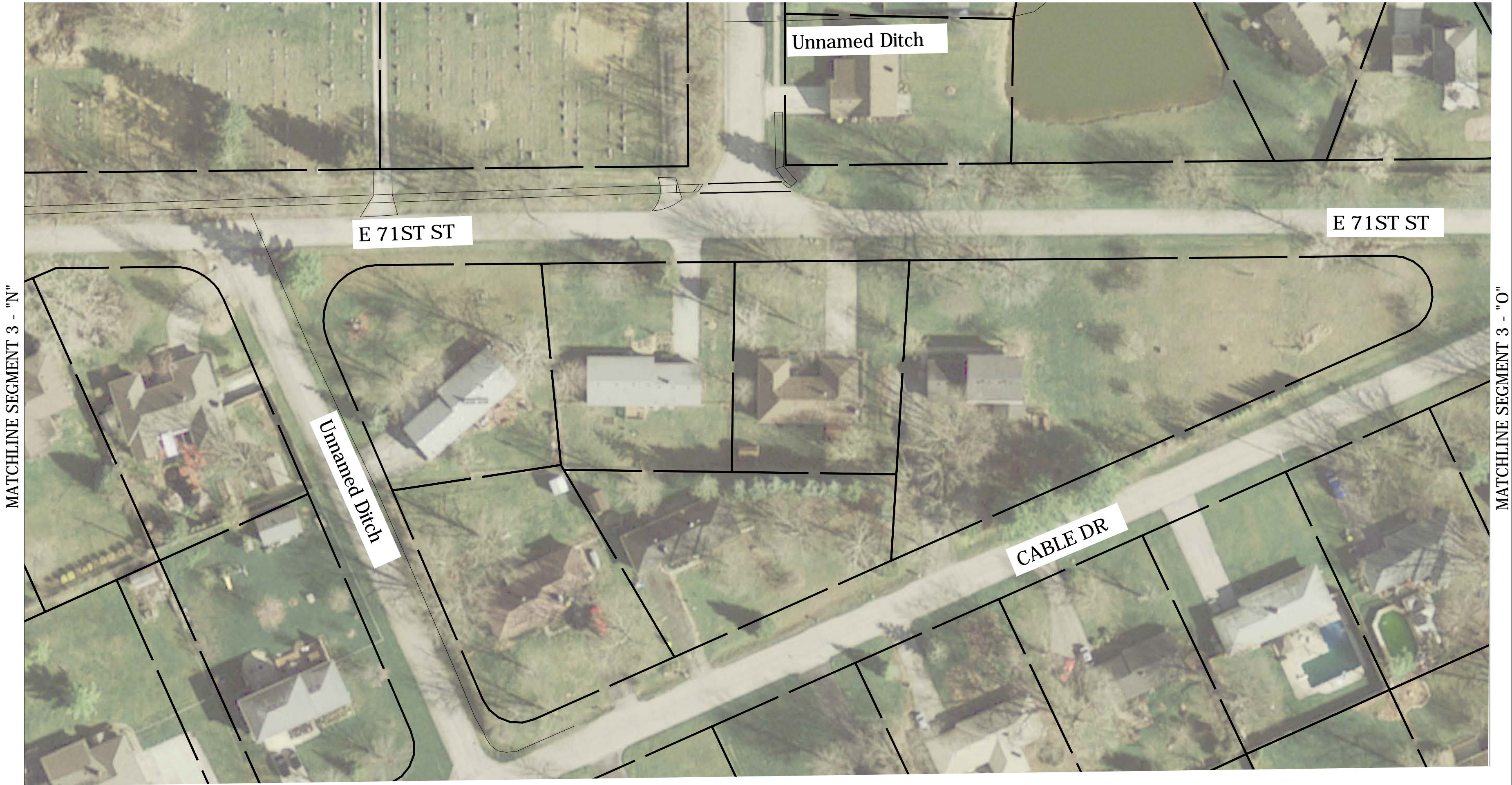
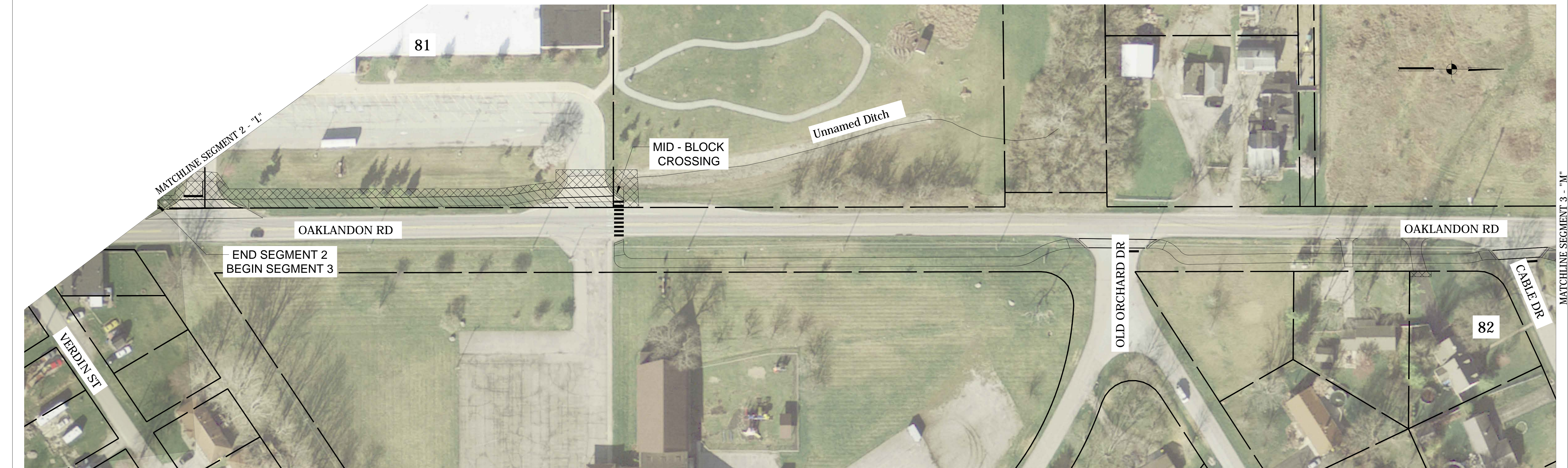
1625 N. Post Road
Indianapolis, IN 46219
Phone 317-895-2585
Fax 317-895-2596
www.ucindy.com

RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____		DATE _____	
DESIGNED: GAM		DRAWN: GAM			
CHECKED: ###		CHECKED: ###			

CITY OF LAWRENCE		
BIKE & PEDESTRIAN TRAIL - SEGMENT 2		

HORIZONTAL SCALE 1" = 50'	BRIDGE FILE #		
VERTICAL SCALE 1" = 50'	DESIGNATION #		
SURVEY BOOK #	SHEETS 5 of 11		
CONTRACT #	PROJECT 17-702		

File Name: U:\17\17-702 (Lawrence Bike and Ped Plan)\Road\Draw\Plans\Strip Maps.dwg Plot Date: 6/7/2018 Plotted By: Meyer, Gretchen



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Fax 317-895-2596
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RECOMMENDED FOR APPROVAL		D DATE	
DESIGNED: GAM		DRAWN: GAM	
CHECKED: ###		CHECKED: ###	

CITY OF LAWRENCE

BIKE & PEDESTRIAN TRAIL - SEGMENT 3

HORIZONTAL SCALE 1" = 50'	BRIDGE FILE #		
VERTICAL SCALE 1" = 50'	DESIGNATION #		
SURVEY BOOK #	SHEETS 7 of 11		
CONTRACT #	PROJECT 17-702		

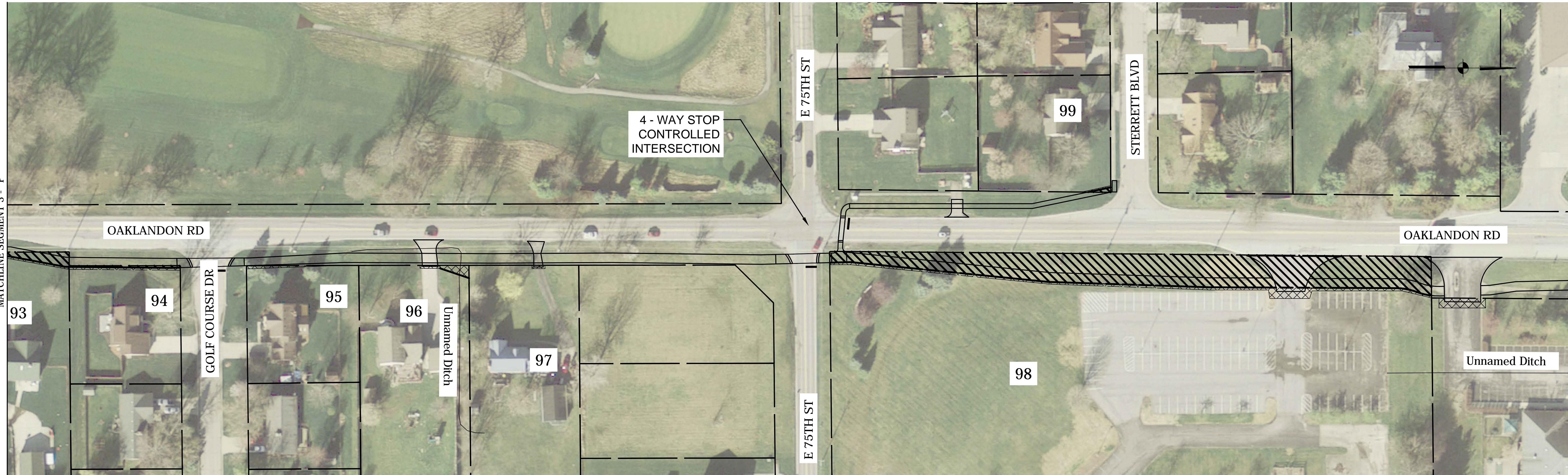
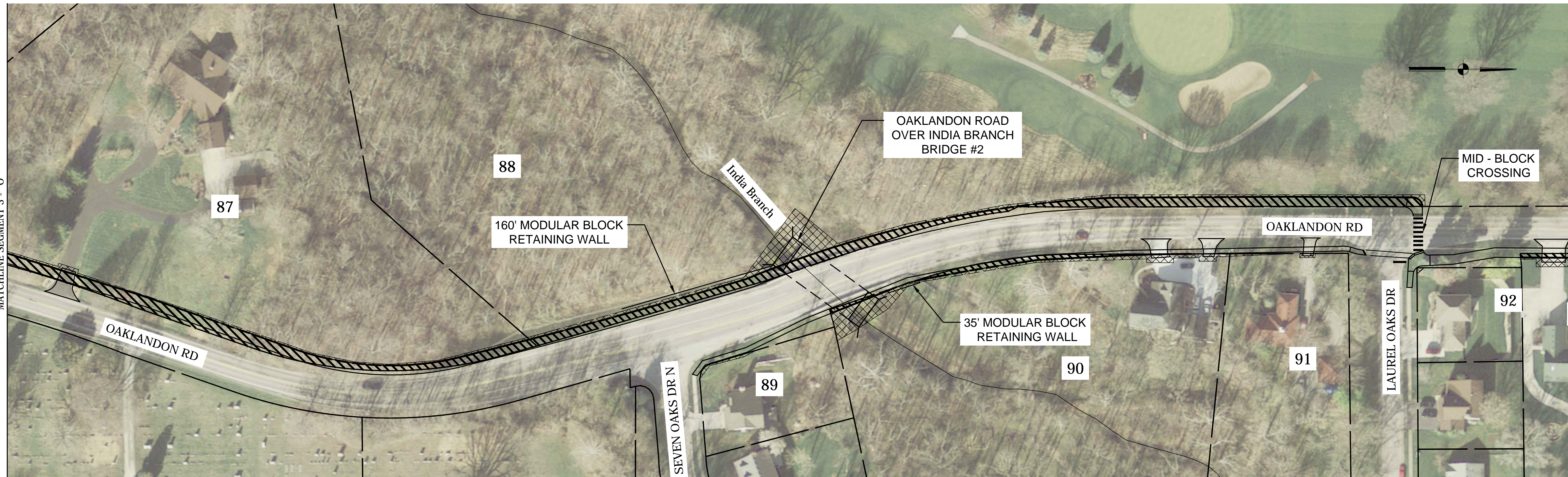
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MATCHLINE SEGMENT 3 - "O"

MATCHLINE SEGMENT 3 - "P"

MATCHLINE SEGMENT 3 - "P"

MATCHLINE SEGMENT 3 - "Q"

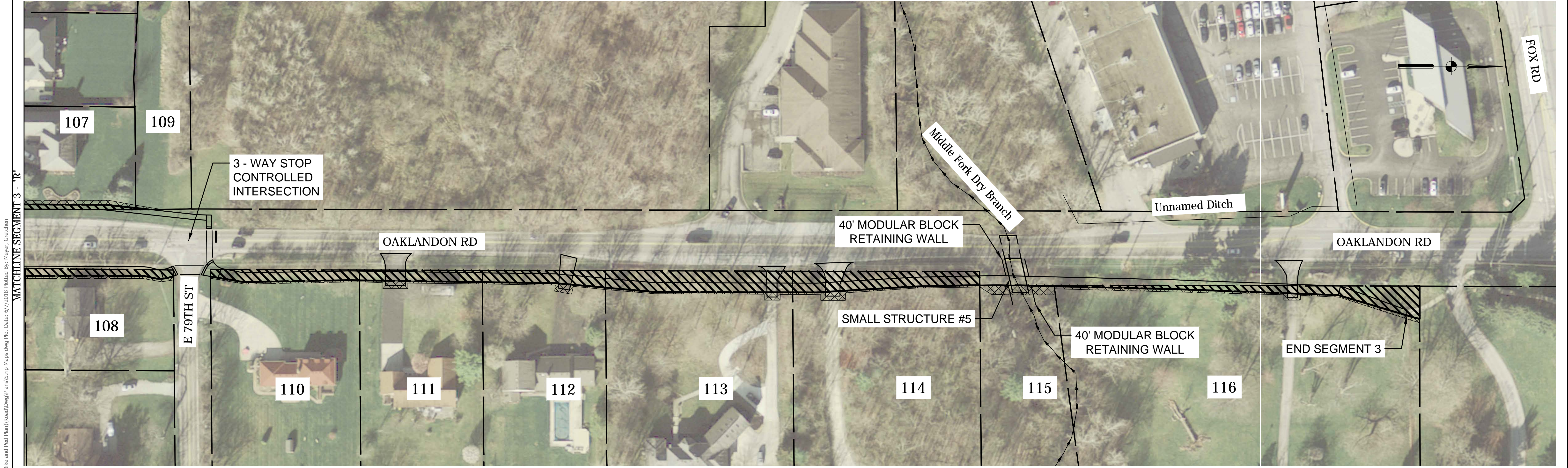
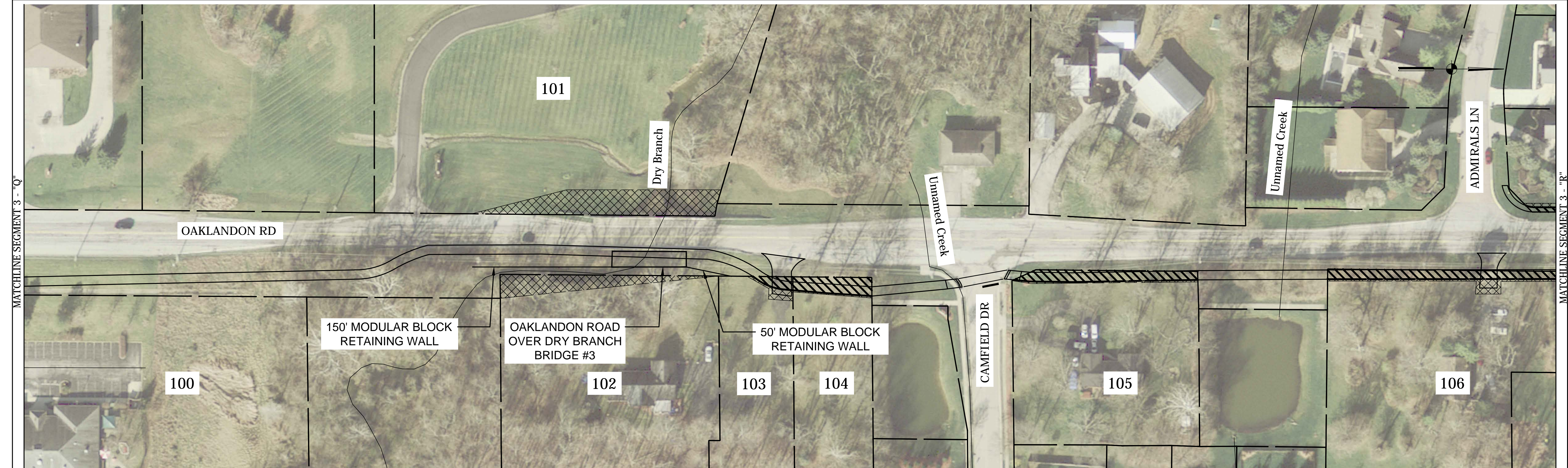



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Fax 317-895-2596
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RECOMMENDED FOR APPROVAL _____ D DESIGN ENGINEER DATE	
DESIGNED: GAM	DRAWN: GAM
CHECKED: ###	CHECKED: ###

CITY OF LAWRENCE
BIKE & PEDESTRIAN TRAIL - SEGMENT 3

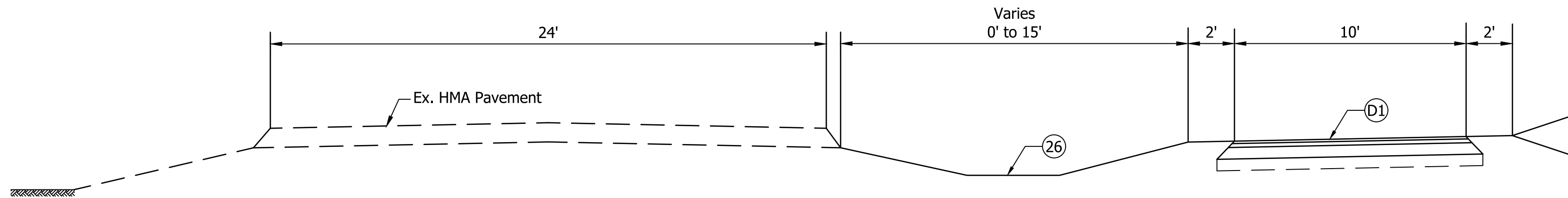
HORIZONTAL SCALE 1" = 50'	BRIDGE FILE #		
VERTICAL SCALE 1" = 50'	DESIGNATION #		
SURVEY BOOK #	SHEETS 8 of 11		
CONTRACT #	PROJECT 17-702		



					1625 N. Post Road Indianapolis, IN 46219 Phone 317-895-2585 Fax 317-895-2596 www.ucindy.com		RECOMMENDED FOR APPROVAL _____ D DESIGN ENGINEER _____ DATE _____		CITY OF LAWRENCE		HORIZONTAL SCALE 1" = 50'		BRIDGE FILE # _____	
							DESIGNED: GAM		DRAWN: GAM		VERTICAL SCALE 1" = 50'		DESIGNATION # _____	
							CHECKED: ###		CHECKED: ###		BIKE & PEDESTRIAN TRAIL - SEGMENT 3		SURVEY BOOK # _____	
													SHEETS 9 of 11	
													CONTRACT # _____	
													PROJECT 17-702	

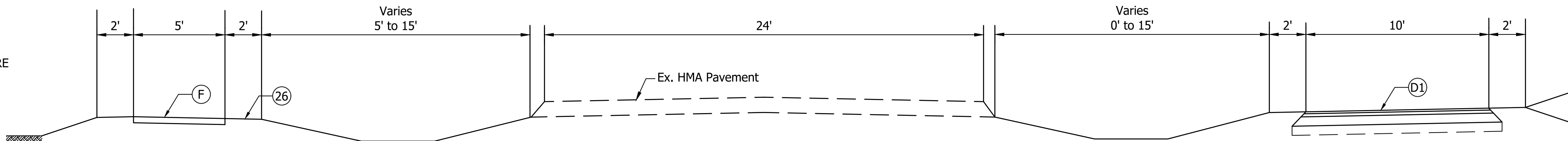
File Name: U:\17\17-702 (Lawrence Bike and Ped Plan)\Road\Draw\Plans\TYPICAL SECTION.dwg Plot Date: 6/7/2018 Plotted By: Meyer, Gretchen

EXISTING SHOULDER WHERE NO
PROPOSED SIDEWALK IS SHOWN

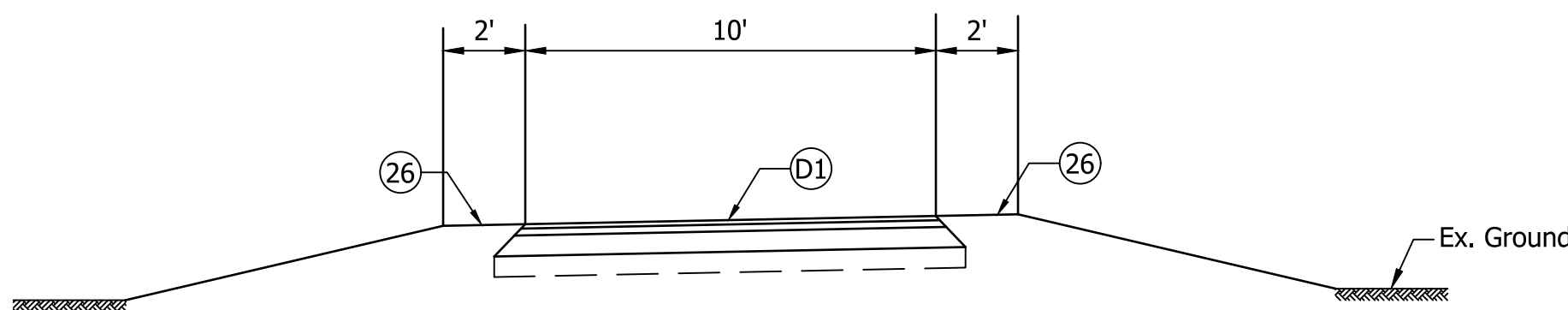


PROPOSED TRAIL ONLY SECTION
Segments 1, 2, 3

PROPOSED SIDEWALK WHERE
INDICATED ON THE PLANS




PROPOSED TRAIL AND SIDEWALK SECTION
Segments 2 and 3

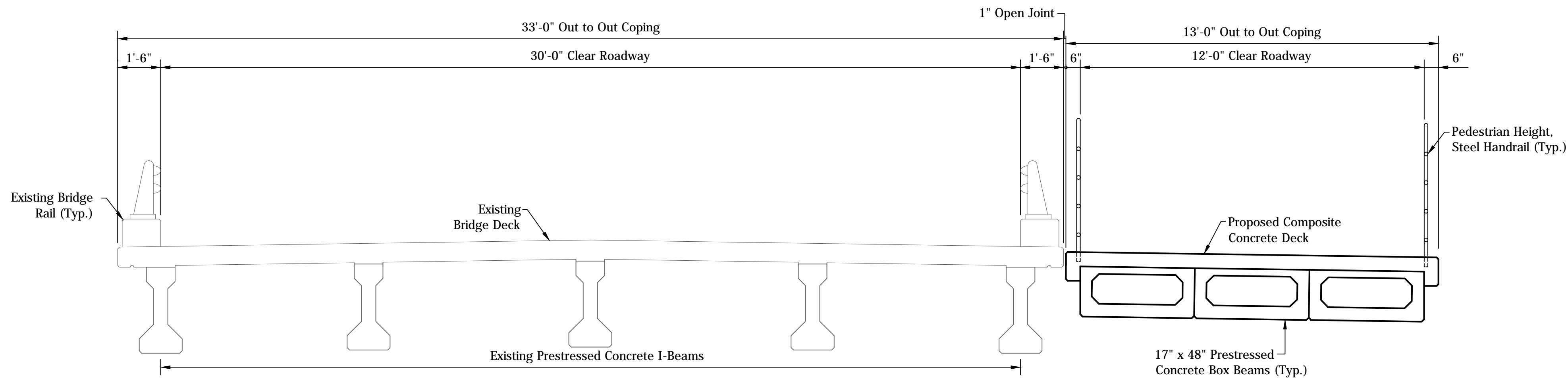


PROPOSED STAND ALONE TRAIL SECTION
Segment 3

LEGEND

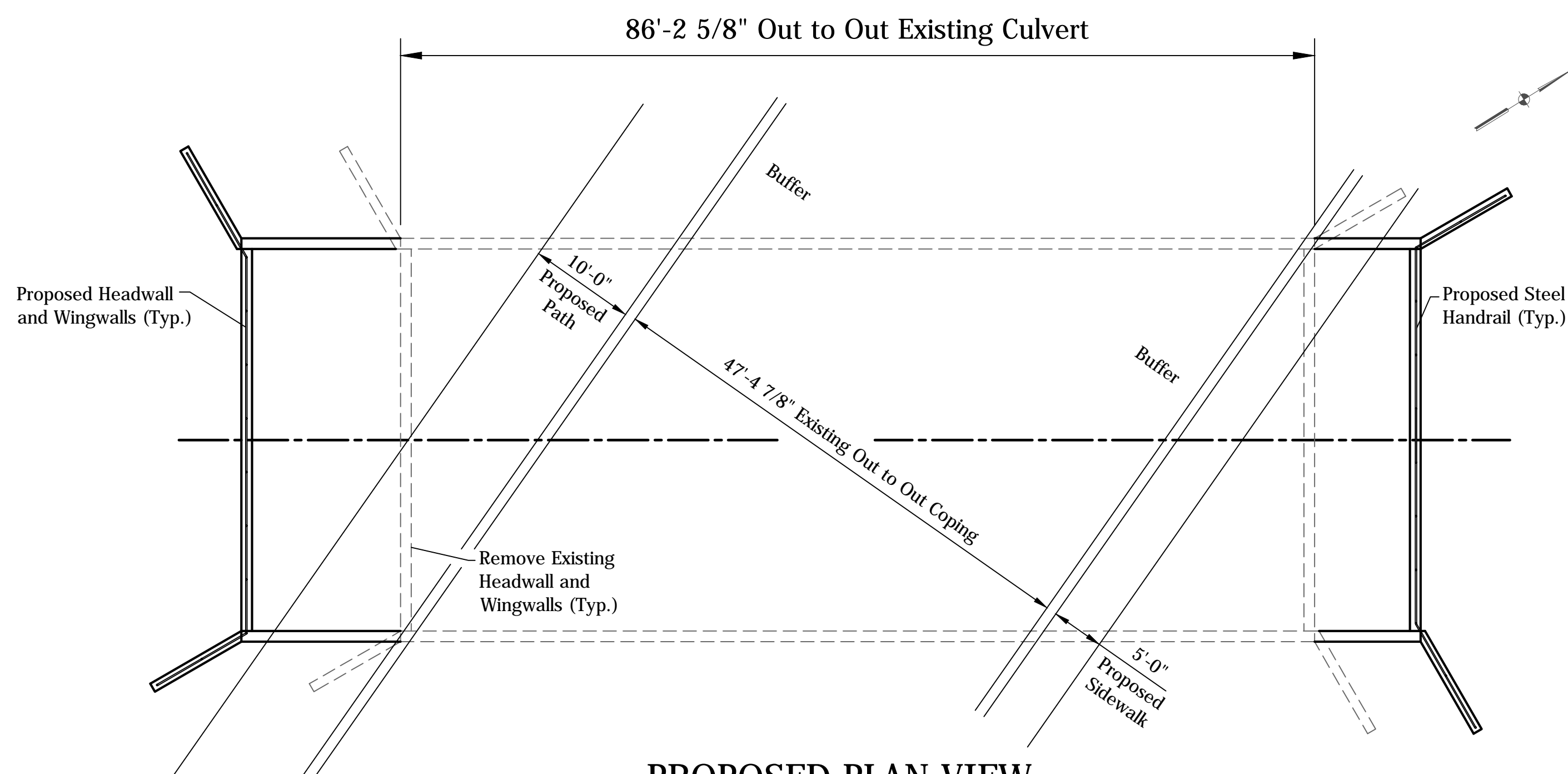
- (26) Sodding
- (F) Sidewalk, Concrete
- (D1) HMA Sidewalk
140 #/sys HMA Surface, Type B on
220 #/sys HMA Intermediate, Type B on
6" Compacted Aggregate No. 53, Base on
Subgrade Treatment Type III

File Name: U:\17\17-702 (Lawrence)			 <div>1625 N. Post Road Indianapolis, IN 46219 Phone 317-895-2585 Fax 317-895-2596 www.ucindy.com</div>		RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	CITY OF LAWRENCE BIKE & PEDESTRIAN TRAIL	HORIZONTAL SCALE 1" = 4'		BRIDGE FILE #	
					VERTICAL SCALE 1" = 4'		DESIGNATION #			
					SURVEY BOOK #		SHEETS 10 of 11			
					TYPICAL TRAIL SECTIONS SEGMENTS 1, 2, 3		CONTRACT #		PROJECT 17-702	



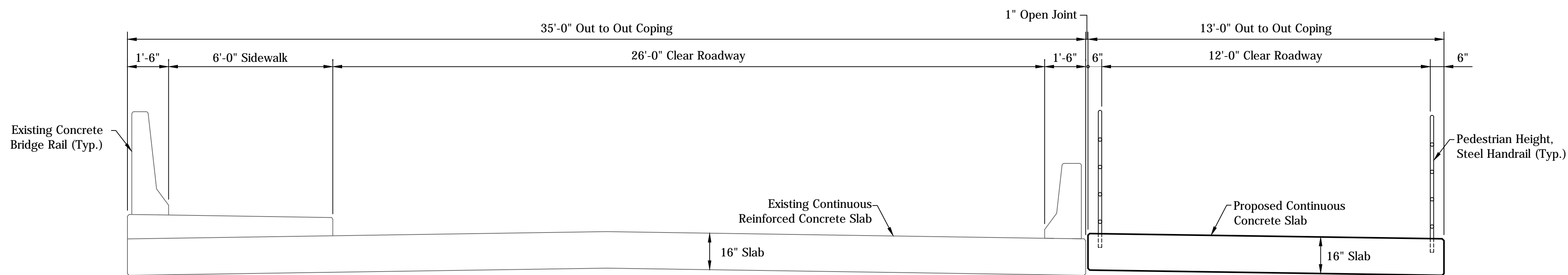
PROPOSED TYPICAL - LOOKING WEST

49-1406F - 63rd Street over Indian Creek (Segment 2: Bridge #1)



PROPOSED PLAN VIEW

49-1405F - Oaklandon Road over India Branch (Segment 3: Bridge #2)



PROPOSED TYPICAL - LOOKING NORTH

49-0704F - Oaklandon Road over Dry Branch (Segment 3: Bridge #3)



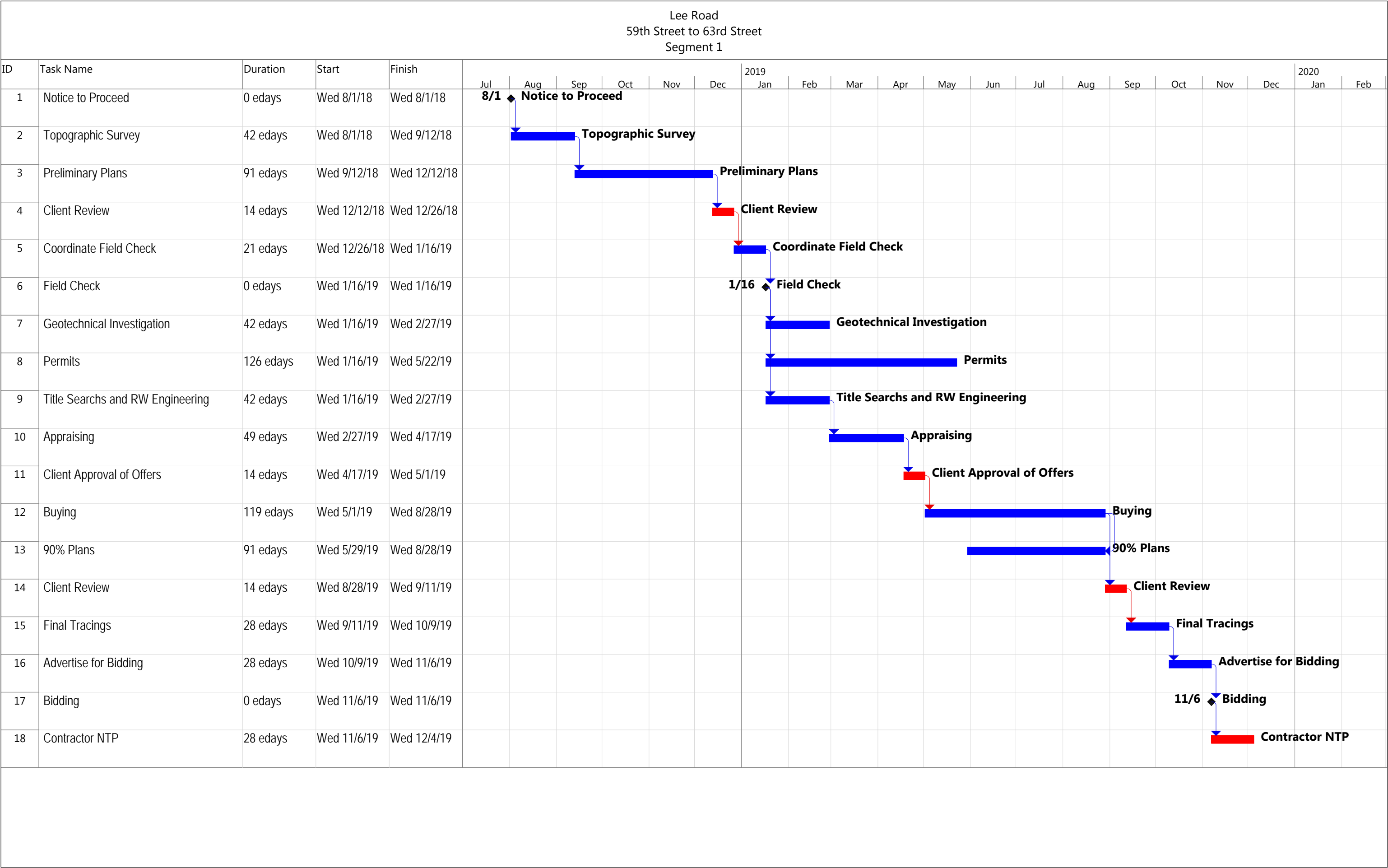
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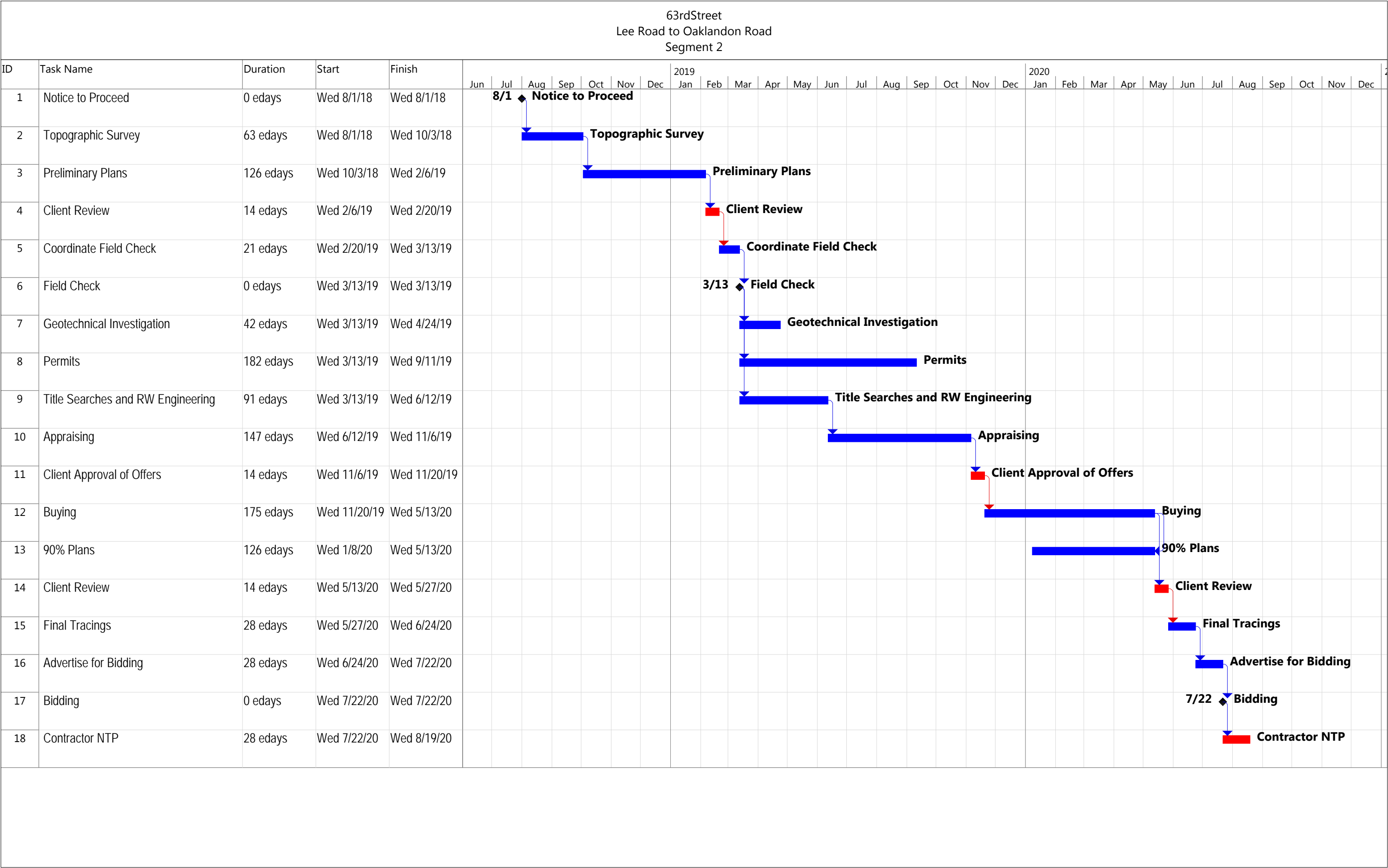
RECOMMENDED FOR APPROVAL _____	
DESIGNED: GAM	DRAWN: GAM
CHECKED: ###	CHECKED: ###

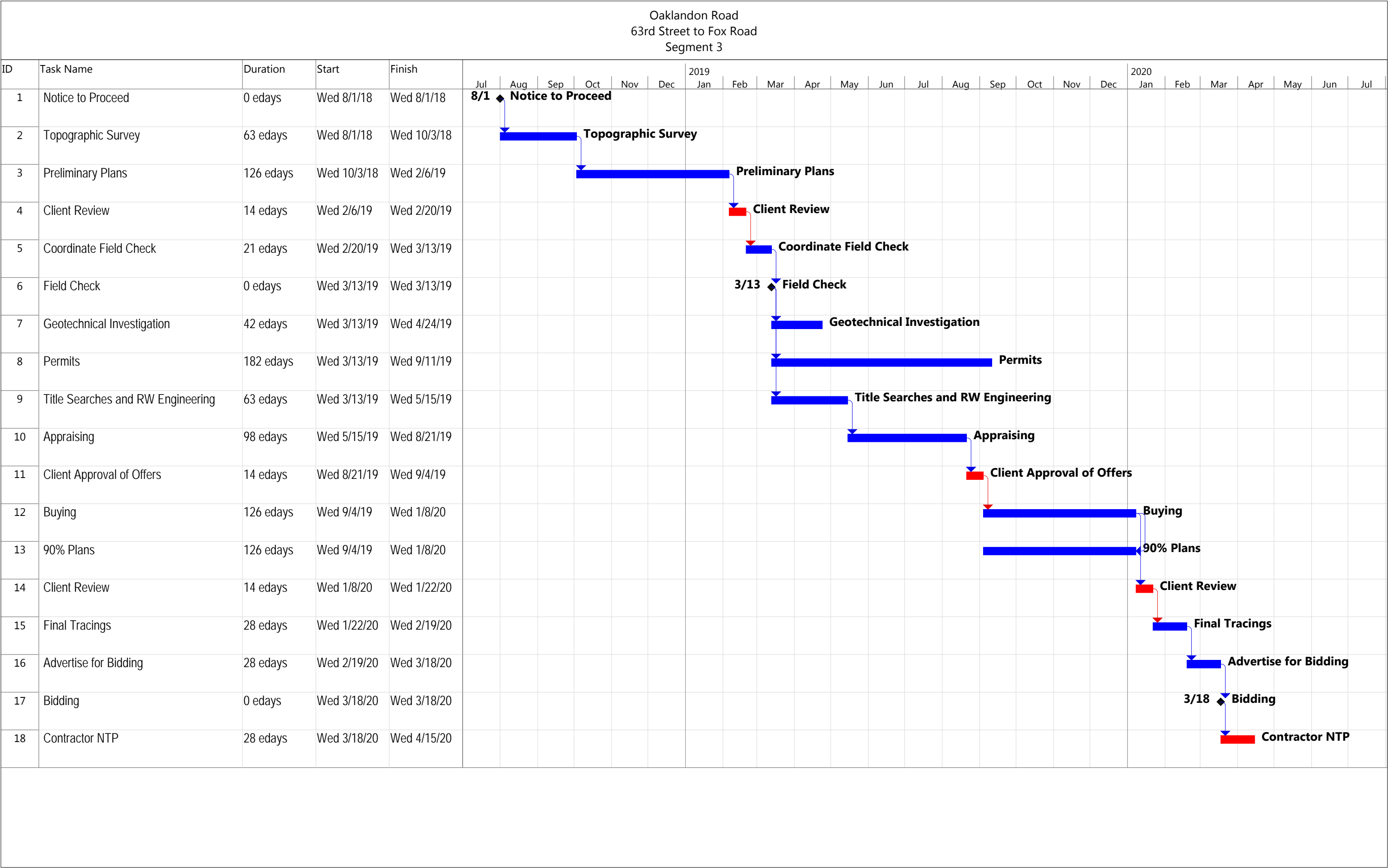
CITY OF LAWRENCE
BIKE & PEDESTRIAN TRAIL

TYPICAL BRIDGE SECTIONS
SEGMENTS 2 AND 3

HORIZONTAL SCALE	BRIDGE FILE		
N.T.S.	#		
VERTICAL SCALE	DESIGNATION		
N.T.S.	#		
SURVEY BOOK	SHEETS		
#	11	of	11
CONTRACT	PROJECT		
#	17-702		







City of Lawrence
Bike and Pedestrian Trail
Segment 1
Lee Road: E 59th Street - E 63rd Street
Project Development Cost Estimate

Topographic Survey	\$	22,700
Geotechnical Investigation	\$	8,400
US Waters Report	\$	4,600
Regulatory Permits ⁽¹⁾	\$	7,000
Traffic Signal Design and Plans ⁽²⁾	\$	11,800
Lighting Design and Plans, 3 Locations	\$	14,800
Utility Coordination	\$	20,100
Trail Design and Plans	\$	116,000
Small Structure #1 Design and Plans	\$	29,500
Project Bidding Services	\$	6,000
Post-Bid Design Services	\$	14,700
TOTAL PRELIMINARY ENGINEERING	\$	255,600

	<u>Parcels</u>	<u>Unit Price</u>	
Title Search	13	\$ 500	\$ 6,500
Right-of-Way Engineering	11	\$ 2,500	\$ 27,500
Right-of-Way Staking	11	\$ 500	\$ 5,500
Land Acquisition Management	11	\$ 1,450	\$ 15,950
Appraisal	11	Varies	\$ 21,420
2nd Appraisal	2	Varies	\$ 5,250
Buying	11	Varies	\$ 19,005
Land Costs ⁽³⁾			\$ 151,900
Land Acquisition Services Contingency (10%)			\$ 10,500
TOTAL LAND ACQUISITION			\$ 263,525

Construction Cost (2020) ⁽⁴⁾	\$	763,000
Construction Inspection (Estimated at 10%)	\$	76,300
Utility Relocation Cost		TBD
TOTAL CONSTRUCTION COST	\$	839,300

TOTAL PROJECT DEVELOPMENT COST **\$ 1,358,425**

(1) Includes IDEM 401, USACOE 404, IDEM Rule 5

(2) Includes 59th Street and 63rd Street signals

(3) These costs will depend on number of parcels impacted, amount of right-of-way required, and land use.

(4) Construction costs will vary depending on construction year



City of Lawrence
Bike and Pedestrian Trail
Segment 2
E 63rd Street: Lee Road - Oaklandon Road
Project Development Cost Estimate

Topographic Survey	\$	75,000
Geotechnical Investigation	\$	33,900
US Waters Report	\$	4,600
Regulatory Permits ⁽¹⁾	\$	14,400
Traffic Signal Design and Plans	\$	7,200
Lighting Design and Plans, 10 locations	\$	45,900
Utility Coordination	\$	11,700
Small Structures #2, #3, and #4 Design and Plans	\$	44,100
Retaining Wall Design and Plans	\$	22,900
Trail Design and Plans	\$	355,000
Bridge #1 Design and Plans	\$	65,100
Project Bidding Services	\$	6,000
Post-Bid Design Services	\$	26,000
TOTAL PRELIMINARY ENGINEERING	\$	711,800

	<u>Parcels</u>	<u>Unit Price</u>	
Title Search	69	\$ 500	\$ 34,500
Right-of-Way Engineering	62	\$ 2,500	\$ 155,000
Right-of-Way Staking	62	\$ 500	\$ 31,000
Land Acquisition Management	62	\$ 1,450	\$ 89,900
Appraisal	62	Varies	\$ 161,070
2nd Appraisal	5	Varies	\$ 17,850
Buying	62	Varies	\$ 108,780
Land Costs ⁽²⁾			\$ 672,100
Land Acquisition Services Contingency (10%)			\$ 60,000
TOTAL LAND ACQUISITION			\$ 1,330,200

Trail Construction Cost (2021) ⁽³⁾	\$	3,558,000
Bridge #1 Construction Cost (2021) ⁽³⁾	\$	565,000
Construction Inspection (Estimated at 10%)	\$	412,300
Utility Relocation Cost		TBD
TOTAL CONSTRUCTION COST	\$	4,535,300

TOTAL PROJECT DEVELOPMENT COST **\$ 6,577,300**

(1) Includes IDEM 401, USACOE 404, DNR Construction in a Floodway, IDEM Rule 5

(2) These costs will depend on number of parcels impacted, amount of right-of-way required, and land use.

(3) Construction costs will vary depending on construction year



City of Lawrence
Bike and Pedestrian Trail
Segment 3
Oaklandon Road: E 63rd Street - Fox Road
Project Development Cost Estimate

Topographic Survey	\$	60,000
Geotechnical Investigation	\$	36,200
Asbestos Inspection	\$	1,500
Cemetery Development Plan	\$	3,500
US Waters Report	\$	4,600
Regulatory Permits ⁽¹⁾	\$	23,400
Lighting Design and Plans, 10 locations	\$	45,900
Utility Coordination	\$	11,700
Small Structure #5 Design and Plans	\$	38,100
Retaining Wall Design and Plans	\$	30,900
Trail Design and Plans	\$	317,000
Bridge #2 Design and Plans	\$	34,800
Bridge #3 Design and Plans	\$	60,100
Project Bidding Services	\$	6,000
Post-Bid Design Services	\$	25,600
TOTAL PRELIMINARY ENGINEERING	\$	699,300

	<u>Parcels</u>	<u>Unit Price</u>	
Title Search	35	\$ 500	\$ 17,500
Right-of-Way Engineering	32	\$ 2,500	\$ 80,000
Right-of-Way Staking	32	\$ 500	\$ 16,000
Land Acquisition Management	32	\$ 1,450	\$ 46,400
Appraisal	32	Varies	\$ 58,800
2nd Appraisal	3	Varies	\$ 11,025
Buying	32	Varies	\$ 53,970
Land Costs ⁽²⁾			\$ 239,000
Land Acquisition Services Contingency (10%)			\$ 28,400
TOTAL LAND ACQUISITION			\$ 551,095

Trail Construction Cost (2022) ⁽³⁾	\$	2,883,000
Bridge #2 Construction Cost (2022) ⁽³⁾	\$	271,000
Bridge #3 Construction Cost (2022) ⁽³⁾	\$	303,000
Construction Inspection (Estimated at 10%)	\$	345,700
Utility Relocation Cost		TBD
TOTAL CONSTRUCTION COST	\$	3,802,700

TOTAL PROJECT DEVELOPMENT COST **\$ 5,053,095**

(1) Includes IDEM 401, USACOE 404, Three DNR Construction in a Floodways, IDEM Rule 5

(2) These costs will depend on number of parcels impacted, amount of right-of-way required, and land use.

(3) Construction costs will vary depending on construction year



City of Lawrence
Lee Road Bike & Pedestrian Facility Improvements
Land Acquisition Summary of Services

Parcel	Cost Per Acre	Temporary ROW (sft)	Permanent ROW (sft)	Land Cost	Damages	Cost to Cure	Relocation	TOTAL ESTIMATED OFFER	Appraisal Type	APA	Appraisal	Second Appraisal	Right of Way Buying	Right of Way Management	Relocation Services	TOTAL SERVICES EXPENSE
1	\$ 100,000	0.00	563.32	\$ 1,300	\$ -	\$ 3,000	\$ -	\$ 4,300	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
2	\$ 400,000	0.00	350.28	\$ 3,300	\$ -	\$ 3,000	\$ -	\$ 6,300	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
3	\$ 150,000	0.00	358.63	\$ 1,300	\$ -	\$ -	\$ -	\$ 1,300	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
4	\$ 100,000	277.52	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 3,550
5	\$ 25,000	6114.96	18905.66	\$ 10,900	\$ 1,000	\$ -	\$ -	\$ 11,900	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
6	\$ 25,000	11966.71	52591.06	\$ 30,200	\$ 1,900	\$ 5,000	\$ -	\$ 37,100	SF		\$ 2,625	\$ 2,625	\$ 1,785	\$ 1,450	\$ -	\$ 8,485
7	\$ 100,000	362.98	1490.41	\$ 3,500	\$ 20,000	\$ -	\$ -	\$ 23,500	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
8	\$ 30,000	569.77	2171.25	\$ 1,500	\$ 400	\$ 500	\$ -	\$ 2,400	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
9	\$ 25,000	395.96	1672.33	\$ 1,000	\$ 100	\$ -	\$ -	\$ 1,100	SF		\$ 2,625	\$ 2,625	\$ 1,785	\$ 1,450	\$ -	\$ 8,485
9a	\$ 25,000	523.70	4098.83	\$ 2,400	\$ 100	\$ -	\$ -	\$ 2,500			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9b	\$ 25,000	9445.23	42591.97	\$ 25,000	\$ 150	\$ 25,000	\$ -	\$ 50,150			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9c	\$ 25,000	1416.88	5913.06	\$ 3,400	\$ 250	\$ -	\$ -	\$ 3,650			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
117	\$ 25,000	807.33	0.00	\$ -	\$ 200	\$ 2,000	\$ -	\$ 2,200	VF		\$ 1,785	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 4,705
118	\$ 25,000	0.00	5185.69	\$ 3,000	\$ -	\$ 2,000	\$ -	\$ 5,000	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450		\$ 5,020
	\$ -	31,881.04	135,892.49	\$ 86,800	\$ 24,600	\$ 40,500	\$ -	\$ 151,900		\$ -	\$ 21,420	\$ 5,250	\$ 19,005	\$ 15,950	\$ -	\$ 61,625

City of Lawrence
63rd Street Bike & Pedestrian Facility Improvements
Land Acquisition Summary of Services

Parcel	Cost Per Acre	Temporary ROW (sft)	Permanent ROW (sft)	Land Cost	Damages	Cost to Cure	Relocation	TOTAL ESTIMATED OFFER	Appraisal Type	APA	Appraisal	Second Appraisal	Right of Way Buying	Right of Way Management	Relocation Services	TOTAL SERVICES EXPENSE
12	\$ 25,000	1255.91	9857.29	\$ 5,700	\$ 200	\$ 25,000	\$ -	\$ 30,900	SF		\$ 2,625	\$ 2,625	\$ 1,785	\$ 1,450	\$ -	\$ 8,485
13	\$ 25,000	8361.02	18773.91	\$ 10,800	\$ 1,300	\$ 5,000	\$ -	\$ 17,100	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
15	\$ 25,000	2555.71	5031.80	\$ 2,900	\$ 15,000	\$ 500	\$ -	\$ 18,400	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
16	\$ 60,000	421.05	729.20	\$ 1,100	\$ 7,500	\$ -	\$ -	\$ 8,600	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
17	\$ 60,000	324.61	358.99	\$ 500	\$ 7,500	\$ -	\$ -	\$ 8,000	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
18	\$ 25,000	1209.30	155.35	\$ 100	\$ 200	\$ 4,000	\$ -	\$ 4,800	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
18a	\$ 25,000	1196.41	113.10	\$ 100	\$ 200	\$ 8,000	\$ -	\$ 8,300			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19	\$ 25,000	77.43	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
21	\$ 60,000	1035.96	3095.18	\$ 4,300	\$ 15,000	\$ -	\$ -	\$ 19,300	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
22	\$ 100,000	73.77	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 3,550
23	\$ 100,000	131.40	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 3,550
24	\$ 100,000	114.74	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 3,550
25	\$ 60,000	586.95	2500.96	\$ 3,500	\$ 15,000	\$ -	\$ -	\$ 18,500	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
26	\$ 100,000	103.24	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 3,550
27	\$ 60,000	715.64	2738.15	\$ 3,800	\$ 10,000	\$ -	\$ -	\$ 13,800	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
28	\$ 100,000	343.96	291.01	\$ 700	\$ 300	\$ -	\$ -	\$ 1,000	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
29	\$ 60,000	690.10	2772.23	\$ 3,800	\$ 16,000	\$ -	\$ -	\$ 19,800	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
30	\$ 60,000	806.63	2846.52	\$ 4,000	\$ 17,000	\$ -	\$ -	\$ 21,000	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435

City of Lawrence
63rd Street Bike & Pedestrian Facility Improvements
Land Acquisition Summary of Services

Parcel	Cost Per Acre	Temporary ROW (sft)	Permanent ROW (sft)	Land Cost	Damages	Cost to Cure	Relocation	TOTAL ESTIMATED OFFER	Appraisal Type	APA	Appraisal	Second Appraisal	Right of Way Buying	Right of Way Management	Relocation Services	TOTAL SERVICES EXPENSE
31	\$ 60,000	899.57	2752.87	\$ 3,800	\$ 19,000	\$ 500	\$ -	\$ 23,300	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
32	\$ 100,000	425.35	0.00	\$ -	\$ 300	\$ 1,000	\$ -	\$ 1,300	VF		\$ 1,785	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 4,705
33	\$ 80,000	1234.53	334.68	\$ 700	\$ 700	\$ 1,000	\$ -	\$ 2,400	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
34	\$ 25,000	413.82	715.56	\$ 500	\$ 100	\$ -	\$ -	\$ 600	SF		\$ 2,625	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,860
34a	\$ 25,000	1197.67	2433.33	\$ 1,400	\$ 200	\$ 5,000	\$ -	\$ 6,600			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
34b	\$ 25,000	134.77	98.46	\$ 100	\$ 100	\$ 7,500	\$ -	\$ 7,700			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
34c	\$ 25,000	71.90	235.81	\$ 200	\$ 100	\$ 7,500	\$ -	\$ 7,800			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
35	\$ 25,000	0.00	353.35	\$ 200	\$ -	\$ 2,500	\$ -	\$ 2,700	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
35a	\$ 25,000	0.00	597.97	\$ 400	\$ -	\$ 1,000	\$ -	\$ 1,400			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
39	\$ 80,000	27.82	93.21	\$ 200	\$ 100	\$ 500	\$ -	\$ 800	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
40	\$ 80,000	425.07	1797.15	\$ 3,400	\$ 300	\$ 2,100	\$ -	\$ 5,800	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
41	\$ 100,000	269.10	1378.24	\$ 3,300	\$ 700	\$ 1,500	\$ -	\$ 5,500	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
44	\$ 125,000	122.36	351.37	\$ 1,100	\$ 100	\$ 1,000	\$ -	\$ 2,200	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
45	\$ 125,000	116.29	272.95	\$ 800	\$ 100	\$ 1,000	\$ -	\$ 1,900	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
46	\$ 125,000	173.86	300.02	\$ 900	\$ 200	\$ 1,200	\$ -	\$ 2,300	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
47	\$ 100,000	196.20	277.72	\$ 700	\$ 200	\$ 1,500	\$ -	\$ 2,400	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
48	\$ 80,000	162.25	168.55	\$ 400	\$ 100	\$ 1,500	\$ -	\$ 2,000	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
49	\$ 70,000	515.38	3294.63	\$ 5,300	\$ 20,000	\$ 1,000	\$ -	\$ 26,300	LF		\$ 4,200	\$ 4,200	\$ 1,785	\$ 1,450	\$ -	\$ 11,635

City of Lawrence
63rd Street Bike & Pedestrian Facility Improvements
Land Acquisition Summary of Services

Parcel	Cost Per Acre	Temporary ROW (sft)	Permanent ROW (sft)	Land Cost	Damages	Cost to Cure	Relocation	TOTAL ESTIMATED OFFER	Appraisal Type	APA	Appraisal	Second Appraisal	Right of Way Buying	Right of Way Management	Relocation Services	TOTAL SERVICES EXPENSE
50	\$ 30,000	822.71	6021.47	\$ 4,200	\$ 30,000	\$ -	\$ -	\$ 34,200	LF		\$ 4,200	\$ 4,200	\$ 1,785	\$ 1,450	\$ -	\$ 11,635
51	\$ 25,000	1172.60	9018.91	\$ 5,200	\$ -	\$ -	\$ -	\$ 5,200	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
52	\$ 80,000	919.77	3737.28	\$ 7,000	\$ 20,000	\$ -	\$ -	\$ 27,000	LF		\$ 4,200	\$ 4,200	\$ 1,785	\$ 1,450	\$ -	\$ 11,635
53	\$ 80,000	421.01	1875.40	\$ 3,500	\$ 14,300	\$ -	\$ -	\$ 18,800	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
54	\$ 80,000	352.28	1878.14	\$ 3,500	\$ 12,000	\$ -	\$ -	\$ 15,500	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
55	\$ 80,000	207.74	1883.79	\$ 3,500	\$ 10,000	\$ -	\$ -	\$ 13,500	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
56	\$ 40,000	716.50	5822.43	\$ 5,400	\$ 11,000	\$ -	\$ -	\$ 16,400	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
57	\$ 50,000	507.04	375.70	\$ 500	\$ 200	\$ -	\$ -	\$ 700	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
58	\$ 25,000	4273.59	13421.23	\$ 7,800	\$ 700	\$ 3,000	\$ -	\$ 11,500	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
59	\$ 80,000	0.00	17661.24	\$ 32,500	\$ -	\$ -	\$ -	\$ 32,500	SF		\$ 2,625	\$ 2,625	\$ 1,785	\$ 1,450	\$ -	\$ 8,485
60	\$ 25,000	83.14	0.00	\$ -	\$ 100	\$ 1,000	\$ -	\$ 1,100	VF		\$ 1,785	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 4,705
61	\$ 25,000	0.00	11574.36	\$ 6,700	\$ -	\$ -	\$ -	\$ 6,700	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
62	\$ 30,000	358.60	16618.60	\$ 11,500	\$ 100	\$ -	\$ -	\$ 11,600	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
63	\$ 125,000	341.09	1191.58	\$ 300	\$ 9,000	\$ 500	\$ -	\$ 9,800	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
64	\$ 40,000	1093.09	6762.66	\$ 6,300	\$ 12,000	\$ 1,000	\$ -	\$ 19,300	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
65	\$ 125,000	380.84	444.53	\$ 1,300	\$ 13,000	\$ -	\$ -	\$ 14,300	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
66	\$ 125,000	493.00	296.95	\$ 900	\$ 20,000	\$ 5,000	\$ -	\$ 25,900	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
67	\$ 100,000	641.39	296.17	\$ 700	\$ 11,000	\$ -	\$ -	\$ 11,700	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435

City of Lawrence
63rd Street Bike & Pedestrian Facility Improvements
Land Acquisition Summary of Services

Parcel	Cost Per Acre	Temporary ROW (sft)	Permanent ROW (sft)	Land Cost	Damages	Cost to Cure	Relocation	TOTAL ESTIMATED OFFER	Appraisal Type	APA	Appraisal	Second Appraisal	Right of Way Buying	Right of Way Management	Relocation Services	TOTAL SERVICES EXPENSE
68	\$ 125,000	168.85	145.50	\$ 500	\$ 11,000	\$ 2,000	\$ -	\$ 13,500	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
69	\$ 100,000	203.76	799.41	\$ 1,900	\$ 10,000	\$ -	\$ -	\$ 11,900	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
70	\$ 25,000	0.00	1132.33	\$ 700	\$ -	\$ -	\$ -	\$ 700	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
71	\$ 60,000	525.14	2313.97	\$ 3,200	\$ 13,000	\$ 5,000	\$ -	\$ 21,200	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
72	\$ 50,000	713.09	2716.59	\$ 3,200	\$ 8,000	\$ -	\$ -	\$ 11,200	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
73	\$ 60,000	890.40	2375.31	\$ 3,300	\$ 6,000	\$ -	\$ -	\$ 9,300	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
74	\$ 70,000	708.67	1289.29	\$ 2,100	\$ 8,000	\$ -	\$ -	\$ 10,100	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
75	\$ 50,000	0.00	873.75	\$ 1,100	\$ -	\$ -	\$ -	\$ 1,100	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
76	\$ 80,000	0.00	889.05	\$ 1,700	\$ -	\$ -	\$ -	\$ 2,100	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
77	\$ 100,000	0.00	462.60	\$ 1,100	\$ -	\$ -	\$ -	\$ 1,100	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
78	\$ 50,000	712.10	1323.87	\$ 1,600	\$ 300	\$ -	\$ -	\$ 1,900	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
79	\$ 125,000	63.18	835.20	\$ 2,400	\$ 100	\$ -	\$ -	\$ 2,500	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
80	\$ 25,000	5492.53	7439.17	\$ 4,300	\$ 900	\$ 500	\$ -	\$ 5,700	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
80a	25000.00	5128.94	5733.18	\$ 3,300	\$ 800	\$ 5,000	\$ -	\$ 9,100			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	53,780.82	191,929.22	\$ 195,900	\$ 371,500	\$ 102,800	\$ -	\$ 672,100		\$ -	\$ 161,070	\$ 17,850	\$ 108,780	\$ 89,900	\$ -	\$ 377,600

City of Lawrence
Oaklandon Road Bike & Pedestrian Facility Improvements
Land Acquisition Summary of Services

Parcel	Cost Per Acre	Temporary ROW (sft)	Permanent ROW (sft)	Land Cost	Damages	Cost to Cure	Relocation	TOTAL ESTIMATED OFFER	Appraisal Type	APA	Appraisal	Second Appraisal	Right of Way Buying	Right of Way Management	Relocation Services	TOTAL SERVICES EXPENSE
82	\$ 100,000	138.55	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 3,550
83	\$ 60,000	971.96	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 3,550
84	\$ 40,000	629.07	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 3,550
85	\$ 25,000	60.76	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 3,550
86	\$ 30,000	287.32	1137.29	\$ 800	\$ 100	\$ -	\$ -	\$ 900	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
87	\$ 25,000	1376.91	6548.10	\$ 3,800	\$ 300	\$ 2,000	\$ -	\$ 6,100	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
88	\$ 30,000	5163.06	7799.31	\$ 5,400	\$ 1,000	\$ -	\$ -	\$ 6,400	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
89	\$ 10,000	151.59	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 3,550
90	\$ 25,000	3087.47	894.91	\$ 600	\$ 500	\$ 10,000	\$ -	\$ 11,100	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
91	\$ 50,000	165.31	0.00	\$ -	\$ 100	\$ 1,500	\$ -	\$ 1,600	VF		\$ 1,785	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 4,705
92	\$ 125,000	25.99	0.00	\$ -	\$ 100	\$ 2,500	\$ -	\$ 2,600	VF		\$ 1,785	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 4,705
93	\$ 60,000	510.26	891.88	\$ 1,300	\$ 10,000	\$ -	\$ -	\$ 11,300	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
94	\$ 100,000	298.31	207.00	\$ 500	\$ 200	\$ -	\$ -	\$ 700	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
95	\$ 100,000	168.32	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 3,550
96	\$ 60,000	326.87	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
97	\$ 60,000	49.50	0.00	\$ -	\$ 500	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
98	\$ 25,000	2065.14	18148.48	\$ 10,500	\$ 400	\$ 5,000	\$ -	\$ 15,900	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
99	\$ 100,000	44.48	62.40	\$ 400	\$ 100	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865

City of Lawrence
Oaklandon Road Bike & Pedestrian Facility Improvements
Land Acquisition Summary of Services

Parcel	Cost Per Acre	Temporary ROW (sft)	Permanent ROW (sft)	Land Cost	Damages	Cost to Cure	Relocation	TOTAL ESTIMATED OFFER	Appraisal Type	APA	Appraisal	Second Appraisal	Right of Way Buying	Right of Way Management	Relocation Services	TOTAL SERVICES EXPENSE
100	\$ 25,000	508.44	0.00	\$ -	\$ 100	\$ 2,000	\$ -	\$ 2,100	VF		\$ 1,785	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 4,705
101	\$ 25,000	5855.55	0.00	\$ -	\$ 1,000	\$ -	\$ -	\$ 1,000	WV		\$ 630	\$ -	\$ 1,470	\$ 1,450	\$ -	\$ 3,550
102	\$ 40,000	3039.39	0.00	\$ -	\$ 800	\$ -	\$ -	\$ 800	VF		\$ 1,785	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 5,020
102a	\$ 40,000	377.07	429.35	\$ 400	\$ 100	\$ -	\$ -	\$ 500			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
102b	\$ 100,000	145.62	1483.35	\$ 3,500	\$ 100	\$ -	\$ -	\$ 3,600			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
105	\$ 60,000	337.66	2142.08	\$ 3,000	\$ 9,000	\$ 500	\$ -	\$ 12,500	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
106	\$ 50,000	937.46	2352.25	\$ 2,700	\$ 10,000	\$ -	\$ -	\$ 12,700	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
107	\$ 100,000	675.51	704.28	\$ 1,700	\$ 25,000	\$ 2,000	\$ -	\$ 28,700	LF		\$ 4,200	\$ 4,200	\$ 1,785	\$ 1,450	\$ -	\$ 11,635
108	\$ 100,000	437.84	1219.98	\$ 2,800	\$ 15,000	\$ -	\$ -	\$ 17,800	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
109	\$ 25,000	51.89	12.50	\$ 400	\$ 100	\$ -	\$ -	\$ 500	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
110	\$ 50,000	327.44	1875.49	\$ 2,200	\$ 20,000	\$ 5,000	\$ -	\$ 27,200	LF		\$ 4,200	\$ 4,200	\$ 1,785	\$ 1,450	\$ -	\$ 11,635
111	\$ 60,000	434.57	1579.98	\$ 2,200	\$ 16,000	\$ -	\$ -	\$ 18,200	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
112	\$ 50,000	407.49	1895.22	\$ 2,200	\$ 17,000	\$ -	\$ -	\$ 19,200	LF		\$ 4,200	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 7,435
113	\$ 40,000	513.20	4475.56	\$ 4,200	\$ 200	\$ -	\$ -	\$ 4,400	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
114	\$ 40,000	608.46	3723.43	\$ 3,500	\$ 200	\$ -	\$ -	\$ 3,700	WV		\$ 630	\$ -	\$ 1,785	\$ 1,450	\$ -	\$ 3,865
115	\$ 25,000	755.62	0.00	\$ -	\$ 200	\$ 2,500	\$ -	\$ 2,700	SF		\$ 2,625	\$ 2,625	\$ 1,785	\$ 1,450	\$ -	\$ 8,485
115a	\$ 25,000	1115.18	3524.53	\$ 2,100	\$ 200	\$ 20,000	\$ -	\$ 22,300			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	32,049.26	61,107.37	\$ 54,200	\$ 131,800	\$ 53,000	\$ -	\$ 239,000		\$ -	\$ 58,800	\$ 11,025	\$ 53,970	\$ 46,400	\$ -	\$ 170,195



Segment 1

Lee Road: East 59th Street to East 63rd Street

Quantities



By: *BAM*
Checked By: *JAR*

Date: *6-11-18*
Date: *6-11-18*

PROJECT NO: 17-702

DESCRIPTION: BIKE AND PEDESTRIAN TRAIL MASTER PLAN - SEGMENT 1

LOCATION: LAWRENCE, IN

Item #	Pay Item	Qty	Unit	Unit Price	Cost
1	CONSTRUCTION ENGINEERING	1	LS	\$ 15,358.41	\$ 15,358.41
2	MOBILIZATION AND DEMOBILIZATION	1	LS	\$ 25,597.35	\$ 25,597.35
3	CLEARING RIGHT OF WAY	1	LS	\$ 15,358.41	\$ 15,358.41
4	CURB AND GUTTER, REMOVE	120	LFT	\$ 15.00	\$ 1,800.00
5	PRESENT STRUCTURE, REMOVE PORTIONS	1	LS	\$ 10,000.00	\$ 10,000.00
6	SIDEWALK CONCRETE, REMOVE	697	SYS	\$ 13.00	\$ 9,061.00
7	SIGN AND SUPPORTS, CHANNEL POSTS, REMOVE	3	EACH	\$ 57.00	\$ 171.00
8	FENCE, CHAIN. LINK, REMOVE	20	LFT	\$ 18.00	\$ 360.00
9	EXCAVATION, COMMON	1,435	CYS	\$ 35.00	\$ 50,225.00
10	BORROW	570	CYS	\$ 57.00	\$ 32,490.00
11	STORM WATER MANAGEMENT BUDGET	1	DOL	\$ 5,047.47	\$ 5,047.47
12	SWQCP PREPARATION AND IMPLEMENTATION, LEVEL 2	1	LS	\$ 15,400.00	\$ 15,400.00
13	SUBGRADE TREATMENT, TYPE II	41	SYS	\$ 30.00	\$ 1,230.00
14	SUBGRADE TREATMENT, TYPE III	5,832	SYS	\$ 4.00	\$ 23,328.00
15	STRUCTURE BACKFILL, TYPE 1	146	CYS	\$ 37.00	\$ 5,402.00
16	COMPACTED AGGREGATE NO. 53	1,430	TON	\$ 27.00	\$ 38,610.00
17	MILLING, APPROACH	640	SYS	\$ 6.00	\$ 3,840.00
18	ASPHALT FOR TACK COAT	1	TON	\$ 540.00	\$ 540.00
19	HMA FOR SIDEWALK	773	TON	\$ 90.00	\$ 69,570.00
20	CURB RAMP, CONCRETE	152	SYS	\$ 135.00	\$ 20,520.00
21	DETECTABLE WARNING SURFACES	34	SYS	\$ 200.00	\$ 6,800.00
22	HMA FOR APPROACHES, TYPE B	176	TON	\$ 123.00	\$ 21,648.00
23	RIPRAP, REVETMENT	27	TON	\$ 65.00	\$ 1,755.00
24	GEOTEXTILE FOR RIPRAP TYPE 1A	48	SYS	\$ 5.00	\$ 240.00
25	WATER	25	KGAL	\$ 4.00	\$ 100.00
26	TOPSOIL	514	CYS	\$ 48.00	\$ 24,672.00
27	SODDING, NURSERY	6,162	SYS	\$ 6.00	\$ 36,972.00
28	STRUCTURE EXTENSION, REINFORCED CONCRETE, BOX SECTIONS, 14 F T. X 4 FT.	16	LFT	\$ 2,000.00	\$ 32,000.00
29	PIPE, TYPE 3, CIRCULAR, 18 IN.	100	LFT	\$ 60.00	\$ 6,000.00
30	PIPE, TYPE 3, CIRCULAR, 24 IN.	50	LFT	\$ 65.00	\$ 3,250.00



By: *GAN*
Checked By: *JAR*

Date: *6-11-18*
Date: *6-11-18*

PROJECT NO: 17-702

DESCRIPTION: BIKE AND PEDESTRIAN TRAIL MASTER PLAN - SEGMENT 1

LOCATION: LAWRENCE, IN

Item #	Pay Item	Qty	Unit	Unit Price	Cost
31	PIPE END SECTION, DIAMETER 18 IN.	10	EACH	\$ 360.00	\$ 3,600.00
32	PIPE END SECTION, DIAMETER 24 IN.	6	EACH	\$ 600.00	\$ 3,600.00
33	CONSTRUCTION SIGN, A	15	EACH	\$ 170.00	\$ 2,550.00
34	CONSTRUCTION SIGN, B	15	EACH	\$ 100.00	\$ 1,500.00
35	MAINTAINING TRAFFIC	1	LS	\$ 10,238.94	\$ 10,238.94
36	BARRICADE, III-B	48	LFT	\$ 16.00	\$ 768.00
37	SIGNAL HEAD RELOCATE	4	EACH	\$ 290.00	\$ 1,160.00
38	SIGN POST, SQUARE TYPE 1 REINFORCED ANCHOR BASE	30	LFT	\$ 19.00	\$ 570.00
39	SIGN, SHEET, WITH LEGEND, 0.080 IN.	23	SFT	\$ 25.00	\$ 575.00
40	SIGNAL POLE FOUNDATION, 36 IN. X 144 IN.	3	EACH	\$ 2,300.00	\$ 6,900.00
41	HANDHOLE SIGNAL TYPE 1	4	EACH	\$ 1,100.00	\$ 4,400.00
42	CONDUIT, STEEL, GALVANIZED, 2 IN.	330	LFT	\$ 22.00	\$ 7,260.00
43	PEDESTRIAN SIGNAL HEAD, COUNTDOWN, 18 IN.	2	EACH	\$ 550.00	\$ 1,100.00
44	SIGNAL POLE, PEDESTAL, 4FT	2	EACH	\$ 600.00	\$ 1,200.00
45	PEDESTRIAN PUSH BUTTON, APS	2	EACH	\$ 1,050.00	\$ 2,100.00
46	SPAN, CATENARY, AND TETHER	4	EACH	\$ 2,250.00	\$ 9,000.00
47	SIGNAL CABLE, CONTROL, COPPER, 3C/14 GA	100	LFT	\$ 2.00	\$ 200.00
48	SIGNAL CABLE, CONTROL, COPPER, 5C/14 GA	200	LFT	\$ 3.00	\$ 600.00
49	SIGNAL CABLE, CONTROL, COPPER, 7C/14 GA	25	LFT	\$ 2.00	\$ 50.00
50	SIGNAL POLE, STEEL STRAIN, 30 FT	3	EACH	\$ 4,300.00	\$ 12,900.00
51	HANDHOLE LIGHTING	6	EACH	\$ 870.00	\$ 5,220.00
52	LIGHTING FOUNDATION, CONCRETE WITH GROUND 30 IN. X 30 IN. X 96 IN.	3	EACH	\$ 1,300.00	\$ 3,900.00
53	WIRE, NO. 6 COPPER, IN PLASTIC DUCT, 4 1/C	450	LFT	\$ 10.00	\$ 4,500.00
54	LUMINAIRE, ROADWAY, LED, 250 WATT	3	EACH	\$ 740.00	\$ 2,220.00
55	CABLE, POLE CIRCUIT, XHHW, NO 10 COPPER, STRANDED, 1/C	150	LFT	\$ 15.00	\$ 2,250.00
56	LIGHT POLE, 40 FT. E.M.H. 10 FT. MAST ARM, ANCHOR BASE	3	EACH	\$ 4,500.00	\$ 13,500.00
57	SERVICE POINT, II	2	EACH	\$ 7,800.00	\$ 15,600.00
58	LINE, THERMOPLASTIC, SOLID, WHITE, 4 IN.	29	LFT	\$ 2.00	\$ 58.00
59	LINE, THERMOPLASTIC, SOLID, YELLOW, 4 IN.	29	LFT	\$ 2.00	\$ 58.00



By: *GAM*
Checked By: *JAR*

Date: *6-11-18*
Date: *6-11-18*

PROJECT NO: 17-702

DESCRIPTION: **BIKE AND PEDESTRIAN TRAIL MASTER PLAN - SEGMENT 1**

LOCATION: LAWRENCE, IN

Item #	Pay Item	Qty	Unit	Unit Price	Cost
60	TRANSVERSE MARKING, THERMOPLASTIC, STOP LINE, WHITE, 24 IN.	163	LFT	\$ 6.00	\$ 978.00
61	TRANSVERSE MARKING, THERMOPLASTIC, CROSSWALK LINE, WHITE, 6 IN.	912	LFT	\$ 3.00	\$ 2,736.00
62	PAVEMENT MESSAGE MARKING, THERMOPLASTIC LANE INDICATION ARROW	2	EACH	\$ 155.00	\$ 310.00

Total: \$ 598,947.58

With 20% Contingency: \$ 718,737.10

With 3% Inflation for 2020 (2 years): \$ 762,508.19

Rounded: \$ **763,000.00**

***BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 1
LAWRENCE, IN***

***BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 1
LAWRENCE, IN***

***BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 1
LAWRENCE, IN***

***BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT I
LAWRENCE, IN***

***BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 1
LAWRENCE, IN***



Segment 2

East 63rd Street: Lee Road to Oaklandon Road

Quantities



By: *FAM*
 Checked By: *JAR*

Date: *6-11-18*
 Date: *6-11-18*

PROJECT NO: 17-702

DESCRIPTION: **BIKE AND PEDESTRIAN TRAIL MASTER PLAN - SEGMENT 2**

LOCATION: LAWRENCE, IN

Item #	Pay Item	Qty	Unit	Unit Price	Cost
1	CONSTRUCTION ENGINEERING	1	LS	\$ 70,403.49	\$ 70,403.49
2	MOBILIZATION AND DEMOBILIZATION	1	LS	\$ 117,339.15	\$ 117,339.15
3	CLEARING RIGHT OF WAY	1	LS	\$ 70,403.49	\$ 70,403.49
4	CURB AND GUTTER, REMOVE	648	LFT	\$ 10.00	\$ 6,480.00
5	PRESENT STRUCTURE, REMOVE PORTIONS	1	LS	\$ 20,000.00	\$ 20,000.00
6	SIDEWALK CONCRETE, REMOVE	1,776	SYS	\$ 13.00	\$ 23,088.00
7	SIGN AND SUPPORTS, CHANNEL POSTS, REMOVE	14	EACH	\$ 100.00	\$ 1,400.00
8	FENCE, CHAIN. LINK, REMOVE	30	LFT	\$ 13.00	\$ 390.00
9	EXCAVATION, COMMON	5,987	CYS	\$ 25.00	\$ 149,675.00
10	BORROW	2,730	CYS	\$ 45.00	\$ 122,850.00
11	STORM WATER MANAGEMENT BUDGET	1	DOL	\$ 23,467.83	\$ 23,467.83
12	SWQCP PREPARATION AND IMPLEMENTATION, LEVEL 2	1	LS	\$ 37,600.00	\$ 37,600.00
13	SUBGRADE TREATMENT, TYPE II	687	SYS	\$ 18.00	\$ 12,366.00
14	SUBGRADE TREATMENT, TYPE III	17,920	SYS	\$ 4.00	\$ 71,680.00
15	STRUCTURE BACKFILL, TYPE 1	138	CYS	\$ 40.00	\$ 5,520.00
16	STRUCTURE BACKFILL, TYPE 3	627	CYS	\$ 45.00	\$ 28,215.00
17	COMPACTED AGGREGATE NO. 53	3,619	TON	\$ 25.00	\$ 90,475.00
18	MILLING, APPROACH	2,067	SYS	\$ 5.00	\$ 10,335.00
19	ASPHALT FOR TACK COAT	1	TON	\$ 500.00	\$ 500.00
20	GUARDRAIL, REMOVE	200	LFT	\$ 7.00	\$ 1,400.00
21	GUARDRAIL MGS W-BEAM, 6 FT 3 IN SPACING	800	LFT	\$ 20.00	\$ 16,000.00
22	GUARDRAIL, END TREATMENT, OS	4	EACH	\$ 3,000.00	\$ 12,000.00
23	FENCE RELOCATE	63	LFT	\$ 43.00	\$ 2,709.00
24	HMA FOR SIDEWALK	2,304	TON	\$ 90.00	\$ 207,360.00
25	SIDEWALK, CONCRETE	1,045	SYS	\$ 47.00	\$ 49,115.00
26	CURB RAMP, CONCRETE	590	SYS	\$ 145.00	\$ 85,550.00
27	DETECTABLE WARNING SURFACES	95	SYS	\$ 200.00	\$ 19,000.00
28	HAND RAIL, PEDESTRIAN	300	LFT	\$ 225.00	\$ 67,500.00



By: *GAM*
 Checked By: *JAR*

Date: *6-11-18*
 Date: *6-11-18*

PROJECT NO: 17-702

DESCRIPTION: **BIKE AND PEDESTRIAN TRAIL MASTER PLAN - SEGMENT 2**

LOCATION: LAWRENCE, IN

Item #	Pay Item	Qty	Unit	Unit Price	Cost
29	HMA FOR APPROACHES, TYPE B	991	TON	\$ 125.00	\$ 123,875.00
30	PCCP FOR APPROACHES, 6 IN.	310	SYS	\$ 60.00	\$ 18,600.00
31	MAILBOX ASSEMBLY, SINGLE RESET	8	EACH	\$ 200.00	\$ 1,600.00
32	RIPRAP, REVETMENT	301	TON	\$ 75.00	\$ 22,575.00
33	GEOTEXTILE FOR RIPRAP TYPE 1A	528	SYS	\$ 4.00	\$ 2,112.00
34	WATER	136	kGAL	\$ 4.00	\$ 544.00
35	TOPSOIL	8,490	CYS	\$ 62.00	\$ 526,380.00
36	SODDING, NURSERY	33,959	SYS	\$ 6.00	\$ 203,754.00
37	STRUCTURE EXTENSION, REINFORCED CONCRETE, BOX SECTIONS, 6 FT. X 3 FT.	8	LFT	\$ 925.00	\$ 7,400.00
38	PIPE, TYPE 2, CIRCULAR, 36 IN.	10	LFT	\$ 90.00	\$ 900.00
39	PIPE, TYPE 2, CIRCULAR, 30 IN.	100	LFT	\$ 75.00	\$ 7,500.00
40	PIPE, TYPE 3, CIRCULAR, 18 IN.	100	LFT	\$ 60.00	\$ 6,000.00
41	PIPE, TYPE 3, CIRCULAR, 24 IN.	50	LFT	\$ 65.00	\$ 3,250.00
42	PIPE END SECTION, DIAMETER 18 IN.	10	EACH	\$ 60.00	\$ 600.00
43	PIPE END SECTION, DIAMETER 24 IN.	6	EACH	\$ 65.00	\$ 390.00
44	INLET, E7	1	EACH	\$ 2,500.00	\$ 2,500.00
45	MANHOLE, J2	1	EACH	\$ 4,000.00	\$ 4,000.00
46	AGGREGATE FOR DRAINAGE FILL	97	CYS	\$ 70.00	\$ 6,790.00
47	MODULAR BLOCK WALL ERECTION	2,615	SFT	\$ 15.00	\$ 39,225.00
48	MODULAR BLOCK WALL WITH GROUND REINFORCEMENT	2,615	SFT	\$ 15.00	\$ 39,225.00
49	CONSTRUCTION SIGN, A	38	EACH	\$ 150.00	\$ 5,700.00
50	CONSTRUCTION SIGN, B	38	EACH	\$ 75.00	\$ 2,850.00
51	MAINTAINING TRAFFIC	1	LS	\$ 46,935.66	\$ 46,935.66
52	BARRICADE, III-B	372	LFT	\$ 15.00	\$ 5,580.00
53	SIGNAL HEAD RELOCATE	4	EACH	\$ 290.00	\$ 1,160.00
54	SIGN POST, SQUARE TYPE 1 REINFORCED ANCHOR BASE	180	LFT	\$ 16.00	\$ 2,880.00
55	SIGN, SHEET, WITH LEGEND, 0.080 IN.	84	SFT	\$ 16.00	\$ 1,344.00



By: *GAM*
 Checked By: *JAR*

Date: *6-11-18*
 Date: *6-11-18*

PROJECT NO: 17-702

DESCRIPTION: **BIKE AND PEDESTRIAN TRAIL MASTER PLAN - SEGMENT 2**

LOCATION: LAWRENCE, IN

Item #	Pay Item	Qty	Unit	Unit Price	Cost
56	SIGNAL POLE FOUNDATION, 36 IN. X 144 IN.	3	EACH	\$ 3,000.00	\$ 9,000.00
57	HANDHOLE SIGNAL TYPE 1	6	EACH	\$ 1,060.00	\$ 6,360.00
58	CONDUIT, STEEL, GALVANIZED, 2 IN.	1,270	LFT	\$ 35.00	\$ 44,450.00
59	PEDESTRIAN SIGNAL HEAD, COUNTDOWN, 18 IN.	4	EACH	\$ 400.00	\$ 1,600.00
60	SIGNAL POLE, PEDESTAL, 4FT	3	EACH	\$ 525.00	\$ 1,575.00
61	PEDESTRIAN PUSH BUTTON, APS	4	EACH	\$ 925.00	\$ 3,700.00
62	SIGNAL CABLE, CONTROL, COPPER, 3C/14 GA	200	LFT	\$ 2.00	\$ 400.00
63	SPAN, CATENARY, AND TETHER	3	EACH	\$ 2,250.00	\$ 6,750.00
64	SIGNAL CABLE, CONTROL, COPPER, 5C/14 GA	270	LFT	\$ 3.00	\$ 810.00
65	SIGNAL CABLE, CONTROL, COPPER, 7C/14 GA	20	LFT	\$ 2.00	\$ 40.00
66	SIGNAL POLE, STEEL STRAIN, 30 FT	2	EACH	\$ 4,300.00	\$ 8,600.00
67	HANDHOLE LIGHTING	26	EACH	\$ 870.00	\$ 22,620.00
68	LIGHTING FOUNDATION, CONCRETE WITH GROUND 30 IN. X 30 IN. X 96 IN.	14	EACH	\$ 1,300.00	\$ 18,200.00
69	LIGHT POLE, 40 FT. E.M.H. 10 FT. MAST ARM, ANCHOR BASE	14	EACH	\$ 4,500.00	\$ 63,000.00
70	WIRE, NO. 6 COPPER, IN PLASTIC DUCT, 4 1/C	1,350	LFT	\$ 10.00	\$ 13,500.00
71	LUMINAIRE, ROADWAY, LED, 250 WATT	14	EACH	\$ 740.00	\$ 10,360.00
72	CABLE, POLE CIRCUIT, XHHW, NO 10 COPPER, STRANDED, 1/C	700	LFT	\$ 15.00	\$ 10,500.00
73	SERVICE POINT, II	10	EACH	\$ 7,800.00	\$ 78,000.00
74	LINE, THERMOPLASTIC, SOLID, WHITE, 4 IN.	22	LFT	\$ 1.00	\$ 22.00
75	LINE, THERMOPLASTIC, SOLID, YELLOW, 4 IN.	22	LFT	\$ 1.00	\$ 22.00
76	TRANSVERSE MARKING, THERMOPLASTIC, STOP LINE, WHITE, 24 IN.	306	LFT	\$ 10.00	\$ 3,060.00
77	TRANSVERSE MARKING, THERMOPLASTIC, CROSSWALK LINE, WHITE, 6 IN.	1,936	LFT	\$ 2.00	\$ 3,872.00

Total: \$2,712,932.62

20% Contingency: \$3,255,519.14

3% Inflation for 2021 (3 years): \$3,557,393.67

Rounded: **\$3,558,000.00**



17-702

**BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 2
LAWRENCE, IN**

By: GAM 5/29/18

Checked By: BEA 6/7/18

207-08266

SUBGRADE TREATMENT, TYPE III

**17,920
SYS**

Segment	Begin Station	End Station	Width (ft) trail + 4'	Area (sft) (from CAD)		Sys
E 63rd St	97+57	9982	14	3150		350.0
	101+25	108+56	14	10234		1137.1
	109+74	116+66	14	9688		1076.4
	117+57	117+85	14	392		43.6
	117+98	118+48	14	700		77.8
	118+61	124+87	14	8764		973.8
	126+00	127+60	14	2240		248.9
	128+39	128+83	14	616		68.4
	129+02	130+07	14	1470		163.3
	130+23	131+63	14	1960		217.8
	131+77	133+16	14	1946		216.2
	133+26	133+51	14	350		38.9
	133+65	134+87	14	1708		189.8
	135+00	136+12	14	1568		174.2
	136+31	137+04	14	1022		113.6
	137+23	139+68	14	3430		381.1
	140+50	144+81	14	6034		670.4
	145+03	153+71	14	12152		1350.2
	154+58	160+47	14	8246		916.2
	160+60	161+67	14	1498		166.4
	161+82	163+95	14	2982		331.3
	164+12	165+37	14	1750		194.4
	165+52	168+33	14	3934		437.1
	168+43	169+89	14	2044		227.1
	170+08	170+85	14	1078		119.8
	171+02	171+80	14	1092		121.3
	171+96	175+95	14	5586		620.7
	201+65	213+33	14	16352		1816.9
	213+46	221+76	14	11620		1291.1
	221+91	225+71	14	5320		591.1
	225+85	227+72	14	2618		290.9
	228+57	230+10	14	2142		238.0
	230+25	230+80	14	770		85.6
	231+13	231+98	14	1190		132.2
	232+12	233+03	14	1274		141.6
	233+64	235+10	14	2044		227.1
	235+25	237+50	14	3150		350.0
	237+66	239+00	14	1876		208.4
	239+20	240+61	14	1974		219.3
	240+90	243+87	14	4158		462.0
	244+61	252+58	14	11158		1239.8
TOTAL =						17920.0



17-702

**BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 2
LAWRENCE, IN**

By: GAM 5/30/18

Checked By: BEA 6/7/18

303-01180

COMPACTED AGGREGATE NO. 53

**3,619
TON**

Segment	Begin Station	End Station	Width (ft)	Area (sft) (from CAD)	Application Rate (T/sys)	Tons
Trail 6" Base						
E 63rd St	97+57	99+82	10	2250	0.333	83.3
	101+25	108+56	10	7310	0.333	270.5
	109+74	116+66	10	6920	0.333	256.0
	117+57	117+85	10	280	0.333	10.4
	117+98	118+48	10	500	0.333	18.5
	118+61	124+87	10	6260	0.333	231.6
	126+00	127+60	10	1600	0.333	59.2
	128+39	128+83	10	440	0.333	16.3
	129+02	130+07	10	1050	0.333	38.9
	130+23	131+63	10	1400	0.333	51.8
	131+77	133+16	10	1390	0.333	51.4
	133+26	133+51	10	250	0.333	9.3
	133+65	134+87	10	1220	0.333	45.1
	135+00	136+12	10	1120	0.333	41.4
	136+31	137+04	10	730	0.333	27.0
	137+23	139+68	10	2450	0.333	90.7
	140+50	144+81	10	4310	0.333	159.5
	145+03	153+71	10	8680	0.333	321.2
	154+58	160+47	10	5890	0.333	217.9
	160+60	161+67	10	1070	0.333	39.6
	161+82	163+95	10	2130	0.333	78.8
	164+12	165+37	10	1250	0.333	46.3
	165+52	168+33	10	2810	0.333	104.0
	168+43	169+89	10	1460	0.333	54.0
	170+08	170+85	10	770	0.333	28.5
	171+02	171+80	10	780	0.333	28.9
	171+96	175+95	10	3990	0.333	147.6
	201+65	213+33	10	11680	0.333	432.2
	213+46	221+76	10	8300	0.333	307.1
	221+91	225+71	10	3800	0.333	140.6
	225+85	227+72	10	1870	0.333	69.2
	228+57	230+10	10	1530	0.333	56.6
	230+25	230+80	10	550	0.333	20.4
	231+13	231+98	10	850	0.333	31.5
	232+12	233+03	10	910	0.333	33.7
	233+64	235+10	10	1460	0.333	54.0
	235+25	237+50	10	2250	0.333	83.3
	237+66	239+00	10	1340	0.333	49.6
	239+20	240+61	10	1410	0.333	52.2
	240+90	243+87	10	2970	0.333	109.9
	244+61	252+58	10	7970	0.333	294.9
TOTAL =						3618.6



17-702

**BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 2
LAWRENCE, IN**

By: GAM 5/30/18

Checked By: BEA 6/7/18

604-05528

HMA FOR SIDEWALK

**2,304
TON**

Segment	Begin Station	End Station	Width (ft)	Area (sft) (from CAD)	Application Rate (T/sys)	Tons
E 63rd St	97+57	99+82	10	2250	0.18	45.0
	101+25	108+56	10	7310	0.18	146.2
	109+74	116+66	10	6920	0.18	138.4
	117+57	117+85	10	280	0.18	5.6
	117+98	118+48	10	500	0.18	10.0
	118+61	124+87	10	6260	0.18	125.2
	126+00	127+60	10	1600	0.18	32.0
	128+39	128+83	10	440	0.18	8.8
	129+02	130+07	10	1050	0.18	21.0
	130+23	131+63	10	1400	0.18	28.0
	131+77	133+16	10	1390	0.18	27.8
	133+26	133+51	10	250	0.18	5.0
	133+65	134+87	10	1220	0.18	24.4
	135+00	136+12	10	1120	0.18	22.4
	136+31	137+04	10	730	0.18	14.6
	137+23	139+68	10	2450	0.18	49.0
	140+50	144+81	10	4310	0.18	86.2
	145+03	153+71	10	8680	0.18	173.6
	154+58	160+47	10	5890	0.18	117.8
	160+60	161+67	10	1070	0.18	21.4
	161+82	163+95	10	2130	0.18	42.6
	164+12	165+37	10	1250	0.18	25.0
	165+52	168+33	10	2810	0.18	56.2
	168+43	169+89	10	1460	0.18	29.2
	170+08	170+85	10	770	0.18	15.4
	171+02	171+80	10	780	0.18	15.6
	171+96	175+95	10	3990	0.18	79.8
	201+65	213+33	10	11680	0.18	233.6
	213+46	221+76	10	8300	0.18	166.0
	221+91	225+71	10	3800	0.18	76.0
	225+85	227+72	10	1870	0.18	37.4
	228+57	230+10	10	1530	0.18	30.6
	230+25	230+80	10	550	0.18	11.0
	231+13	231+98	10	850	0.18	17.0
	232+12	233+03	10	910	0.18	18.2
	233+64	235+10	10	1460	0.18	29.2
	235+25	237+50	10	2250	0.18	45.0
	237+66	239+00	10	1340	0.18	26.8
	239+20	240+61	10	1410	0.18	28.2
	240+90	243+87	10	2970	0.18	59.4
	244+61	252+58	10	7970	0.18	159.4
TOTAL =						2304.0

17-702

***BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 2
LAWRENCE, IN***

By: GAM 5/30/18

Checked By: BEA 6/7/18

604-06070

SIDEWALK, CONCRETE

**1,045
SYS**

[illegible]



17-702

**BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 2
LAWRENCE, IN**

By: GAM 5/30/18

Checked By: BEA 6/7/18

604-12083

DETECTABLE WARNING SURFACES

**95
SYS**

<i>Segment</i>	<i>Station</i>	<i>Area (sft)</i>				<i>Sys</i>
		<i>From CAD</i>				
<i>E 63rd St</i>	<i>99+82</i>	<i>21</i>				<i>2.3</i>
	<i>100+41</i>	<i>22</i>				<i>2.5</i>
	<i>108+57</i>	<i>31</i>				<i>3.5</i>
	<i>109+57</i>	<i>31</i>				<i>3.5</i>
	<i>116+66</i>	<i>30</i>				<i>3.3</i>
	<i>117+43</i>	<i>30</i>				<i>3.3</i>
	<i>117+51</i>	<i>13</i>				<i>1.4</i>
	<i>118+10</i>	<i>11</i>				<i>1.2</i>
	<i>124+87</i>	<i>33</i>				<i>3.7</i>
	<i>125+76</i>	<i>39</i>				<i>4.3</i>
	<i>125+24</i>	<i>17</i>				<i>1.9</i>
	<i>126+07</i>	<i>24</i>				<i>2.7</i>
	<i>127+60</i>	<i>43</i>				<i>4.8</i>
	<i>128+23</i>	<i>46</i>				<i>5.1</i>
	<i>127+69</i>	<i>11</i>				<i>1.2</i>
	<i>127+88</i>	<i>13</i>				<i>1.4</i>
	<i>128+31</i>	<i>10</i>				<i>1.1</i>
	<i>128+38</i>	<i>13</i>				<i>1.5</i>
	<i>139+68</i>	<i>41</i>				<i>4.5</i>
	<i>140+37</i>	<i>43</i>				<i>4.8</i>
	<i>153+71</i>	<i>27</i>				<i>3.0</i>
	<i>154+42</i>	<i>33</i>				<i>3.7</i>
	<i>200+95</i>	<i>26</i>				<i>2.9</i>
	<i>200+77</i>	<i>24</i>				<i>2.7</i>
	<i>201+00</i>	<i>26</i>				<i>2.9</i>
	<i>201+50</i>	<i>25</i>				<i>2.7</i>
	<i>227+71</i>	<i>24</i>				<i>2.7</i>
	<i>228+42</i>	<i>29</i>				<i>3.2</i>
	<i>233+03</i>	<i>23</i>				<i>2.6</i>
	<i>233+50</i>	<i>36</i>				<i>4.0</i>
	<i>243+87</i>	<i>31</i>				<i>3.4</i>
	<i>244+48</i>	<i>21</i>				<i>2.3</i>
TOTAL =						94.1



17-702

**BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 2
LAWRENCE, IN**

By: GAM 5/31/18

Checked By: BEA 6/7/18

610-07487

HMA FOR APPROACHES, TYPE B

**991
TON**

Segment	Station		Area (sft) from CAD	Application Rate (#/sys)	Tons
				165 on 385	
E 63rd St	gravel drives				
	119+29		342	550	10.4
	133+22		276	550	8.4
	134+94		322	550	9.8
	165+46		564	550	17.2
	170+00		590	550	18.0
	170+93		543	550	16.6
	171+88		513	550	15.7
	175+95		409	550	12.5
	213+36		477	550	14.6
	221+86		403	550	12.3
	225+76		439	550	13.4
	232+06		370	550	11.3
	239+10		435	550	13.3
	240+70		500	550	15.3
rd approaches/HMA drives					
MS drive	108+75	109+58	2692	550	82.3
MS drive	116+82	117+44	1699	550	51.9
Pleasant Woods	117+58	118+11	759.22	550	23.2
	117+84	117+98	328.93	550	10.1
	118+48	118+60	340.37	550	10.4
	121+36	121+54	249.18	550	7.6
twyckenham	124+99	125+85	2197.99	550	67.2
fountain springs	125+40	126+07	2736.76	550	83.6
winona	127+77	128+28	903.53	550	27.6
winona	127+88	128+27	1102.38	550	33.7
	128+81	129+00	571.92	550	17.5
	129+22	129+38	278.67	550	8.5
	130+07	130+23	439.23	550	13.4
	130+22	130+40	307.5	550	9.4
	131+63	131+77	373.25	550	11.4
	132+02	132+25	419.45	550	12.8
	136+12	136+31	466.45	550	14.3
	137+05	137+24	448.47	550	13.7
linkwood	139+80	140+37	1219.93	550	37.3
	144+81	145+03	551.72	550	16.9
Tennison	153+86	154+42	1155.11	550	35.3
	160+47	160+60	417.67	550	12.8
	161+69	161+83	478.35	550	14.6
	163+95	164+12	560.7	550	17.1

TOTAL (THIS PAGE)=

821.3

17-702

***BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 2
LAWRENCE, IN***

By: GAM 5/31/18

Checked By: BEA 6/7/18

610-08446

PCCP FOR APPROACHES, 6 IN.

310
SYS

[illegible]



Segment 3

Oaklandon Road: East 63rd Street to Fox Road

Quantities



By: CAM
Checked By: JAR

Date: 6-11-18
Date: 6-11-18

PROJECT NO: 17-702

DESCRIPTION: BIKE AND PEDESTRIAN TRAIL MASTER PLAN - SEGMENT 3

LOCATION: LAWRENCE, IN

Item #	Pay Item	Qty	Unit	Unit Price	Cost
1	CONSTRUCTION ENGINEERING	1	LS	\$ 55,804.23	\$ 55,804.23
2	MOBILIZATION AND DEMOBILIZATION	1	LS	\$ 93,007.05	\$ 93,007.05
3	CLEARING RIGHT OF WAY	1	LS	\$ 37,202.82	\$ 37,202.82
4	CURB AND GUTTER, REMOVE	423	LFT	\$ 10.00	\$ 4,230.00
5	SIDEWALK CONCRETE, REMOVE	257	SYS	\$ 13.00	\$ 3,341.00
6	SIGN AND SUPPORTS, CHANNEL POSTS, REMOVE	10	EACH	\$ 100.00	\$ 1,000.00
7	FENCE, CHAIN. LINK, REMOVE	40	LFT	\$ 13.00	\$ 520.00
8	EXCAVATION, COMMON	4,087	CYS	\$ 25.00	\$ 102,175.00
9	BORROW	1,284	CYS	\$ 45.00	\$ 57,780.00
10	STORM WATER MANAGEMENT BUDGET	1	DOL	\$ 18,601.41	\$ 18,601.41
11	SWQCP PREPARATION AND IMPLEMENTATION, LEVEL 2	1	LS	\$ 32,600.00	\$ 32,600.00
12	SUBGRADE TREATMENT, TYPE II	223	SYS	\$ 18.00	\$ 4,014.00
13	SUBGRADE TREATMENT, TYPE III	11,866	SYS	\$ 4.00	\$ 47,464.00
14	STRUCTURE BACKFILL, TYPE 1	181	CYS	\$ 40.00	\$ 7,240.00
15	STRUCTURE BACKFILL, TYPE 3	577	CYS	\$ 45.00	\$ 25,965.00
16	COMPACTED AGGREGATE NO. 53	2,823	TON	\$ 25.00	\$ 70,575.00
17	GUARDRAIL, REMOVE	600	LFT	\$ 7.00	\$ 4,200.00
18	GUARDRAIL MGS W-BEAM, 6 FT 3 IN SPACING	2,400	LFT	\$ 20.00	\$ 48,000.00
19	GUARDRAIL, END TREATMENT, OS	12	EACH	\$ 3,000.00	\$ 36,000.00
20	FENCE RELOCATE	482	LFT	\$ 43.00	\$ 20,726.00
21	HMA FOR SIDEWALK	1,526	TON	\$ 90.00	\$ 137,340.00
22	SIDEWALK, CONCRETE	1,148	SYS	\$ 47.00	\$ 53,956.00
23	CURB RAMP, CONCRETE	478	SYS	\$ 145.00	\$ 69,310.00
24	DETECTABLE WARNING SURFACES	82	SYS	\$ 200.00	\$ 16,400.00
25	HAND RAIL, PEDESTRIAN	900	LFT	\$ 225.00	\$ 202,500.00
26	HMA FOR APPROACHES, TYPE B	62	TON	\$ 125.00	\$ 7,750.00
27	PCCP FOR APPROACHES, 6 IN.	777	SYS	\$ 60.00	\$ 46,620.00
28	RIPRAP, REVETMENT	52	TON	\$ 75.00	\$ 3,900.00



By: *GAM*
 Checked By: *JAR*

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DESCRIPTION: **BIKE AND PEDESTRIAN TRAIL MASTER PLAN - SEGMENT 3**

LOCATION: LAWRENCE, IN

Item #	Pay Item	Qty	Unit	Unit Price	Cost
29	GEOTEXTILE FOR RIPRAP TYPE 1A	92	SYS	\$ 4.00	\$ 368.00
30	WATER	78	kGAL	\$ 4.00	\$ 312.00
31	TOPSOIL	4,831	CYS	\$ 62.00	\$ 299,522.00
32	SODDING, NURSERY	19,324	SYS	\$ 6.00	\$ 115,944.00
33	STRUCTURE, REINFORCED CONCRETE, BOX SECTIONS, 18 FT. X 6 FT.	40	LFT	\$ 1,800.00	\$ 72,000.00
34	STRUCTURE, REINFORCED CONCRETE, BOX SECTIONS, 6 FT. X 3 FT.	55	LFT	\$ 770.00	\$ 42,350.00
35	PIPE, TYPE 3, CIRCULAR, 18 IN.	100	LFT	\$ 60.00	\$ 6,000.00
36	PIPE, TYPE 3, CIRCULAR, 24 IN.	50	LFT	\$ 65.00	\$ 3,250.00
37	PIPE END SECTION, DIAMETER 18 IN.	10	EACH	\$ 360.00	\$ 3,600.00
38	PIPE END SECTION, DIAMETER 24 IN.	10	EACH	\$ 600.00	\$ 6,000.00
39	AGGREGATE FOR DRAINAGE FILL	50	CYS	\$ 70.00	\$ 3,500.00
40	MODULAR BLOCK WALL ERECTION	1,347	SFT	\$ 15.00	\$ 20,205.00
41	MODULAR BLOCK WALL WITH GROUND REINFORCEMENT	2,337	SFT	\$ 15.00	\$ 35,055.00
42	CONSTRUCTION SIGN, A	38	EACH	\$ 150.00	\$ 5,700.00
43	CONSTRUCTION SIGN, B	38	EACH	\$ 75.00	\$ 2,850.00
44	MAINTAINING TRAFFIC	1	LS	\$ 37,202.82	\$ 37,202.82
45	BARRICADE, III-B	384	LFT	\$ 15.00	\$ 5,760.00
46	SIGN POST, SQUARE TYPE 1 REINFORCED ANCHOR BASE	220	LFT	\$ 16.00	\$ 3,520.00
47	SIGN, SHEET, WITH LEGEND, 0.080 IN.	130	SFT	\$ 16.00	\$ 2,080.00
48	CONDUIT, STEEL, GALVANIZED, 2 IN.	1,150	LFT	\$ 35.00	\$ 40,250.00
49	HANDHOLE LIGHTING	24	EACH	\$ 870.00	\$ 20,880.00
50	LIGHTING FOUNDATION, CONCRETE WITH GROUND 30 IN. X 30 IN. X 96 IN.	12	EACH	\$ 1,300.00	\$ 15,600.00
51	WIRE, NO. 6 COPPER, IN PLASTIC DUCT, 4 1/C	2,250	LFT	\$ 10.00	\$ 22,500.00
52	LUMINAIRE, ROADWAY, LED, 250 WATT	12	EACH	\$ 740.00	\$ 8,880.00
53	CABLE, POLE CIRCUIT, XHHW, NO 10 COPPER, STRANDED, 1/C	600	LFT	\$ 15.00	\$ 9,000.00
54	LIGHT POLE, 40 FT. E.M.H. 10 FT. MAST ARM, ANCHOR BASE	12	EACH	\$ 4,500.00	\$ 54,000.00



By: *FAM*
Checked By: *JAR*

Date: *6-11-18*
Date: *6-11-18*

PROJECT NO: 17-702

DESCRIPTION: BIKE AND PEDESTRIAN TRAIL MASTER PLAN - SEGMENT 3

LOCATION: LAWRENCE, IN

Item #	Pay Item	Qty	Unit	Unit Price		Cost	
55	SERVICE POINT, II	11	EACH	\$	7,800.00	\$	85,800.00
56	LINE, THERMOPLASTIC, SOLID, WHITE, 4 IN.	14	LFT	\$	1.00	\$	14.00
57	LINE, THERMOPLASTIC, SOLID, YELLOW, 4 IN.	43	LFT	\$	1.00	\$	43.00
58	TRANSVERSE MARKING, THERMOPLASTIC, STOP LINE, WHITE, 24 IN.	151	LFT	\$	10.00	\$	1,510.00
59	TRANSVERSE MARKING, THERMOPLASTIC, CROSSWALK LINE, WHITE, 6 IN.	1,321	LFT	\$	2.00	\$	2,642.00

Total: \$2,134,559.33

With 20% Contingency: \$2,561,471.20

With 3% Inflation for 2022 (4 years): \$2,882,958.40

Rounded: **\$2,883,000.00**



17-702

**BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 3
LAWRENCE, IN**

By: GAM 6/4/18

Checked By: ATW 6/5/18

203-02000

EXCAVATION, COMMON

**4,087
CYS**

Segment		Wall Area	Depth	L		Cys
Retaining Walls		sft	0.7*H	D+1		
Oaklandon Rd	@ Dry Branch	950	6	7		246.3
	@ Middle Fork	460	6	7		119.3
	@ Indian Branch	926.25	6	7		240.1
Trail Length		Area (sft)				
Oaklandon Rd		76280	1			2825.2
Sidewalk Length						
Oaklandon Rd		10323	1			382.3
Wall Levelling Pads		Length	Depth	Height		
Oaklandon Rd	@ Dry Branch	200	1.5	0.5		5.6
	@ Middle Fork	80	1.5	0.5		2.2
	@ Indian Branch	195	1.5	0.5		5.4
Soil below levelling pad						
Oaklandon Rd	@ Dry Branch	200	2.5	1		18.5
	@ Middle Fork	80	2.5	1		7.4
	@ Indian Branch	195	2.5	1		18.1
Due to Ditches						
From Sta.	To Sta.	Area (sft)				
321+60	325+15	5	PR-C Path Left			65.7
425+60	430+20	5	PR-C Path Right			85.2
455+40	459+50	0	PR-C Path Right			0.0
478+00	480+00	5	PR-C Path Right			37.0
480+50	482+00	5	PR-C Path Right			27.8

TOTAL =

4086.1

***BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 3
LAWRENCE, IN***

17-702

***BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 3
LAWRENCE, IN***

By: GAM 5/30/18

Checked By: ATW 6/8/18

303-01180

COMPACTED AGGREGATE NO. 53

**2,823
TON**

[illegible]

TOTAL (THIS PAGE) =

2822.4

17-702

**BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 3
LAWRENCE, IN**

By: GAM 5/30/18

Checked By: ATW 6/7/18

604-05528

HMA FOR SIDEWALK

**1,526
TON**

[illegible]

TOTAL (THIS PAGE) =

1525.6

17-702

***BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 3
LAWRENCE, IN***

By: GAM 5/30/18

Checked By: ATW 6/7/18

604-12083

DETECTABLE WARNING SURFACES

82
SYS

<i>Segment</i>	<i>Station</i>	<i>Area (sqft)</i>				<i>Sys</i>
		<i>From CAD</i>				
Oaklandon Rd	300+66	51				5.7
	301+44	72				8.0
	304+83	42				4.7
	305+54	42				4.7
	400+74	22				2.4
	405+61	29				3.2
	406+50	30				3.3
	410+10	25				2.8
	410+78	28				3.1
	415+23	25				2.7
	415+72	43				4.8
	418+49	12				1.4
	418+72	10				1.1
	320+45	25				2.7
	337+86	20				2.2
	432+61	5				0.6
	433+23	34				3.8
	436+74	21				2.4
	437+30	21				2.3
	443+07	23				2.5
	443+50	21				2.3
	443+66	9				1.0
	443+75	10				1.1
	461+56	20				2.3
	462+21	21				2.3
	469+62	21				2.4
	470+11	39				4.3
	470+01	11				1.2
				TOTAL =		81.1

***BIKE AND PEDESTRIAN TRAIL MASTER PLAN -
SEGMENT 3
LAWRENCE, IN***

