

FFY 2015-2016 Transportation Alternatives Program Application  
Tulsa Urbanized Areas

for

**Broken Arrow Main Street Bicycle Facilities**



City of Broken Arrow  
Thomas D. Hendrix, PE - Engineering Division Manager  
485 N. Poplar Street  
Broken Arrow, OK 74012  
918 259-2400 x5414  
[thendrix@brokenarrowok.gov](mailto:thendrix@brokenarrowok.gov)

**FFY 2015-2016 Transportation Alternatives Program Application  
INCOG Urbanized Area**

**Part I: Applicant Information**

Project Title	<b>Broken Arrow Main Street Bicycle Facilities</b>
Project Location ( <i>must be principally in the Tulsa Urbanized Area</i> )	<b>Main Street from Washington (E. 91<sup>st</sup> St.) to Kenosha (E. 71<sup>st</sup> St.), and along Richmond St with connection to Arrowhead Park and W. Midway and Fourth Street between Main and Kenosha.</b>
Sponsor (must be eligible sponsor under Section <b>Error! Reference source not found.</b> )	<b>City of Broken Arrow</b>
Sponsor Contact Name	<b>Tom Hendrix</b>
Sponsor Contact Title	<b>City of Broken Arrow Engineering Division Manager</b>
Address	<b>485 N. Poplar Street Broken Arrow, OK 74012</b>
Phone	<b>(918) 259-2400 x 5414</b>
Email	<b>thendrix@brokenarrowok.gov</b>

**Part II: Project Financial Information**

	<b>Sponsor Funds (20% minimum)</b>	<b>Federal Funds</b>	<b>Total</b>
<b>Amount</b>	\$125,976.05	\$377,928.14	\$503,904.19
<b>Percentage</b>	25%	75%	100%
Project Category	<input type="checkbox"/> Small (≤\$75,000 Federal Share) <input checked="" type="checkbox"/> Large (\$75,001 - \$500,000 Federal Share)		
Project Priority (if multiple applications are submitted from one entity)			

**Certification:**

I certify that **the City of Broken Arrow** supports the proposed project, has the legal authority to pledge matching funds, and has the legal authority to apply for state or federal funds. I further certify that matching funds are available or will be available for the proposed project.

Signature \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: Thomas D. Hendrix Title: Engineering Division Manager

**Part III: Project Technical Information**

**Required elements (attach additional pages)**

1. Resolution from governing body indicating support for the project and commitment of non-federal matching funds and ongoing maintenance of the proposed project
2. Detailed, complete and realistic project budget
3. Project map. Ensure that the project is inside the [Urbanized Area](#)

**Optional elements (attach additional pages)**

1. Conceptual design plans showing a rendering of the project
2. Photos of existing conditions at the project site
3. Demographic information showing the population served
4. Letters of support from community organizations

1. Describe your project (location, project type, length)

The project is a little over two miles in length and consists of green bicycle lanes, shared lanes, and signed bicycle routes extending from Washington Avenue to Kenosha Avenue along Main Street. The project is primarily on Main Street, but on the north end of Main a signed bicycle route extends west along E. Midway Street and makes the connection to Kenosha along E. Fourth Street and links Rhoades Elementary School to the bicycle corridor. Also along the south end a signed route makes a connection to Oak Crest Elementary School and the multi-use trail Arrowhead Park trailhead.

As the first in the area, the green bike lanes will link 447 establishments, 2 elementary schools, 2 parks, community center, performing arts center, Rose district and numerous restaurants to 3,957 employees and 7,545 residents within a ½ radius of the corridor.

2. Describe how the project fits into existing plans and how the public has been engaged in the project planning. What project planning has taken place prior to this application?

This project provides implementation of a segment of the GO Plan. Broken Arrow community and public involvement in the GO Plan was extensive and is detailed in the attached Appendix B Public Involvement GO Plan. The public outreach and participation for the GO Plan was amazing. The project has been conceptually designed per GO Plan guidance and a detailed cost estimated is attached to this application.

3. Describe any safety benefits the project will achieve. Is there evidence of crash experience that would benefit pedestrians or bicyclists?

This project will significantly increase safety for motorist and cyclists compared with existing conditions. With new bicycle facilities, the corridor will provide motorists and cyclists with the needed guidance to safely navigate and coexist in the corridor together. Along the south portion of Main, six foot green bicycle lanes will be established, many with a safety buffer area adjacent to the motorist travel lane. In the heart of the downtown Rose District, bicycle facilities will consist of a well-marked and signed “share the lane” bicycle facility. On the north side of the Rose District the green bike lane will be 5’ wide due to street width limitations. Two spurs at the north and south end of the corridor project signed bicycle facilities which safely connect to schools and parks.

Since 2012, three crashes (two pedestrian and one bicyclist) have been reported with a pedestrian fatality in 2015. These crashes within this corridor on Main Street might have been avoided if the bicycle facilities were implemented. The bicycle facilities provide increased safety for bicyclists, but will help protect pedestrians using the corridor by calming traffic speeds and providing more buffers between vehicles and sidewalks.

4. How does the project benefit your community? How are destinations within the community connected by the project? How might people use the project as a transportation alternative to get to work, school or to make personal trips.

This project provides safe access to the Rose District, all downtown service facilities and businesses, Oak Crest Elementary School, Rhoades Elementary School, Central Park, Community Center, and Arrowhead Park. These destinations will be readily accessible via bicycle mode provide safe bicycle access from all the neighborhoods within ½ mile of Main Street for the entire length of the corridor. This project will truly encourage bicyclists to access activities and destinations along the proposed corridor.

At Washington and Kenosha Avenues, these proposed bicycle facilities are within the Tulsa Transit No. 508 B.A. Connection route which could provide another mode of transportation for cyclists. With over 1500 school age children living within a ½ mile radius of the corridor, the City expects many children to utilize this facility for access to schools and parks. Many of the 7500 local residents within this radius will utilize this access to travel to the 447 establishments within the corridor. With more than 3,900 employees within this ½ mile radius, the City expects more home to work commuting as a result of this new bicycle corridor. In addition the City expects numerous cyclists from other parts of the City to use this corridor for safe effective transportation.

5. Does the sponsor have control of the right-of-way for the project? If so, has the ROW been acquired in accord with the Federal Uniform Relocation Assistance and Acquisition Policies Act?

The City of Broken Arrow has all existing ROW necessary to construct the plan as conceptually designed.

6. Describe the proposed ownership and maintenance responsibilities for the project once it is completed.

The City of Broken Arrow will own and maintain the facilities within the corridor. The City of Broken Arrow Streets Department will maintain the striping and the signage.

7. Use this space to provide any additional details that relate to the rating criteria that were not addressed in the questions above.

This bicycle project will provide a safe and efficient bicycle way for Broken Arrow that will be used by cyclists wanting to enjoy the popular Rose District destination in downtown. Making the Rose District connection with a safe bicycle way will truly allow citizens the choice of riding versus driving. Not only will the Citizens whom live within a half mile of the corridor be affected, but as future adjacent GO Plan bike/ped facilities are developed, this corridor will see even more bicycle use.

Broken Arrow is committed to match project costs to 25%, which in excess of the minimum requirement.

8. Attach maps, budget estimates, and resolution from local governing body. List attachments here:
- a) *Attachment A-Conceptual corridor plans.*
  - b) *Attachment B-Cost Estimate*
  - c) *Attachment C-Appendix B Public Involvement GO Plan*



APPENDIX B

City of Broken Arrow Resolution No. 921  
Resolution to Request Programming of  
Tulsa Urbanized Area Transportation Alternatives Funds

WHEREAS, Transportation Alternatives Urbanized Area funds have been made available for transportation improvements within the Tulsa Urbanized Area; and

WHEREAS, The City of Broken Arrow has selected a project described as follows: Broken Arrow Main Street Bikeway, extending from the north side of Arrowhead Park as an off-street trail, then along Richmond Street west to Main Street as a signed route, and from Washington Street north along Main Street to Midway Road as a bikeway and a signed route, and on Midway Road east to Fourth Street then north along Fourth Street to Kenosha Street as a signed route; and

WHEREAS, the selected project is consistent with the local comprehensive plan, including applicable Major Street and Highway Plan Element or the Tulsa Regional Bicycle / Pedestrian Master Plan (GO Plan), as applicable, and the Regional Transportation Plan; and

WHEREAS, the engineer's preliminary estimate of cost is \$ 503,904.19, and Federal participation under the terms of the federal law, Moving Ahead for Progress in the 21st Century (MAP-21) relating to Transportation Alternatives Urbanized Area funds are hereby requested for funding of 75 percent of the project cost; and

WHEREAS, the City of Broken Arrow proposes to use 2014 Quality of Life General Obligation Bonds funds for the balance of the project costs; and

WHEREAS, the City of Broken Arrow agrees to provide for satisfactory maintenance after completion, and to furnish the necessary right-of-way clear and unobstructed; and

WHEREAS, the City of Broken Arrow has required matching funds available and further agrees to deposit with the Oklahoma Department of Transportation said matching funds within thirty (30) days after approval by the Federal Highway Administration.

NOW, THEREFORE, BE IT RESOLVED: That the Indian Nations Council of Governments is hereby requested to program this project into the Transportation Improvement Program for the Tulsa Transportation Management Area; and

BE IT FURTHER RESOLVED: That upon inclusion in the Transportation Improvement Program, the Oklahoma Transportation Commission is hereby requested to concur in the programming and selection of this project and to submit the same to the Federal Highway Administration for its approval.

ATTEST:

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Mayor

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City Clerk

LOCATION MAP  
TULSA COUNTY



CITY OF BROKEN ARROW

PLAN OF THE PROPOSED

# BROKEN ARROW MAIN STREET BIKEWAY TAP FUNDING

### SHEET INDEX

SHEET	TITLE
0	TITLE SHEET
1	MAIN STREET BIKE LANE
2a	MAIN STREET BIKE LANE
2b - 2d	E. RICHMOND STREET BIKE ROUTE
3 - 9	MAIN STREET BIKE LANE
10a - 10e	E. MIDWAY STREET BIKE ROUTE
11	MAIN STREET TRANSITION STRIPING
12	TYPICAL BIKEWAY APPLICATIONS

### LEGEND

- BIKE LANE
- SHARE THE ROAD LANE
- BIKE ROUTE



CITY OF BROKEN ARROW

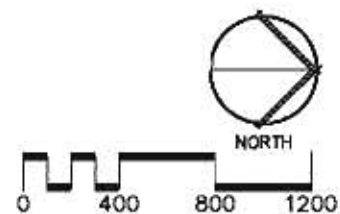
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ENTIRE PROJECT IS WITHIN THE CORPORATE  
AND URBAN LIMITS OF THE CITY OF BROKEN ARROW

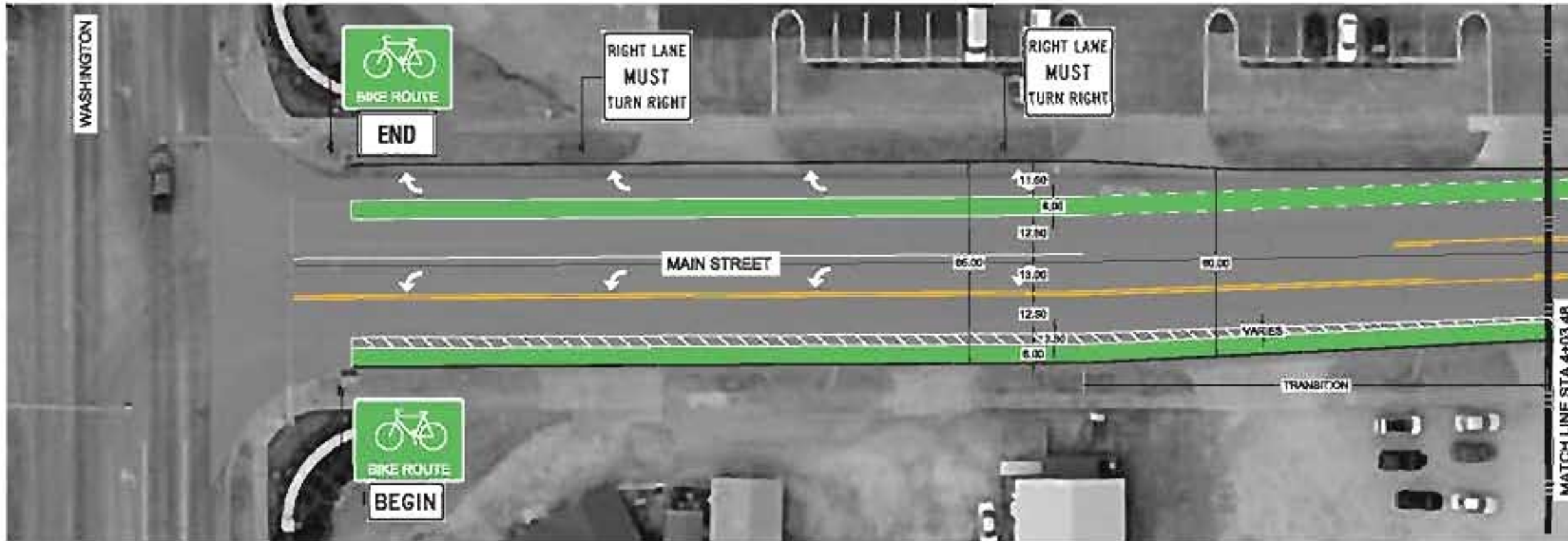


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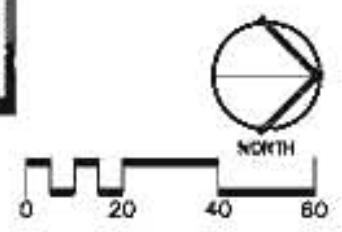
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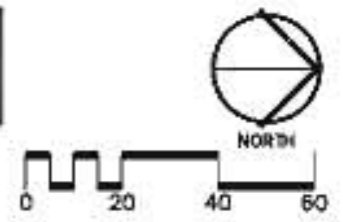
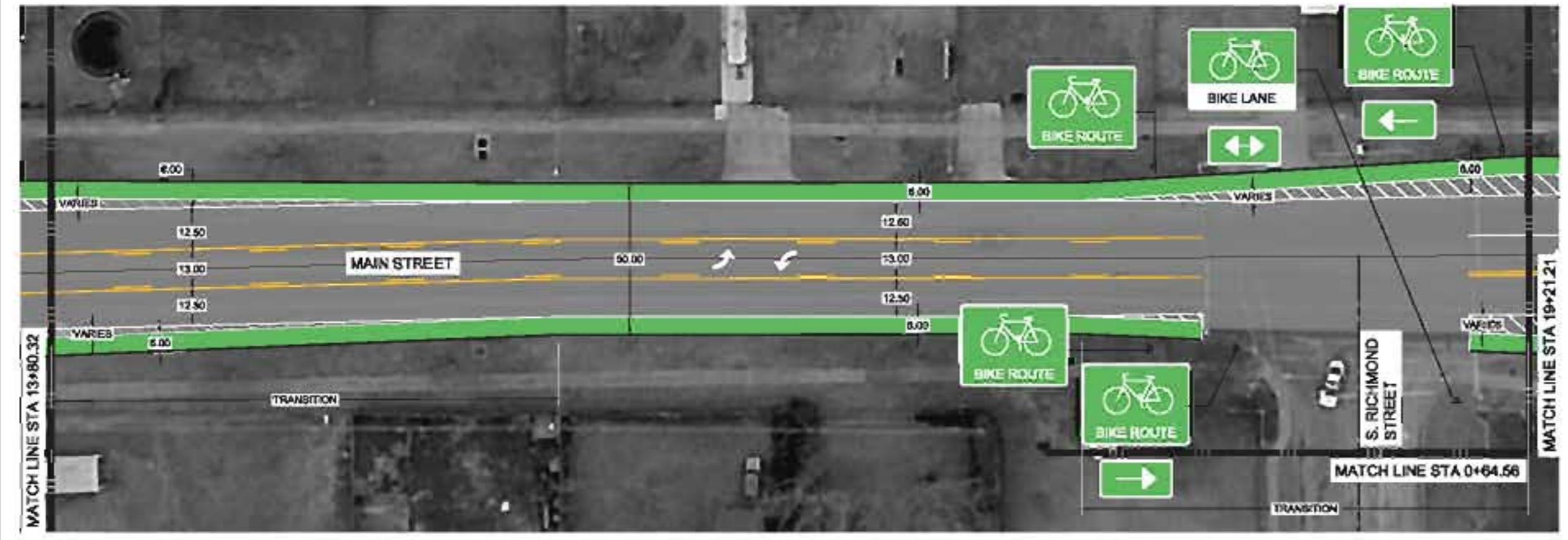
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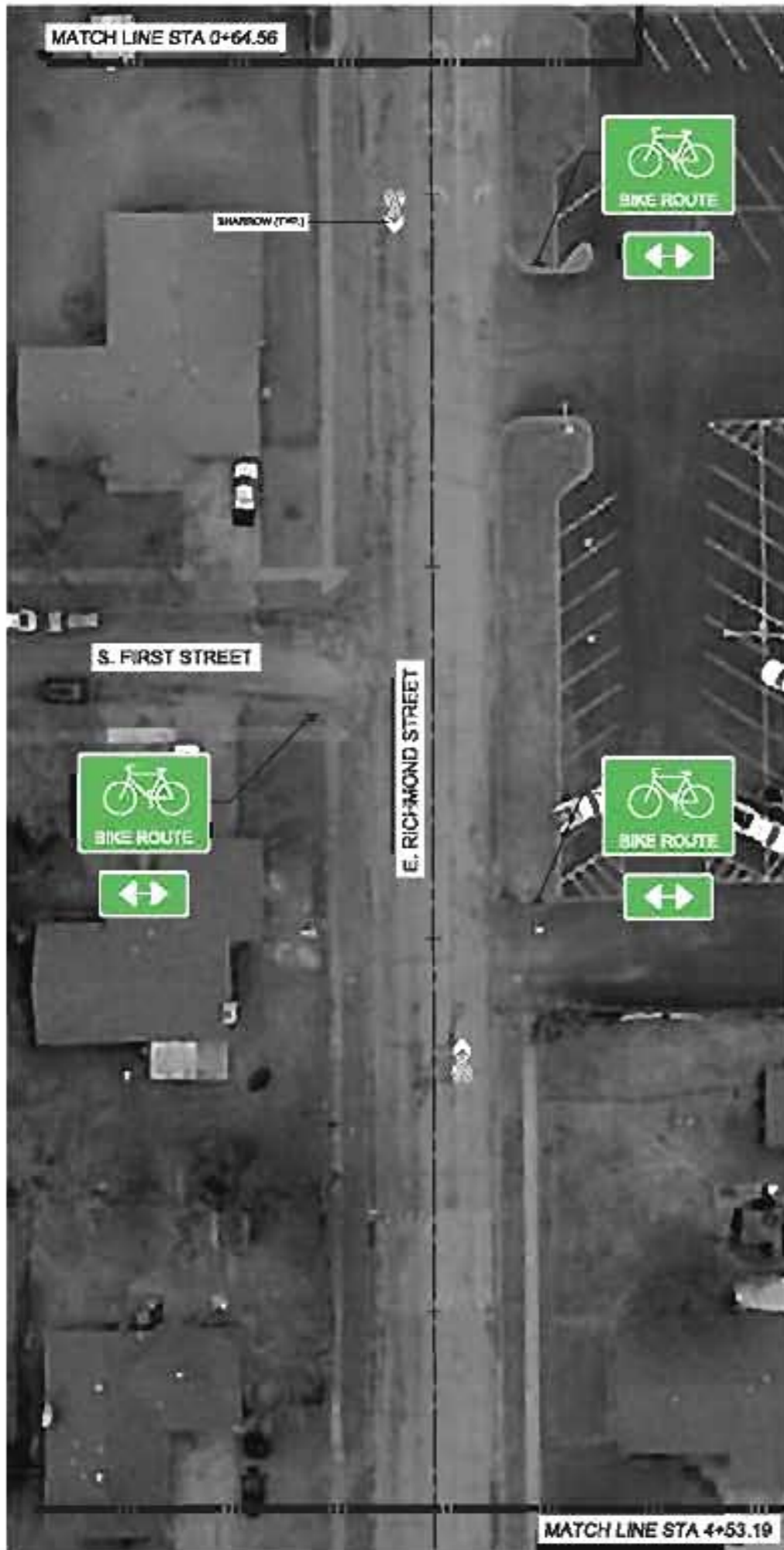
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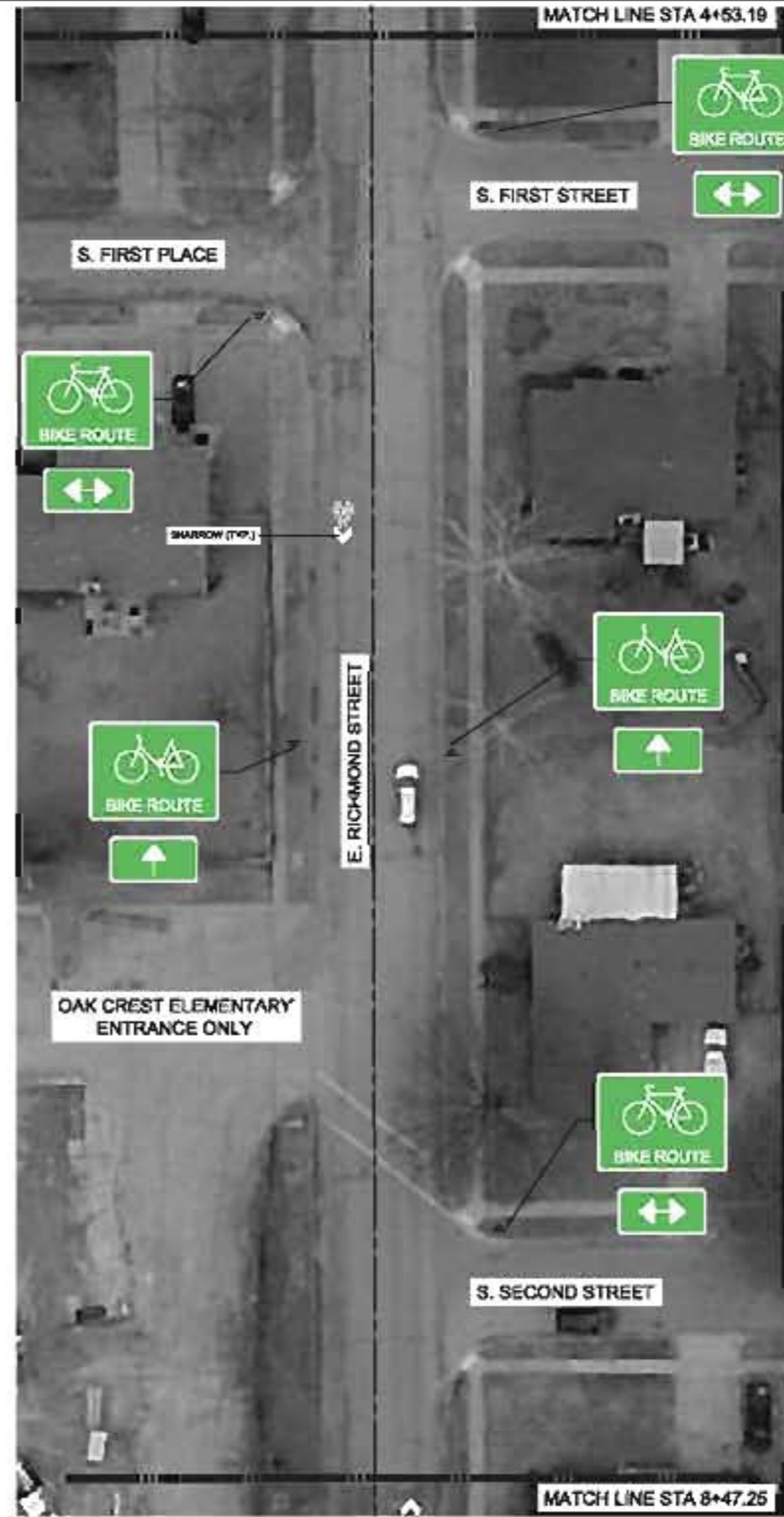


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MATCH LINE STA 4+53.19

MATCH LINE STA 4+53.19



MATCH LINE STA 8+47.25

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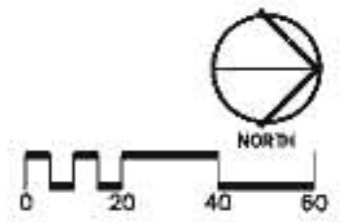
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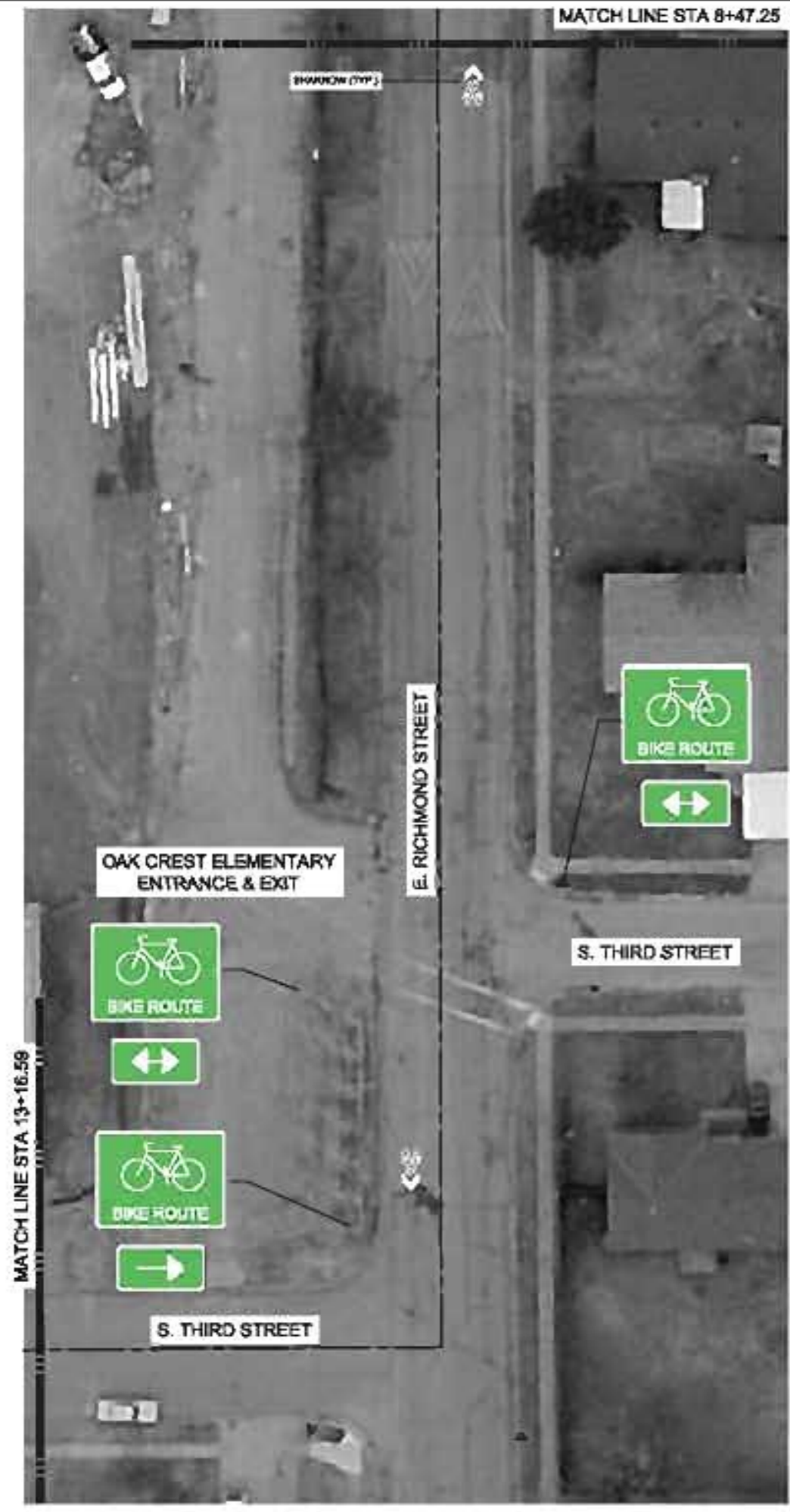

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MATCH LINE STA 8+47.25



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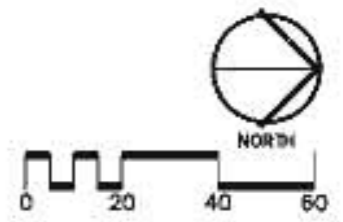
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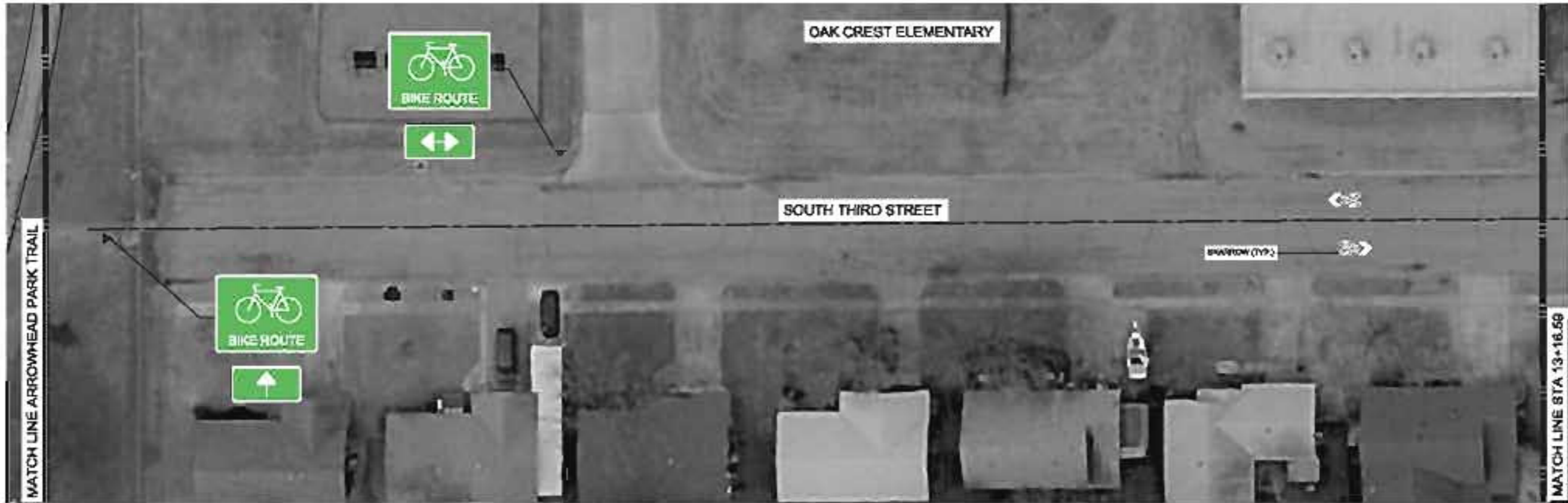



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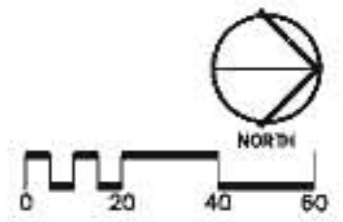
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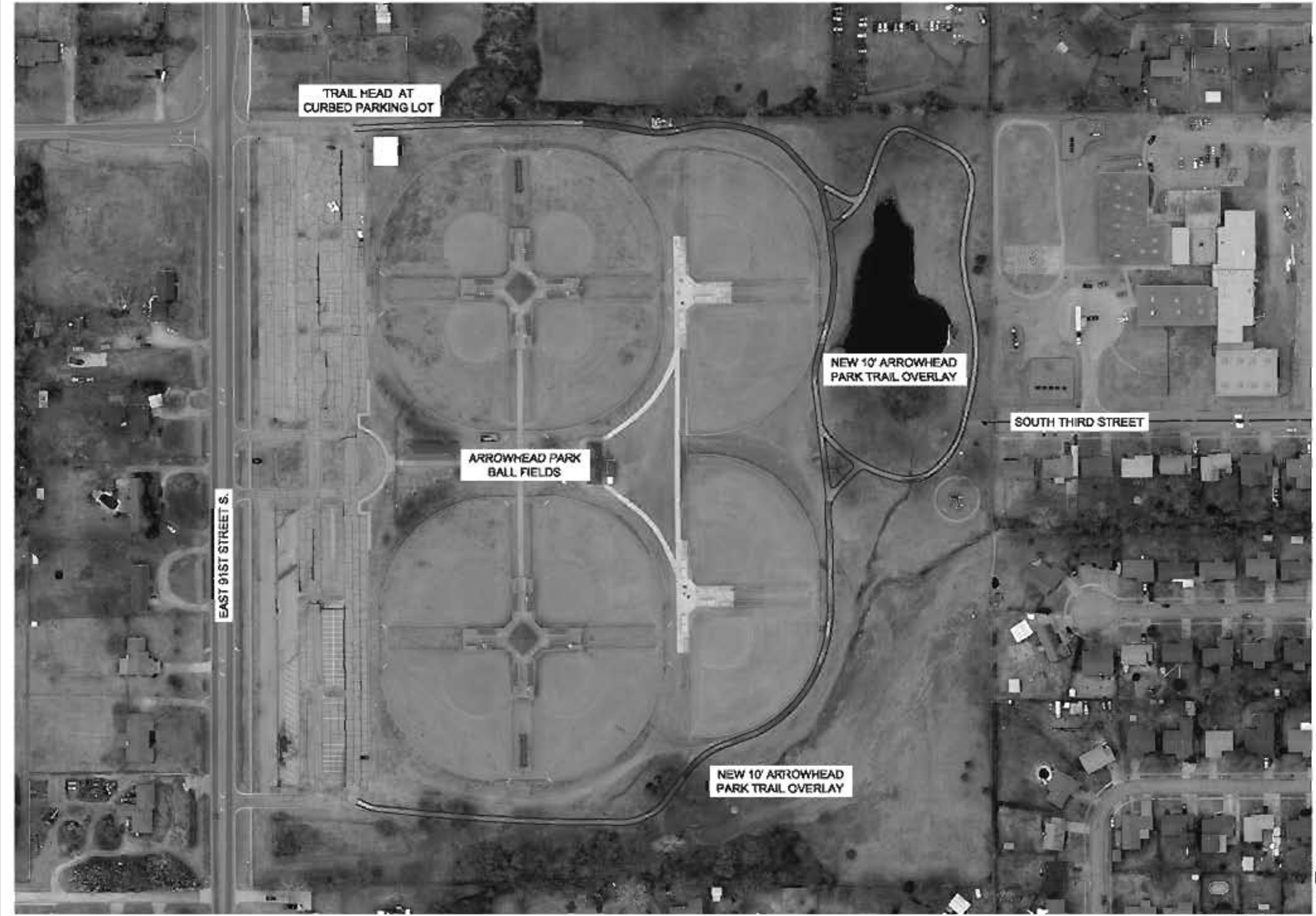



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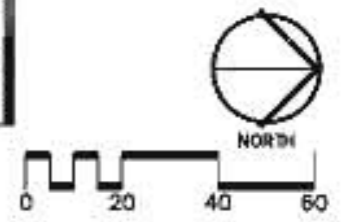
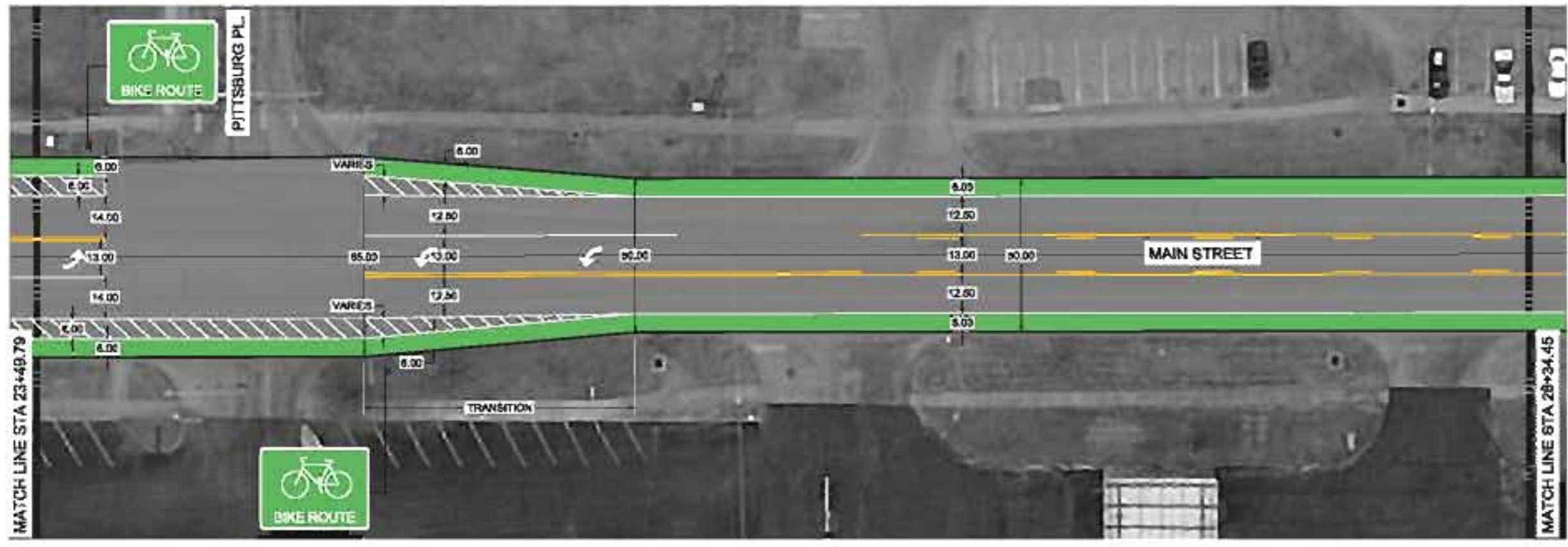
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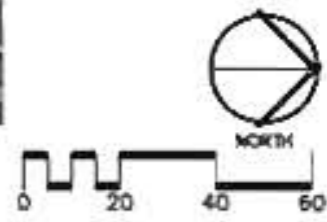
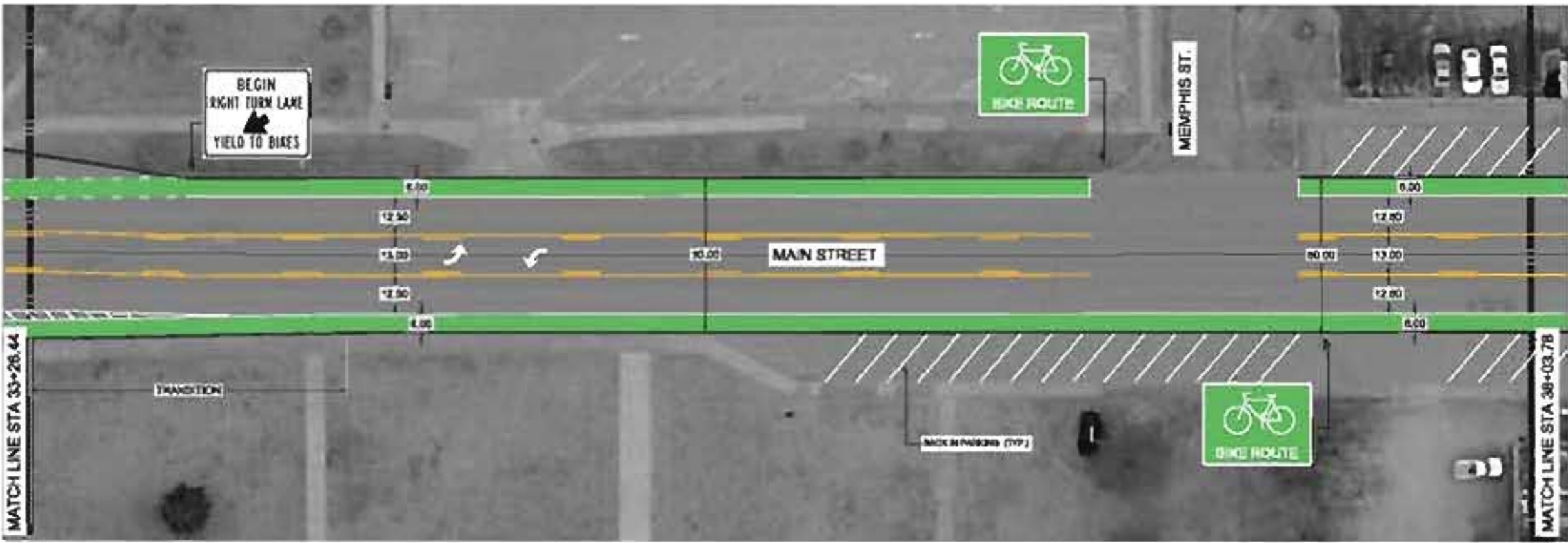
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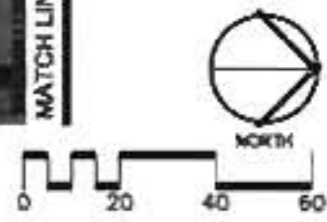
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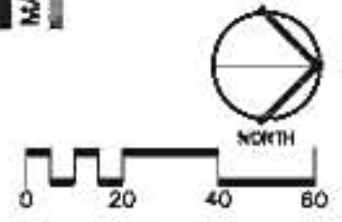
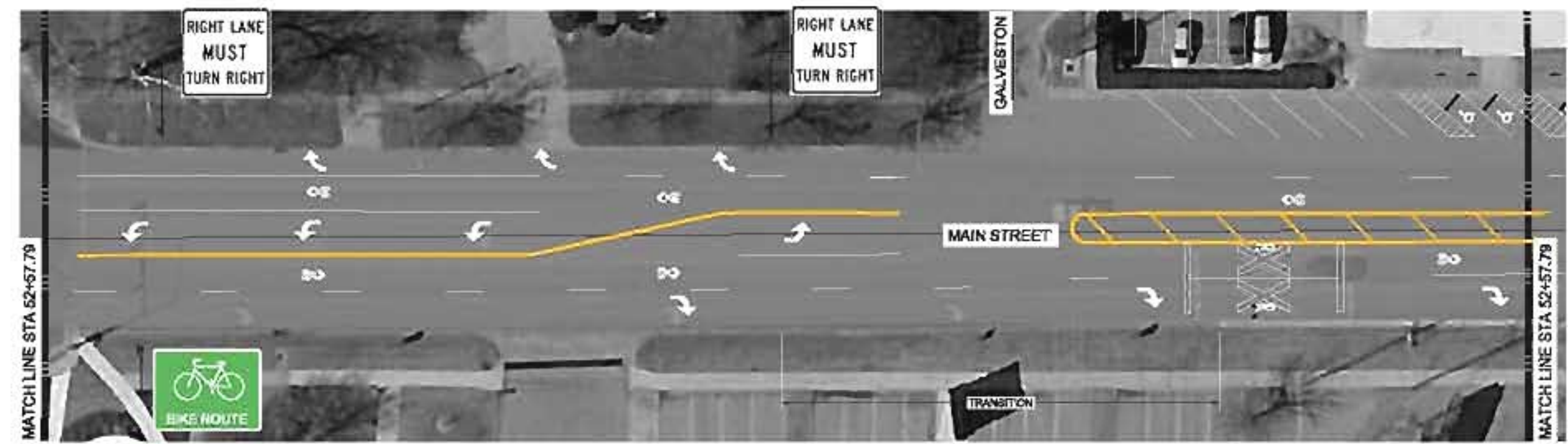
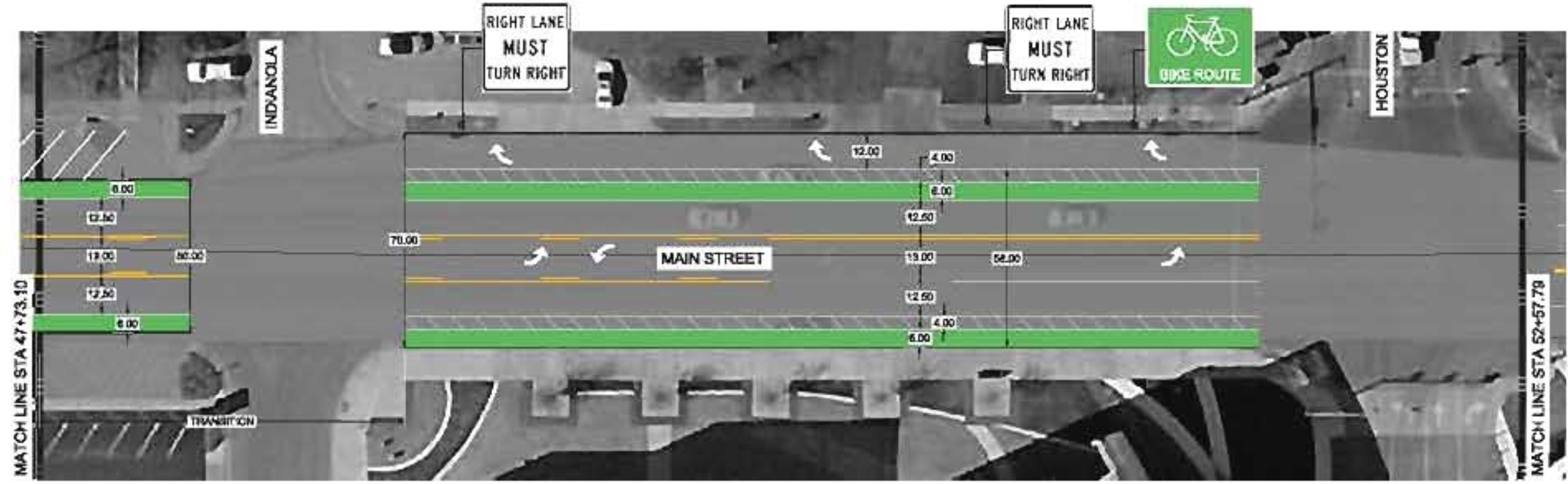


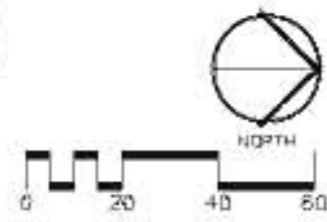
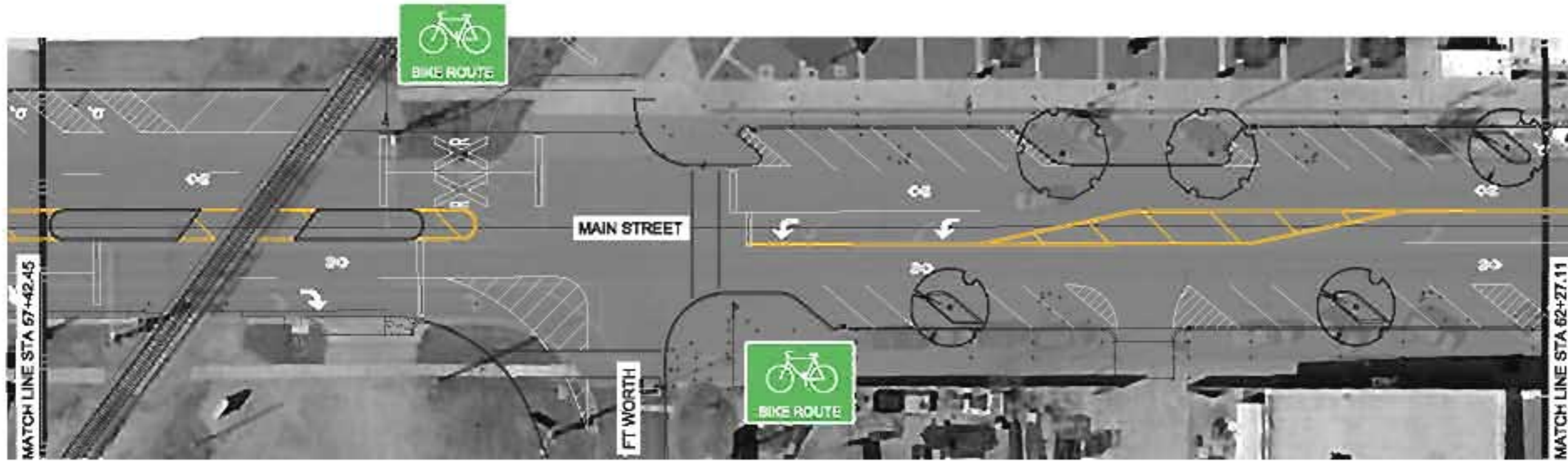
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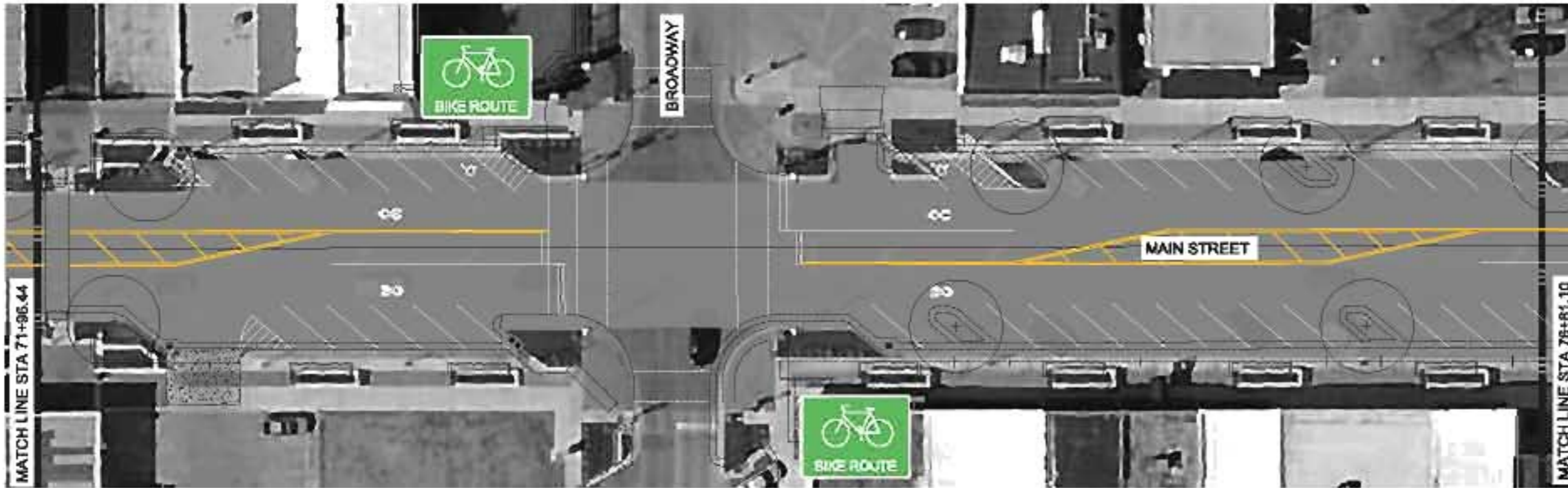
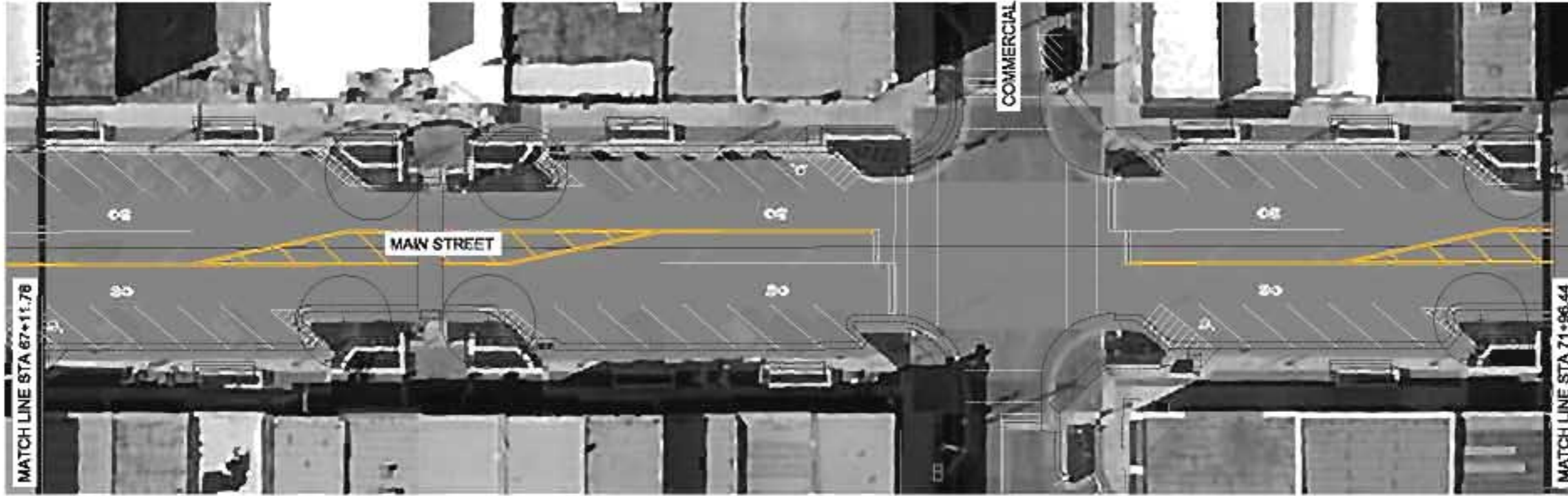
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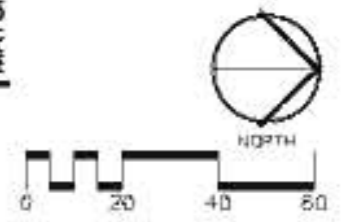
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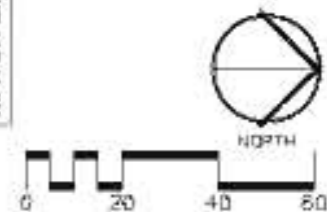
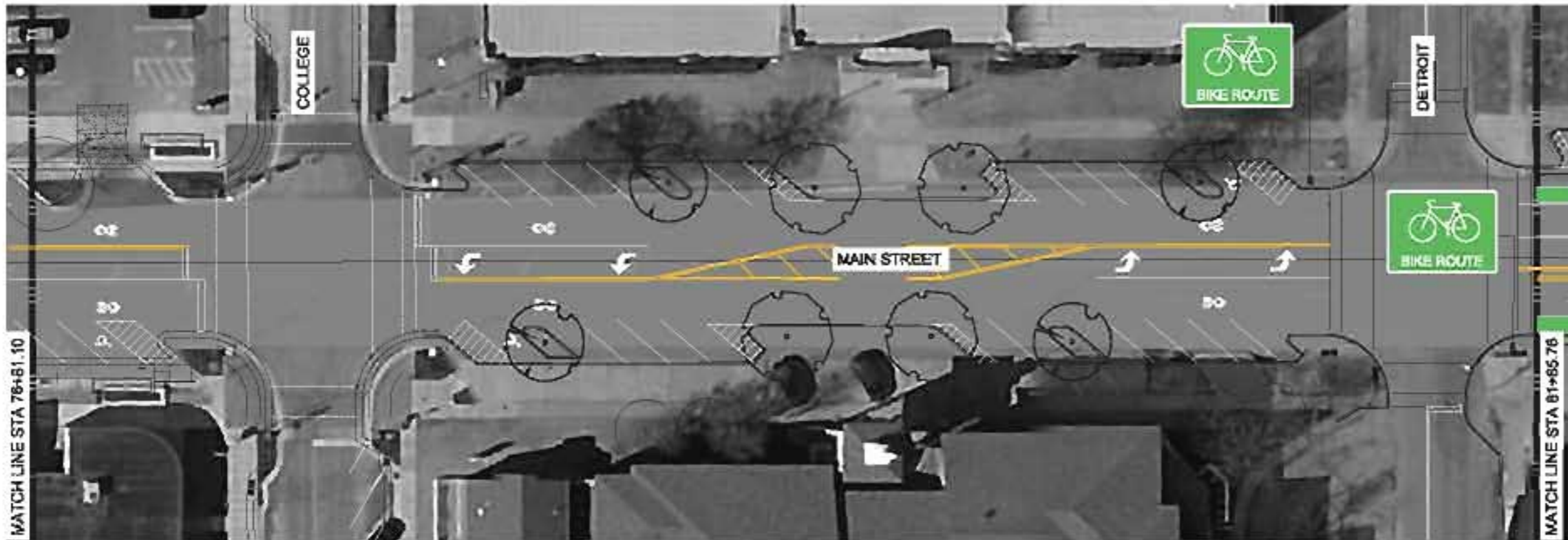



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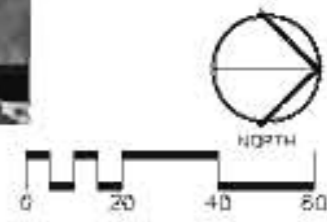
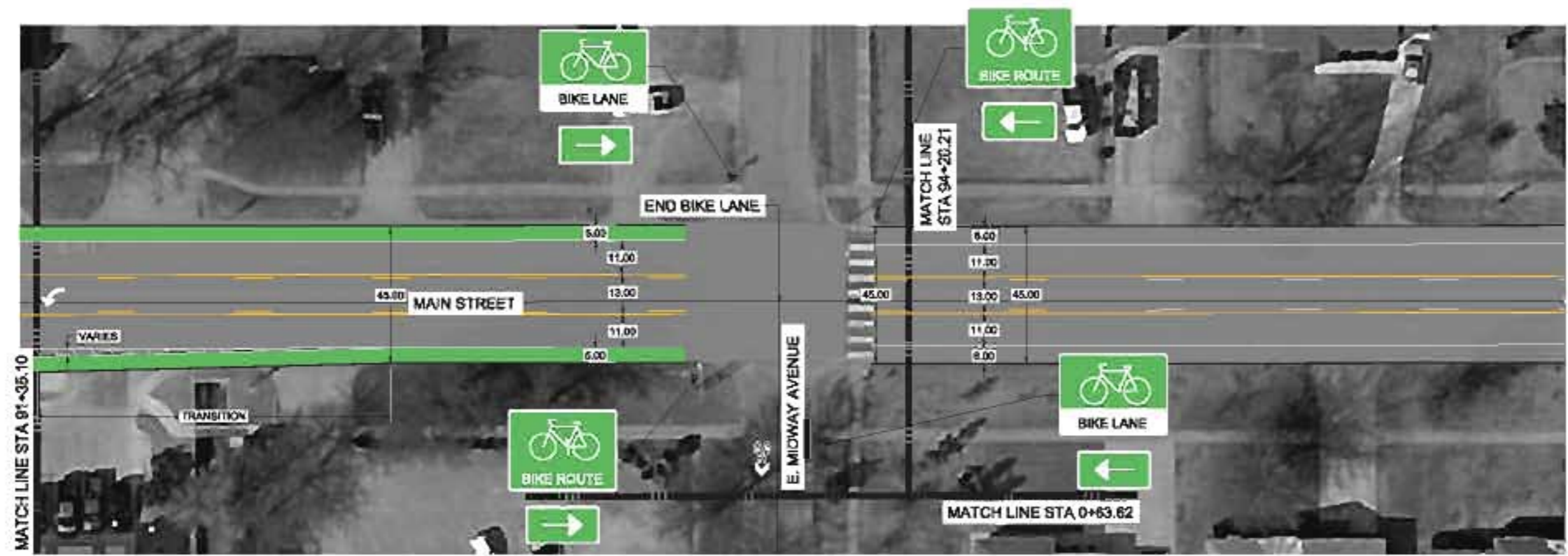
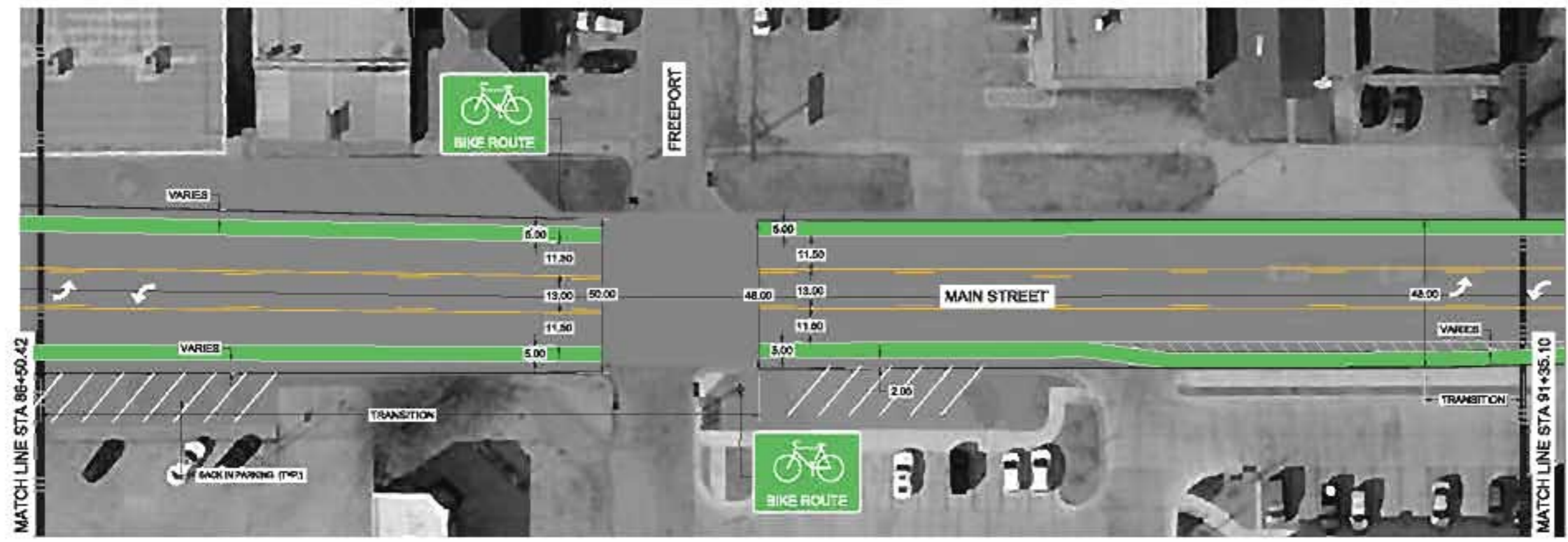
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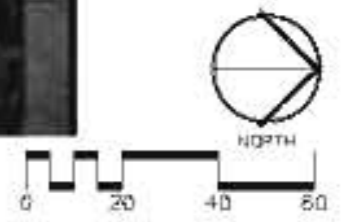
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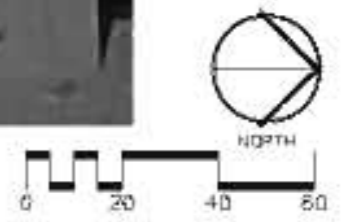



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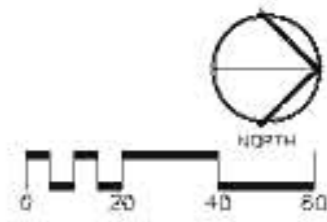
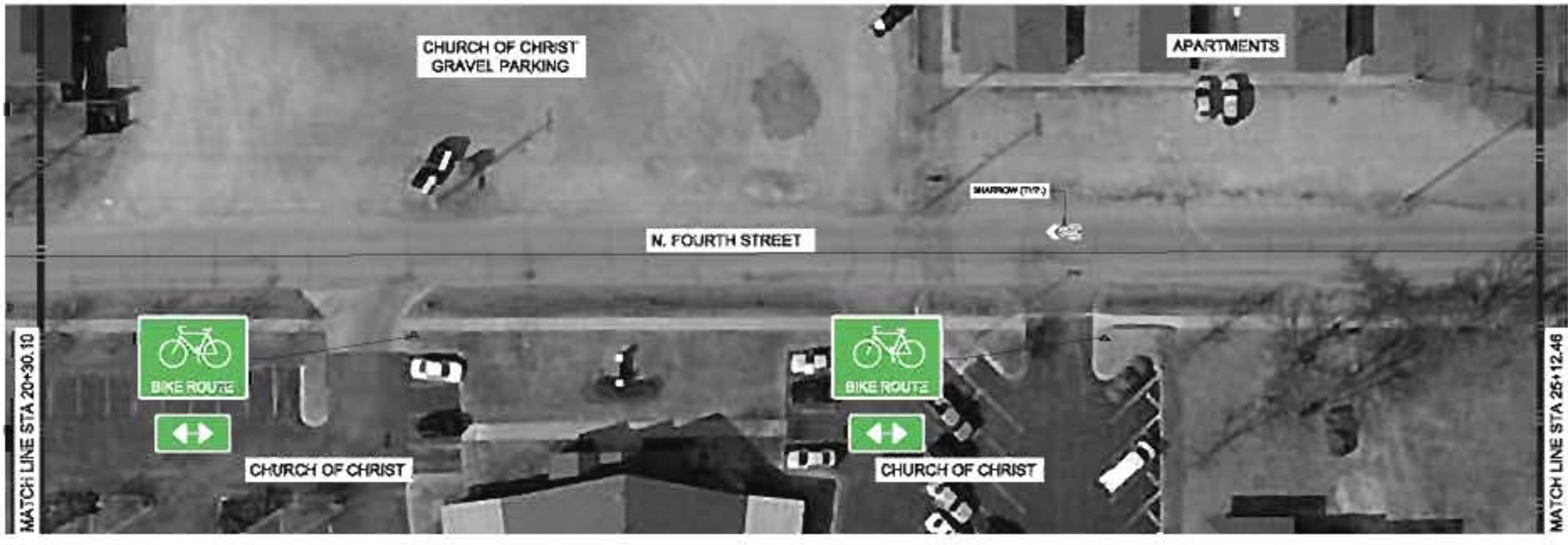


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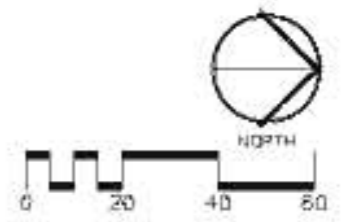
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# BROKEN ARROW MAIN STREET BIKEWAY TAP FUNDING

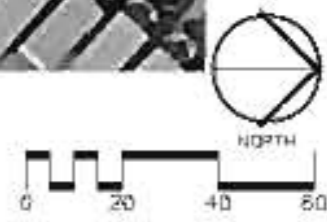
Revisions:




Design	MOH 4-6-16
Drawn	
Checked	
Approved	
PROJECT NUMBER: 577	



Sheet





LANDPLAN  
CONSULTANTS  
INCORPORATED

1110 West 23rd  
Tulsa, OK 74107  
(918) 584-6484

Sheet

**BROKEN ARROW  
MAIN STREET BIKEWAY TAP  
FUNDING**

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BIKE LANES ARE MARKED WITH A BICYCLIST SYMBOL AND ARROW INDICATING DIRECTION OF TRAVEL



BUFFERED BIKE LANES PROVIDE GREATER SHY DISTANCE BETWEEN MOTOR VEHICLES AND BICYCLISTS



BIKE ROUTES ALERT DRIVERS THROUGH SIGNAGE LOCATED ALONG THE ROUTE



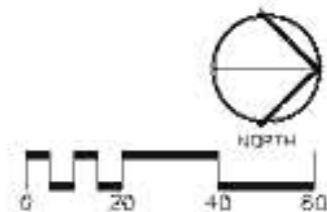
SHARED LANE MARKINGS INDICATE BICYCLISTS' PRESENCE TO DRIVERS AND APPROPRIATE PLACEMENT ON THE ROADWAY



COLORLED PAVEMENT WITHIN A BICYCLE LANE INCREASES THE VISIBILITY OF THE FACILITY, IDENTIFIES POTENTIAL AREAS OF CONFLICT, AND REINFORCES PRIORITY TO BICYCLISTS



BACK IN PARKING ADJACENT TO BIKE LANES PROVIDE CYCLISTS A SAFER LANE OF TRAVEL AND REDUCES CONFLICT PARKED CARS



Attachment B



**Broken Arrow Main Street Bikeway**

3/28/2016

Description	Units	Quantity	Cost / Unit	Price
TRAFFIC STRIPE (REMOVAL)	LF	38,500	\$1.00	\$38,500.00
TRAFFIC STRIPE (PLASTIC) (4" WIDE)	LF	46,250	\$2.00	\$92,500.00
TRAFFIC STRIPE (PLASTIC) (SYMBOLS)	EA	95	\$425.00	\$40,375.00
TRAFFIC STRIPE (PAINT) (GREEN)	SY	8,675	\$12.15	\$105,401.25
BIKE ROUTE AND SHARE THE ROAD SIGNAGE WITH POSTS	SF	165	\$64.89	\$10,706.85
MOBILIZATION	LS	1	\$8,624.49	\$8,624.49
<b>10% Contingency</b>				\$29,610.76
<b>Construction Subtotal</b>				\$325,718.35
<b>Design</b>				\$40,714.79
<b>Survey</b>				\$10,000.00
<b>Geotech</b>				\$0.00
<b>6% ODOT CA COST</b>				\$19,543.10
<b>Total Cost</b>				<b>\$395,976.25</b>

**Midway Ave. Signed Route**

Description	Units	Quantity	Cost / Unit	Price
TRAFFIC STRIPE (PLASTIC) (SYMBOLS)	EA	7	\$425.00	\$2,975.00
BIKE ROUTE AND SHARE THE ROAD SIGNAGE WITH POSTS	SF	96	\$64.89	\$6,229.44
MOBILIZATION	LS	1	\$276.13	\$276.13
<b>10% Contingency</b>				\$948.06
<b>Construction Subtotal</b>				\$10,428.63
<b>Design</b>				\$1,303.58
<b>Survey</b>				\$3,500.00
<b>Geotech</b>				\$0.00
<b>6% ODOT CA COST</b>				\$625.72
<b>Total Cost</b>				<b>\$15,857.93</b>

**Richmond Street Signed Route**

Description	Units	Quantity	Cost / Unit	Price
TRAFFIC STRIPE (PLASTIC) (SYMBOLS)	EA	7	\$425.00	\$2,975.00
BIKE ROUTE AND SHARE THE ROAD SIGNAGE WITH POSTS	SF	75	\$64.89	\$4,866.75
MOBILIZATION	LS	1	\$235.25	\$235.25
<b>10% Contingency</b>				\$807.70
<b>Construction Subtotal</b>				\$8,884.70
<b>Design</b>				\$1,110.59
<b>Survey</b>				\$3,500.00
<b>Geotech</b>				\$0.00
<b>6% ODOT CA COST</b>				\$533.08
<b>Total Cost</b>				<b>\$14,028.37</b>

**Arrowhead Park Trail**

Description	Units	Quantity	Cost / Unit	Price
2" ASPHALT OVERLAY	TON	477	\$110.00	\$52,520.16
STAKING	LS	1	\$3,000.00	\$3,000.00
MOBILIZATION	LS	1	\$1,665.60	\$1,665.60
<b>10% Contingency</b>				\$5,718.58
<b>Construction Subtotal</b>				\$62,904.34
<b>Design</b>				\$7,863.04
<b>Survey</b>				\$3,500.00
<b>Geotech</b>				\$0.00
<b>6% ODOT CA COST</b>				\$3,774.26
<b>Total Cost</b>				<b>\$78,041.64</b>

**Combined Total Cost            \$503,904.19**

Final version – 3/30/16

**APPENDIX A – TULSA URBANIZED AREA (2010 Census Defined)**

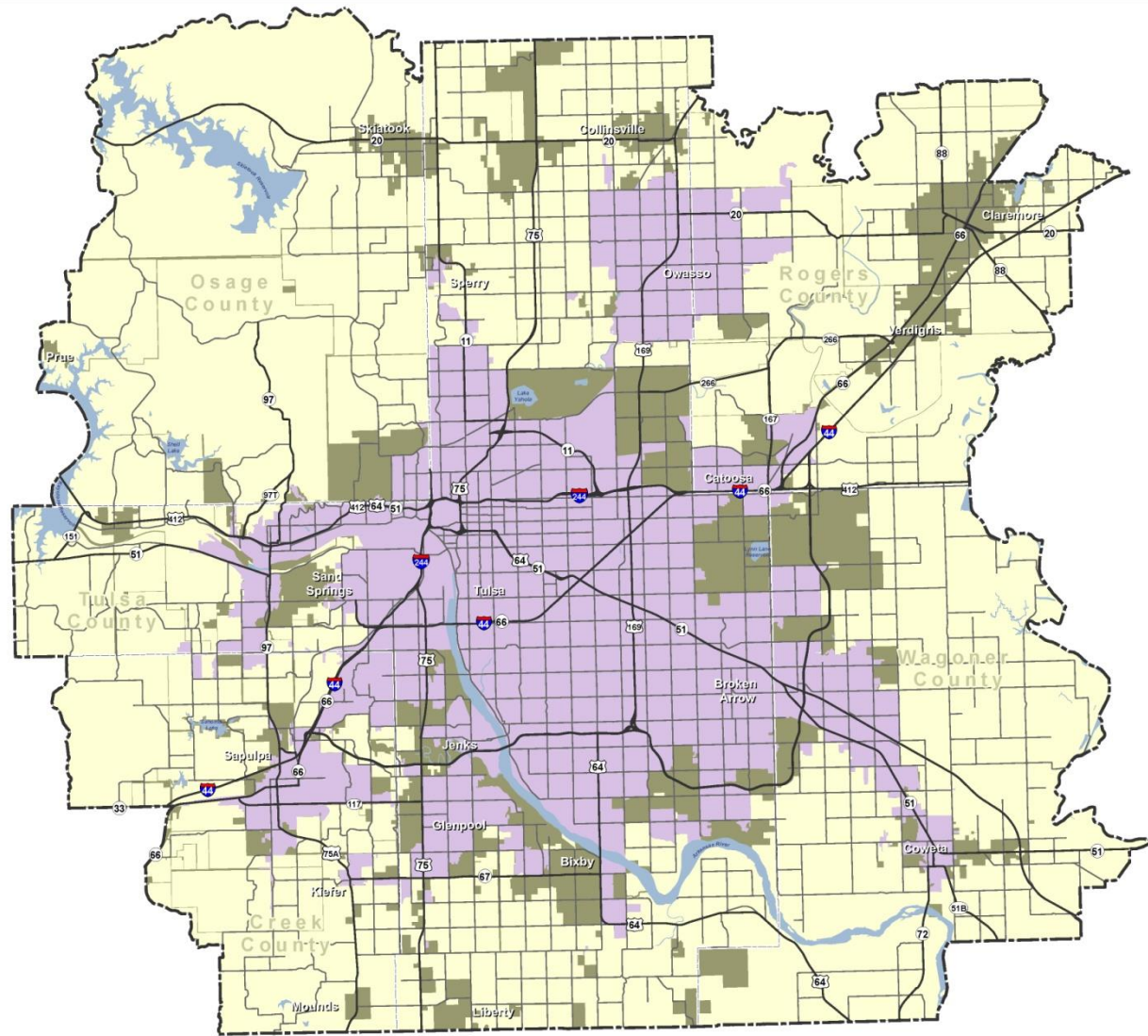
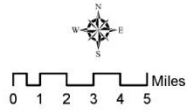
All applications submitted under this program must be in the urbanized area shown on this map in purple

A digital version of this map can be found at: <http://bit.ly/TULUZAMAP> (case sensitive)

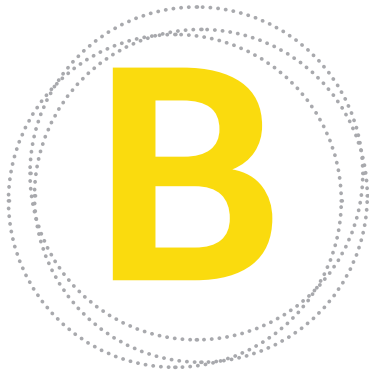
**Urbanized and Non-Urbanized Area Populations - Tulsa Area**

-  Highways
-  Major Streets and Roads
-  Bodies of Water
-  County Boundaries
-  Transportation Management Area
-  Urbanized Area
-  Non-Urbanized Area
-  Corporate Limits in Non-Urbanized Area

Tulsa Area		
Geography	Population	Percent
Urbanized Area	655,479	84%
Non-Urbanized Area	122,572	16%
Transportation Management Area	778,051	100%



Map provided by IncoG. All rights reserved. Urbanized Area - Population map



# PUBLIC ENGAGEMENT

The 2015 Tulsa Regional Bicycle & Pedestrian Master Plan Update (Plan) project included in-depth collaboration with the public, stakeholder and community engagement focused on the following groups:

1. Steering Committee: INCOG staff, representatives from each participating community in the region and other agencies and citizen interest groups. The committee met five times during the course of the Plan process.
2. INCOG Transportation Technical Committee, INCOG Transportation Policy Committee and INCOG Board of Directors: Regular updates and information were provided to the committees and board by the INCOG project manager with support from project team.
3. Walkshops: Small scale "walking" meetings took place in all participating communities including a walk audit.
4. Community / Stakeholder Huddles and Focus Groups: Coordinated outreach efforts with key stakeholders, community groups and community planning boards throughout the region including advocates, community groups, city departments, and the business community. Interest areas for the focus groups included economics, safety, health, and education.
5. Stakeholder Retreat: Off-site retreat with key stakeholders and community partners at the mid-point of the project.

6. General Public: Included outreach through radio and news articles; open house meetings, on-line engagement and event participation. This outreach also included participation in an open streets event, Street Cred, May 2014.

7. Training - Bicycle/Pedestrian Planning and Design: Conducted one-day training for agency staff and consultants at the regional and local level.

The planning team in cooperation with INCOG staff engaged the aforementioned groups in a variety of ways throughout the course of the project: project web site, formal and informal meetings, focused stakeholder meetings, public open houses, participation in local events, community-level field activities and a comprehensive project workshop. From the start of the planning process, INCOG has frequently communicated and coordinated project deliverable reviews with each participating community and the INCOG transportation and policy committees. This robust public outreach served to keep interest level high throughout the planning process and greatly informed the recommendations and results of the study.

## Steering Committee Meetings

The Steering Committee was INCOG staff-appointed by invitation. The committee included representatives from each participating community in the study, bicycle and pedestrian interest groups and partner agencies. The group provided valuable feedback and ideas for planning documents, analyses, and outreach activities. They also served as important liaisons between their respective communities or constituents and the planning process by actively sharing information and providing relevant insights to the planning team.

The committee meetings occurred in March 2014 (kick-off); October 2014 (stakeholder retreat); February 2015 (final network review, prioritization process, draft plan outline); August 2015 (regional network, final report, community tear-outs,

preparation for final public meeting), September 2015 (final plan presentation). Meeting summary highlights are as follows:

### Steering Committee Meeting 1 - Kick-Off, 3/3/14

Summary:

- Introduced project team members and discussed roles
- Reviewed agenda and related activities
- Discussed and defined role of steering committee
- Reviewed key milestones and deliverables
- Discussed challenges and opportunities
- Planned for public outreach
- Reviewed draft goals and objectives
- Gathered comments/feedback

### Steering Committee Meeting 2 – Stakeholder retreat, 10/29/14

Note: This committee meeting was incorporated into the project stakeholder retreat; see stakeholder retreat notes for summary.

### Steering Committee Meeting 3, 2/18/15

Summary:

- Reviewed meeting goals/objectives
- Discussed environment/motivation for Go Plan adoption
- Provided a project progress report
  - Update since project retreat
  - Key action items
- Reviewed final study network
- Reviewed level of traffic stress analysis
- Outlined prioritization process



- Reviewed focus areas
- Reviewed draft outline of final plan

Facilitated discussion on the following topics:

Topic 1: Review final network

- Overview of regional and community maps
- Discussion of public presentation of maps

Topic 2: Prioritization Process

- ActiveTrans Priority Tool (APT)
- City of Tulsa
- Community level
- Regional

Topic 3: Final plan outline

- Overview of report outline
- Discussed of key elements

Final public meeting

- Discussed meeting format and function

### **Steering Committee Meeting 4, 8/7/15**

Summary:

Plan update

- Reviewed plan status and completion timeline

Regional plan – reviewed and discussed each of the following components:

- Recommendations
- Priorities
- Costs
- Concept designs

Final Plan Document

- Reviewed outline

- Discussed revision process

Community plans (tear-outs)

- Discussed outreach required for plan revisions
- Reviewed recommendations, priorities, costs and focus areas
- Gathered feedback on community sections of plan

Final Public Meeting

- Confirmed September 17th, time and location
- Refined purpose, format and content of public forum
- Discussed promotion and outreach

### **Steering Committee Meeting 5 – Final plan presentation, 9/16/15**

Summary: This steering committee meeting focused on review of the final plan, plan presentation and preparation for the public forum. The project team provided a presentation of the final plan, received feedback and discussed next steps in the plan adoption process. The committee expressed support for the plan and committed to work towards implementation in their respective communities.

## Public Meetings

### Meeting 1 – Project Kick-Off

March 3, 2014

Location: Tulsa Community College Center for Creativity

Attendees: 85 (approximately)

Media coverage: KTUL, Tulsa World, KJRH, Tulsa People

Summary: Project team member Shane Fernandez kicked off the event by introducing Dr. Gerry Clancy, President of OU-Tulsa. Dr. Clancy discussed the health impact that planning, like the GO Plan, will have on the Tulsa region. James Wagner introduced the GO Plan basics and project team. Jeff Ciabotti walked through the plan process, public involvement and timeline. Citizens were given a Q&A session with the team. Questions ranged from “Will there be a speed limit on new trails?” to “How can I give input?” Stations were set up after the presentation so that



Dozens of residents in the Tulsa region came to the first public meeting to help shape the planning process.

participants could try out the interactive web map, online survey and get information on upcoming Walkshops. Other highlights included:

- Provided input into the vision/goals for making the region more walkable and bikeable
- Solicited input on pedestrian access, bicycle connectivity and safety throughout the region
- Documented bicycle and pedestrian issues through an on-line interactive map
- Educated participants about tools to improve walking and biking - design treatments, standard and innovative accommodations and programs.
- Launched a public survey (see notes in On-line survey section)

### Meeting 2 – Street Cred Open Streets Event

May 4, 2014

Southern downtown Tulsa

Summary: The project team participated with INCOG staff and project stakeholders in this open streets event. The team provided design consultation prior to the event. During the event the team’s outreach focused on education and awareness about the Tulsa Regional Bicycle and Pedestrian Master Plan process and opportunities for public involvement.

### Meeting 3 – Final Public Forum

September 17, 2015

Location: Tulsa Community College Center for Creativity

Attendees: 85 (approximately)

Media coverage: Tulsa World

Summary: The final meeting was conducted as a public forum. Steering committee chair Michael Hairston was the MC and provided the opening and closing remarks. Prior to presentation of the



The Streed Cred event attracted Tulsans to enjoy a redesigned Boulder Avenue.

final plan the following speakers gave remarks about the importance of moving the master plan forward:

Joani Dotson, Tulsa Health Department

Malcolm McCollam, Tulsa Tough

Blaine Young, Tulsa Public Schools

The project team provided a detailed presentation on the plan components and a broader national perspective on the benefits of becoming a bicycling and walking friendly region followed by an open mic question and answer period. Project manager, James Wagner, provided an overview of next steps toward implementation with closing remarks by Chairman Hairston. Feedback received at the public forum was overwhelmingly positive towards the plan and its future implementation.

## Community/Stakeholder Huddles and Focus Groups

Summary: The listing below represents a series of community meetings and stakeholder huddles that were conducted throughout the project. This outreach was conducted with INCOG staff in coordination with the project team. The meetings served to inform, update and gather valuable

feedback from participating communities and stakeholder groups. Input gathered was especially useful on policy, program and implementation issues. Additionally, INCOG staff presented to the planning commissions of each participating community with regard to project status and team recommendations. A list of those meetings is also indicated below.

The numbers in bold below indicate focus group meetings with communities and groups in the INCOG service area including the health sector, small town councils, law enforcement, the business sector, bicycling advocates, transit agencies and parks departments among others. These meetings were conducted as facilitated group discussions around topics most important to each interest group or sector.

1. Tulsa Transportation Advisory Board, 3/3/14: 12 (KWGS coverage)
2. Kendall Whittier Task Force, 6/11/14: 10
3. Tulsa Young Professionals Urbanists, 3/17/14: 12 attendees
4. Broken Arrow City Council, 3/18/14: 40 (KOKI coverage)
5. Bicycle/Pedestrian Advisory Committee, 4/1/14: 15 attendees
6. Tulsa City Council District 6 Town Hall, 4/1/14: 15 attendees
7. Sustainable Tulsa 1st Thursday Luncheon, 4/3/14: 40 attendees
8. SW Tulsa Homebuilders Association, 4/16/14: 30 attendees
9. River Parks / Tulsa Parks, 6/9/14
10. Fleet Feet Running Club – 61st & Yale, 6/9/14
11. Tulsa Bicycle Club, 6/10/14
12. North Tulsa at Lacey Community Center, 6/10/14
13. Bicycle/Pedestrian Advisory Committee, 6/10/14
14. Tulsa Police & Tulsa Transit, 6/11/14
15. OSU open house, 6/11/14
16. Tulsa Transit Board, 8/26/14: 20 attendees

## Planning Commission Meetings:

- a. Glenpool, 4/3/15
- b. Collinsville, 4/16/15
- c. Sand Springs, 4/20/15
- d. Coweta, 4/27/15
- e. Catoosa, 5/4/15
- f. Owasso, 5/11/15
- g. Broken Arrow, 5/14/15
- h. Bixby, 5/18/15
- i. Tulsa Metro Area Planning Commission (TMAPC), 5/20/15
- j. Jenks, 8/13/15

## Walkshops

For detailed summaries of the Walkshops, please reference each community plan section in Chapter 6 where a summary and outcomes are provided.

INCOG staff with support from the project team conducted small scale hands-on meetings and mini walk audits in all project communities. This format gave the project team an opportunity to fully understand community hot spots and priorities related to walking. A primary result of these meetings was to identify focus areas for further study and design recommendations.

### Walkshops (by the numbers):

1. Catoosa, 3/6/14: 7 attendees
2. Owasso, 3/13/14: 13 attendees (Owassoisms, Owasso Reporter coverage)
3. Skiatook, 3/18/14: 0 attendees
4. Glenpool, 3/24/14: 9 attendees
5. Collinsville, 3/25/14: 9 attendees
6. Sand Springs, 4/1//14: 15 attendees
7. Broken Arrow, 4/3/14: 24 attendees (project team participation) (TW, Fox 23 coverage)
8. Midtown Tulsa, 4/8/14: 15 attendees (project team participation)



9. East Tulsa, 4/9/14: 8 attendees (project team participation)
10. Coweta, 4/14/14: 6 attendees (project team participation)
11. Jenks, 4/17/14: 4 attendees
12. South Tulsa, 4/22/14: 7 attendees
13. Bixby, 4/24/14: 4 attendees
14. West Tulsa, 4/28/14: 6 attendees

Total Walkshop participants: 143

## Stakeholder Retreat

October 29, 2014

Silo Event Center

RETREAT PHOTO HERE I:\Photos\Photos\_DCA\PHOTOS and GRAPHICS\Project\_Photos\Tulsa\_OK\Project Retreat

Jointly organized by the TDG Team and INCOG staff the stakeholder retreat was an off-site day-long meeting to review the draft network, focus areas and other project deliverables. Participation in the retreat included representatives from each study community, steering committee members and other stakeholders. The meeting was an opportunity to evaluate all work to date and set the course for project completion. Highlights of the meeting included:



Small group discussion centered on policy questions, project prioritization and focus area discussion.



Planners and engineers from many jurisdictions and firms attended the design training.

Viewing Stations: WikiMap and survey results, demand analysis, network maps – bicycle and pedestrian, level of traffic stress – existing and select facilitates, and facility types.

Content: Project progress report and presentation, policy review and breakouts, network review and breakouts, community project prioritization, and focus areas presentation.

## Training Workshop: Bicycle/Pedestrian Planning and Design

December 3, 2014

Location: Sand Springs, OK

Instructors: Eric Mongelli and Robert Patten

This training was conducted by the project team and was an opportunity for participants to expand their technical capacity and familiarity with best practices in bicycle and pedestrian design. The training content was based on existing design guidelines and best practices, including the AASHTO Bike Guide, AASHTO Pedestrian Guide, NACTO Urban Bikeways Guide and other resources. A presentation binder and certificate of attendance were available to participants. Attendees included staff from INCOG, agency staff from participating communities and area consultants.

## Online Interactive Map/Wikimap

An online interactive map called a WikiMap was set up for the GO Plan. The map was available for public and stakeholder feedback regarding pedestrian and bicycling conditions throughout the region for approximately four months. INCOG publicized the map through its website and promotional emails and tweets about the planning effort. This outreach garnered 144 registered users, most of whom (76) listed a home zip code in the City of Tulsa. The next largest number of participants was from Broken Arrow (19) and then Bixby (10). Respondents skewed more male (69.7 percent) than female and slightly older with 92 respondents between ages 36 and 65.

These users provided over 450 comments on the map. Users were asked to add points and lines to the map that covered the following categories:

- Route I ride/walk
- Route I'd like to ride/walk
- Place I walk/bike to
- Barrier to walking
- Barrier to bicycling

For routes people already walk or bike, users were asked to rate them on a Poor, Ok, Good or Great scale. Most Poor or Ok bicycling routes were on major roads where people ride but are not completely comfortable. Many barriers to

biking were also noted along these same streets where larger intersections on arterials, especially those without traffic signals, pose challenges to safe and comfortable bicycle travel. Dangerous intersections were the most frequently noted barrier type, followed by pinch points on roads or bridges where shoulders disappear.

Most Good and Great bike routes were on existing trails or smaller streets. This input showed the popularity of longer distance regional trails as did the routes users said they would like to bike, many of which were connections between jurisdictions, rather than just within them. Trails were also popular on the routes already used by pedestrians where they feel comfortable.

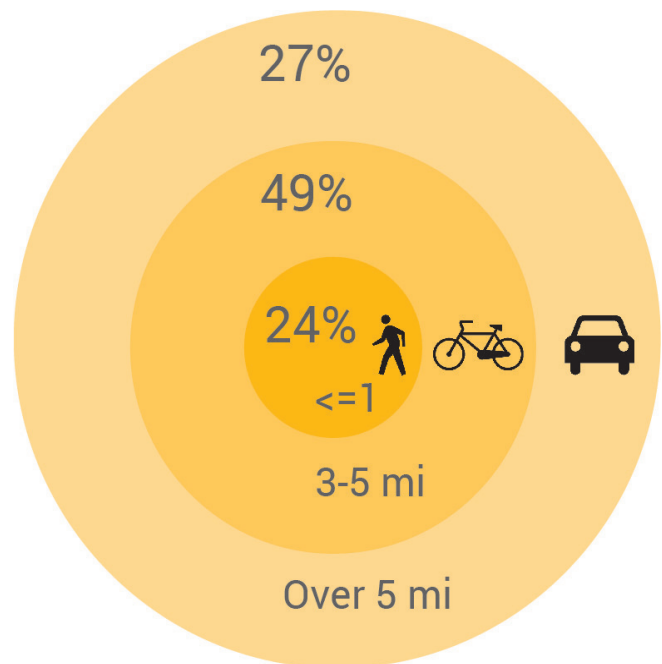
Overall, lack of sidewalks across the region was the biggest issue noted by pedestrians. Users brought up this issue on streets where they already walk but feel conditions are Poor or OK. Lack of sidewalk was the most frequently noted barrier to walking (32 responses) followed closely by dangerous intersections (31 responses).

Maps showing these results are presented on the following pages.

## Online Survey

An online survey was used in the GO Plan process to understand existing regional travel patterns, attitudes toward walking and bicycling, and further detail about what types of bicycle facilities would make most residents feel comfortable biking. The survey was completed by 499 respondents, the majority of which were Tulsa residents. A slight majority (55 percent) of respondents were male, and most respondents (85 percent) were white. The majority of respondents had biked (83 percent) and/or walked (94 percent) in the last year. Further breakdown of respondent characteristics is provided in the section following this overview which includes the full survey results, including text of any write-in answers. It should be noted that the survey was not a scientific sample as there was no control enforced over who responded.

Respondents generally drive alone for most commute and non-commute trips throughout the region, but they were more likely to take other modes for the non-commute trips. This is not surprising since commute trips were identified as the longest trip type among respondents with 58 percent of respondents said that their commutes are five miles or more. The shortest trips taken by respondents are for errands, with nearly three-quarters of respondents saying these trips are three miles or less. That distance is generally considered a reasonable bike ride for an adult.



Residents of the Tulsa region generally noted that they enjoy bicycling and walking as forms of exercise and as a way to spend time with friends or family. The trails system was also supported by respondents, approximately a third of whom said it was one of the things they like best about walking and biking in the Tulsa region.

The survey was also used to assess what barriers currently prevent residents from walking or biking more and what types of improvements could induce people to take each mode more often. The widely dispersed land uses in the Tulsa region were reflected in respondents' top choice (58 percent) of what prevents them from walking more: it simply would take too long to get where they need

to go. Lack of pedestrian friendly infrastructure was the basic issue identified in the three next most popular answers. When asked about what improvements would encourage them to talk more, respondents also focused on infrastructure such as construction and maintenance of sidewalks, and construction of trails.

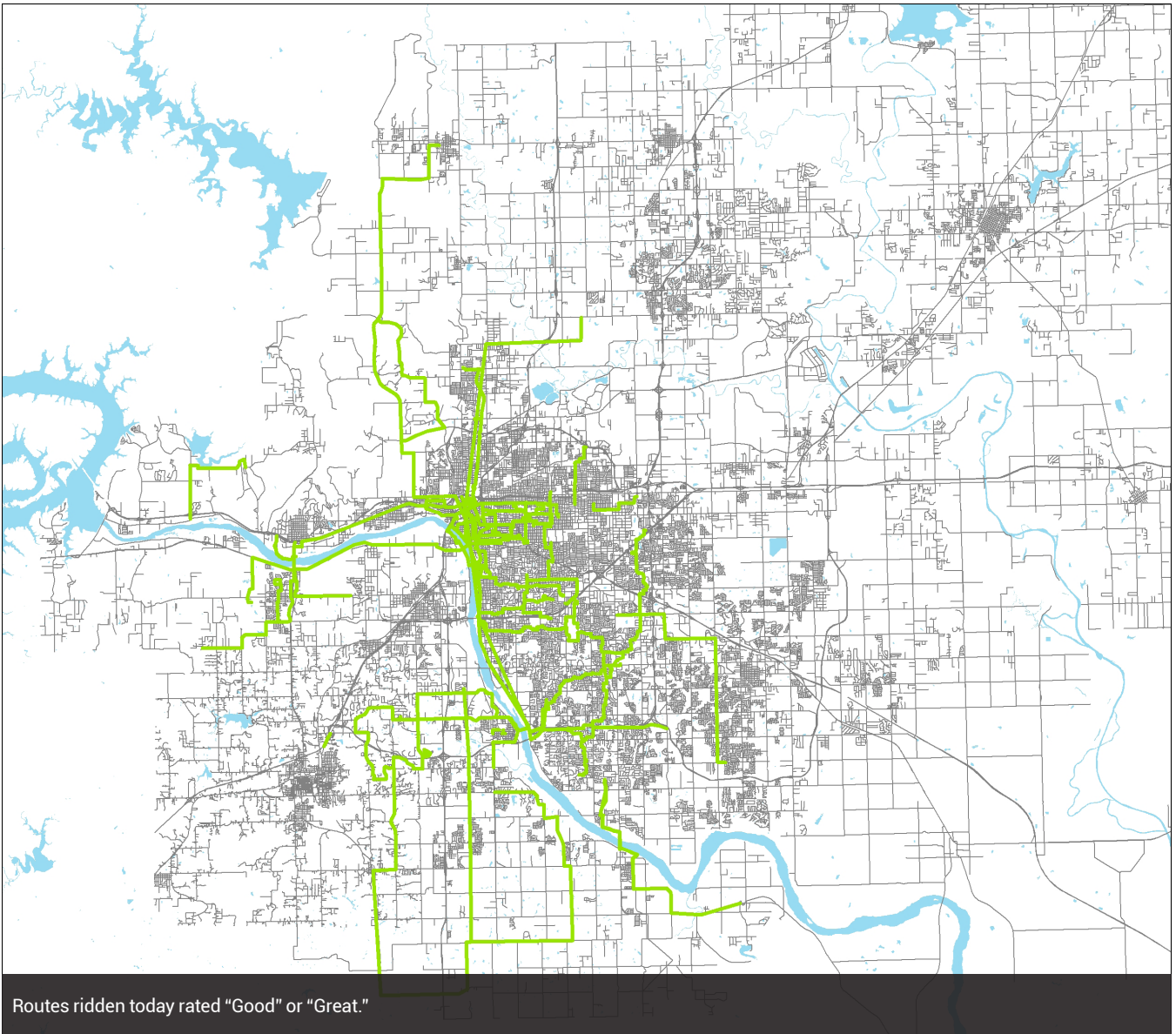
Residents say they are prevented from bicycling more by not feeling comfortable sharing the road with cars (55 percent), by a lack of bike friendly roads and trails near their home (37 percent), and by barriers to biking such as large roads (34 percent). A number of the open-ended comments also dealt with the fact that prevailing culture is not friendly to bicyclists in the region, and the need for the relationship between drivers and bicyclists to improve. Following from those comments, enforcement of existing traffic laws and education about how to safely drive around bicyclists were two of the top improvements (74 and 67 percent, respectively) respondents pointed to for helping them bike more. Improved maintenance was also important with 72 percent of respondents identifying it as important. Many commenters called for more bike lanes and trails in spite of the question being about programs rather than infrastructure.

When asked directly about infrastructure, it was clear that respondents were most interested in facilities that provide greater separation of bicyclists from automobile traffic. The survey asked users to choose between two facility types based on photos of each. Results below show this trend.

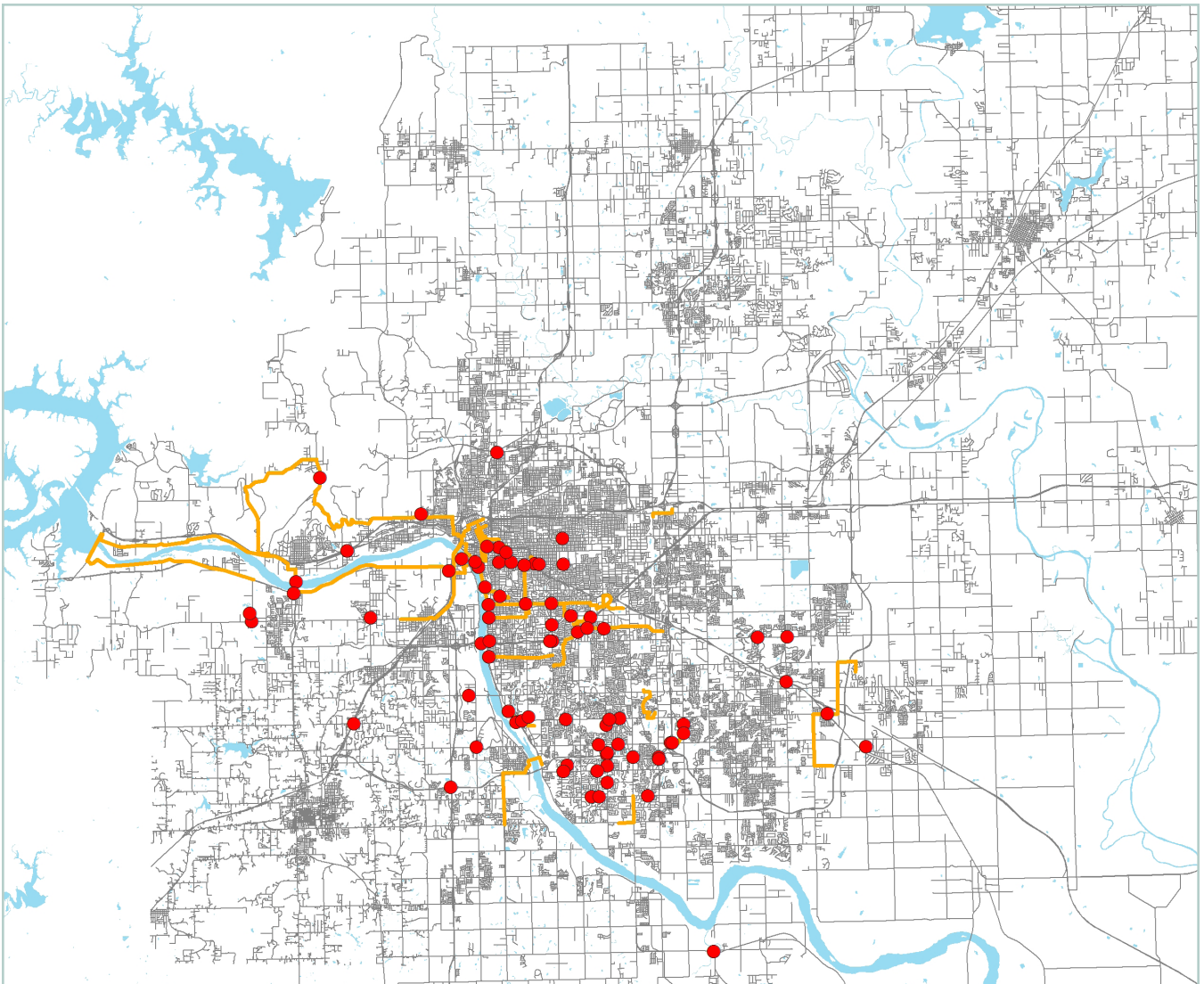
## Facility Preferences

Respondents chose the photo for the facility they'd prefer to ride.

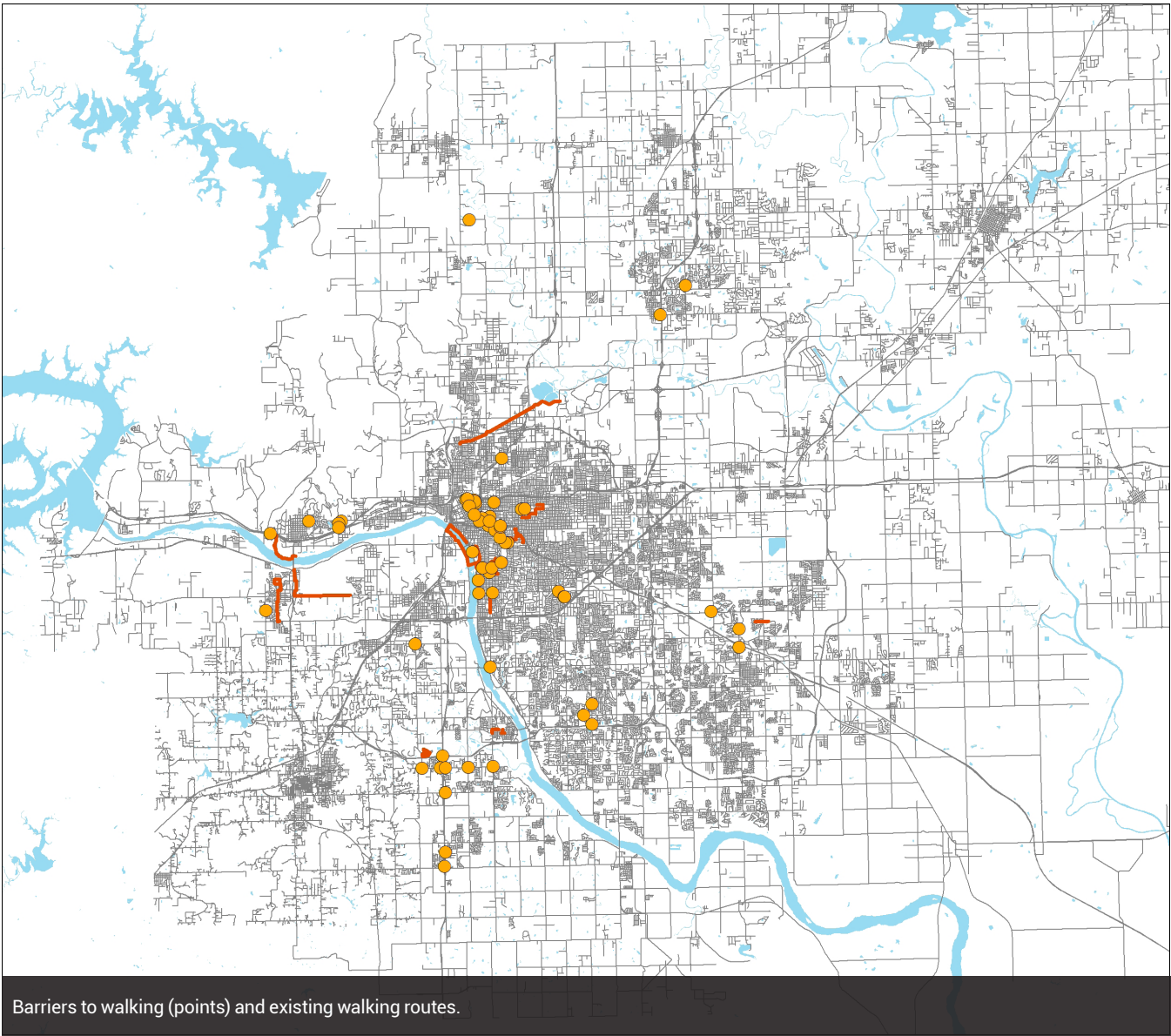




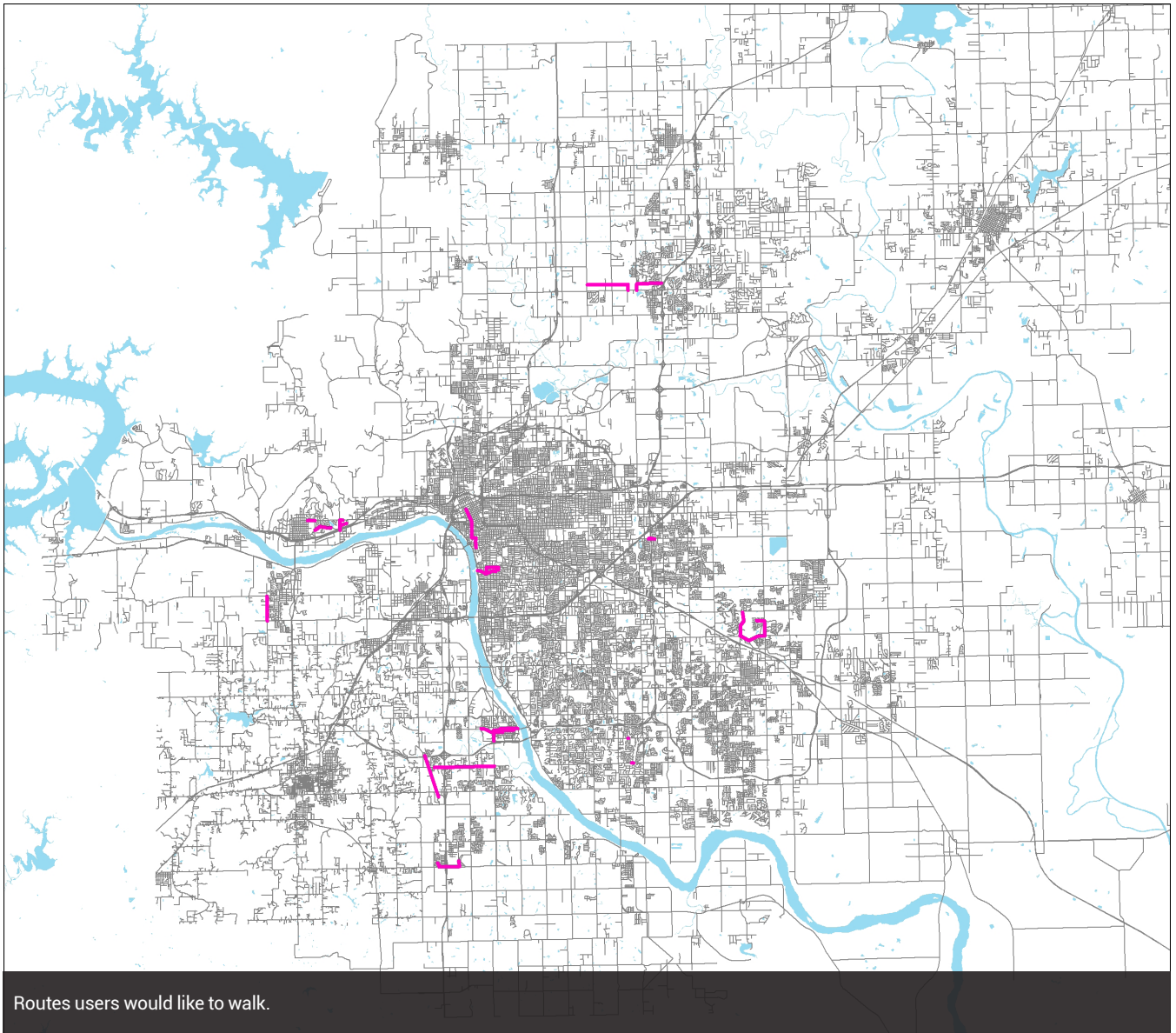




Barriers to biking and routes ridden rated "Poor" or "Ok."



Barriers to walking (points) and existing walking routes.



Routes users would like to walk.

